Conference on

Higher Education Pedagogy

February 5-7, 2014
The Inn at Virginia Tech and Skelton Conference Center
Virginia Tech, Blacksburg, Virginia

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Letter from the Conference Committee

The 6th annual Conference on Higher Education Pedagogy is focused on higher education teaching excellence and the scholarship of teaching and learning. The conference provides a forum for faculty members, researchers, administrators, and graduate students to showcase the latest in instructional practice and educational research; a mechanism to network with like-minded educators regarding higher education instruction; and, an opportunity to expand one's understanding of and motivation for learner-centered instruction.

The conference has grown over its six-year history from a one-day to a three-day event involving 250 participants all from Virginia Tech in 2009, to 1000 participants from 215 institutions, 46 states plus Puerto Rico and the District of Columbia, and 47 countries in 2014. This growth has been accomplished without a conference fee thanks to our academic sponsors (9 Vice Presidents, 9 Deans, 11 Department Heads, and 12 Unit Directors) and corporate sponsors (Wiley Learning Institute, Digication, i>clicker, ProctorU, SGI, lynda.com, Pearson, and Stylus).

In this time of economic challenge, it is essential that we maintain the highest standards for higher education and continue to increase the effectiveness of instruction and the depth of student learning. We are pleased to join with our colleagues to foster educational excellence through the Conference on Higher Education Pedagogy.

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Opening Keynote Address

Wednesday, February 5, 2014
8:45 – 9:45 am

José Bowen

Dean, Meadows School of the Arts
Algur H. Meadows Chair and Professor of Music
Southern Methodist University

Teaching Naked: How Moving Technology out of your College Classroom will Improve Student Learning

Technology is changing higher education, but the greatest value of a physical university will remain its face-to-face (naked) interaction between faculty and students. The most important benefits to using technology occur outside of the classroom. New technology can increase student preparation and engagement between classes and create more time for the in-class dialogue that makes the campus experience worth the extra money it will always cost to deliver. Students already use online content, but need better ways to interact with material before every class. By using online quizzes and games, rethinking our assignments and course design, we can create more class time for the activities and interactions that most spark the critical thinking and change of mental models we seek.

Closing Keynote Address

Friday, February 7, 2014
12:30 – 1:30 pm

Melissa Peet

Stephen M. Ross School of Business
Integrative Learning and Knowledge Management
University of Michigan, Ann Arbor

The Problem with No Name: Preparing Students for a World of Constant Change

21st century life is marked by rapid and constant change. Our students will be faced with the need to continually learn and adapt to new contexts, expectations and technologies throughout their lives. To be successful, they will have to know how to successfully navigate shifting careers, learning new jobs, roles and relationships as they go. They will have to transform broken systems and organizations, and create new ones that are more ethical, effective and, hopefully, socially just.

The problem is that the vast majority of us - those who educate our students - were not taught how to create positive change in the world, and as a result, we do not really know how it is done. Although we hope that our curriculum is providing students with the knowledge and skills they will need for the world, we have no empirical evidence to suggest that this is actually true. Our current knowledge gap brings to mind several questions: How can we teach our students how to create positive change when we (those who teach them) do not know how such change actually happens? What kind(s) of knowledge, skills and habits of mind do our students really need in order to act as ethical and effective agents of change? How can we clarify for ourselves and for our students what living in a changing world actually requires?

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Wednesday

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http://www.cider.vt.edu/conference/

Wednesday

February 5, 2014

Session 1

10:00-10:50 AM

http://www.cider.vt.edu/conference/

Preparing Math Deficient University Students for STEM Coursework: A Longitudinal Look at Achievement and Sustained Learning

John H. George & Karen H. Larwin, *Youngstown State University*

Abstract: At both national and state levels, an emphasis is on Science Technology Engineering and Mathematics (STEM). At its heart is a demand for a more technologically trained workforce. Paradoxically, the foundation for a practical college level solution in the first three fields rests with reaching a population increasingly displays both disinterest and poor performance in abstract mathematics. The purpose of the current investigation is to explore what can be done for students who possess both a desire and ability to matriculate into technical fields but who present in need of math remediation and typically lack effective problem solving skills. This investigation looks at the impact of a lab-intensive remedial course on student achievement in subsequent core courses. It was found that students who were remediated performed as well as or better than students not identified for remediation, in subsequent courses.

Beyond the concern of bringing more students into STEM is the issue of retaining them once they are there. Seymour and Hewitt (1997) performed a study involving seven universities, finding that 44.1% of STEM majors switched over to non-STEM majors before graduation. In particular, they noted that students perceived introductory STEM courses as a major barrier, owing to their level of difficulty, stress on competition, and impersonal large lecture format.

One seemingly promising approach has been attempted at the University of Cincinnati. Retention of primarily biology students has been enhanced for students with low math placement scores by way of a course (SM 101) introduced in fall 2008. Unfortunately, when successful SM 101 students took their follow-up introductory biology course, they fared no better than comparable students who did not take the course (Koenig, Schen, Edwards, & Bao, 2012).In another study, Lesik (2007) examined longitudinal data of 1,276 first-time, full-time college freshmen who entered a four year state university in an effort to understand whether remedial math courses impacted student achievement and retention. From this group, a reduced sample (n = 212) was selected; students within five points either side of a math cutoff score. Those below the cutoff score received an intermediate algebra (developmental) treatment while those above the cut score proceeded immediately to college level coursework. The study was able to show that the particular developmental intervention at this college was effective in helping students persist; that is stay enrolled in school (Lesik, 2007).

Since all remedial coursework is not successful, some researchers have posited what might be necessary to produce successful students from among those who come to the university underprepared. Due to the complexity involved in engineering, Cabrera, Colbeck, & Terenzini (2001) recommend "[s]tructuring classroom activities to promote gains in occupational awareness, problem solving, and group skills" (p. 350). Following these recommendations, the current investigation examines students' progress from 2008 through 2013 who were enrolled in Youngstown State University's Engineering Technology (ET) program. Specifically, the investigation examines how students recommended for remediation performed in later coursework, relative to their non-remediated peers, when that remedial course is a structured laboratory-intensive activity-based course (ENTC1500) that raises "occupational awareness, problem solving, and group skills", as recommended by Cabrera, Colbeck, & Terenzini (2001).

Methods

Participants: Students enrolled in the (ET) program at Youngstown State University from 2008 through 2013 make up the sampling frame for the current investigation. Treatment students were students who have mathematics ACT scores that were below a 22. These students (n = 116) were enrolled in ENTC 1500 in an effort to remediate them for the low mathematics score. Control group students (n = 273) include all students enrolled in the ET program who scored at or above the mathematics ACT of 22. These students were not remediated. The students in both the treatment and control groups were predominately male (94%). *Instrumentation:* The measures used for comparison for student achievement for the treatment students relative to the control students are the student final grade point average in seven core courses that all students are required to take as part of the ET program. These classes include one engineering section (ENTC 1505), and the associated lab section (ENTC 1505L), three mathematics sections (MATH 1513, 1570, & 2670), a mechanical engineering section (MET 1515), and a section of physics (PHYS

1501). *Procedures:* The treatment procedures included participation in a lab-intensive remedial course. Details about the schedule and structure of this remedial course will be provided at the presentation of this research.

Data Analysis and Results

Individual participant data (IPD) meta-analysis was used to analyze the data for the current investigation, using Comprehensive Meta-Analysis (CMA). This method of analysis was used particularly because this approach weights sample sizes of each cohort group. Findings demonstrate treatment students outperformed control group students in four of the seven core classes, and performed no differently in two of the sections (ENTC 1501, PHYS 1501, $p>.05$), as seen in Figure 1. Additional detailed results and effect size measures will be provided. Conclusion: The findings of the current investigation suggest that the treatment (ENTC 1500) had a positive significant effect on student achievement over time and across required coursework. The impact of this remediation treatment increased from 2008 to 2012. The findings suggest that remedial coursework that is focused on occupationally appropriate problem solving in laboratory intensive coursework encourages students to work through those often difficult concepts that might otherwise be missed. This course approach, along with instructor interaction, consistent feedback, and supportive collaboration, can produce positive results. This intervention has made a significant impact in the retention and persistence of STEM students at Youngstown State University, and can be replicated nationally to support the growing need for underprepare students entering STEM programs and courses.

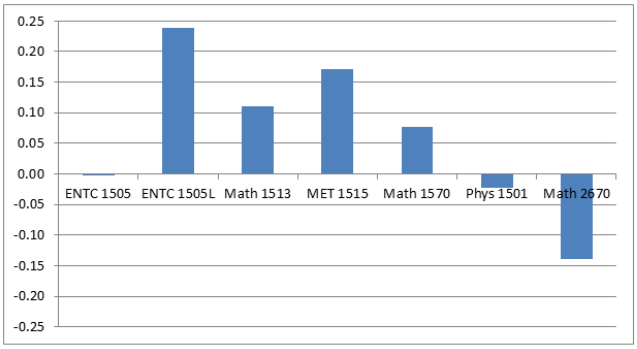

Figure 2. *Effect Size by Course for ENTC 1505 Semester Cohorts (New vs. No Treatment)*

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The Reframed Trilogy of Engagement, Competence and Continuity for Student Success

Chaya R. Jain, Nasser Ghariban, & Zhenhua Wu, *Virginia State University*

Abstract: The proposed pedagogical model of holistic intervention is being implemented at a small Southern institution of higher learning that supports an overall student enrollment of 6,000. The purpose is to address the issue of student lack of interest, retention, and academic success, particularly in the disciplines of science, engineering, math and technology (STEM). Reframing Jolly, Campbell and Perlman (2004) model of Engagement, Capacity and Continuity (ECC) as the framework, this proposed research; initially involving engineering students exclusively, seeks to test a three-pronged intervention to increase students' interest, sustained engagement, and eventually, academic success. This three-year empirical study involves a sample of 40 freshmen students to test the hypothesis that a holistic pedagogical intervention, which includes mentoring strategy as Engagement; student preparation in academic curriculum along with soft life-job skills as Competence; and, targeted industry internships as Continuity, helps increase student interest, retention and academic success. The purpose of this generalizable and replicable model is to test and advance the useful pedagogical strategies for students' academic success in any discipline.

Literature Review

Contemporary research shows that academic lack of interest among underrepresented minority, particularly African American students in science, engineering, math and technology (STEM) disciplines reveals a complex equation of motivational beliefs, economics, infrequent availability of positive racial/ethnic role models, and sometimes just wrong perceptions about math and science (Kim & Conrad 2006; Palmer & Gasman 2008; Washington 2011). Other difficulties include unfamiliarity with science as a discipline, lack of science-content knowledge, low self-efficacy with respect to science learning, difficulty in meeting the increasing rigors of the science content, and lack of industry and entrepreneurial exposure. The report by President's Council of Advisors on Science and Technology (2010) notes that students who display poor performance during their grade school years often experience a snowball effect often begin to regard STEM areas as boring or overly challenging. Citing the role of social and cognitive elements, Swail, Redd and Perna (2003) identify institutional factors as an area where professionals have some level of control and emphasize mentoring along with programs and services as critical to retention. In their report titled *"Engagement, Capacity and Continuity: A Trilogy for Student Success"* Jolly, Campbell and Perlman (2004) examine reasons why reform efforts have not been enough in generating increased achievement among students in science- and math-oriented disciplines. Their report identifies simultaneous integration of three requisite components: engagement, capacity and continuity. On the other hand, Fairweather (2008) suggests intervention strategies having the potential for greatest gain in fulfilling gaps in existing knowledge with due regard to social context. Combining these strategies, the proposed model offers a feasible three-pronged approach to ensure student interest, retention, and academic success for sustained interest in STEM-related careers.

Objectives

Upon completion of this session, participants will be able to:

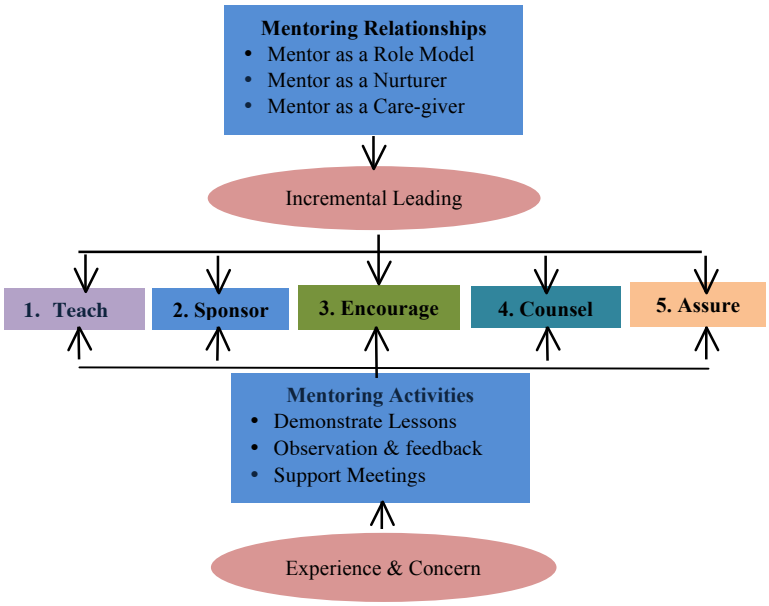
1. understand the root causes of student apathy regarding academic retention and success;
2. recognize the importance of three broad conditions as holistic pedagogical intervention to improve students' academic interest, engagement, retention and success;
3. learn the strategies to implement broad conditions to support a comprehensive intervention program; and
4. initiate collaborative partnerships with private, public and non-academic entities to negotiate targeted internships for students for sustained interest in the field of study.

Methodology

As a quantitative empirical post-ex facto research, this study will test correlations as well as the degree of relationships between the independent (the three interventions) and dependent (student success) variables. The methodology involves a case-control design having a sample of 40 students with 20 students in each comparison group. The hypotheses will test the cause-and-effect order between the control and experimental group students' proportional academic success. The first

of the three-year study will be spent in assigning students to control and experimental groups based on the entry exam scores. The second year will be devoted to faculty development, student mentoring and development of soft life/job skills. The third year will be used to place students in targeted internship programs. Collection of data for both groups' targeted courses will be coordinated through advisors. Appropriate measures will be taken to guarantee the rights of students and to maintain the confidentiality of the data ensuring that any potential benefits of the new knowledge sought will outweigh any risk to student confidentiality. Participant students' permission will be secured through informed consent. Quantified data will be organized and analyzed to answer the study objectives, questions, and hypotheses using contemporary statistical analysis techniques.

The Five-Step Mentoring Model



Source: Adopted from Anderson & Shannon's mentoring concept (1988)

Discussion

Initial aspects of this study have already been implemented. These include industry partnerships for student continuity through targeted discipline internships. Students have been given the preliminary test for selection of control and experiment groups. If the proposed theory is proven valid, it will serve as a best-practice model to induce the triple-helix-interaction mechanisms in other smaller academic institutions. Besides strengthening student success, it will expand the knowledge and understanding of the holistic, integrated approach as stimulus in motivating other smaller aspiring institutions as incubators for entrepreneurial explorations. A deficiency of this proposed pedagogical model is that given the current budgetary and economic situation, it is entirely dependent on sustained funding and commitment from internal and external sources.

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Community without Compromise: Cultivating Interactivity in Online and Blended Learning Environments

Tracy W. Smith & Emory Maiden, *Appalachian State University*

Abstract: The popularity of social media demonstrate how communities can develop and flourish in virtual spaces. How can higher education institutions and instructors leverage the power of community to enhance student learning – without compromising the rigor that is foundational to the Academy? Building on the scholarly literature and their own experiences teaching and providing faculty development in online and blended learning environments, the presenters will provide a rationale and demonstrate multiple practical methods for cultivating community in online and hybrid courses.

Literature Review

With an estimated 96% of public and private colleges and university now offering online courses (Allen & Seaman, 2006), it is not surprising that the academic community has seen increased research, writing, and professional development related to effective online teaching and learning. Since dropout rates among distance education students are 10-20% higher than those of students in traditional face-to-face courses (Carr, 2000), one research focus has been related to identifying and mediating factors that might contribute to student success, satisfaction, and persistence in online courses. Researchers have identified a feeling of isolation as one factor associated with higher dropout rates among online students (Galusha, 1997; Soles & Moller, 2001). Psychological distance (lack of community) in the online learning environment, can result in student isolation, frustration, boredom, overload, and low course completion rates (Hara & Kling, 2000; Northrup, 2002; Rovai, Wighting, & Liu, 2005).

On the other hand, Ascough (2007), Cho, Gay, Davidson, and Ingraffea (2007), as well as Pate, Smaldino, Mayall, and Luetkehans (2009) found that creating online social communities creates an encouraging environment of shared activities that results in deeper learning, higher final course grades, and successful online courses. Functioning in a community can enhance learning, improve academic success, and contribute to persistence in higher education (Hargis, 2005; Kember, 1987; Shea, Sau Li, & Pickett, 2006).

Most researchers point to the instructor as the critical player in cultivating a sense of community in online courses. Rovai, et al. (2005) as well as Liu, Magjuka, Bonk, and Lee (2007) found that instructors who facilitate a sense of community and student engagement significantly affect student satisfaction and quality of online learning. According to Ascough (2007) and Liu, et al. (2007), a welcoming teaching and learning community is central to online student knowledge acquisition, which in turn leads to meaningful learning experiences. Online courses create unique environments that require thoughtful care for instructors to help students become engaged in their learning and to design virtual classrooms that enhance a sense of community (Meyers, 2008). According to Berge (2002) and Northrup (2002), when instructors carefully plan ways for students to interact, students can focus on achieving course learning goals. Students who learn the most from online courses have online instructors who provide a structured and comfortable classroom environment that involves the participation of everyone in the learning activities (Young, 2006). Oriogun, Ravenscroft, and Cook (2005) and Liu, et al. (2007) posited that online student collaboration provides opportunities for students to realize their potential through meaningful engagement, which may ultimately increase student persistence rates in education.

Goals and Objectives for the Session

- Articulate a rationale for creating community in online and blended learning environments.
- Describe strategies for cultivating community in online and blended learning environments.
- Identify tools for building community and enabling communication in online and blended courses.

Description of the Practice to Be Modeled

- Providing a framework for cultivating community that includes interactions between instructor and students, students and students, students and content.
- Modeling the stages of Community Development: Beginning/Establishing, Sustaining, and Ending/Transitioning.

- Sharing examples of Learning Management System course resources, activities, and student responses that promote and illustrate community within online and hybrid environments.

Discussion

This presentation focuses on the centrality of community to effective teaching and learning. As course content and activities continue to migrate increasingly into virtual environments, higher education teachers are challenged to cultivate community among students who are not in the same physical space. Building on the scholarly literature and their own experiences teaching and providing faculty development in online and blended learning environments, the presenters will provide a rationale and demonstrate multiple practical methods for cultivating community in online and hybrid courses.

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21st Century Students Need 21st Century Professors: Applying the Servant-Professor Paradigm

Janet R. McNellis, *Holy Family University*
Dionne Rosser Mims, *Troy University*

Abstract: Today's college professor must facilitate the learning process of the 21st century student population. In their quests for personal and professional growth and fulfillment, adults are increasingly turning towards formal higher education. Today's student population is especially diverse and replete with situational, personal, emotional, and professional challenges that inevitably find their way into the classroom. To make a significant difference in their students' lives professors must undergo a paradigmatic shift in their view of the teacher-learner relationship. Today's professors must cast off their old role of sage on a stage and don the new role of servant professor – one who effectively supports, manages, and guides his or her students' development. In this interactive session the facilitators will present the main principles of servant professorship and will work with the participants to develop effective ways of applying these principles to the college classroom.

Literature Review

Arreola, Theall, and Aleamoni (2003) explain that traditionally, college professors comprised a loose confederation of content specific professional groups. However, today's faculty are practitioners of a more comprehensive meta-profession. They are a more unified set of professionals whose practice extends beyond their specific content expertise to the broader areas of psychology, the performing arts, organizational management, and leadership. Amidst the fiscal constraints facing higher education institutions today, there is greater reliance on technology and social media to enhance faculty course instruction and student learning, on the use of adjuncts, and on the expanded role of the traditional college faculty member within the professoriate. Fifteen years ago it was assumed that effective college instructors held the following qualifications: content expertise, engagement in professional activities to remain current in their fields, experience/practice appropriate to their fields, and the ability to perform and conduct research (Boyer, 1997; Theall & Arreola, 2006). This basic assumption may not be true today.

Today's professors are willing to play a greater role in nurturing and shaping their students' personal, professional, and academic growth. To do so successfully requires a paradigmatic shift in their view of appropriate teacher-student relations. Research findings suggest that today's professor, must serve as expert, nurturer, a facilitator of learning, and counselor (Galbraith, 2004; Gear, Krumrei, & Pargament, 2009; Tisdell, 2003; Vogel, 2000). In addition, we appropriate a concept from the field of management and add the role of "servant" to the list. The term servant and professor at first glance may appear to be unrelated and perhaps contradictory. However, there is a point of convergence: the giving of oneself/serving others (servant) by way of imparting specialized knowledge to others for their personal and professional growth (professor). Robert K. Greenleaf (1970), who proposed and popularized the concept of "servant leader", explained that there is a very important difference between someone who takes a "leader-first" vs. someone who takes a "servant-first" perspective. In the case of the servant professor, the educator leads the students' academic and personal growth by providing varying forms of guidance (Braskamp, Trautvetter, & Ward, 2006). In each case the guidance is tailored towards each individual student's highest priority needs. It also requires that, "the focus be shifted to the needs of the student rather than on the opportunity for the professor to put him or herself on center stage" (Kitahara & Hannay, 2008. p. 4). Part of this shift includes switching from teacher-centered to learner-centered teaching methods (Knowles, Holton, & Swanson, 2011; Merriam & Grace, 2011). However, completing this shift requires an even more fundamental change in their view of education itself: it entails accepting responsibility for what is actually *learned* rather than just for only what has been *taught*. It also requires the educator to take into account the specific context of their individual students.

Goals and Objectives

Objectives:

- Provide participants information on the needs of today's adult learners
- Give participants an understanding of the concept of servant professorship
- Help participants integrate the principles of servant professorship into their personal philosophies of education and into their classrooms

What attendees will learn:

- The principles of servant professorship
- Understanding of their teaching philosophies
- Basic andragogical principles
- The role context plays in adult learning
- Practical examples of how they can apply the theoretical concepts we discuss to their own classes

Discussion

We will involve the audience by periodically and frequently inviting them to answer questions on various topics and to share real-life examples of how the general principles that we discuss can be applied to their own classes. The questions we will ask include:

- What are the most pressing challenges you have encountered while teaching adults? What solutions have you tried?
- How would you describe the appropriate role of a college professor today?
- Can you provide an example of when you have experienced connectedness in your classroom or observed it in other classrooms?
- Can you provide an example of when you have experienced authentic instruction in your classroom or observed it in other classrooms?
- Can you provide an example of when you have experienced empathy in your classroom or observed it in other classrooms?
- Using the principles of Servant Professorship, what other activities can we employ to address the challenges professors face when teaching adult learners?

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Using Mixed Methods Research Designs to Conduct Research in Teaching and Learning

Elizabeth G. Creamer & Julaine Fowlin, *Virginia Tech*
Beth L. MacDonald, *Utah State University*

Abstract: Despite tremendous growth in the use of mixed methods designs in many applied disciplines, resistance to it continues. Faculty members often express concern that its design requires too much knowledge and time to be realistic for doctoral research. This practice session sets out to challenge this reservation by providing models of how different designs for mixed methods studies have been used in a variety of settings; including math education, higher education, and distance education. Audience members will be invited to discuss their own experiences with conducting mixed methods research, including the challenges they encountered. The session will close with a practical list of ways to design a mixed methods research study in disciplines involving teaching and learning.

While there is not necessarily agreement among leaders in the field about every aspect of its definition (Johnson, Onwuegbuzie, & Turner, 2007)), there is general agreement that the foundational distinguishing characteristic of mixed methods research is not only the collection and analysis of both qualitative and quantitative data, but the explicit integration of these data sources at some point of the research project. Leading textbook authors, John Creswell and Vicki Plano Clark, offer this definition of mixed methods research:

> Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process... As a method, it focuses on collecting, analyzing, and mixing both the qualitative and quantitative data in a single study or series of studies. (2011, p. 5)

This definition frames mixed methods as a distinct methodology and method. It shares with interdisciplinary research, an approach to knowledge that strives to consider multiple viewpoints or perspectives (Greene, 2007). It places emphasis on the "value added" of the mixing of the qualitative and quantitative strands.

There are a number of reasons why the nature of research about teaching and learning is particularly well suited for an approach that combines qualitative and quantitative methods. Some elements are best addressed by qualitative methods. Most centrally, this includes the need to consider elements in a context that can influence learning gains. Other qualitative dimensions of teaching and learning include the value of observing learning as it occurs, the ability to capture unanticipated processes and outcomes that are important to learning, and the ability to observe process. Other aspects of the nature of research about teaching and learning are more strongly affiliated with the quantitative than qualitative tradition, including the goal of identifying causal links mechanisms behind gains in learning; and the desire to achieve representatives.

Literature Review

Greene, Caracelli, and Graham (1989) proposed a typology of purposes for using mixed methods designs that continues to provide a useful way to frame the purposes and design of a mixed methods study. Their typology recognizes five designs for mixed studies: triangulation for purposes of corroboration, complementarity or elaboration, development for instrument design, initiation (to explore contradictions), and multi-level studies that they label as expansion. The typology links purpose of the study with other features of the design, like concurrent or sequential timing. The typology is useful not only in distinguishing different types of mixed methods studies, but also as a way to conceptualize the overall design of a study.

A study by Mazzola et al. (2011) illustrates the development design and the use of mixed methods to answer different research questions. Quantitative data were collected to calculate the frequency with which graduate assistants experienced stress. In the form of critical incidents, analysis of the qualitative data revealed types of stress and strains associated with them. This article is unusual in that mixing occurred in all stages of the research project.

Triangulation design is the name applied to studies that have the aim to use qualitative and quantitative strands in a confirmatory way or to increase the validity (Greene et al., 1989). Phillip et al. (2007) effectively used this design typology to blend paradigms, which describe beliefs that mathematics preservice teachers carry into both teaching mathematics and understanding how children construct mathematical concepts. To measure changes in preservice teacher's beliefs a descriptive analysis of averages and standard deviations from pretests and posttests described how different field experiences influenced aforementioned belief systems. However, qualitative data further informed this study as to why changes in preservice teachers' beliefs occurred. Phillip et al.'s (2007) study strongly represents this typology as mixing at all stages of the study. One strand of data would not have revealed what the convergence of each strand of data validated, as changes in content knowledge and pedagogical beliefs were found to result from varying types of field experiences.

Development designs use the results of one method \to help inform the development of the other method (Greene et al., 1989). Richardson and Ice (20 I 0) used this method to determine how different instructional strategies used in online forum engaged students and the relationship between each strategy and students' levels of critical thinking. The qualitative strand of this study involved using an a priori coding scheme to examine the quality of students' postings on various online discussion forums in order to determine students ' levels of critical thinking. The quantitative strand collected data via an end of semester survey to ascertain students' views. Using a mixed methods approach was valuable as data were collected on students' actually experiences and perceptions. Findings revealed disparities between instruction a l strategies that resulted in high critical thinking and students' preference, which indicates that students' are not always aware of their cognitive processes and that self-reports should not be used as the only source in determining effectiveness of instructional strategies.

Goals and Objectives for the Practice Session

The purpose of this session is to provide models to illustrate different ways that mixed methods research studies about teaching and learning can be designed. Objectives of the session include to:

1. Review the definition of mixed methods research and rationales for its use.
2. Discuss why a mixed methods approach is particularly suitable for research about teaching and learning.
3. Review a typology of purposes for mixed methods research studies, along with frequency of use.
4. Provide three models of the design of mixed methods studies from three research publications.
5. Exchange experiences in conducting mixed methods studies.
6. Discuss challenges faced in conducting a mixed method study.
7. Review recommendations for designing a mixed methods dissertation.

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Instructional Video Games: Overcoming Usability Barriers in the Classroom

Jessica L Barron, *Duquesne University*

Abstract: Using video games in the classroom can be an enriching and beneficial experience for both student and instructor. However, there are specific barriers that prevent educators from using video games in their curriculum. This practice session will examine the barriers and provide solutions in order to make integrating gaming into learning seamless and effective. Participants will be encouraged to share their experiences with technology and gaming in the classroom. Practical resources and existent lesson plans will be examined and discussed. Upon conclusion, participants will be able to take actual examples of using video games in the classroom and apply them to their lessons plans.

Literature Review

There are many barriers that prevent educators from using video games in the classroom. The majority of reasons are similar to the barriers preventing instructors from using any type of technology in their teaching method: time constraints, lack of equipment and the fear of trying something new are just a few. In the article, Why educators should care about games, (2009) Barab, Gresalfi, & Arici reason that using video games in the classroom encourages a state of learning called "transformational play." Transformational play is not just the act of playing the game, but applying knowledge and skills through decision making and critical thinking while playing the game. "Positioning students in this way sparks their interest, but equally important, leads to deeper engagement with content." Gee supports the idea of using gaming ass an instructional tool, arguing that "Good game designers are practical theoreticians of learning." Quality video games that spark the interest of millions of players are using common teaching techniques within their game; however, the player doesn't even notice they are learning. Not only are educators supporting the use of video games, they are creating online resources for fellow instructors to use and modify. Educational sites have been created for many video games, including Minecraft (http://minecraftedu.com/), Portal 2 (http://www.teachwithportals.com) and SimCity (http://www.simcityedu.org/). Using these resources and exploring the possibilities that are already being implemented can help educators overcome some of the barriers preventing them from using video games in their classroom.

Goals and objectives for the practice session

As a result of this practice session, participants will be able to:

- Identify the common barriers that prevent using video games in the classroom
- Recognize the benefits of using video games and how it can create positive learning environments for instructors and students
- Observe the different ways that video games can be easily incorporated into a variety of different subjects
- Find and share educational resources that provide lesson plans, real-world examples and technical support for using video games
- Effectively integrate video games into their lesson plans

Description of Practice

This presentation will discuss the difficulties instructors face when integrating technology into their classroom. Then I will compare them with the barriers that prevent educators from using video games in the classroom. I want to create an open discussion about their experiences and fears using technology and video games in the classroom. The two barriers I will then focus on are "Why should we use video games?" and "How can we use video games?" First I will address the "why." I will review the current literature, sharing the thoughts and practices from educators like Clark Aldrich and Sasha Barab. Then I want to focus on the "how." I want to give the participants concrete examples of how to use video games in a variety of ways. I will show them several video game websites that contain usable lesson plans and creative ideas. I will show example of a lesson plan I have used in the past using the game SimCity. Finally, I will talk about equipment accessibility and budget concerns. Many video games can be played on a PC, and special education prices are available. It is my hope that confronting and discussing these major issues will help aid the integration process of video games in the classroom.

Discussion

This presentation is meant to be used as a guide that is backed by empirical research. When I mention to my colleagues that I an advocate of using video games in the classroom, I can see the interest in their eyes. However, the interest is quickly vanquished when they become overwhelmed by the possibility of introducing a video game to a classroom that they aren't sure how to play. If they do know how to play the game, purchasing a classroom license and incorporating it into the classroom are other deterrents. Their fears turn into barriers and override their original excitement over a new teaching tool. This presentation addresses and provides solutions for those barriers.

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Exploring Innovation in the Learning Landscape

Laurie Burruss, *Pasadena City College*

Abstract: As educators, how can we identify and foster the key tenants of innovation? If we focus on producing innovators, not subject matter experts, how might we shift our teaching approach? What lessons can we learn from real world leaders who possess the traits of risk-taking, curiosity, and creativity? This session provides practical examples of how to incorporate questioning, experimentation, observation, association, and sharing into our curriculums. Join us as we provide and compare examples.

Learning in the workplace is changing. Key to organizational success is "innovation" but it really isn't taught in education or at the workplace. What is needed are leadership and talent strategies to drive innovation. By identifying and fostering the key tenants of innovation, organizations are able to focus on producing innovators, not subject matter experts. By shifting our teaching and learning approaches, we can learn lessons can from real world leaders who possess the traits of risk-taking, curiosity, and creativity. In common to the most innovative business leaders and companies are five teachable and learnable traits – providing a platform for adjusting our own teaching methodologies to nurture and promote innovation and creativity.

Through the understanding of these five (5) processes noted below, both students and employees can learn the practical and "teachable" skills that lead to innovation in academic rigor and sustainable success in business:

- Questioning
- Experimentation
- Observation
- Association
- Sharing/Networking

By infusing our "hallway" meetings, sidebar discussions, and small team projects with a culture of "learnable" innovative practices, organizations can reap the benefits of creativity and passion as the drivers of productivity, collaboration, and long-term financial success.

Why was "Innovation in the Learning Landscape" research undertaken?

- To foster key tenants of innovation
- In teaching and learning at the university and workplace, to explore where teaching and practicing innovation, creativity, curiosity, and risk-taking belong
- To research teachable skills that foster innovation questioning, experimentation, observation, association, and sharing
- To practice iterative creative protoyping

What were the results of the initiative/project?

- Small teams employing innovation techniques to solve challenge-based problems
- Project-based assessments that exceeded individual learner's and employer's expectations

What impact did this initiative/project have?
Learners, employees, professors, and employers are able to:

- Evaluate what activities occur in "valuable" face-to-face time as a group (from traditional storytelling and lecturing to collaborative "groupthinks" to facilitated assessment, feedback, and critiques).
- Then consider what tools and methods extend learning outside the four walls of the classroom/office with on-your-own learning any time, anywhere, any place
- Create an understanding and a strategy that allows for and encourages learner-centric practices, i.e. self-direction, self-responsibility, self-motivation, self-awareness and self-management.
- Integrate "innovation" practices in both online and face-to-face learning environments amongst small teams and ensembles

Each of us has the power to improve, elevate, and advance his or her "Innovation IQ." By sharing with others and practicing the five learnable and immediate innovation techniques, opportunities exist to foster a culture of innovation.

These types of creative practices have an immediate and direct impact in sustaining a culture of innovation on a campus or at a workplace, in the lives of educators and students, or in the relationships of employees, and employers.

Takeaway Techniques: Collaboration, Project Management, The Fail, Feedback, Fixit Cycle, Rapid & Agile Iteration

http://www.youtube.com/watch?v=-G67MDsA5tI

Faculty and Librarian Partnerships: Avenues for Providing Information Literacy and Critical Thinking Instruction to Student Breadwinners and Others

Sandra Seay, *East Carolina University*

Abstract: In this practice session, a description of how a faculty member and a librarian are partnering to provide information literacy and critical thinking instruction will be given. Information literacy is the ability to access and evaluate information. Accessing and evaluating information is the foundation for making informed decisions and it is a necessary part of the critical thinking process. An actual class assignment that requires the use of information literacy and critical thinking skills will be used to demonstrate the roles played by the faculty member and the librarian in helping students successfully complete the assignment. Information from experience and the literature will be used to identify factors that prevent student breadwinners from using academic support services. Participants will be encouraged to add to the discussion by sharing assignments and strategies they are using to address both of these skills.

Literature Review

Information literacy is as important as computational, written, and oral skills for functioning in present day society (Thompson, 2002). There is a mis-calibration between students' perceptions of and their actual ability to retrieve and evaluate information (Gross & Latham, 2012). An assignment in any content area that requires students to use information retrieval and evaluation skills is providing students practice using critical thinking skills. Faculty members as content experts make assignments that require the retrieval and assessment of information. Librarians as information retrieval experts guide students through the process of accessing information sources and then evaluating the trustworthiness of the information (Lindstrom & Shonrock, 2006). Maintaining employment is mandatory for student breadwinners who are often responsible for the financial and physical care of children, parents, and other relatives (National Center for Education Statistics [NCES], 2003). Work obligations prevent these students from taking advantage of assistance services (Kuh & Gonvea, 2003). The need exists for faculty to be flexible in helping these students obtain content knowledge and academic assistance when needed.

Goals and Objectives

Attendees will leave the session with the following: a definition of information literacy; an understanding of factors identified in the literature and from personal experience that work against students developing strong information literacy skills; an understanding of why the need exists for faculty and librarians to work collaboratively in helping students use assistance services, and a number of specific ideas for implementing an instructional collaboration with a librarian.

Description of the Practice

In this session, a description will be given of an assignment that involves a critique of a nationally syndicated newspaper column and how this assignment relates to a faculty-librarian partnership. I will share the instructions and rubric I use in explaining the assignment to the students. I will explain the steps I take to identify students who might especially benefit from having personal sessions with a librarian in order to complete the assignment. I will describe the values I seek in librarians who partner with me. I will explain why I prefer students meeting individually with a librarian rather than in a group. The specific duties of each of the partners will be detailed. I will recount my experiences with students I have approached and suggested that they work with a librarian to complete the assignment.

Discussion

From teaching both undergraduate and doctoral students, I know that a desire to succeed is often hindered by their family and work concerns. It is not unusual for an undergraduate student to inform me of his or her need to take a parent for cancer treatments or to accompany a child to a court hearing. Often the performance of these activities results in the student losing work hours. In turn the student makes up the lost work hours by reporting to work instead of coming to class. Because missing classes due to documented personal concerns is a reality, I began

posting all of my instructional materials on line; this allows students continuous access to class materials. I also began allowing students with documented concerns to use class time to meet with librarians, counselors, and other support staff. The need to meet with a librarian became acute as I introduced critical thinking into my instruction. I have found that students have facility with social media tools, but cannot use technology to perform academic research. Student statements on my annual teaching assessments commend my flexibility in allowing them class time to work with librarians and other support staff. For me, a very important outcome is that students often report being able to use critical thinking in completing assignments in other classes.

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A Conversation About the Integration of Experiential Learning Opportunities in and Outside of the Classroom

Carrie Sanders & Kavin Ming, *Winthrop University*

Abstract: This conversation will provide the space for participants to share their experiences providing experiential learning opportunities and gain insight from others. Participants will be asked to describe their own experiences with and interest in experiential learning in addition to identify ways they have incorporated activities into their work. As a group, we will identify and discuss ways in which we may facilitate meaningful learning opportunities for our students in various disciplines. Participants will leave with simple, straightforward strategies that they can take with them and implement as appropriate to meet educational needs in their various settings.

Literature Review

Experiential learning theory (as cited in Guthrie & Jones, 2012) defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" (Kolb, 1984, p.41). Bringing concepts to life, 'learning by doing,' and making instruction more meaningful continues to be of interest to educators. Bobby Ann Starnes indicates that over a half century ago John Dewey expressed the belief that for education to be genuine, it must come through experience (Starnes, 1999). Experiential learning in which students have opportunities to apply their knowledge has been identified as a positive aspect of education and leadership development (Guthrie & Jones, 2012). There is a benefit to the student and the learning environment when they are engaged in hands-on opportunities (Peterson, 2009). Because students have opportunities to immediately implement new information, they gain insight and understanding into theoretical concepts, and develop competence in their abilities (Leventhal, 2004). Furthermore, they learn to effectively share their ideas and reflect on their practice. They also receive opportunities to work with diverse student populations, and as Cruz and Patterson (2005) state, students are provided with opportunities to become less "culture-bound." Within the context of the learning environment, students bring energy and new perspectives to the learning situation and are able to meet the needs of learners in individualized or small group settings. They are also able to share new ideas with their collaborating supervisors (Martin, Hutchinson, & Whitehead, 1999).

Goals and Objectives

The goals of this session are for participants to recognize the importance of incorporating experiential learning opportunities in higher education and leave with simple, straightforward strategies that they can take with them and easily implement to meet educational needs in their various settings. The overall goals are supported by coming together to:

- Identify the importance of experiential learning opportunities
- Provide examples of experiential learning opportunities
- Discuss ways to integrate experiential activities

Description of Topic to be Discussed

Experiential learning can be integrated throughout various programs or individual courses to enhance and apply course material. During this session, the discussion will be framed by the importance of incorporating experiential opportunities to promote student engagement in learning. The presenters will provide examples of the experiences they are offering students at the undergraduate and graduate level both in and outside of the classroom.
For example, at the undergraduate level, teacher education students may experience Teachscape, which allows them to watch videos of teachers in the field. Teacher education students also have opportunities to work with students who are English Language Learners, who have disabilities, and who are gifted and talented through *Star Rotation* courses. In addition, field-based methods courses allow students in teacher education to learn teaching methods and apply them in the field for five of the fifteen semester weeks. At the graduate level, counselor education students have the opportunity to develop specializations and hone their skills by participating in site-based or off-site clinical experiences during their practicum and internships. These experiences allow for students to receive supervision through direct feedback from on-site and university-based supervisors.

In addition to the out of class experiences, students also experience a variety of interactive experiences inside of the classroom. Web-based technology provides a medium in which students and faculty are able to use resources in the classroom to enhance students' learning experience. Video streaming provides a tool for educators to offer dynamic visual representations of various concepts and promote classroom discussions to reflect on the material as well as provide insight into the reactions of students. Not only are students able to learn more about the material, but they are also experiencing technology being integrated in the classroom, which models this instructional practice. Students are given the opportunity to participate in role-play, group problem solving, collaboration, and they provide peer feedback to enhance their learning experience. Along with facilitating the activities mentioned, instructors also provide direct modeling of concepts so that students experience a visual representation of the concept along with a verbal description.

Facilitation Techniques

The facilitators will begin the session by seeking to learn why participants chose this session. We will ask the participants what brought them to the table in order to provide a baseline for the direction of our discussion. Once we have done a quick check-in with the participants, we will provide a brief overview of the literature and discuss the value of experiential or field-based learning. Next, we will briefly share what we are doing in our current institution that is considered to be experiential with specific examples of what students are doing in the field. Then, we will open it up for the group to share about their own experiences. In order to facilitate the discussion, we will prepare a list of guiding questions to use if needed.

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Conversation: Student Conceptions of Research Writing: From Fact-Finding to Critical Dialogue

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Abstract: College instructors frequently express disappointment with student research papers, which often do not demonstrate the critical and analytical thought considered characteristic of academic discourse. This dissatisfaction may be reflective of a disconnect between college students' and instructors' views on the purpose and the nature of research: while scholars generally understand research as a process of critical inquiry, students often see it as an act of mere fact-finding. While the classroom can be a space in which students learn to approach research as dialogical and exploratory, this opportunity often becomes lost, as instructors' conceptions of the research process do not always translate into actual teaching practice. Studies on students' and instructors' approaches to research writing suggest that if students are to understand and to engage in research writing as a creative, critical, and meaningful process of knowledge construction, educators need to develop pedagogical approaches and models that frame research and writing in different terms. This conversation will open with a brief description of research findings on students' and instructors' approaches to research and research writing. Participants will then be invited to reflect on the implications of these studies for teaching and learning, as well as to connect this research to their own experiences with teaching research writing.

Literature Review

Doubts about the value of the traditional research paper have become commonplace in higher education, particularly since the publication of Richard Larson's 1982 essay "The 'Research Paper' in the Writing Course: A Non-Form of Writing." For Larson, the decontextualized nature of most research papers and the artificial way in which they frame the research process prevents students from engaging in critical thought and analysis. Others argue that research writing continues to be essential to student learning, but should be reframed in order to emphasize the rhetorical nature of both research and writing. Doug Brent, for example, notes the move in composition studies during the late 1980s and 1990s from assigning "research papers" to describing research writing as "reading to write" and "writing from sources" (Brent, n.d.). As Brent suggests, this shift in terms signals an increased emphasis within some writing courses on contextualizing and analyzing sources in order to construct new meaning.

Despite this trend in composition studies, research indicates that students continue to view research writing as a simple fact-gathering activity, rather than as a process of analysis and critical inquiry. As Schwegler and Shamoon (1982) indicate, there appears to be a disconnect between college students' and instructors' views of the research process. Interviewing both college students and college instructors, Schwegler and Shamoon (1982) found clear differences between how these two groups view the purpose of research writing. While instructors described the research paper as analytical and interpretive in nature, students generally understood these assignments to be primarily informative and factual (Schwegler & Shamoon, 1982). Instructors' conceptions of the research process, however, may not always translate into their teaching practice. Holliday and Rogers (2013) conducted an observational study of research instruction in a college writing course. They noted that the majority of writing assignments and of instructors described the research process in terms of finding sources, while placing little emphasis on learning about sources.

Further studies on student writing and research behaviors provide further evidence that students approach research writing as the mere gathering and reporting of facts. Howard, Rodrigue, & Serviss (2010), in a detailed analysis of 18 college student papers, found that plagiarism and patchwork are commonplace. Contrary to common perceptions among instructors, these tendencies in student writing may be due more to a lack of engaging with and understanding sources, rather than to an attempt to cheat (Howard, Rodrigue, & Serviss, 2010). In keeping with the idea that students often approach research writing as a process of uncritically patching together facts, Head and Eisenberg (2010) found that students tend to consistently use the same research strategies and sources, regardless of the task at hand (Head & Eisenberg, 2010). The inclination to apply the same search strategies regardless of rhetorical purpose again may reflect a common view among students of research as a process of fact-finding.

Student perceptions of the research process, however, are not necessarily fixed. Limberg (2006) conducted interviews with teachers and librarians and concluded that students' conceptions of the information seeking process influence how they engage with research and learning. Students who view information seeking as a process of scrutinizing or analyzing are likely to use more sources and more holistic strategies to develop a deeper understanding of their topics.

On the other hand, those who view research as fact-finding use more surface approaches to source evaluation and use (Limberg, 2006). Holliday and Rogers (2013), reflecting on both Limberg's findings and their own observational study, conclude that classroom discourse on the research process may influence how students view research and writing. More specifically, an emphasis on "finding sources" may limit student engagement with research as a process of inquiry (Holliday & Rogers, 2013).

These studies on student and instructor approaches to research writing suggest that if students are to understand and to engage in research and in writing as a creative, critical, and meaningful process of knowledge construction, instructors and librarians need to develop pedagogical approaches and models that frame research and writing in different terms.

Goals and Objectives

- Recognize common student research behaviors and reflect on their implications for teaching and learning.
- Explore and share instructional approaches, activities, and assignments which foster student engagement in research writing as a meaningful process of dialogic exchange and knowledge construction.

Description of Topic to be Discussed

College instructors frequently express disappointment with student research papers, which often do not demonstrate the critical and analytical thought considered characteristic of academic discourse. This dissatisfaction may be reflective of a disconnect between college students' and instructors' views on the purpose and the nature of research: while scholars generally understand research as a process of critical inquiry, students often see it as an act of mere fact-finding.

While the classroom can be a space in which students learn to approach research as dialogical and exploratory, this opportunity often becomes lost, as instructors' conceptions of the research process do not always translate into actual teaching practice. Studies on students' and instructors' approaches to research writing suggest that if students are to understand and to engage in research writing as a creative, critical, and meaningful process of knowledge construction, educators need to develop pedagogical approaches and models that frame research and writing in different terms.

Facilitation Techniques

This conversation will open with a brief description of research findings on students' and instructors' approaches to research and research writing. Participants will then be invited to connect this research to their own experiences with teaching research writing. To help concretize abstract concepts, the moderator will provide a handout with examples of class activities and assignments that relate to the concept of research and writing as processes of critical inquiry. These examples may serve as catalysts for discussion if needed.

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Wednesday

February 5, 2014

Session 2

11:10-12:00 PM

http://www.cider.vt.edu/conference/

PINK TIME: Moving from Grade-Based to Intrinsic Motivations for Student Learning

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Abstract: Higher education is currently facing a convergence of crises. Studies have shown that students are not learning to think, they are taking on loads of student debt and they're not finding jobs when they graduate. Furthermore, the American university, once viewed as an extraordinary tool for promoting meritocracy and upward mobility has been exposed as an instrument to reinforce class-based differences. These concerns have contributed to a growing chorus in the popular media that questions the value of a college degree, even as research continues to identify important social and economic benefits of completing college. To address these questions, this paper describes and analyzes a classroom intervention to promote intrinsic motivation for learning in college students at a large public university in the United States. Here, grades and instructor expectations for content are viewed as students' primary motivations for learning, and correspondingly present important obstacles for improved critical thinking skills, student autonomy, and engagement in higher education. Following this approach, this study uses mixed methods of data collection and analysis to examine students' learning activities and perceptions of learning outcomes in response to an iterative assignment that asks students to "skip class, do anything you want, and give yourself a grade." The findings offer support for the ideas that this assignment promotes creative and experiential forms of learning and supports student perceptions of their own engagement with the course and ability to think critically.

Background

Higher education is currently facing a convergence of crises. Studies have shown that students are not learning to think (Arum & Roksa, 2011), they are taking on loads of student debt (Selingo, 2013) and they're not finding jobs when they graduate (Newman, 2012). Notwithstanding the debate surrounding the value of a college education, educators must work to redress the apparent shortcomings in our current approach to educating. For us, an educational model that continues to prioritize the content of learning over the process of learning will fail students. Straight "A" students will not necessarily thrive in this new world, learners will. Our efforts to further examine these issues here proceed from three basic questions: How can educators prepare students for an uncertain future? What should we teach them? And how can we engage them in this endeavor? To address these questions, this paper draws on scholarship in student-centered learning(Weimer, 2013) and motivation in education (Pink, 2009) to help describe and analyze a classroom intervention to promote intrinsic motivation for learning in college students at a large public university in the United States. Here, grades and instructor expectations for content are viewed as students' primary motivations for learning, and correspondingly present important obstacles for improved critical thinking skills, student autonomy, and engagement in higher education. Following this approach, this study examines students' learning activities and perceptions of learning outcomes in response to an iterative assignment that asks students to "skip class, do anything you want, and give yourself a grade." To examine some of the outcomes associated with this assignment, we have focused on four specific research questions: (RQ1) What types of projects will students select if given the autonomy to select? (RQ2) What grades will students give themselves if given the autonomy to grade? (RQ3) Will assignment type and grades be related? If so, how? (RQ4) How will students perceive an assignment, which gives them the autonomy to select projects and grade themselves, in terms of critical thinking, class engagement and leadership? For the remainder of the paper, the term "projects" will be used to represent the activities and presentations that students did for each of the three iterations of PINK TIME.

Methods

Several types of data were collected for these analyses. Permission was obtained from students to record and present basic project descriptions, project types, and grades (RQ1, RQ2, RQ3). These data were collected for most students in the class (i.e., 14 of 15). In addition, an anonymous, semi-structured survey was conducted to collect students' perceptions of the assignment. The survey was comprised of two parts. In the first part, students were asked to rank, according to a likert scale, the extent to which they agreed or disagreed with each of following 4 statements: (1) I liked the PINK TIME exercise; (2) The PINK TIME exercise helped me to engage in the class; (3) The PINK TIME exercise helped me to develop critical thinking skills; (4) The PINK TIME exercise helped me to feel like I was a leader. In the second part, students were asked to write short responses describing why they ranked

each of these statements the way that they did. These data, which were collected for most of the students (i.e., 14 of 15), provide insight into how students perceived the assignment in terms of engagement, critical thinking and leadership (RQ4). To facilitate analyses, student projects were categorized into three different types: Academic, Creative and Experiential (this categorization will be referred to as ACE and individual categories will be capitalized throughout the paper). Category types were determined inductively once the semester was over. We analyzed data on student perceptions of the assignment in two ways. First, we calculated proportions of responses for each level of agreement/disagreement for each likert statement. Second, we used qualitative analysis software (i.e., Dedoose) to analyze the content of students' short responses from the survey tool. Our analyses here included inductively coding all students' comments to identify similar themes across students' responses and highlighting specific comments that exemplified dominant themes (RQ4).

Findings

Measures of the incidence of students' project types (RQ1) and average grades (RQ2) per type (RQ3) are presented in Figure 1. Measures of students' likert responses are presented in Figure 2. Responses were overwhelmingly in agreement with the statement prompts (described above) with only a handful of "neutral" responses and a single "disagree" across all the statements. Despite variation in the length and descriptiveness in students' qualitative responses to open-ended questions, their perceptions of the PINK TIME assignment (RQ4) were strongly consistent with each other. The most common themes arising from student responses included: autonomy, critical thinking, engagement and assessment – in this order. (Descriptions of student comments omitted). Discussion of these findings address the context of the course, the role of grades, the relevance of this assignment for other course types, instructor involvement, and planned modifications for the future.

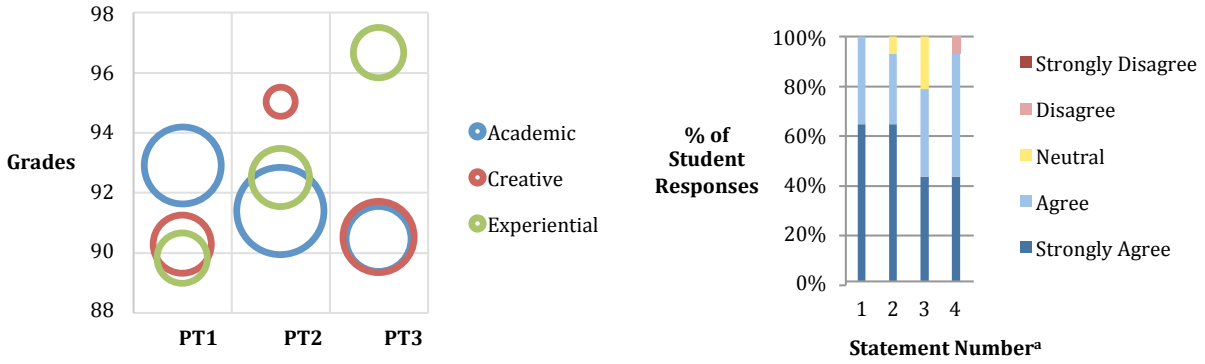

Figure 1. Average grades and project type (i.e., Academic, Creative, Experiential) frequency (indicated by circle size) for each PINK TIME. N=14 (out of 15) for each column.
Figure 2. Percentages of student responses to likert scale statements. [a] Statement 1: I liked the PINK TIME exercise. Statement 2: The PINK TIME exercise helped me to engage in the class. Statement 3: The PINK TIME exercise helped me to develop critical thinking skills. Statement 4: The PINK TIME exercise helped me to feel like I was a leader.

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Teaching to Support Academic Confidence for Persistence and Success

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Abstract: Using data from nearly 100 community college student interviews, this paper examines students' descriptions of their confidence upon entering college and their changes in confidence early in their college careers. Our findings suggest that student confidence is shaped by past academic experiences and expectations of college upon entry, but continually shifts as a result of student interactions with peers, faculty, and others. Using student descriptions of their perceptions of college and of themselves, we describe the characteristics of students who describe themselves as self-assured and those who identify as apprehensive. Our analysis indicates that academic confidence can impact student motivation and academic behaviors associated with achievement. Importantly, this paper identifies the nature of experiences that positively reinforce student confidence, events that we term *experiences of earned success*. In addition to our analysis, we present teaching strategies to create opportunities for students to experience earned success and ultimately enhance their commitment to academic pursuits.

Literature Review

Social-psychologists and cultural sociologists have long suggested that students' self-perceptions are related to behaviors associated with academic performance. In particular, students' self-efficacy and confidence may be tied to their aspirations, motivation, and ultimately their persistence (e.g., Cech, Rubineau, Silbey & Seron, 2011). For example, expectancy-value theory demonstrates the ways in which effort is shaped by an individual's expectations for a successful outcome (Wigfield & Eccles, 2000). Similarly, psychologists have asserted that if a student does not expect to achieve success, he or she is less likely to engage in positive self-regulatory behaviors related (Oyserman, Bybee & Terry, 2006). Research suggests a range of factors which may shape the academic confidence of postsecondary students and subsequently affect outcomes and success. For example, knowledge of and comfort with the norms and expectations of educational institutions has been identified as an important component of a successful transition to college (Leese, 2010). Moreover, dominant cultural narratives and persistently low expectations of some students, particularly working class students and students of color, have been associated with poor academic performance (Steele & Aronson, 1995) and an under-developed academic and collegiate identity (Howard, 2003). Likewise, research suggests that student perceptions about intelligence and learning and previous experiences with successes and failure are associated with effort and achievement (Cox, 2009; Dweck, 2006). These theoretical perspectives indicate that a number of pre-collegiate and collegiate factors shape students' sense of themselves as competent students and are correlated with academic behaviors, persistence, and performance.

Methodology

This paper uses data from semi-structured interviews with 97 students at three community colleges. The interview protocol included questions about students' expectations of college before enrolling, their college experiences, and how those experiences resulted in changes in their perceptions of college. Participants were relatively representative of the student population at the three colleges in the study. Just over half of interviewees were women, 35 percent were students of color, and 55 percent were between 18 and 20 years old at the time of the interview. Interviews were audio recorded, transcribed and coded using NVivo. The construct of academic confidence emerged inductively from a thematic analysis of the dataset; in response, we established a series of codes to capture student confidence and the factors that impact it. The research team coded the interview data for instances in which students described their confidence. We sorted those instances into descriptions of "past" and "present" confidence, and then coded for factors that appeared to interact with students' confidence, such as knowledge about college, goals and plans, past experience and motivation; and for shifts in confidence.

Results

We first outline the nature of the experiences of students who entered college with confidence, whom we refer to as *self-assured students*, and of students who were *apprehensive* about their collegiate endeavors upon entry. We then

describe two types of shifts that emerged most prominently in our data. The first type of shift is rooted in *experiences of destabilization* that led students to reevaluate their understanding of what it means to be a college student and that in some cases undermined students' confidence. The second shift we identify occurred when students received tangible evidence about their potential, which then inspired them to feel more confident about their college endeavors. These experiences, which we call *experiences of earned success*, reshaped students' perceptions of their own abilities, even if they coincided with a realization that college was more challenging than expected. Such experiences were prevalent among both apprehensive and self-assured students and were associated with reported positive shifts in confidence, enhanced motivation, and more robust academic identities. Experiences of earned success were varied but had three factors in common. They provided students with evidence of success, they resulted from that student's own actions or effort, and they were related to an identified area of concern or weakness.

This paper provides insights into teaching practices that can help students earn success. For example, the data suggest that faculty members can make the results of students' efforts transparent to them. Without feedback, students in our sample found it difficult to measure their progress and were likely to make assumptions about their abilities. However, interviewees' reliance on teacher feedback to gauge their learning suggests that students need additional opportunities to learn how to reflect on their work process and product. Asking students to reflect on the amount of effort they expended on a task or to evaluate their work against a rubric can help students become more cognizant of the relationship between their academic behaviors and the grades they receive. Additionally, instructors may also foster student success by providing opportunities for guided practice of academic skills such as notetaking and study techniques. When students in our sample experienced success after applying these skills, they reported increases in their academic confidence and an intention to employ them again.

Discussion

The findings presented in this paper confirm existing research suggesting that when students do not expect to be successful they are less motivated and less likely to exert effort (e.g., Cox, 2009). If their confidence is tied to a lack of information about the expectations of college, they may not engage in appropriate self-regulatory behaviors that lead to success. One important strength of the current study is that it explores the shifting nature of the confidence of in ways that have not been done before. The findings highlight how individual faculty members can create opportunities for students to earn success, calibrate their confidence appropriately, and develop positive perceptions of themselves as learners.

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Increasing Retention in Online Courses: Integrating Learning Preferences with a Digital Search Tool

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Abstract: Universities are often concerned with issues of student retention, both in student and class retention rates, and the amount of knowledge a student gains and maintains in a course. Online and hybrid courses are becoming increasingly popular, however these courses often have high attrition rates. This high attrition can be blamed on difficulties navigating course material, having a lack of control over learning, and lack of individualization of learning. In an effort to increase retention rates in university students, we developed a tool that integrates information from student learning preferences, multimedia learning objects, and an ontology of security concepts that will help adapt security course content, and, in the future, content of any course, to individualize student learning. The Ultimate Course Search tool (UCS), part of the iSECURE research project funded by the National Science Foundation, is an open source technology that can be used in online or hybrid courses but also helps students increase learning in face-to-face course environments, and could be extrapolated for use with other subjects. We will discuss our process in building and implementing initial stages of the tool, including preliminary student learning outcomes. Participants will discuss the importance of and differences between learning preferences, the implementation of multimedia data in coursework, and the implications of combining the two in an effort to increase student retention and to help students learn more effectively and efficiently. Participants will also explore and discuss the digital course development tool through an interactive demonstration.

Literature Review

Multimedia materials (e.g. text, image, video and audio) are effective learning tools. One of the applications of multimedia is in higher education where multimedia learning materials are integrated into online and hybrid courses. Indeed, most universities offer online courses with lecture videos, slides, online textbooks and other teaching materials. While online course learning can be superior to traditional face-to-face courses when pedagogically appropriate methods are used, online courses often fail to be successful for Millennial students (Friedman & Friedman, 2011). Reducing attrition rates is important in any course, but especially in an online environment, where students often lack the face-to-face contact with faculty and peers. Morris and Finnegan (2008) found that students who dropped out of an online course tended to have difficulties locating content and resources and often felt "lost" in the course. Conversely, students that successfully navigate an online course do so if they believe they have the ability to control the environment of the course (Morris & Finnegan, 2008) and to meet their own intrinsic learning goals by placing new knowledge in their contextual framework (Fisher & Baird, 2005). In addition, Friedman and Friedman (2011) determined that successful online courses need to utilize a variety of teaching tools that: (1) enhance learning for students using different learning preferences, (2) can keep student attention, and (3) can individualize learning in terms of pace of learning as well as information. In other words, students should be able to learn as quickly or slowly as they need, while being able to build upon their current knowledge or go back and fill in learning gaps. Thus students would be able to construct their own knowledge in a way that best suits their internal learning structure, providing deeper more permanent understanding. From a Constructivist point of view, individualizing learning allows students to use their current life experiences and worldview to actively build their knowledge base (von Glasersfeld, 1995). According to Chen (2003) the most successful learning activities in a course should be developed from ordinary practices and tools of the culture and should help construct knowledge multiple times using a variety of methods and contexts. Since Millennial students consider technology as part of their current cultural norms, it is important to use technology in creative and encompassing ways to help students build their knowledge base.

Goals and Objectives for the Practice Session

This session will begin with a discussion on the latest research for increasing retention and learning in online and hybrid courses, as well as how to integrate technology into courses. We will discuss the development and implementation of the iSECURE tool, including the integration of individualized learning styles into technology-

based course content. We will discuss the process of developing and implementing the individualized online course tool and will provide an interactive demonstration of a working model to participants. Participants will discuss learning styles and multimedia usage in pedagogy, and tools to increase student retention and knowledge growth rates.

Description of the Practice to Be Modeled

We will demonstrate a model of our iSECURE online course tool currently in development. This tool is intended to help students access class information according to their learning preferences. For example, a student who learns visually will be able to search for textbook information, graphs, and charts, while an auditory learner will be able to search for a specific section of a class lecture video based on the information he/she needs. Student perceptions of utilizing this tool and educational outcomes will be discussed.

We will lead a discussion on learning styles, multimedia usage in the classroom, and the effect of combining the two on classroom development. We will also allow participants to ask questions about the tool or the tool development process, as well as use the tool.

Discussion

The open source learning management system we are developing can help students build their own learning by adding to their knowledge base as they are being introduced to new material. When students want to learn more about a subject, they can instantly search the course to find new ways of learning the material. When choosing specific learning platforms, the students can choose learning tools that best fit their learning preferences, while continuing to follow course material. The outcome of this project will have a broader impact on the education of security courses. The learning management system can be extended to other domains if the ontology is altered. This is intended to increase the efficiency and effectiveness of student learning, as it helps individualize material to the student. This in turn helps students increase learning, and may impact overall student retention rates at universities.

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Critical Thinking in the College Classroom: Teaching the Teachers

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Abstract: There is a general consensus among educators that improving students' critical thinking skills is a major goal of higher education. However, there is also some agreement that the educational system has not performed well in consistently producing critical thinkers. In fact, research suggests that traditional classroom instruction has little impact on students' critical thinking skills. In this practice session we will present an approach used at our institution to help faculty become more deliberate, explicit, and transparent in their incorporation of critical thinking content into their courses. We will introduce participants to a critical thinking framework conceptualized by Richard Paul and colleagues, and we will engage participants in model activities that are directly applicable to their own classrooms. We will conclude by facilitating a discussion on the ways that participants can initiate and develop faculty-driven projects to improve student learning by enhancing the pedagogy of critical thinking.

Literature Review

Critical thinking can be defined as "reasonable reflective thinking focused on deciding what to believe or do" (Ennis, 1997). As teachers we may assume that effective mastery of course content requires critical thinking and, therefore, we are teaching critical thinking skills simply by teaching content designed to stimulate critical thought. The general consensus is, however, that the educational system has not performed well in consistently producing critical thinkers when critical thinking instruction is implicit or approached superficially (Barbuto, 2000; Burbach, Matkin, & Fritz, 2004; del Bueno, 2005; Lizzio & Wilson, 2007; Paul, 2005; Pithers & Soden 2000). Research suggests that improvement of critical thinking skills is possible, but it requires explicit, deliberate instruction in critical thinking (Davies, 2006; Solon, 2007; van Gelder, Bissett, & Cumming, 2004). In addition, studies show that the planned integration (sometimes referred to as "infusion") of critical thinking material and exercises with course content "can produce significant and substantive growth in student critical thinking ability" (Solon, 2007). While this approach requires a moderate amount of in-class instruction and homework on critical thinking, Solon (2007) found that it need not lead to a significant cost to subject matter learning. Thus, a growing body of evidence strongly suggests that through the deliberate infusion of critical thinking instruction into subject area courses we can improve students' critical thinking abilities. (See, for example, Allegretti & Frederick, 1995 and Solon, 2003 for additional support).

Though they may be adept critical thinkers themselves, it is unlikely that most college faculty members are practiced in critical thinking pedagogy. Therefore, it may be unreasonable to think they can teach critical thinking skills without additional pedagogical support, models of successful practice, and ideas about integrating critical thinking into their existing instructional practice. Daly (1995) asserted that "an effective critical thinking skills program will require…substantial faculty retraining" (p. 23). He argued that most faculty have not thought carefully about the teachable components of critical thinking skills, and, therefore, faculty discussions of the components of critical thinking and of how to help students improve these skills are vital if any sustained pedagogical change is to occur.

Goals and Objectives

Upon completion of the session, participants will be able to:

1. Demonstrate a thorough understanding of the benefit to student learning of explicit, deliberate instruction of critical thinking in subject area courses.
2. Incorporate the "elements of thought" into critical thinking instruction in their disciplines.
3. Promote the "intellectual standards" in their critical thinking instruction.
4. Explain a coherent framework for integrating critical thinking instruction into their teaching.

Description of Practice

We will use this session as a model for how participants can use the elements of thought and intellectual standards (Paul, 2005; Paul & Elder, 2002) as a framework to integrate critical thinking instruction into their courses. To do

so, we will engage participants in interactive critical thinking activities that we use both when we teach students in our subject area courses (social work, psychology, art) and when we train faculty members at our institution to integrate critical thinking content into their courses. These activities will include brief writing exercises to initiate participants' thinking on a given topic; working with the elements of thought and intellectual standards in triads, in which one participant assumes the role of teacher, one is student, and one is observer; and whole group discussion of how this approach to critical thinking instruction may be imported or adapted to meet the needs of participants' institutions.

Discussion

A thorough review of the critical thinking literature confirms what our experience as college teachers and formal assessments of our students indicate: many students have difficulty demonstrating the skills characteristic of critical thinkers. Research indicates (and our experience in the classroom supports the claim), however, that explicit instruction in a coherent critical thinking framework combined with the application of this framework to the content of one's discipline can improve student learning outcomes. We are confident that participants in this practice session will gain useful knowledge and take away effective strategies for integrating critical thinking into their current instructional practice.

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Fighting Silenced Voices: Facilitating Effective Discussion in the University Classroom

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Abstract: Classroom discussion and dialogue can be difficult to facilitate well. Too often, classroom discussion is embedded in the transmission model of education (Wink, 2005) and looks more like call-and-response than authentic grappling with complex concepts and topics. As social constructivists of knowledge, we believe that students should go beyond receiving and transmitting information and instead should generate knowledge with one another, and ultimately be transformed by that knowledge (Wink, 2005). The difficulties of getting to this end point are numerous and include students' institutional histories (Giroux, 1988) with rote learning (especially in the era of NCLB), lack of experience in engaging in respectful and thoughtful dialogue, overly-large class sizes, limited class time, and awkward physical classroom set-ups. Transcending these problems, however, is do-able and will be the focus of this practice session. Presenters will share their approaches to engaging students in productive and meaningful classroom discussions, in which students' knowledge and understandings are enriched and deepened. We will be exploring approaches that include setting the classroom climate for discussion, processes of discussion (including assignments given to help students prepare well for discussion, scaffolding discussion effectively), and ways to problem solve when discussion is faltering.

Literature Review

One important purpose of education is to nurture critically- thinking, deliberative citizens who can effectively communicate with one another to understand and work on complex problems (Dewey, 1938; Labaree, 1997). In order for this purpose to be served, our students must have opportunities to engage in authentic/productive dialogue in their university courses. The pedagogy of discussion is fundamental to most classes in nearly every discipline (Parker, 2003). Discussion is valuable, both as a process in and of itself (especially visible in humanities and social science courses) and as a vehicle for creating a product (especially useful in the "hard sciences") (Parker and Hess, 2001). Discussion can lead to self-reflection (Barr, Barth, & Shermis, 1977), it supports human growth (Preskill, 1997), contributes to community building (Parker & Hess, 2001), and promotes higher levels of thinking (Larson, 1997).

Truly effective classroom discussions, unfortunately, occur too rarely. Theorists have argued that most students are caught in the banking model of education in which they simply take in knowledge transmitted by experts (Freire, year; Glass, 2000). Students often do not get a chance to hear the voices of their classmates, and thus the benefit of multiple perspectives and interpretations is lost to all (Klages, 2003; Preskill, 1997; Weltman, 1999). Added to this problem of the dominance of the transmission model of education is the fact that certain students sometimes feel that they must silence their voices (connected to gender and social class factors, or simply lack of practice with speaking in class) (Belenky, Clinchy, Goldberger, Tarule, 1986; Weiss and Fine, 1993).

Goals and objectives for the practice session

In this session, participants will:

- Evaluate the role of discussion in the social construction of knowledge. effective in college classrooms (Ann Mary, you had a much better description of this when we met in my office)
- Examine processes which set the stage for effective classroom discussion
- Identify issues which hinder classroom discussion
- Describe elements of effective classroom discussion
- Experience strategies which facilitate effective classroom discussion
- Share their own approaches to facilitating discussion

Description of practice to be exemplified

In this hands-on presentation, participants will experience strategies and come away with ideas on how to build a classroom climate conducive to discussion. The presenters will first provide a theoretical framework illustrating how

discussion is one of the key tools for the social construction of knowledge. Participants and presenters will communally develop a listing of the elements of effective discussion, as well as share concrete examples of strategies to help foster that discussion in classes. Finally participants will talk about their experiences with facilitating discussion and we will brainstorm how they might alleviate some of the blocks to discussion.

Discussion

This presentation is based on the presenters' years of experiences in both the education and counseling fields. We believe in the social construction of knowledge and that all students' voices are vital/critical to the learning process. Discussion is actually a difficult strategy to master. Many professors think they are engaging in discussion when in fact they might really be participating in a form of call and response. And often students just reply to the professor, rather than speaking with the whole class (not realizing that, for the moments they are speaking, they are being the teacher to all students in the classroom!). Discussion is a confluence of leaders, learners, content, space, and time. The very nature of the organic process of dialogue can be difficult for educators as discussion can take on a life of its own.

Even when professors provide a forum for discussion and are skilled at facilitating the discourse, some students may remain silent. Discussion is a skill for students as well and they are often uncomfortable with the process. How do you get students to venture out and share their thoughts when they have been trained to wait for the correct answer? We will provide processes and discuss the pitfalls of discussion with the end result of equipping professors with effective tools in improving their discussion process.

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Connecting Biology Lessons with Real-World Issues through Service Learning

Amy E. Kulesza, Kelsie M. Bernot, & Judith S. Ridgway, *The Ohio State University*

Abstract: This session describes a service-learning project that engaged an honors introductory biology course. By providing service to community partners, students forged connections between the classroom and community. Students mathematically analyzed the significance of their contributions and documented their experiences at a poster symposium. Although the students only spent 4-12 hours participating in the activities, the pilot project generated enthusiastic student responses to real-world application of science to community issues. Since then, the instructors have developed a sustainable course and initiated an IRB-approved study on the efficacy of the project. This session includes a discussion on how service learning can enhance existing courses.

Literature Review

Service Learning has been identified as a high-impact educational tool that greatly enhances student learning (Kuh 2008). This process occurs through application of classroom concepts to real-world problems and reflection of service activities within the learning environment (Kuh 2008). Why is service learning high-impact? Students think about Biology for an extended period of time outside of the classroom in a manner that integrates multiple topics across society. Furthermore, students spend more time interacting with peers, community members, and faculty in purposeful scientific discussion (Brownell and Swaner 2010). Students participate in several critical reflection opportunities – both individual and peer-reviewed - to help them gain the metacognitive skills that are necessary for the students to develop as life-long, independent learners (Ash and Clayton 2009). Service learning is a growing national trend, with 40% of full-time first year students taking a course that involved a community based project and 68% of universities expanding the emphasis on service learning (NSEE 2011). Service learning yields outcomes of increased retention and persistence, gains in critical thinking and civic engagement, and higher GPA, among others (Brownell and Swaner 2010).

Goals and Objectives

Upon completion of the session, participants should be able to:

1. Recognize the distinction between service learning and community service.
2. Consider the potential areas of impact on student learning from a service learning course.
3. Brainstorm ideas for applying service learning to their own courses.
4. Identify methods to measure the efficacy of service learning projects.

Description of Practice to be Modeled

We initiated a collaborative service learning project to help students develop a connection between concepts learned in the classroom and real-world scientific problems affecting the community. Additionally, through providing a service to the community, we hoped to foster in students a sense of civic responsibility and a belief that they are capable of addressing community needs. In an honors introductory biology course, students completed both a service activity and a related external learning activity designed to support students in recognizing the correlation between classroom concepts and real issues and problems in the community. Students participated in one of 6 different activities:

1. MMORE (Multiple Myeloma Opportunities for Research & Education). *Service*: Students volunteered at MMORE's annual fundraising gala. *Learning*: In addition to hearing guest speakers, students visited an OSU research laboratory focused on studying multiple myeloma and met a MM survivor.

2. Waterman Farms. *Service*: Students planted thousands of tomatoes, peppers, and other plants in the Garden of Hope for cancer patients. *Learning*: Students visited the School of Agriculture's fruits and vegetables large scale processing facility, listened to a short lecture on the different isoforms of lycopene in tomatoes, and participated in a sensory lab experience.

3. Red Cross. *Service*: Students volunteered as greeters at a scheduled Ohio State University Red Cross Blood Drive and recruited participants. *Learning*: Students toured the Red Cross Manufacturing facility. Students learned about blood processing, storage, typing, and testing for disease. Students toured an OSU research laboratory that uses blood from the Red Cross to study immune cell function.

4. Pelotonia (Cycling Fundraiser for the James Cancer Center). *Service*: Students participated in a Team Buckeye event fundraiser for Pelotonia. *Learning*: Students participated in hands-on training in robotic surgery, toured a cancer research laboratory, and met a cancer patient.

5. COSI (Center of Science and Industry. *Service*: Students helped COSI guests test their brain power and problem solving skills while introducing them to puzzles, riddles and mental challenges. *Learning*: Students toured the Science Center.

6. Supporting our Furry Friends (OSU vet school). *Service*: Students volunteered at the OSU Veterinary School Annual open house. *Learning*: Students toured OSU Veterinary Medical Center.

Students created a poster documenting their experiences in the context of the scientific experiment - choosing metrics for analyzing the efficacy and significance of their contribution. Students identified specific connections between classroom biology topics and their service activity. Finally, students presented ideas for future individual, class, and university contributions. Oral presentation occurred with peers, faculty, and community partners at a formal symposium.

Discussion

At the conference, the presenters will discuss their development of the service learning project, instructor time commitment, student preparation for service, potential pitfalls, the discovery of unexpected benefits, and the community benefit and impact. Remarkably, this project was extremely well-received by the students despite the extra work required outside of class. The presenters will address how the project outcomes and enthusiastic student responses were able to inform educational practices and shape improvements for future iterations of the course. Finally they will discuss how they are tackling sustainability issues for the course. Participants will brainstorm how service learning might enhance their existing courses and how they might measure the associated changes in student learning. Furthermore, participants will consider the pros and cons of various methods for assessing the correlation between student skill acquisition and implementation of service learning.

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Undergraduate Teaching Assistants (UTAs): A Daily Reflective Practice Provides New Perspectives on Student Learning and Classroom Dynamic

Jessica Gordon & Rebecca Ribley, *Virginia Commonwealth University*

Abstract: This session, led by a faculty member and undergraduate teaching assistant (UTA), will explain the three-tier structure of the UTA program in the University College at Virginia Commonwealth University and explore the benefits for all participants in this program. The session will be focused, however, on how the UTA's and Instructor's daily reflective writing practice yields insightful and valuable feedback regarding how to improve teaching and learning in undergraduate classrooms.

Goals and Objectives

Upon completion of this session, participants will be able to:

- Explain the three-tier structure of the UTA program in University College at VCU
- Recognize the benefits of a UTA program for all participants--UTAs, students and faculty
- Explain the specific ways that a UTA's perspective on student learning and classroom dynamic differs from and informs that of the instructor
- Implement a similar practice of daily reflection to effectively inform their own teaching practice

Literature Review

Universities have a long history of using graduate teaching assistants to staff low level courses, grade papers, and assist with administrative tasks. However, as undergraduate peer leadership opportunities became more customary in the 1980's and 1990's, university educators found ways for undergraduates to fulfill the same purpose as graduate teaching assistants. More recently, however, faculty have begun experimenting with ways for UTAs to assist with more progressive methods for teaching and learning in the university classroom.

In the 1970s, faculty began using UTAs to enhance instructor interaction with students. Ruth Wallace (1974) explained that the use of UTAs had the potential to benefit both the students in the class and the UTAs themselves. Referring to the use of UTAs in the classroom as "An Alternative to Assembly Line Education", she explained how UTAs could be enlisted to facilitate weekly discussion sessions. In congruence with Wallace, Osborne, Norman, and Basford (1997) recounted how, in the wake of the economic recession of the early 1990s, they began training undergraduates as teaching assistants as a way to staff large classes without hiring new instructors. Faced with a similar problem ten years later, Hogan, Norcross, Cannon, and Karpiak (2007) describe the way that the University of Scranton created a program in which UTAs were used for tutoring and "organization, management, record keeping, evaluation and other such teaching functions"(p. 188).

While higher learning institutions seem to have at first relied on UTAs as a way to minimize costs, more progressive approaches have focused on using UTAs to enhance the teaching and learning process. For example, Herreid and Kozak (1995) discuss how the feedback provided by UTAs can be used to promote curriculum reform. The authors claimed that students "can be led to discuss serious pedagogical issues if they are made to feel like partners, rather than mere receptacles, in the educational process" (p. 28). They add that faculty, in turn, "gain insight into the educational process when their own presentations are dissected in detail by students" (p. 28). Gray and Halbert (2010) recount an experience at New Mexico State University wherein Gray taught a Criminal Justice course with Halbert, an undergraduate, as her co-teacher. They found that teaching with an undergraduate "leads to a more student-centered classroom" in comparison to co-teaching with another faculty member (p. 150). Finally, Jacobs et al. (2002) have written extensively about the use of UTAs to increase the quality of participation in courses, finding them to be a critical theoretical and pedagogical tool.

Today, more and more UTAs are utilized as a tool for improving undergraduate instruction. While evidence indicates that UTAs can benefit both students and faculty, we know little about how a UTAs perspective differs from that of the professor. We believe that a daily reflective practice completed by UTAs and faculty can inform and improve teaching and learning in undergraduate classrooms.

Description of Session

This presentation, led by a faculty member and a second-year undergraduate teaching assistant, will explain the ways that undergraduate teaching assistants (UTAs) can improve instruction in university classrooms of all sizes. In addition, we will explain how implementing a daily reflective practice for both instructor and UTA can provide insight into effective teaching and learning in any undergraduate course.

We will begin with a very brief history of the use of UTAs in university undergraduate courses, followed by a short but clear explanation of the three-tier system for UTAs at Virginia Commonwealth University. A diagram of this structure, provided below and previously published in *The International Journal for Teaching and Learning in Higher Education*, will be provided. The UTAs in VCU's University College courses facilitate student engagement by modeling successful intellectual and academic practices and offering assistance to students with coursework. Faculty who choose to participate in the UTA program select students from their own classes to serve as UTAs the following year. UTAs understand the curricular goals of the courses in which they serve and tend to be students who value lifelong learning and enjoy helping other students to succeed academically. Although the program began in 2008/2009 with just five UTAs participating in a year-long pilot, it expanded exponentially within its first two years as an official course. During the 2012/2013 academic year, more than 100 UTAs worked with over 30 faculty to improve instruction in first-and second-year courses.

Following the description of the UTA program structure, we will explain the daily reflective practice that we implemented during the previous semester. The practice involved reflective writing by both UTAs and instructor in response to a set of standardized questions regarding student learning and classroom dynamic. Questions provoked observations from the UTA and instructor regarding perception of instructor presence and clarity in the classroom, student attitudes, and the ability of students to actively apply course concepts in small groups and whole class discussions. Reflective writing about these observations occurred within a short time after course meetings and before instructor and UTAs discussed individual perceptions. Subsequent comparison of reflective writing yielded noticeable trends and valuable insight into the varying ways that instructors and students perceive learning and the general dynamic of the classroom. An end-of-semester student evaluation reveals further insight into student perception of teaching practice.

During the final ten minutes of the session, participants will be encouraged to share their own UTAs programs and similar assessment or evaluation practices. In addition, participants will have time to ask questions of both the faculty member and the UTA.

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Developing, Assessing and Adapting Multicultural Curriculum for Student Learning in Higher Education

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Abstract: In this age of globalization, higher education institutions have an increasingly diverse student body. Historically, there has been a dichotomy between quality and diversity but since the 80s, that classical dichotomy between the cognitive and the social has been criticized (Anderson, 1987). Higher education institutions open their gates to non traditional students, and faculty members have to find ways to take into account the individual differences and assure effective student learning. Teacher education is more and more concerned with preparing future teachers how to effectively teach diverse groups using existing curricula or assessing and adapting the curriculum to the needs of their students. This session will present and demonstrate a process of curriculum assessment and adaptation based on theories and best activities that can improve student learning in higher education institutions which are multicultural environments. The participants will be exposed to best practices, will be given concrete examples and will be able to integrate the principles of multicultural curriculum in their own culturally responsive teaching in higher education and teacher education institutions.

Literature review

Banks (2007) presents the characteristics of a multicultural curricula whose main goal is to encourage cultural pluralism by educating students to know and appreciate diversity. Faculty willing to promote multiculturalism in their teaching may face significant challenges when they try to use the curriculum or to adapt it to the needs of a student body which changes at a very rapid speed.

In the past, the idea of 'teacher proof curriculum' was advanced, but today there is a consensus that even the best curriculum doesn't work in all situations and that the teachers are the ones who are able to maximize the potential of any given curriculum. Banks (2007) discusses the five dimensions indispensable to a good education in a multicultural world: content integration, knowledge construction, equity pedagogy, prejudice reduction and empowering school culture. Other researchers stress obstacles in implementing multicultural education such as "mindlessness" (Silverman, 1993) and "dysconscious racism" (King, 1991). Prideaux (1993) suggests ways of developing curriculum while Brown (2008) proposes meaningful ways of assessing the curriculum.

Goals and objectives for the practice session

The purpose of this practice is to present techniques of assessing curriculum related to multicultural education in higher education and in teacher education. At the end of the session, the participants will be able to:

- Increase awareness of sensitivity to other cultures
- Increase awareness of the hidden curriculum and understand its implications
- Define the principles for curriculum assessment
- Apply these principles to multicultural education
- Identify the best practices for assessing multicultural curriculum
- Integrate these principles in their own instructional design

Description of the practice to be modeled

There are several issues that have to be taken into account when it comes to assessment of curriculum: the *planned curriculum* deals with what was intended by the designers; the *delivered curriculum* deals with the aspects that are actually taught and the *experienced curriculum* is interested in what is learned by the students. First I will involve the participants in an individual activity which will increase their awareness to multicultural aspects and will expose them to the planned curriculum. Second, I will give the participants handouts with examples of teaching activities and I will explain the principles according to which the delivered curriculum can and should be assessed. Third, the participants will work in teams in order to assess the curriculum by applying the principles of multicultural education. Next, I will guide a discussion based on the conclusions of the work they performed in their teams, and I

will lead the reflection process which will allow the participants to think of ways in which they experienced the curriculum. Participants will also think of methods which allow them to creatively integrate these principles in their own discipline or subject matter. Finally, I will share with the participants a portal which offers free access to relevant theoretical material, classroom activities, articles and references which can be used in higher education institutions.

Discussion

Traditionally, some researchers and administrators believed that teachers should be provided with a curriculum which reflects 'the right way' to teach . Such administrators therefore suggested that it is important to develop a 'teacher proof curriculum' which is written in the style of a cookbook that will make sure that all teachers will get the same results if they use the same technique. However, today it is widely recognized that teachers are not technicians, but rather professionals who know best their students' learning needs and therefore they must be able to develop their own curriculum which can be modified according to the students' changing needs (Darling-Hammond, 1996). At the same time, it is obvious that not all the teachers have been trained to develop and/or to assess curriculum and therefore this can be part of the professional development of teachers. The same is true when it comes to academics in higher education. Some faculty members are very knowledgeable when it comes to their subject matter, but they need to improve their teaching skills in order to be able to reach all students, in order to be able to handle heterogeneous classes.

This presentation is based on a program whose goal was to develop and assess curriculum related to multicultural education in higher education institutions from 7 countries: Israel, Georgia, UK, Estonia, Austria, Germany and the Netherlands. Since October 2012, the researcher has been the leader of the curriculum development and assessment international team which worked together with several other team leaders in order to develop and assess syllabi related to multicultural education in higher education and in teacher education. The project included teachers workshops for faculty members and stressed the empowerment of students who were involved in the process of developing out of classroom activities that enforce the academic material that they have learned in class. I will share my experience in developing and assessing curriculum in general and multicultural curriculum in particular, and I will offer some suggestions regarding ways of performing a similar task in different environments, with students from diverse backgrounds, with faculty members who can develop and assess curriculum in collaboration with colleagues, nationally or internationally. I believe that teachers, academic faculty in institutions of higher education as well as administrators will find this practice useful and inspiring.

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Conversation: How Can Instructors Make Sense of Mid-Semester Student Evaluations of Teaching?

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Abstract: Formative evaluations can provide an opportunity to respond to student comments early in the semester (Aultman, 2006). They can also serve as a medium to improve communication between students and instructors. But how can we as instructors make sense of this feedback? What can instructors do with this mid-semester feedback? Why do some students not participate in the feedback process? Feedback allows teaching staff to evaluate their effectiveness from the student perspective (Diamond, 2004). Oftentimes this feedback from students may seem disorganized and disconnected. Making sense of conflicting student may seem like a monumental task. Participants in this session will engage in discussions and activities that help sort and connect feedback in meaningful ways.

Literature Review

Being a reflective practitioner is considered a pinnacle of teaching practice (Moon, 1999) and reflective practice remains a valuable aspect of teaching (Winchester & Winchester, 2011). Mid-semester student evaluations are one aspect of this process. Student evaluations can provide useful information (Theall & Franklin, 2001). Structured mid-term feedback allows instructors to evaluate effectiveness from the students' perspective (Diamond, 2004). The justification for student feedback includes that they contribute to improving the quality of teaching (Kember, Leung, & Kwan, 2002). However, problems can arise because written comments have no built in structure like scaled items do (Lewis, 2001). Making sense of conflicting feedback can be challenging for instructors who want to use this information to improve their teaching.

It has been found that if instructors feel a university rewards good teaching, there is incentive to make use of student feedback (Kember, Leung, & Kwan, 2002). Higher student evaluations have been found to be correlated with student perceptions of their own learning and student/teacher interaction (Dee, 2007). Students who perceive that they are learning often rate instructors more highly (Clayson, 2009). Similarly, if they perceive instructors as helpful and interested in their success, these instructors receive higher evaluations (Dee, 2007). Motivation level in students has been identified as a determinant in the amount of feedback they give (Svinicki, 2001). Because students may not have seen many good models of feedback (Svinicki, 2001) it may be difficult for them to provide feedback. Explanations and demonstrations of appropriate feedback may be helpful. But how much explanation and what type of demonstrations would be useful?

The purpose of this conversation session is to explore how instructors are using mid-semester feedback in their courses and examine how we can improve instructors' use of this feedback. This conversation is meant to explore ways to increase constructive feedback from students and help instructors develop ways to apply this feedback to improve teaching quality.

Goals and Objectives

1. Participants will discuss strategies about how to sort through formative student evaluation data.
2. Participants will be able to identify ways in which to categorize the responses.
3. Participants will develop strategies to motivate students to give constructive feedback.
4. Participants will explore ways to promote teaching constructive feedback as part of the evaluation process throughout the semester.

Description of Topic to be Discussed

In this conversation session, participants will engage in activities to explore their use of student feedback, their experiences with sorting it and how it can benefit both students and themselves. We hope to build communities of knowledge based on shared experiences and develop evaluations activities that can be used in the participants own classroom. We will also discuss why many students do not provide feedback and ways to increase student involvement. Come join the fun!

Facilitation Techniques

The session will begin with a 10-minute review of research and discussion on lack of consistency regarding the use of formative student feedback. Next we will engage in a think-pair-share activity to gather ideas about how faculty are currently sorting feedback from students. Then we can move into a reflection activity so instructors can identify possible ways to categorize student responses. Session participants can then discuss possible ways to increase student motivation to submit feedback about the course. Small groups can then be utilized to develop direction of how to give feedback to students as examples. Finally, the session will conclude with a 5 minute brainstorming activity identifying potential obstacles and ways to overcome them

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"All Change Starts with Individual Change": A Conversation About Individual Sustainability and Social Change

Eric Pappas & Olga Pierrakos, *James Madison University*

Abstract: All societal change begins with the individual. One cannot do for a community what one cannot do for one's self. The topic of Individual Sustainability is a controversial one, as students often appear to be unable to align their day-to-day behaviors with their admirable values related to sustainability. Individual behavior creates the foundation for action in social, economic, and environmental sustainability, and potentially guides our ability to work with one another to make life-affirming decisions. In short, it is a matter of aligning our day-to-day behaviors with our well-stated values that will result in greater sustainable community action. The general objective of this conversation is to explore methodologies to help students align their behaviors with their values related to sustainability. This change is a necessary precursor to demonstrating sustainable community behavior. Creating a "cognitive dissonance" between an individual's values and behaviors tends to encourage individuals to balance more effectively the self-knowledge that motivates intentional personal development towards more sustainable behavior. While most students indicated (in our recent NSF research) they believed their behaviors consistently reflected their values, the students' broad range of responses and survey responses revealed behaviors quite in conflict with their values.

Literature Review

Individual behavior creates the foundation for action in social, economic, and environmental sustainability and potentially guides our ability to work with one another to make life-affirming decisions. In short, it is a matter of aligning our day-to-day behaviors with our well-stated values that will result in greater sustainable community action (Pappas 2011). We define Individual Sustainability (also referred to Sustainable Personality), as follows: Sustainable individuals are characterized by creating harmony, interconnection, and relatively high levels of self-awareness in their values, thoughts, behaviors, and actions as well as cultivating continued individual growth in their physical (health), emotional, social, philosophical, and intellectual abilities.

Aligning one's values and behaviors is a central factor in developing Individual Sustainability.

With the publication of the *Principles of Psychology* in 1890, William James (1890) offered a psychological approach to the holistic personality, stating the constituents of the self as the material self, the social self, the spiritual self, and the pure ego (p. 292). These constituents provide the human foundation for self-awareness and self-preservation—an understanding of one's self in the broadest sense.

A short time later, Dewey (1910) referred to consciousness composed of "natural and social operations" (p. 244) and is a "connected course of experience" (p. 249). Further he notes the synthesis of human processes "which elements combine into complex wholes and series" (p. 245). He notes "knowing, willing, feeling, name states of consciousness" (p. 252) and acts, attitudes, all found in experience (p. 252). He later refers to consciousness as a "system of truth" (p. 257). A few years later, Dewey noted a similar system guiding successful education: "Education, we received from three sources—Nature, men, and things," that the "concurrence of the three kinds of education is necessary to their completeness" (p. 108). Each kind of education, he stresses, determines the success of the other two, a *system* of mutual dependence and influence.

Maslow (1968) greatly expanded upon the characteristics of the sustainable individual, in which he described a *self-actualized* individual. He noted 13 characteristics as a path to "a fuller knowledge of, and acceptance of, the person's own intrinsic nature, as an unceasing trend toward unity, integration, or synergy within the person" (p. 25): (1) superior perception of reality; (2) increased acceptance of self, others, and of nature; (3) increased spontaneity; (4) increase in problem-centering; (5) increased detachment and desire for privacy; (6) increased autonomy and resistance to enculturation; (7) greater freshness of appreciation, and richness of emotional reaction; (8) higher frequency of peak experiences; (9) increased identification with the human species; (10) changed (the clinician would say improved) interpersonal relations; (11) more democratic character structure; (12) greatly improved creativeness; and (13) certain changes in the value system (Maslow, 1968, p. 26).

An expansion of Maslow's characteristics, and more befitting of the era in which they were developed, is Carl Rogers' (1980) *The Qualities of the Person of Tomorrow.* In comparison to Maslow, Dewey, and James, this list includes a wider variety of experience, thought, emotion, and spirituality. Echoing a similar inclusiveness, Capra (1982) offers his systems view of life, "based on awareness of the essential interrelatedness and interdependence of all phenomena—physical, biological, psychological, social, and cultural" (Rogers', 1980, p. 265).

Csikszentmihalyi (1993) further reflects on the complexity of consciousness stating that knowledge or intelligence need be in harmony with feelings and actions—"to create harmony between goals and desires, sensations and experiences" (p. 207). He considers evolution and happiness as dependent, and further, he suggests that "integration is also a strong component of the self" (Csikszentmihalyi, 1993, p. 214).

Goals and Objectives

- Objective 1: To introduce the topic of *Individual Sustainability* and our current instructional methods.
- Objective 2: To discuss and develop other instructional methodologies for using values and behaviors in interdisciplinary settings.
- Objective 3: To determine the benefits of employing behaviors as educational outcomes.

Description of Topic to be Discussed

This is the starting point for the conversation: Students generally embrace admirable values related to sustainability, but often encounter a "cognitive dissonance" when asked to explain whether their behaviors accurately reflect their values. In short, students often do not act according to their values and beliefs. *If one understands the complexities and interconnectedness of sustainability as related to one's own life, then he or she might well transfer this systems knowledge to understanding larger systems like community and global sustainability.*

Our recent NSF-sponsored research (EEC #1158728) indicates that students themselves believe there was a "disconnect" between what they believe about sustainability and how they act, a factor undermining Individual Sustainability. This inconsistency motivated students to more actively align their behaviors with their values in six studies we conducted (Pappas, 2013).

What place does this sort of instruction have in higher education? Should we be responsible for educating students to be conscious and enlighten citizens? Are we responsible for simply "transmitting knowledge" or teaching values? Are there other methods for helping students understand this concept (aligning values and behaviors)?

Facilitation Techniques

A simple roundtable open conversation format, focused on the questions noted above (and others developed), and guided by the facilitator. Generally fast-paced, contemplative, and risky.

References

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Wednesday

February 5, 2014

Poster Session A

12:00-1:30 PM

http://www.cider.vt.edu/conference/

A Meta-Analytic Investigation Examining Effective Characteristics of Professional Development in K-12 Education Since the Inception of the No Child Left Behind Act of 2002

Eugene M. Thomas, *Youngstown State University*

Professional development is a common phrase used by public school educators to describe the training they participate in order to stay current and increase their knowledge and skills in their respective fields. School districts implement professional development for various purposes including but not limited to curriculum, pedagogy, mathematics and so forth. In various school districts professional development training has many formats. Some of these formats include attending conferences, hiring outside consultants, using existing staff, small group book studies, live sessions and online training. Often, the sessions vary from one single isolated training session to on-going multi-year training plans. Essentially, no professional development programs are identical. This investigation meta-analyzes existing secondary data including published articles, journals, reports, dissertations, theses and studies to identify effective characteristics of professional development in traditional public schools grades K-12 since the inception the No Child Left Behind Act of 2002 hereafter referred to as NCLB. The dependent variable of student test scores is used to examine what characteristics/strategies are identified as effective and to what degree. Overall, the analysis reveals that the professional development of teachers has a moderate-to-large significant effect on student achievement.

A Numeracy Infusion Course for Higher Education (NICHE): Best Practices for Quantitative Reasoning Instruction

Esther Isabelle Wilder, *The City University of New York*

This poster describes a Numeracy Infusion Course for Higher Education (NICHE), a faculty development program that teaches faculty from across the disciplines best practices for Quantitative Reasoning (QR) instruction. NICHE is a predominantly online course that consists of 8 separate units: (1) QR and Making Numbers Meaningful; (2) QR Learning Outcomes; (3) The Brain, Cognition and QR; (4) QR and Writing; (5) Discovery Methods; (6) Representations of Data; (7) QR Assessment; and (8) QR Stereotypes and Culture. This paper describes the key components of NICHE and shows how we employ the same strategies recognized as effective methods for teaching QR to our training of faculty as QR instructors. Course activities, interactive discussions, faculty-developed instructional materials and assessment data are also presented.

A Study of the Library Reading Habits of Students of Senior Secondary Sections in Some in English Medium Schools of Mandleshwar City

Shri Krishna Mishra, *Shri Kanwartara Institute for Teacher's Training*

In this time of competition reading is an effective tool to move ahead, ultimately, Knowledge is power. It leads a man from ignorance to light. It is necessary that today's children should be in touch with the library. The school and the parents must collectively provide a rich environment, students should be encouraged to read continuously as a learning process to enhance and enrich their personality and their outlook. As it is well said that – "Books are men's best friends," to students, the library is the place where they can find ready reference material beyond the class text books, beyond the classrooms, to pursue their knowledge.

Accommodating Higher Education Students with Disabilities: STEM Faculty's Experiences

Tyler S. Love, Nicole Kreiser, Elsa Camargo, Michael Grubbs,
Eujin Julia Kim, & Penny L. Burge, *Virginia Tech*

Science, technology, engineering, and mathematics (STEM) education has been identified by President Obama and numerous disciplines as an area critically needed to better prepare students for careers in a competitive global economy. In response to this, more students are needed to fill the vacancies in STEM related careers essential to the United States' economy. To attract students needed for these valuable careers, STEM educators must ensure that all students are provided the opportunities and accommodations to pursue a degree in a STEM field. Accommodating students with disabilities in higher education has become an emerging issue due to the increasing number of P-12 students diagnosed with disabilities continuing onto higher education. This increase in students with disabilities at the higher education level has created new demands on faculty to be adequately prepared to accommodate these students. The researchers utilized a qualitative methodology to examine STEM faculty members' experiences with students with disabilities at a land grant institution in the southeastern United States. The researchers conducted this study to answer the following questions: (a) What experiences, positive and negative, have STEM faculty members had working with students with disabilities?, (b) How do STEM faculty members describe students with disabilities?, and (c) What resources do faculty members need to adequately serve students with disabilities? A team of five researchers conducted interviews with five faculty members across the STEM disciplines. The interviews were transcribed and analyzed by the research team. The following themes emerged from the data: Challenges, Support, Knowledge, Awareness/Visibility, and Formal versus Informal Accommodations. Implications from this study can help higher education institutions improve the awareness of resources available on their campus for faculty to accommodate students with disabilities. Also, this study suggests the need to reexamine the preparation process of higher education faculty members.

Are Flipped Classes Worth the Hassle? An Evaluation of Student Performance

Jennifer L. Sliko, Blair R. Tormey, Michael B. Meyer, Dan S. Jones, *Western Carolina University*

"Flipped" or inverted classes involve having the students learn new material outside of the classroom and work on activities or discussions reinforcing that material while in class. Effectively, traditional 'lecture' material is covered as homework and traditional 'homework' assignments are covered in the class. The perceived benefit of this style of classroom management is that, through classroom activities, students use the more complex domains of education activities (such as apply, analyze, evaluate, or discuss) to learn the new subject material. In a flipped classroom, students must read new material and/or watch a prerecorded lecture video presentation prior to coming to class. This can be problematic in introductory or non-major classes, as students typically do minimal work outside of class. Unlike a traditional lecture-style class, unprepared students in a flipped class are often confused in class and have trouble completing the class assignments. Unless the student to professor ratio is extremely low (a rare trait in most introductory courses), this confusion often leads to frustration and ultimately a general disinterest in the class material. Here we examine student performance in flipped and traditional-style classes from non-major, introductory environmental geology classes. The flipped classes used narrated presentations and book chapters to introduce the new material outside of the classroom coupled with in-class collaborative and individual activities. In the traditional classes, lectures were delivered during class time and limited individual activities were assigned as homework. We examine the student performance in three topics typically taught in an introductory geology class (plate tectonics, volcanoes, and earthquakes). During this trial, students completed anonymous pre- and post-activity assessments for each topic. Individual and overall improvements between pre- and post-activity assessments are compared between students in the traditional and flipped classes. Additionally, the post-activity scores are compared for statistical difference between the different styles of classroom management.

Biometrically Monitoring Multitasking: Using Electroencephalographic Data to Monitor User Task Engagement

Robert Beaton, Scott McCrickard, & Manuel Pérez-Quiñones, *Virginia Tech*

Our approach explored mental state from cognitive variables like interruption, engagement, and focus—factors for which a user can be made aware of their presence and can be empowered to change their behavior toward improving their mental state. By creating biometric models of when users' cognitive experiences, and by aggregating them in a way that is meaningful to the users, our approach will enable the users to make informed decisions about their choices for tasks moving forward. Much of the recent work in this area has proposed to automatically adjust aspects of an interface based on possible or perceived interruptors (e.g., Fogarty et al., 2005; Mark et al., 2008). But this approach ignores the *explicit* desires of the user: perhaps the user is locked in on a task, or perhaps multiple tasks are all important and the user is willing to take performance (and mental health) degradation. Instead, this work seeks to make available to users the information that can help them assess their state--toward empowering the user to examine their personal activities along objective biometric changes that were not previously known. Our hypothesis is that the user will find this metric valuable during activity assessment. Our poster presents results on the impact of multi-tasking on students' engagement. In our study, college age students completed 3 tasks: 2 single mode tasks and both simultaneously. Students completed a math test compiled from Virginia Standards of Learning 8th grade tests, and monitored a constantly scrolling twitter-style newsfeed and explicitly identified stories contextually relevant to Virginia Tech Dining Services. Engagement was calculated using Pope's Engagement Metric (Pope et al., 1995) using a Neurosky MindSet Electroencephalograph (EEG) device. Engagement differences were statistically significant between task type (within subject), but not between single task and multitask activity.

Body Language and Cultural Mismatches in English as an International Language

Mehdi Solhi Andarab, *Bahcesehir University*
Ali Rahimi, *Bangkok University*

The increase in the number of non-native speakers of English has resulted in a salient fact about English; not only are people who speak English more likely to be non-native speakers of English than native speakers, but they are most likely to speak to other non-native speakers of English than to native speakers. Consequently, coming from different cultural backgrounds, people are required to familiarize themselves with different forms of non-verbal communication in addition to the mastery over the structures and essential elements of the language. Non-verbal communication has always played a major role in cross-cultural interaction and unfamiliarity with different forms of body language, such as postures, gestures or eye movements, can lead to a breakdown in communication or some kind of discomfort while interacting with people from different cultural schemas. This study elaborates on a number of forms of non-verbal communication in different countries and explains how body language can lead to a failure in communication.

Breaking the Code: Encouraging Perspective Sharing Among Black Male Doctoral Students

Battinto Batts, Leo Brown, Levon Edwards, Jamel Gibson, Dietrich Morrison-Danner, & Dennis Westbrooks, *Hampton University*

McGee and Martin (2011) assert that we still live in a time when being a Black male continues to be devalued by the larger society and many of its institutions. Consequently, colleges and universities struggle to recruit and retain Black males in institutional programs. This problem is particularly acute in doctoral programs where women outnumber men two to one. This problem is exacerbated by the fact that doctoral programs in general have an attrition rate that exceeds fifty percent (Lovitts, 2008). In one educational leadership doctoral program a commitment was made to increase the number of Black males admitted to the program and explore ways to keep

them connected to their learning. In focus group conversations with Black Males in the program, several themes were identified related to their matriculation: (1) why they come, (2) why they stay, (3) coping skills for overcoming challenges, and (4) what they need from the university community to survive and thrive. West, Gokalp, Pena, Fisher, and Gupton (2011) in an article entitled *Exploring Effective Support Practices for Doctoral Student Degree Completion* point out that the doctoral journey can be very isolating for students and that this isolation can become an insurmountable barrier. To address this issue, students are admitted to the doctoral program as a cohort and are encouraged to find ways to interact and communicate regularly. To this end, the first cohort developed and maintained a social media presence through a Face book page and built a community of support external to the university. Through this social media presence, students were able to share their motivations and challenges and anxieties.

Building a Community of Teachers: Designing Faculty Interest Groups to Build Pedagogical Expertise

Lauren Pressley & Tracy Hall, *Virginia Tech*

This session will explore the University Libraries program to develop instructional expertise within the department, with a focus on the development of a pedagogies interest group that is focused on understanding, reflecting on, and practicing new and emerging pedagogies in higher education. This session will also include an opportunity to discuss how this model might be applied to other departments interested in facilitating this faculty-driven model of pedagogical development.

Case Study of Peer Tutoring and Student Performance of Beginning Foreign Language Students

Sheri K. Barksdale, *University of Cincinnati Blue Ash College*

The most desirable method of learning any language is by interacting with native users of the language. The interaction allows the language to be used in a meaningful way and reinforces cultural nuances whose significance may be lost in the classroom. Given the number of students in foreign language classes, communication with L1 users is often not a possibility. It is often the case that Foreign Language students outnumber native users of the language at some events. Given that there are such a large number of foreign language classes being taught in high schools and colleges, it seems an unfair expectation for teachers and professors to place the burden of responsibility for communicating with students on members of the community. It is a frustration for many instructors that students do not practice the language outside the classroom, or practice incorrectly. It is not always possible to provide the adequate practice time that is required for students to deepen and integrate their understanding of the language through prolonged structured rehearsal in the classroom. Further, homework may not be written homework, but listening, speaking or signing homework. It is evident that when students don't have a written document to present to the teacher, they are often not prepared. As a result, when new material is presented, some students do not have a strong foundation upon which to build. A potential remedy is to provide structured practice time outside of the classroom for beginning foreign language students, in a meaningful environment that is led by intermediate foreign language students. This technique will improve not only beginning student use of the language, but also to benefit the peer teacher. The students are actively engaged in using the language (and obviously the grammar) rather than looking at a book or video to practice individual words/signs, and reading about the grammar.

Collaborative Efforts in Development of New Faculty Orientation: Assimilating Clinicians into Academia

Melody F. Sharp, Rebecca M. Greer, Denise D. Foti, Carolyn W. Lyon, Carol M. Bailey, Kimberly M. Wilson, Larry L. Lilley III, Dorey E. Anderson, & Janice R. Taylor, *Jefferson College of Health Sciences*

New faculty orientation is a fundamental process to assimilate clinicians into academia. According to Suplee and Gardner (2009), orientations addressing roles, culture, and program specific content assist clinicians transitioning in the faculty role. Academia is vastly different from clinical practice and there is a need for true collaboration of various members to develop a detailed ongoing individualized orientation program. A nursing committee of experienced faculty, administrative faculty, and secretarial support was formed to develop a structured orientation program for newly hired nursing faculty. Using Kanter's theoretical framework, *Structural Power in Organizations,* the committee identified key elements essential to orienting, socializing and empowering new faculty into the educator role (Kanter, 1977). These key elements included access to (1) information, (2) mentorship support, and (3) resources. Components consisted of college/faculty orientation, web-based platform training, advising protocols, orientation to clinical units and protocols, electronic medical charting, didactic teaching roles, assessment technology tools, and test writing and analysis. Each new faculty member was paired with a faculty mentor and an administrative mentor for ongoing support for one year. Weekly and monthly meetings were established with both the faculty and administrative faculty mentors. Providing various formats of the orientation materials and having assigned mentors and resources facilitated transition into the faculty role. Collaboration among the nursing committee of experienced faculty, administrative faculty, and secretarial support fostered new perspectives and the development of a comprehensive structured orientation program that was essential to orienting, socializing and empowering new faculty into the educator role. New faculty who have an appropriate structured orientation program are more likely to perceive empowerment and socialization to the educator role within the academic setting. An evaluation tool will be completed by the new faculty, faculty mentors, and administrative faculty mentors at the end of the year long orientation program.

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Collaborative Teaching Model for Individuals with Autism

Amelia Moody, *University of North Carolina Wilmington*

It is critical that the field of higher education promote the use of collaborative teaching models for students diagnosed with ASDs to ensure that evidence-based are being used in the classroom and to encourage consistency to enhance success. Special Education students were paired with teacher candidates from the Science program to collaboratively plan and instruct children diagnosed with ASD. The teacher candidates facilitated science, technology, engineering, and mathematics (STEM) activities, adapted by teacher candidates to meet the individual needs of students using Universal Design for Learning (UDL) principles that increase engagement, representation, and expression. Each collaborative group completed instructions. Results of surveys and interviews are discussed.

Community Engagement: Where Reality Meets the Road

Emilie Joy Kistnasamy, *Durban University of Technology*

A vital component of higher education is the practice of community engagement. This important educational pillar underlies a meeting of the theoretical with the practical in a hands-on, holistic manner that allows our primary customers: the students, to professionally anticipate the real world. They get to understand the dynamics of working with excellence in solving issues and contributing to society, in a meaningful, respectful, timely, organised and feasible manner. This presentation will therefore explore community engagement case studies that final year students participated in, with specific reference to planning, collaboration practices, overcoming challenges, celebrating successes and final evaluation. Participants will be randomly allocated to groups to brainstorm proposed community engagement scenarios and the implementation thereof.

Course Surveys and Student Engagement Surveys: Indirect Measures of Gains in Learning Outcomes

Eric G. Lovik, *College of The Albemarle*

Assessment of student learning outcomes, particularly via direct measures of class activities and assignments, is critical to enhancing students' academic growth (Banta, Jones, & Black, 2009; Suskie, 2009; Walvoord, 2010). However, indirect measures of learning outcomes can be used to draw additional insights into student accomplishments, or at least their perceived gains in designated competencies. This presentation is based on the use of indirect measures of student learning at a multi-campus community college in North Carolina. The institution serves students across a seven-county region that ranges from rural farming communities to large populations of residents along the Outer Banks. In the course/instructor evaluations that are completed by students for every class each semester, students are asked to respond indicating their level of agreement with a wide range of items, including their perceived gains in several interdisciplinary core competencies. The following competencies were measured indirectly via the course surveys: oral communication (two questions), written communication (two questions), information literacy, quantitative skills (three questions), and computer literacy (two questions). Students reported high levels of personal development in these five competencies, with results ranging from 85% to 100% of students stating that they improved in at least one core area. The second strategy using indirect measures is the Community College Survey of Student Engagement (CCSSE). During spring 2011, this college was one of 435 institutions nationwide and 25 in North Carolina that participated in the CCSSE. Nearly 500 students responded to the CCSSE survey, representing about a response rate of approximately 20%. The results indicated that students' self-reported gains in the core competencies compared favorably to peers in the comparison group of other in-state community colleges.

References

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Creating a College Teaching Certificate: What do Aspiring Faculty Need?

Pamela Eddy & Adam Pendergraph, *The College of William and Mary*

The bulk of college teaching faculty are well grounded in their content knowledge and research skills, but less prepared for classroom teaching (Gappa, Austin, & Trice, 2007). Currently in Virginia, no college or university based program exists that offers a credit-bearing College Teaching Certificate (CTC). Several institutions offer in-house development or workshops, but stop short of a cohesive program that carries graduate credits. Recently,

Tidewater Community College (TCC) started a Faculty Academy to address the learning needs of their new full-time faculty hires. Changes in the Virginia Community College System's criteria for professional development and promotion for faculty members require the acquisition of 15 graduate credits. This creates an opportunity to craft a credit-bearing College Teaching Certificate. This presentation will provide a summary of national CTC programs, including an analysis of common courses and learning outcomes. The poster will also provide a synthesis of research on teaching certificates, including best practices. To gauge the utility of creating a CTC in Virginia, a focus group was conducted with members of TCC's first Faculty Academy. The results of the national audit of CTC programs, the literature review, and the focus group research helped inform how best to structure a CTC in Virginia. A model of the proposed College Teaching Certificate will be presented. Key features of the program include a blended learning format (Garrison & Vaughan, 2008) that provides core content knowledge in online learning modules, collaborative learning opportunities offered through a series of face-to-face workshops, and a capstone project that provides students with an opportunity for authentic learning and application of their new skills (Herrington, Reeves, & Oliver, 2010). Feedback from this presentation during the CTC formation phase will result in the creation of a robust program to help support college teaching in the Commonwealth.

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Creating Conditions for Deeper Learning with New College Students

Meret C. Burke, *Wilkes Community College*

College success courses are a common offering at two and four year institutions. These courses exist to assist students as they adapt to the college environment, but vary greatly in efficacy. This presentation highlights the key elements of a college success course model based on current research that provide a foundation for more significant learning experiences for students. Session participants will engage in guided discussion of how these concepts and strategies can be integrated into an existing college student success course as well as any college classroom to promote an environment of deeper student learning and reflection.

Critical Thinking: Guiding Learners to Succeed in the 21st Century

Sharon L. Burton, *National Graduate School of Quality Management*
Charlotte L. V. Thoms, *Rochester Institute of Technology*
Yoshino W. White

This paper explores the development of a best practice that connects art and science to provide learners with the practice and understanding to achieve needed qualifications for navigating a flattening world. Additionally, this model showcases tools required to regulate life's conditions through ground-breaking coursework. The research team introduces learning through crafting individual development programs that begin with the end in mind. The approach entails learners' exploring goals and objectives of their coursework as these goals and objectives relate to long-term career plans. Learners' research also incorporates principles of traditional literature review with the reflective examination of practitioners. Next learners take that knowledge and literature review data to build a plan of how this information fits into their career positions. The theory is that by building a long-term plan for student learning outcomes of the course, learners can enhance career qualifications. Guiding learners to the light of knowledge, skills, abilities and competencies is vital within this 21st century to achieve economic progress and social mobility. These learners will need the understanding and fortitude to plot a course within a universe, which is growing significantly global and flatter due to technology. If left unbridled, this shift in globalization will allow unprepared learners to enter into an intricate world that is continually changing in communication methodology due

to the deluge of technology. Alternatively, inter-disciplinary instructional strategies can be employed to construct capability supporting learners' educational understanding and information usage. If this type of andragogical teaching excellence is not consistently demonstrated learners might experience a handicap in their efforts to maximize capabilities. This model guides learners to embrace change, imagine possibilities, learn through the activity of experience, and to rejuvenate continuously. Practitioners and academicians can use this model that sits in the frameworks of andragogy, technology, interdisciplinary study, and constructivism.

Designing and Developing an Instructional Module on Basic Camera Operations Based on the Dick and Carey Systems Approach Model

Zeynep Ondin, Kendall Woodard, Kwame Ansong-Gyimah, & Josh Rubin, *Virginia Tech*

The instructional module based on The Dick and Carey systems approach model was designed and developed for Instructional Design and Technology (IDT) graduate students at Virginia Tech. After the completion of this module, IDT graduate students at Virginia Tech will be able to set up the camera, compose shots, and record video footage using a "consumer" video camera and tripod. According to VT IDT program web site, students of the program are training to become experts in the design, development, implementation, and evaluation of learning. One aspect of this is the design and development of performance support products, processes, and environments. Teaching and learning have been greatly affected by the massive proliferation and infusion of technology tools in all its processes and products. One such technology tool that is readily available is video. As potential IDT professionals, there is little doubt that students will be faced with video in their professional lives. An IDT professional, therefore must have some knowledge about shooting video that is above the knowledge of an everyday consumer. Because the module was developed based on the Dick and Carey systems approach model following phases were completed; survey was conducted to investigate our learners' current situation in regards to setting up and using a consumer-level video camera and tripod, instructional goal was defined, domain of learning and subordinate skills were defined, learners and context analysis were completed, performance objectives were defined, assessment instruments, instructional strategy, and instructional module was developed, formative evaluation of instruction was designed. The online instructional module includes chunked, online self-instructional module, instructional videos, "take-away" documents for each of the sections (covering the material presented in video), self-evaluation questionnaire, resources (web links, guides, and books). (The link for the instructional video developed for the study https://sites.google.com/site/basicvideocameraoperations)

Determining the Effectiveness of a Faculty Development Fellowship Program at a New Medical School by Measuring Both Teaching Behaviors and Perspectives

Susan Polich, *Jefferson College of Health Sciences*
David W. Musick, *Virginia Tech Carilion School of Medicine*

Physician faculty members in schools of medicine are rarely trained in the art and science of teaching. Faculty development fellowships (FDFs) may help physicians move into the role of physician-teacher (Bland, Hitchcock, Anderson, & Stritter, 1987). While most studies on the efficacy of FDFs measure tangible outcomes, few measure changes in perspectives related to teaching (Anderson, Stritter, Mygdal, Arndt, & Reid, 1997; McGaghie, Bogdewic, Reid, Arndt, Stritter, & Frey, 1990). A FDF at a new medical school required participants to meet monthly for discussion of selected topics, and to work independently on a capstone project. We measured program outcomes regarding teaching behaviors and possible impact on the teaching "mindset" of participants. Twenty-two participants from two cohorts of the FDF completed pre- and post-fellowship surveys. Fourteen survey items focused on participants' teaching experiences and behaviors. A 15-item survey adapted from the *Teaching Perspectives Inventory* (TPI) was used to measure changes in "mindset" associated with teaching[4]. Pre-fellowship surveys were completed by 95% of participants; 55% completed post-fellowship surveys. Most participants were clinicians (84%) who performed their teaching duties either in the clinic or at the bedside. Most had no previous training regarding effective teaching practices (89%), yet reported little anxiety about teaching. Pre- and post-fellowship survey comparisons revealed the following: (1) participants were more likely to rate themselves as "good teachers" after completing the FDF (46% vs. 79%); (2) reported use of selected teaching behaviors all increased; (3) willingness to

"always" evaluate their own teaching increased (3% vs. 46%); (4) two items from the TPI were significantly higher on the post-survey: "teaching should focus on developing qualitative changes in thinking" (p = .05) and "building self-confidence in learners is a priority" (p = .02). Our FDF program designed to improve faculty members' teaching was well-received by participants, and appeared to positively impact teaching perspectives and behaviors. However, results should be interpreted with caution due to small sample size and lower participation rate on the post-fellowship survey.

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Developing a Model for Transitioning Distance Learning Courses from Place Dependent to Place Independent Delivery

Julaine Fowlin, Catherine Amelink, Glenda Scales, & David Okoth, *Virginia Tech*

In 1983 Virginia Tech's (VT) College of Engineering (COE) partnered with four other universities within the Commonwealth of Virginia (University of Virginia, Old Dominion University; Virginia Commonwealth University, and George Mason University) to form a consortium known as the Commonwealth Graduate Engineering Program (CGEP). The main goal of CGEP is to provide the opportunity for practicing engineers and scientists within the Commonwealth of Virginia and beyond to maintain and enhance their skills. Learners have the option of gaining admission to any of the five universities, and can take courses from the other four universities. Since its inception the program has evolved from using televised delivery to primarily interactive video conferencing (IVC). The challenge with using the existing IVC structure is that it is place dependent; participants are required to go to selected locations known as receive sites to access courses. Stakeholders (advisory board, employers, and learners) are demanding more flexible access. The task of transforming courses from one delivery mode to another involves several interacting variables (technology, administration, faculty, students etc.). The course transition process becomes even more challenging in a decentralized university like VT. This poster outlines VT's experience thus far with the initiative to transition 8 CGEP courses by spring 2014 and the conceptual framework being used to implement the course transition process. We have adopted a phasic approach as recommended by the literature (Carroll-Barefield, Smith, Prince, & Campbell, 2005) and have used the change management guidelines presented by Kotter (1996). We successfully got all key levels of stakeholders to "buy into" the project and are currently working with individual faculty members to meet targeted deadlines. Our success was not without challenges and it is hoped that the lessons learned from our experience may provide a model for other universities with similar needs.

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Embedded Student Self-Regulation in College Courses: Helping Students Take Responsibility for Their Own Learning

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Academic self-regulation is one of the essential ingredients for academic success and eventual student retention through degree attainment. These skills include setting personal targets for academic performance, monitoring performance, mastering and matching learning skills for various academic tasks, and modifying academic behaviors as necessary and are applicable in all higher education disciplines. Not all college students enter higher education with strong self-regulation skills, and student retention data show that the lack of these strategies is often central to unsuccessful academic performance. Although self-regulation skills can be taught, they are not successfully mastered through one-time, didactic presentations of information. Instead, they must be embedded throughout learning processes and made explicit through repeated focus and review. This poster presentation outlines the practice of embedding academic self-regulation skills into college classrooms. The nature and value of self-regulation skills are outlined. Drawing on the work of such scholars as Zimmerman (2013) and Schunk, (1997, 2005), we designed assignments and activities requiring students to set goals for attendance, work quality, and procrastination. We included in-class support and activities to teach how to set measureable goals, identify and collect specific data for each goal, monitor performance over time, and reflect on outcomes to plan for future goals. We share handouts of materials used to teach and track self-regulation skills and illustrate how to schedule course activities to best teach self-regulation procedures. We discuss how intentionally teaching self-regulation strategies to our students impacted student performance. The embedded practice was built into 7 undergraduate classes at two institutions, with a total of 150 students involved in the courses.

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Enculturation Scholarship of Assessment Using Programme Assessment Plan

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Assessment practice in general can answer important questions about the learning of individual students, the effectiveness of a single course or programme, or even the entire institution as a whole. Currently, it is widely discussed with regard to how assessment could be used in attaining unexpected learning outcomes on the part of the students themselves. This paper will seminally discuss the importance of a Programme Assessment Plan and how university engineering lecturers could utilize it as a learning aid, thereby promoting learning throughout life. In ensuring the enculturation of scholarship of assessment among the National University of Malaysia engineering lecturers, it is argued that assessment should be acknowledged as a major influence on student learning in all course design and development. Additionally, assessment should be judged first in terms of its consequences on students' learning and second in terms of its effectiveness in measuring students' achievement. This paper ends by proposing steps and measures that should be undertaken in preparing Programme Assessment Plan, which tacitly inform the learning processes that should be undertaken in achieving its underlined outcomes, while at the same time contributing towards continuous quality improvement on part of the programme itself.

Engaged Learning Experience in an Undergraduate Biology Course

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The principles of "Engaged/Active Learning" have many elements that are important for a significant classroom learning experience; yet, implementing such a change in a traditional didactic lecture course is a challenging issue. The present proposal describes the 2nd year "experience" for an undergraduate Biology course taught at UNC-Chapel Hill (enrollment was 80 students, 76 Seniors focused on pre-Healthcare careers and 4 Continuing Ed) entitled "Biology of Blood Diseases" (Biol/Path 426). Engaged Learning was done weekly in multiple formats: (1) "Flipped-lecture" videos; (2) Basic-science Workshops; (3) Clinical Case Studies; (4) Corners; (5) Role Play and H & P (History and Physical) Report; (6) Medical Jeopardy; (7) Performing a PubMed search; (8) Ethical dilemmas; and (9) Short lecture with student-generated 'thought-notecards'. Engaged Learning days typically included (besides the group activities described above): (a) online individual quizzes given in Sakai based on a paper/flipped-lecture that was due before class started; (b) small group discussion/group, randomly assigned and together the entire semester); (c) group quizzes answered with IF-AT scratch-off cards (self-graded), and (d) application clinical question discussed-answered by the groups displaying color-coded cards. The Engaged Learning Grade was 11% of the total class grade: 5.5% from submitted Sakai "Individual" quizzes, and 5.5% for "Group" answers. Attendance was monitored as part of the Group grade. A detailed description of student academic performance compared to past years, student survey, and stumbling blocks from this Engaged Learning experience will be presented.

Engaging Diverse Students in Higher Education: Lessons Learned from K-12 Practices Around the World

Jioanna Carjuzaa, *Montana State University*
Eileen Gale Kugler, *Embrace Diverse Schools*

Diversity on campus is considered to be of compelling value to the education of all students. Much attention has been focused on recruitment of underrepresented students. Less is known about proven strategies to retain and successfully graduate students with different life experiences than those who have traditionally dominated college campuses. In K-12 schools, however, the issue of supporting students' long-term success has been a focus for years, as teachers are held accountable for reaching ALL students in their increasingly diverse classrooms. Lessons learned from these classrooms offer valuable insights for higher education where faculty are expected to help all students reach their academic and social potential. The presenters will share successful practices from K-12 educators around the world and professional development efforts at a land grant institution in the Western US to inform faculty in higher education. One key strategy we highlight is developing a supportive respectful relationship with students of wide-ranging backgrounds. Participants will have the opportunity to gain awareness of assumptions and expectations grounded in their own background that can keep them from seeing the strengths of their diverse students and negatively impact the learning and success of their students.

Engaging Students in Active Learning: Traditional and Innovative Teaching Strategies

Milena Staykova, Deidira Stewart, & Jennifer Everidge, *Jefferson College of Health Sciences*

Adult students and academic educators want to find the effective teaching strategies leading to successful learning outcomes. The nursing students face difficulties learning a vast amount of information from the textbooks. Engaging students and keeping their attention focused require faculty competency in the implementation of innovative strategies. Traditional and innovative teaching strategies have been an ongoing point of interest in nursing education. Traditional teaching strategies, such as reading from assigned text material, lecturing based on textbooks, and exams, are regularly used in the contemporary classrooms. Studies have shown that lecture-only teaching has been

insufficient to capture students' attention. In a position statement, NLN has concluded that excellence in nursing education is achieved through a culture of innovation embracing creativity and daring. The purpose of this IRB approved mixed-method study was to evaluate a set of traditional and innovative teaching strategies that were implemented in an advanced nursing skill class at a baccalaureate degree nursing program. Thirty-nine junior level II nursing students who were exposed to traditional and innovative teaching strategies over a course of 17 weeks. The data collection procedure was based on an original survey with a 5-point Liker scale ranging from *not effective* (1) to *extremely effective* (5) and open-ended questions with comment boxes. Mean and standard deviation were calculated. The participants of the study were mostly younger adults, 38% were 17-21 years old and 87% were females. From the 32 teaching strategies, 16 were rated as extremely or very effective such as in-class discussions (μ 4.6, *SD* 0.92) and low and moderate fidelity lab simulation (i.e., IV arm, Port-A-Catheter assess; μ 4.53, *SD* 1.2), and knowledge checks (μ 4.4, *SD* 1.06). The content analysis was congruent with the quantitative findings. The students in the contemporary educational system prefer interactive teaching strategies such as discussions and simulation activates, case-based learning and i-clickers. The educators should create vibrant academic environment to engage students and achieve successful learning outcomes.

Enhancing Interpersonal Skills Within Multi-Disciplinary Healthcare Teams

Shelly Pauling, Yolanda Savoy, & Ravi Rathnam, *Stratford University*

The purpose of this study is to identify components of interpersonal skills that need development when working within various allied health professional disciplines. Pedagogically, these findings will allow professors to build upon these components through existing instructional methods. Schofield and Amodeo (1999) report, the effectiveness of inter-disciplinary teams has improved the quality of patient care and satisfaction. Using evidence-based teamwork, health sciences students of multiple disciplines will be introduced to simulated scenarios in a mock clinic setting. The sample size consists of Pharmacy Technicians (n = 4), Healthcare Administrators (n = 2), and Medical Assistants (n = 26). The sample size was kept small indicative to a medical office setting. Conducting a case study methodology, observations and focus group interviews during a debriefing will offer conclusions of the interpersonal skills that are essential to acquire in operational healthcare teams. Findings from the debriefings indicate there are 5 major components (communication, delegation, conflict resolution, team building, and personal effectiveness.) The research found the use of andragogy approaches can cultivate a multi-disciplinary healthcare team who are well prepared for the complexities of today's health environment; while acknowledging simulated practices are valuable to deliver instruction that are desirable to develop interpersonal skills.

Equipping Students for Workplace Writing: Composition Techniques and Transfer

Brittany N. Hoskins, *Virginia Tech*

This investigation examines how first year composition (FYC) instructors can begin equipping students for professional writing in addition to academic writing tasks. The research includes a survey of seven recent graduates in different career fields in order to determine the writing skills and materials that are most commonly required in the modern workplace. Additionally, it examines the importance of written communication skills to employers through recent national studies (e.g. National Association of Colleges and Employers) and reviews scholarly recommendations for how FYC instructors can help students transfer learnings over a long-term basis. Research and perspectives are included from Doug Downs (interview), Beaufort (2007), Brandt (2005), Frazier (2010), Humphreys (2013), Schneider and Andre (2005), and Wardle (2007). The results emphasize teaching rhetorical situation analysis and sampling professional genres as effective methods for helping equip students for workplace writing.

Exploring Attributions in Graduate and Undergraduate Students' Devaluing of Peer Feedback in Educational Blogs: A Phenomenological Study

Anita M. Knight, William Gribbin, & Amanda J. Rockinson-Szapkiw, *Liberty University*

Participation in learning communities is positively associated with cognitive development, active learning, achievement, and persistence in an academic program. Blogs have the potential to facilitate a sense of community when students provide one another with reviews. Peer review has the pedagogical benefit of encouraging students to define and to discuss content related ideas and to refine their writing. Further, collaboration in this manner promotes community and persistence. Unfortunately, researchers have found that students devalue one another's feedback on blogs. Devaluation of peer feedback negates the potential benefits of blogging. As such, this phenomenon, devaluation of peer feedback on blogging activities within undergraduate and graduate courses, needs to be better understood. As such, these researchers will employ a phenomenological methodology as the intent is to gain an understanding of the phenomena of devaluation of peer feedback on blogging activities and the underlying consciousness beneath the experience; thus, enabling the researchers to understand fully the devaluation and how university faculty can better facilitate blogging activities. Participants are students enrolled in the residential humanities and social sciences disciplines course who use blogging activities and report that they see little value in the peer aspect of the blogging activity. As the primary method of data collection for phenomenological studies is interviewing, semi-structured, open-ended interviews were conducted to understand participants' experiences with the phenomenon. Moustakas' phenomenological data analytic procedures will be guide the analysis of data. This includes 'bracketing out,' delineating units of meaning, and clustering meaning units into themes. Primary themes will be reported, and practical implications will be discussed.

Exploring International Student Challenges and Needs in U.S. Post-Secondary Education Settings Through a Longitudinal Approach

Xi Yu, *University of Minnesota-Twin Cities*

The population of International students is not well represented in literature. Based on U-Curve theory and Culture Shock theory, cultural adjustment and cultural transition are important developmental journey for international students in US postsecondary institutions in order to better achieve their academic success and personal growth. This study presented the findings of a longitudinal study on international student needs assessment about their unique needs and anxieties/challenges across stages of pre-departure, upon-arrival, post-arrival around welcome week, by first semester, and by first year phases in a postsecondary institution in the US. Quantitative and qualitative data were collected through surveys, interviews, focus groups, and evaluations on face-to-face programs that are offered by the institution and departments. The results displayed the international student's varied challenges and needs at different phases, which provided insights for further research and practice to improve international students' experiences in US classrooms and make advanced efforts through student affairs and student services on campus.

Facilitating Collaboration Among Future Professionals

Kerry Fay Vandergrift, Renée Huth, Deneen Evans,
& Sheila Krajnik, *Radford University*

This mixed study evaluated learning outcomes from interprofessional case-based symposiums. This type of collaborative work has gained relevance in the past three decades, in part due to a migration toward globalization and changes in resource availability (Guile, 2012; Phelan, Barlow, & Iversen, 2006). When professionals collaborated, the quality of care and outcomes improved (Reeves, Tassone, Parker, Wagner, & Simmons, 2012). Undergraduate and graduate students within five healthcare professions (Communication Sciences and Disorders, Nursing, Occupational Therapy, Physical Therapy, and Social Work) were invited to participate in simulated healthcare teams. During each symposium, a patient case was presented and students were assigned to groups which

included representatives from each of the five disciplines. Each team developed a comprehensive patient care plan with intragroup discussions facilitated by faculty. Participants were then provided the opportunity to compare and contrast all care plans created. Pre- and Post- Self-report 5-point Likert scale questionnaires (N = 121) indicated significant increases in students' knowledge of the five represented healthcare disciplines (t = 10.70; p = .000), as well as positive changes in attitudes and perceptions toward team learning and working (t = 2.99; p = .004). The survey included four open-ended questions which revealed similar themes. Students recorded the ability to better grasp discipline specific scopes of practice while realizing that overlaps exist in current practice. They reported being able to develop their aptitude in critical reasoning and practice intragroup communication skills. Students felt professionally unified and noted a better understanding of professional roles. The poster presentation will include analyses from the Interdisciplinary Symposium scheduled fall 2013. Next steps include expanding evaluation of the symposia's impact on real-world healthcare planning and decision making.

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Faculty Development for English-Mediated Instruction

Kent Lee & Hikyoung Lee, *Korea University*

English-mediated instruction (EMI) is being increasingly implemented in universities in South Korea as a means to globalize higher education. Rationales include domestic university rankings based on the number of courses offered in English, recruiting foreign students, and increasing global visibility. For students lacking sufficient academic English competence, classroom performance is impaired. For faculty who are contractually bound to teach in English, they must confront not only their students' English competence but also their own. In this light, this presentation addresses EMI at a South Korean university and how faculty must undergo prolonged and continuous learning to develop academic English skills in addition to skills in their own fields. A qualitative study of professors at a leading South Korean university is presented. This study addresses significant gaps in the literature, as research on EMI issues at East Asian universities is scarce, especially on the challenges and perspectives of faculty. The university's EMI policy is introduced, along with the role of the Center for Teaching and Learning (CTL) and the programs it offers for faculty development in EMI. Their difficulties are discussed, and viewpoints and opinions of some professors are provided regarding EMI and its implications for faculty development. While the policy has helped the university rankings, the faculty prefer more autonomy in choosing the language medium of instruction of their courses. In addition, although support programs such as EMI workshops and individual coaching are offered by the CTL, faculty participation is low. The data indicate that EMI has far-reaching consequences for faculty and teaching, which subsequently affect the learning environment. The results from this study can be generalized to South Korea and the growing demand for EMI in higher education in non-English speaking countries.

Fostering Understanding of the "Other" Through Service Learning

Meeta Mehrotra & Kristi Hoffman, *Roanoke College*

Service Learning is a crucial pedagogical tool for helping students learn empathically about and from disadvantaged groups. To challenge stereotypes, dispel fears, and encourage cross-cultural understanding, we provide community service opportunities that allow students to interact with two diverse groups often viewed as the "other"—

international refugees and mothers who are drug addicts. While the groups have different experiences, they share several similarities: they are often stigmatized, they face considerable challenges as they start a new life in unfamiliar surroundings, they have few marketable skills or face language barriers, they lack social support, and they face negative reactions ranging from indifference to hostility. For one project, students provide childcare during therapy sessions for mothers participating in residential drug treatment. For the other project, students work with refugee families by helping them practice conversation skills, helping the children with their homework, and answering questions about daily life in American society. The service is structured to maximize informal interaction, resulting in a significant transformation of perceptions as demonstrated by a content analysis of a small sample of student papers. The students realize the need for providing assistance and some student reflections indicate a shift from a paradigm of charity to social justice through their advocacy for change in social policy and structures. The challenges and advantages of working with these groups are also described. Service learning projects which focus on a greater understanding of the "other" are applicable in a variety of disciplines and interdisciplinary programs.

From Homeless to College: How to Address Housing Trauma Within the Challenges of the Higher Education Classroom

Tara Overzat, Stan Hoover, & Andrew Morse, *Mercer University*

Students take many paths towards a higher education. Some students may have previous or current traumatic experiences with unstable housing. Homelessness has the potential to compromise individuals' basic sense of safety and security and also create a great deal of uncertainty about their future. The impact of these traumatic experiences over time takes a significant emotional and physical toll. In reviewing the developmental effects of traumatic stress, van der Kolk (2005) notes that trauma can limit individuals' abilities to regulate emotional arousal and effectively cope with stress. Traumatic experiences can also negatively impact learning. Students who have been exposed to trauma have been found to demonstrate lower academic achievement (Perry, 2004), decreased IQ and reading ability (Delaney-Black et al., 2002), and lower overall GPA (Hunt et al., 1997). Trauma associated with homelessness impacts students at all educational levels. Currently, a specific proven pedagogy does not exist in the literature to address the unique struggles of this population; however, the theory of social pedagogy shows promise in meeting the needs of this student population. Social pedagogy is "used to denote work with more vulnerable groups in society" (Petrie, 2005). A form of psychological first aid—Listen, Protect, Connect—could also guide educators towards empathizing with this population. A possible model for integrating on-campus services (counseling, campus health center, tutoring labs, etc.) with trauma-informed care will be explored. College professors and professionals will be given information on how to identify issues past or currently homeless students may face, and how to direct these students to appropriate resources. The benefits and areas of improvement of a pilot program for helping homeless students succeed in a northeastern university will be also explored.

Going Straight to the Experts: Using Focus Groups to Assess for "Significant Learning Experiences"

Sandra Gramling, Benjamin Lord, Elizabeth Collison, & Rachel Weiskittle, *Virginia Commonwealth University*

Active learning strategies are increasingly implemented in college classrooms (e.g., Fallahi, & LaMonaca, 2009). Moreover, Fink (2003) has advanced an integrated approach to designing college courses to foster the creation of "significant learning experiences". However, as lamented elsewhere, the extent to which this increase in active learning actually enhances significant learning experiences has proved difficult to assess (e.g., Gramling, Lord, Collison, & Harper, 2013). The present proposal reviews the authors' use of qualitative and quantitative indices of "significant learning" in an experiential "Spotlight" course (5-week, one credit) on college student bereavement ("Coping with Bereavement: What doesn't kill you makes you stronger?") The course aims to educate students about the current grief literature from a stress-and-coping perspective. The active learning strategies successfully implemented in traditional 3 credit classes were adopted for this Spotlight course. Namely, each week a new module is introduced with the practice of a specific experiential exercise (e.g., expressive writing, picture memoir) followed by peer-to-peer discussion and class discussion. Mini "lecturettes" (20-30 min) tie the in-class exercise to relevant theory or outcome literatures and sets the stage for subsequent out-of-class exercises. An overarching shared-learning project gives students the opportunity to view survey data about the grief experiences of the class, and to

participate in focus groups on loss experiences, how they affect students, and how they cope with them. Readings and on-line quizzes reinforce foundational knowledge. Student gains on each of Fink's taxons (Foundational Knowledge, Application, Integration, Human Dimension, Caring, Learning How to Learn) are assessed with pre-and post course quantitative measures. Importantly, pre and post course focus groups also provide rich qualitative data to assess gains along Finks taxons and to evaluate the robustness of the taxons per se. The data are discussed in terms of advancing and refining Fink's integrative course design for fostering "significant learning."

Group Dynamics and the Creative Process: Student Collaboration on a Lifestyle Magazine

Catherine Fox Byers & Nick Cassway. *Drexel University*

When the final project for a course is also a magazine published and distributed as a university marketing tool, faculty devised a teaching process that promotes individual creativity *and* a collective goal. The annual challenge is to have each student achieve high quality individual work that mirrors and complements the group's vision for the end product. The students and faculty also must please multiple clients, including college administrators. To achieve this goal, in the first of two consecutive terms (quarters, in this instance), students literally "sign off" on content and design decisions that result from an enthusiastic, collaborative and iterative classroom process. Once a student has researched, written and designed content, the piece is handed off to a team of classmates who finalize the layout to meet the specifications established by the group. In addition, the faculty aims to have the class align with the department's "Required and Desired" skills identified by the program faculty and set as a goal for all graduates of the program. Throughout the process of devising, developing and designing the magazine, leadership, teamwork, negotiation and effective communication skills are gained in a supportive and lively classroom environment.

How do We Build the New University?

Shelby Ward & Robert Siegle, *Virginia Tech*

Virginia Tech's new *Center for 21st Century Studies* models reinventing the university through its alternative administrative structure, its transdisciplinary methodology, its unconventional study abroad component, and its pedagogical innovations. As a top to bottom effort to reimagine how things might work, the program offers several provocative invitations to those wishing to carry over the best of what we've been doing into a remixing of the elements that go into undergraduate education. During this Practice Session, the organizers will outline the program's design, share selected artifacts, and suggest the initial results of several kinds of measures of program outcome. Collaborative discussion follows.

Impact of Virginia Tech Summer Academy on Student Intended Major

Matthew Schroeder, Courtney Vengrin, Donna Westfall-Rudd, Susan Sumner, *Virginia Tech*

The Virginia Tech Summer Academy (VTSA) began in 2012 and was developed from the successful Pennsylvania State model. This program is designed for accepted first-year or transfer students who want to jump-start their academic career. While many summer bridge programs address the needs of minority or first generation college students, the purpose of VTSA is to ease the transition from high school to a large, undergraduate university while becoming familiar with campus life, academic expectations, and a new community. The 2013 VTSA had 240 total students enrolled in 25 academically themed tracks. All tracks consisted of two discipline-specific classes. For the purpose of this study, we focused on students enrolled in the five tracks within the College of Agriculture and Life Sciences (CALS). The objectives of this study were (1) examine the factors influencing the students' participation in the VTSA program, (2) examine the factors influencing students' choice of CALS, and (3) determine if the VTSA classes impacted their choice of intended major. At the conclusion of the summer program, 42 students were asked to participate in an online survey and 23 total responses were collected. Data was collected on a variety of topics including: demographics, extracurricular activities, intended major, past experiences, and impact of their VTSA track on their future major choices. Preliminary results indicate that "getting a head start" and "family influence"

were predominant factors that encouraged the students to attend the VTSA. A majority of students indicated that they chose a CALS specific track because of their personal interests. The CALS specific classes had an influence on intended major for 28% of participants. This study suggests that early academic experiences may have an influence on future academic choices. Encouraging students to participate in a summer bridge program with discipline-specific classes could impact participation within a specific major.

Implementation of Virtual Parks and Recreation Systems for Higher Education

Dustin Bessette, *National Graduate School of Quality Management*

As institutions cut vital funding in outdoor recreation programs, limited resources such as technology become essential to students growth. The uses of visual concepts on digital platforms become essential to the main functions of classrooms and studies. Research has shown that the use of online and distance learning creates diverse and prepared professionals for the careers of the future. With more students becoming profound users of online and distance learning via technology, the use for this type of methodology is becoming more useful in future years. Virtual and real time technology is now used to help bring about the management processes of parks and recreation to the student level. With using the main textbook analytical research faculty can now enhance the mode of information via online by using a visual based park for students in park and recreation programs. Real time activity can be used to help communication skills with avatars and users from across the world. The benefits of a program that has the ability to bring the real life situations of recreation into a virtual platform are endless. Institutions will be well prepared for the recreation savvy world of the future. Overall, the visualization of virtual parks and recreation systems is becoming vital to the surplus institutional needs. Universities that have limited funds but specialize in outdoor recreation can and will be able to use features of these systems to enhance the prospective, abilities, and management styles of students. With tablets, laptops, and smartphones being able to be used and adapted into the higher education classroom, a virtual parks and recreation system is a must for the future of the industry.

Implementing Multi Mini Interviews into the Residency Interview Process

Aaron Clark & Anita Kablinger, *Virginia Tech Carilion Clinic*

The multi mini interview (MMI) was introduced to address two issues which include accurately predicting performances in medical school and to address intangibles such as interpersonal skills, professionalism, ethical and moral judgment. The Virginia Tech Carilion Clinic Department of Psychiatry has just implemented its pilot year of the MMI. The objectives included determining whether residency programs should implement MMI into the interview process for the purpose of choosing candidates for medical training and to review the surveys of the past interviewees to assess their objective opinion of the MMI approach. The goal of the multi mini interview is to assess a candidate for a residency program spot in a brief but sufficient manner, which was done by having candidates interview with eight faculty and staff members in 10-minute interview sessions. Characteristics that were stated to be of value to the program included a commitment to excellence and education, serving the underserved communities, cultural sensitivity, experience in volunteer services, leadership potential, maturity, interpersonal relationships, professionalism, and being able to become an effective team player. Past articles were examined where the goal was to observe predictive validity. These past articles have shown that those who were selected using the multi mini interview were able to do better on licensure examinations and were shown to become more effective physicians. At the end of the interview season, surveys were sent to each potential candidate to assess their satisfaction or perceived bias and concerns with the multi mini interview. Past articles have shown predictive validity of 0.73 with eight administrations of the multi mini interview in past cohorts when 12 ten-minute stations were used with one examiner at each station. The review of the first use of multi mini interviews at the Virginia Tech Carilion Clinic Psychiatry Program showed a vast amount of the applicants were satisfied with the use of the multi mini interview.

Increasing Ethical Reasoning in STEM Students

Amanda G. Biesecker, David K. McGraw, & Mary K. Handley, *James Madison University*

Ethics education is increasingly included in the curricula of science, technology, engineering and math (STEM) programs, frequently required by an accrediting body. The Integrated Science and Technology (ISAT) major at James Madison University, an ABET-accredited applied science program, requires a course in ethics in the first year and, in addition, offers an optional senior level course, *Ethical, Legal and Social Implications of Biotechnology* (ISAT 456). ISAT 456 also includes students from JMU's Biotechnology degree program, for whom the course is requirement and is most often their only explicit instruction in ethics. Thus, the ISAT 456 students differ in major and in previous ethics instruction. In order to assess (1) the effectiveness of the course in increasing ethical reasoning, and (2) the effect of previous ethics education on ethical reasoning, we administered the Defining Issues Test (DIT-2), a well-established ethical reasoning instrument, to students (n = 68) pre- and post-term. The mean N2 score, a measure of post-conventional reasoning skills on the DIT-2, was analyzed; the N2 score increases with a participant's higher level reasoning, e.g. prioritizing justice over purely self-interest. N2 scores showed a statistically significant increase from 39.8 ± 13.2 to 43.6 ± 15.0 (p = 0.005) pre- to post-term. Interestingly, neither the mean pre-term nor post-term score differed between the ISAT majors (n = 22) and Biotechnology majors (n = 46); likewise, there was no difference in change in scores between the two majors. These results indicate that while explicit instruction in ethics in ISAT 456 increased ethical reasoning, previous instruction in ethics did not correlate with a higher pre-ISAT 456 score. We continue to collect data for this study in order to increase sample size. Other ongoing work includes testing ISAT students before and after their first year course in ethics to determine if scores increase after that course and if the increase is maintained until senior year.

Increasing Time on Task Using Civic Engagement

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During the last several years, the incorporation of online homework systems into mathematics courses and in other disciplines has dramatically increased. WeBWorK has become a popular choice as an online homework system for over 450 institutions ranging from high school to the university level. Some of the features that make WeBWorK appealing to students include its accessibility, easiness to use and learn, and its instant feedback concerning the correctness of problem answers. Instructors from a practical standpoint can use the ability of WeBWorK to assign each student unique problems from the same general concept. WeBWorK is set up where it is very easy for an instructor to track how many problems students work successfully. To further encourage students to work additional problems and increase their time on task, we are currently integrating WeBWorK' s capabilities with a project involving St. Jude Children's Research Hospital in two sections of first semester calculus. For this project, several local community businesses and individuals have agreed to sponsor St. Jude for the two calculus sections, with the amount of money raised based on the number of problems the classes work successfully. Students have the opportunity to work problems to raise money for an excellent cause, while at the same time, better increasing and retaining their mathematical skills. We are especially interested to see if this endeavor increases students' motivation to work and engage in more mathematics problems, which hopefully will result in better success for them in this class and beyond. The purpose of this poster is to report the initial results of this study. This project is supported by the universities' new Quality Enhancement Plan involving the Scholar-Citizen Initiative, which encourages the integration of students' academic work with civic engagement.

Instrument Validation of Students' Assessment Using Rasch Measurement Model

Nuraini Khatimin & Azami Zaharim, *Universiti Kebangsaan Malaysia*
Azrilah Abd Aziz, *International University of Kuala Lumpur*

This paper aims to identify the suitability and accuracy of the final examination questions for engineering mathematics. As a compulsory subject for second year students from 4 departments in Faculty of Engineering and Built Environment Universiti Kebangsaan Malaysia, the Differential Equations 1 course (KKKQ2124) was considered in this study. The data used in this study consists of the marks for each question from final examination of semester 2, 2012/2013 session. The data then will be analyzed using the Rasch measurement model. Besides fitness test exam questions, Rasch model can examine the ability of students and redundancy of instrument constructs.

Investigating the Mathematics of Inaccessible Objects: Algebra Videos with iPads

Susan Staats & Douglas Robertson, *University of Minnesota*

Mathematics assignments based on mobile technology should support authentic mathematical exploration while leveraging the capabilities of the technology. We use the theme "the mathematics of inaccessible objects" as a foundation for creating assignments that make appropriate use of the mobility of tablet computers. This endeavour is important because early research on iPads in Higher Education focuses more on media manipulation than on disciplinary learning. The University of Minnesota College of Education and Human Development provides all entering students with an iPad to use in learning communities and interdisciplinary seminars that form the college's First Year Experience program. The students described here participated in an interdisciplinary learning community. They enrolled as a group in two classes, college algebra and introduction to elementary schools. All students were first year university students considering a career in elementary education. For this activity, students visited the university art museum and engaged in small group discussions and activities on the mathematical features of various works of art. Each student group selected one work of art to answer the question "How do the mathematical qualities of the artwork contribute to its artistic feeling?" They created a video using their iPads to demonstrate their answers. Works of art are inaccessible objects—they cannot be touched for measurement or other analysis—and so mobile technology provides opportunities to photograph and analyze their features in ways that could not otherwise be done. Students made interesting choices in their videos: emphasis on transformation of functions to describe visual repetitions in the art; emphasis on linear functions; use of the SketchBook app to overlay grids on photos to afford mathematical analysis; use of the Educreations app to capture real-time hand-drawings laid over photos; and trouble-shooting problems through a two-iPad method: one iPad video recorded while another iPad produced the animations.

Learning for Meaning: The Effectiveness of Reflection on Action Through Service Learning Approach

Samreen Momin Khoja, *ITREB for Pakistan*

This current study examines the effectiveness of reflection on action through implementing service learning approach in a higher secondary classroom. In this action research cycle conscious effort was placed to help course participants to reflect on their action through guided enquiry. The study identifies that importance of critical reflection on experience and the role of teacher is crucial in service learning where participants get opportunity to link subject matter with their daily life. This approach provided a basis that the pedagogical approaches and curriculum should have a strong linked to individual's wider connection with the society. Over a period of one semester, participants were examined in the process of practicing service activities, group reflection and peer feedback. The data was collected through observation, audio recording, focus group interviews, and reflective journals. The study shows the benefits of service-learning in all sphere of participants' development: intellectual, personal and social development especially student who find difficulties in understanding and presenting difficult

thoughts. Improved questioning and writing skills was evident in the study where participants ask questions about the text to clarify concepts and present their critical thoughts to develop plans for future implications of this strategy. Another aspect which allowed participants to reflect on their own action which reduce their stereotypes and broaden their perspectives of issues of diversity and facilitate cultural and racial understanding thus resulted in better preparation for their professional career. It brought positive effect on individuals' self-efficacy, self-identity, spiritual-growth, and moral-emotional development. In addition, the study found that it promoted co-constructivist model as opposed of the transmission model in higher classes where the participants collectively took responsibility for the learning of the entire group regardless of gender or social group. Finally, the research provided a platform to the policy makers and curriculum developers for the implication of meaningful pedagogical approaches at the higher secondary level to enhance students' learning.

Listening to Students 1, 2, 3: Analyzing First, Second, and Third-Person Data Collection Methodology for Understanding Student Experience

Brian Kelleher Sohn & Anne Leslie Skutnik, *University of Tennessee, Knoxville*

Learning about student experiences in our courses can benefit our teaching, planning, and understanding of what was learned. This paper compares typical educational research methodologies. Specifically, we compare 1st person, 2nd person, and 3rd person approaches. Third person approaches are most commonly used to learn about student experience. Outside observers of one kind or another come into a teacher's classroom and note what the instructor and student are doing. But if we want to know about students' experience, why not ask them? As part of a major phenomenological study, our team of researchers recorded class sessions, collected post-class written reflections, and conducted focus group and individual interviews with students and the instructor of a unique graduate seminar. We focus here on individual interviews and post-class written student reflections, and argue that, while first- and third-person data collection methods are helpful, dialogic phenomenological interviews are the most powerful way to learn about student experiences in our classrooms. We will support our argument by citing student quotes that were powerfully emotive, deeply introspective, and revelatory of connections and applications of course concepts to their lives and work. Researchers and the instructor found a way to listen to students that provided a powerful window into student experience that other methods do not provide. With a bigger window looking onto the landscape of student consciousness, instructors can better understand the effectiveness of their methods, lessons, and classroom activities.

Making Curriculum Threads REAL

Kathy Haugh, Elizabeth Friberg, Linda Eastham, Karen Rose, Vickie Southall, Anita Thompson-Heisterman, Janie Heath, Mary Gibson, Reba Childress, & Deb Conway, *University of Virginia*

Teaching undergraduate nursing *Research*, *Ethics*, *Advocacy*, and *Leadership* (REAL) presents unique challenges and opportunities. Historically these pillars are threaded throughout the curriculum or given their own "course silo." Threading content has the potential to leave gaps in some areas, unintentionally duplicate other areas, or leave students with the impression that the content is less significant. Teaching content in silos does not allow students to appreciate the interrelationships of these pillars and can imply that content can be mastered in one isolated course. Offering a "REAL" series of courses (I-IV) tears down existing silos and showcases the interrelationships of the four pillars, transforming the curriculum. While the emphasis of each pillar shifts, a sequenced approach ensures content is relevant, contemporary issues are highlighted, and builds on the previous semesters learning. The pillars retain distinct visibility throughout the curriculum. REAL-I exposes students to the foundational context and concepts of professional nursing. Students develop skills needed for scientific inquiry and produce a scholarly writing assignment. Students learn principles of ethics and relate ethics to patient care and professional integrity. Students are introduced to their role as leaders and advocates for health policy. The following semester, REAL-II continues to cover all four pillars, but emphasis shifts to policy and regulation. In Real-III, focus shifts to evidence based practice, including the protection of human subjects in health care research, application of the REAL principles to mentored evidence based projects. REAL-IV is the culminating course as students apply the REAL principles to plan capstone projects for their final semester. Students launch their nursing career by developing professional

portfolios. We anticipate this pedagogical approach will lay a stronger foundation for professional nursing practice by integrating the pillars of research, ethics, advocacy, and leadership into the curriculum through a systematic, formative approach.

Mid-Course Evaluations: Utilizing Student Feedback to Effect Real-Time Course Change

Melissa Adragna, *SUNY Upstate Medical University*

Course evaluations have become vital instruments in the assessment of course effectiveness and educational outcomes. While these instruments are essential in obtaining the data needed to implement effective course change, challenges such as student participation and student perception must be considered (Porter, 2011). An ideal method for evaluation development takes a student-led approach, by creating meaningful opportunities for engagement and input during the evaluation process (Cooke-Sather, 2009). The objective of this study is to develop and examine a course evaluation system that encourages open dialogue between course administrators and students, ensures high levels of participation and creates opportunity for current students to inform course change. To meet this objective a live mid-course evaluation system is implemented. Evaluation items are summarized student suggestions assessed on a two-point Likert scale of either 'agree' or 'disagree'. Using response devices, live-polling is executed during a mandatory course session. Based on the results items are discussed in an open forum, allowing students and course administrators to more clearly define the meaning of the student suggestions and collaboratively develop plans to overcome current challenges within the course. During the session, re-polling allows for students to vote and approve of all proposed change and items that have been further defined during the evaluation process. This approach creates an effective evaluation system that ensures participation, while allowing students to construct and define their perceptions of evaluation items. According to Porter (2011), content and participation are often two challenges which significantly impact the validity of evaluation data. Beyond validity, the system strives to foster a learning environment where the student is a valued stakeholder in the course development and evaluation processes.

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Modality and Perceptions of Student Teacher Performance

Lisa G. Stoneman & Gary L. Whitt, *Roanoke College*

Student teachers in teacher preparation programs at Roanoke College have used web-based portfolios for more than a decade to house examples of work which, when presented verbally to education faculty, document competency of departmental goals. Roanoke Education faculty suspected that modality-related factors might be reducing the validity of the performance evaluations and that, if the presentation modality changed, perceptions of student performance might significantly change. So, the modality of the student narrative was changed from speech to text. Rather than listening to student oral presentations of their work, faculty evaluated online written narratives asynchronously. Before seeing the cumulative student performance scores, faculty were asked to compare the newer assessment methodology with the old. They reported uniformly that the evaluation of student performance was more valid due to several factors: increased time to scrutinize data, less distraction due to superfluous social interaction, and increased access to student data (faculty could better see the examples). The change in modality reduced faculty perception of student performance by an average of 12% (students formerly scoring 4.7 on a 5-point Likert scale scored an average of 3.9). The study has implications for teacher preparation programs using student narratives to establish content and skill competency. Changing the modality of the narrative may significantly change perceptions of student performance and may increase assessment validity.

Modular Instruction: Challenges and Opportunities in Teaching and Learning, the Case of Implementing Universities in Ethiopia

Aynalem Lenjiso, *Debre Birhan University*

The main objective of this study was to investigating the opportunities and challenges that the implementing universities are facing, and devise mechanisms by which this new concept could benefit both the students and instructors and above all enhances quality of higher education within the country. The researcher employed mixed methods in which both qualitative and quantitative research was employed, and qualitative was a tool used to complement the quantitative data. The information was obtained through questionnaire, FGD, observation, and document review. Among the total population of students and academics staff, 30% of the population was included in the study sample, which is suggested by Suter (2006). Cluster, stratified, and simple random sampling, purposive and quota sampling was employed to select a representative population. The quantitative data were analyzed using SPSS. Percentage and frequency were used in the description of background information, and frequency, percentage, and Chi-square methods were employed to see whether there is an association between responses of different groups for the similar items, and to show relationships between variables. The data collected through interview, FGD, and document analysis was analyzed qualitatively through narration, and the open-ended questions were converted into ranked data to move in parallel with numerical values. Modular system was effective in teaching learning and time usage of students while there were challenges like shortage of time to complete and digest contents. The findings show that there is significant association among variables under study ($p < .05$). There is lack of cooperation among implementing universities, and challenges as well as opportunities for modular systems were diverse in all universities. There was no data showing cooperation among Ethiopian universities and other international universities regarding modularization. Some of the universities that were performing effectively used the system to improve quality teaching and learning.

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Monsters Under the Bed: Episodes, Questions, and Dialogue in a Graduate Seminar

Tiffany Dellard, *University of Tennessee*

So, can I ask a question? So, so as a parent, let's say you have... you know, here are two options . . . one would be to say to the child, "Oh no, there are no monsters in the closet." Right? *Right.* The other one would be . . . just, to say, "Ok, well, let's shoo the monsters out of the room." So, in other words, one would be . . . um. . . . *Find another alternative.* One would be . . . I don't know . . . you're acknowledging that what the child is seeing is real . . . for the child. *So, you ask the question; ask the question that says that.* This poster presentation will utilize an illustrative episode from a graduate seminar in phenomenology to unpack how freedom is created in a classroom setting. We will use the transcript of an actual seminar event to explore how the instructor used an unobtrusive leading style to help students think critically while engaging in a process of questioning and dialogue to reach a new understanding of the impact of individual perception. Using our knowledge of the principles of phenomenology and educational psychology we will unpack and analyze the episode to reveal some underlying principles and practices used by the instructor, including structure of the seminar environment, which opened up a time and space in the classroom. This approach allows students to slowly yet intentionally explore their own assumptions and understandings. The uniqueness of this episode lies in the fact that the instructor uses a student initiated example to connect students to course content through instances of the concept in a "real world" setting. We intend to begin a discussion that allows other instructors to reflect upon and examine "episodes" in their own courses that present an opportunity for students and instructor to engage in productive questioning with free flowing dialogue.

Multiple Worldviews and the World Wide Web: Can Online Environments Aid Transformative Pedagogy?

Debjani Chakravarty, *Grand Valley State University*

Expansion of online modalities in higher education have resulted in widespread conversations and contentions about student learning, retention, pedagogy, epistemology, digital divides and the real role of universities. Scholars such as Meyers (2008) and Turpin (2007) tie the notion of bell hooks' transformative pedagogy and teaching communities to online environment. My research adds to the conversation by further exploring the contested potential of online environments to create counterhegemonic courses that focus on critical thinking and social justice. Online discussions facilitate asking and answering of difficult questions arising from teaching topics that constitute lived experiences of students and faculty such as poverty and racism, privilege and sexual assault. Online environments also facilitate the telling of "backstories" where topics such as "third world poverty" and "gender violence" can become continuous and contextualized, instead of dogmatic and detached. Courses taught in women and gender studies often fall short of painting the full picture or telling the whole story where histories of colonialism or corporate capitalism cannot become a part of the plot or the learning-scape due to shortage of time. Online environments embody the potential to create concept maps and use hypertext to make crucial backstories and current developments on controversial topics taught accessible to students, as well as create a semi-safe environment for conversations on such topics. Keeping in mind issues of access and privilege, identities and communities that underlie all pedagogical conversations, my research is a methodological exploration into the interface of critical feminist pedagogy with online teaching and learning.

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Negotiating Social, Professional, and Teaching Identities: Narratives of Pre-Tenure Faculty

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The purpose of this constructivist narrative inquiry was to investigate the influence of social identities on undergraduate teaching practices among pre-tenure engineering faculty. This study responds to the need for increased understanding of the socialization of newcomers in the daunting culture of academic engineering (Foor & Walden, 2009; Pawley, 2009) and the importance of meeting the needs of increasingly diverse faculty and students. Student co-investigators conducted the interviews, focusing on the experiences and roles instrumental in shaping participants' identities as engineers and faculty members. Questions explored the experiences and events leading to faculty careers; reflection on how undergraduates experienced participants as teachers; and components of identity that emerged in teaching practices. Initial findings reveal the complexities of identity negotiation among engineering faculty, offering implications for faculty socialization and undergraduate teaching practices. Emergent themes included (1) relational and experiential influences on identity formation; (2) complexities of identity negotiation in academic engineering; and (3) teaching as a response to structures of power and dominance in engineering and academe. Findings from this study may have implications for faculty socialization, engineering education, and the study of identity among women and underrepresented students and faculty in STEM.

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Novice Teachers' Perceptions of Organizational Socialization in Arab Countries: the Cases of KSA & the Sultanate of Oman

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Organizational socialization has a critical role in adjustment and learning process of newcomers. The purpose of this study is to examine teachers' perceptions in KSA and Sultanate of Oman towards the effect of Organizational Socialization process on the adjustment and learning process of newcomers, and to understand the differences between Saudi and Omani novice teachers regarding the effectiveness of Organizational Socialization process. For data collection the study uses the Organizational Socialization Scale, developed by Chao et al. (1994), as a data-gathering instrument. The background profile contains socio-demographic characteristics of the respondents including nationality, gender, and years of working. For data analysis the exploratory factor analysis (EFA) and appropriate statistical techniques is used. A representative sample of 170 subjects, including 90 teachers from Saudi public schools and 80 teachers from Omani schools, is selected during the 2013-2014 school year. This study is expected to contribute organizational socialization literature by identifying new teachers' perceptions of Organizational socialization in some Arab countries.

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Nudging Students Toward Active Participation and Self-Regulation with Interactive Online Environments

Naomi Jeffery Petersen, *Central Washington University*

For decades teachers have struggled to isolate students and eliminate the 'distraction' of socialization. Dewey is known for observing that school is where we come together to learn alone. In contrast, constructivist pedagogy argues against such isolation, citing the value in such concepts as self-efficacy, choice theory, intersubjectivity, and self-regulation. This highly influential factor in successful learning is well documented in cooperative learning research as well as ongoing studies using the National Survey of Student Engagement. Ironically, the trend in higher education is toward even less personal contact but greater accessibility with the use of online platforms. Although online platforms provide fast and convenient access to information and are technically able to facilitate interaction, the structure of assignments such as discussion boards can undermine engagement. Many students complain that required participation in discussion boards becomes trite and tedious, resulting in resentment toward the technology, the instructor and even their colleagues. One problem is the misuse of online learning platforms for holding students accountable for reading instead of exploiting its innovative features to develop a social network that enhances the learning environment in class as well as among students outside of class. This poster presents an introductory assignment in order to minimize those disadvantages while developing a cohesive and cooperative culture. The success of social networks (e.g., Facebook) informs the practice illustrated here: Graphically displayed are key decisions that will "nudge" students into greater engagement, more thoughtful processing of ideas, and much higher levels of achievement. The poster will also address opportunities for assessment of course content in all four knowledge domains (i.e., factual, conceptual, procedural, and metacognitive, identified by Anderson et al., 2000, in the revision of Bloom's Cognitive Taxonomy).

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Online Homework Help Forums for Engineering Learners: An Assessment of Student Conversations

Hon Jie Teo, *Virginia Tech*

Online discussion forums have emerged as a popular Web application to build and support online communities for numerous engineering interest areas and practice. A review of engineering education literature suggests that there is limited understanding on the use of online homework help forums for engineering learning beyond the classroom. As a contribution to the identified gap in literature, the focus of this study is on the "Homework Help" section on AllAboutCircuits.com. The purpose of this study is to explore the main topics. Over 6,000 discussion messages representing homework questions were downloaded and a Python program was used to extract user trace data from the messages. Instead of analyzing the data through manual means, I utilized the Natural Language Toolkit (NLTK) to capture textual patterns and leverage a topic modeling approach, Latent Dirichlet Allocation, to identify connected clusters of words. Linguistic Inquiry and Word Count (LIWC) analysis was also used to determine how often students use words associated with cognitive processes. I found that the homework help forums mainly cater to students seeking help on fundamental engineering topics. The online discussion forums also appeared to be supportive learning environments, as students openly engage in meaningful inquiries and interactions with other learners.

Pedagogical Challenges Facing International Students

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Globally, more people than ever before are choosing to undertake an international education. International students now form a large part of the diverse students' community that exists in most higher institutions of learning, especially in the United States, United Kingdom, Australia and Canada. These students are taught in the same classroom alongside the "home" students. The purpose of this study therefore is to empirically investigate through a research questionnaire and interview, the teaching-learning difficulties encountered by second year international students after a year of study. Prominent among the findings were cultural diversity in group work, language in terms of accents of lecturers and colleagues, as well as cordial relationships with respect to interacting with lecturers and colleagues from other parts of the continent. Moreover, reports indicated that the main challenge focused more on the curriculum. The nature of what is learnt , method of lesson delivery and the assessment mode was strange to some of the students. This is further compounded by the fact that they needed to adapt to the use of modern technologies in learning some topics. Same applies to the submission of assignments. These challenges were discussed, and the paper concluded by recommending ways of minimising these instructional challenges, so as to help the students perform better.

Practicing what We Preach in Critical Autoethnography: Empowering PhD Students Through Participation in an International Book Project

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David Castilo Arceo & Maria de la Luz Luevano Martinez, *Universidad Autonoma de Aguascalientes*
Elizabeth Gilpin, Matthew Grimes, Rong Chang, Dyanis Popova, Melissa Rose-McCully, Kelly Munly, Pamela Smart-Smith, Jessica Stephenson, & Gresilda Tilley-Lubbs, *Virginia Tech*
Silvia Benard Calva, *Universidad Autonoma de Aguascalientes*

We offer an overview of one model of graduate teaching, which exemplifies the theories of critical pedagogy put into practice across country borders through the narrative techniques of autoethnography. Our presentation includes a brief overview of the literature, as well as a discussion of our book project, which employs these theories. Notably,

we will discuss how the tenets of critical pedagogy led us to explore collaborations outside the United States as part of our commitment to questioning the dominant practices of pedagogy and, specifically, the assumptions of power relations between graduate students and teachers. Our presentation argues two things: that graduate coursework itself can model the practices espoused by transformative educational theories; and that an active engagement with students and faculty from other countries (e.g., Mexico) enrich mutual understandings of educational praxis and reshape collaborative writing practices. Both of these arguments reflect those values that undergird the very foundation of critical pedagogy. Finally, we suggest that graduate students need models and experiences that offer critical participation in the literatures we study and in the practices we develop as early career scholars and teachers. We will highlight our collective book project as an exemplar of how faculty can engage graduate students not just as teaching and research assistants but as partners in creating a global vision for pedagogical equity. And we will offer strategies for how to write using autoethnographic techniques and methods. By drawing on specific aspects of both approaches, we will illustrate a theory and method of what we call "critical autoethnography."

Practicing What We Preach: Modeling Co-Teaching Practices in Higher Education to Promote Collaboration and Co-Teaching in K-12 Schools

Dana Gregory Rose, Elizabeth Altieri, & Kenna Colley, *Radford University*

The pedagogies of collaboration and co-teaching, by general and special education teachers in the K-12 classroom, are viewed as a means of meeting the needs of learners of all variabilities. University educator preparation faculty must find ways to engender in all teacher candidates the belief in co-teaching as a valued pedagogy and must also provide candidates with experiences with the practices of collaboration and co-teaching. We have created a merged elementary and special education teacher preparation program that promotes such beliefs and practice. We believe that we needed to 'practice what we preached,' so we modeled the pedagogies of collaboration and co-teaching while our candidates practiced collaboration and co-teaching in their field placements. Participants in this session will be engaged in a co-taught session that will feature several co-teaching models. We will also share preliminary results of research on the effects of our program on our graduates who are currently teaching.

Predictor of Hospitality and Tourism Students' Success in Online Classes: A Longitudinal Study

Tammie J. Kaufman, *University of Central Florida*

There is a trend towards online learning at the college level. Students enjoy the flexibility and colleges enjoy the expansion to the number of students that distance learn as well as no need for classroom space. Not every student adjusts to the online environment as easily as others and predictors would help to guide students away from this medium based on their learning style and other variables. This research will focus on hospitality student's comfort with online learning based on their learning style, demographic variables, hours per week working, and motivational factors. The results will assist colleges in directing those students who are less likely to benefit from an on-line learning environment. This research is a model of Yukselturk and Bulut (2007) study that looked at predictors of success in an online course at a university in Turkey. The study will expand on the prior research by focusing on students in a university hospitality program. Students enrolled in two junior level online hospitality classes (sample size 150) will be surveyed mid semester so they have had a good amount of experience to decide their level of success in participating in an online class environment. The primary variable will be based on their self perception of success in order to keep the respondents anonymous. The survey will include questions from David Kolb's learning style model to see if there is a relationship in online education success (1984) and learning style. Demographic information will be collected to determine any variances based on gender and age. Motivational beliefs will be analyzed based on the following: intrinsic goal orientation, extrinsic goal orientation, level of interest in subject matter, and level of test anxiety. Finally, based on the fact that a majority of the hospitality students work at least part time due to the financial need and/or the three-semester internship requirement the number of hours worked per week as well as the level of responsibility will be collected.

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Preservice Teachers' Perceptions and Beliefs About Gifted Students and Gifted Education

Amy Morgan Schmidt & Young Eun Son*, The College of William and Mary*

The purpose of this study was to investigate factors related to the perceptions and values of preservice teachers towards gifted education, in terms of understanding giftedness and the teaching of gifted students. This multi-case study was conducted in the context of a medium-sized college in a southeastern state that also hosts an enrichment program for gifted students. To better understand participants' perceptions and their change, if any, about gifted education, we interviewed and observed them before and after participating in the enrichment program. Findings may be used to underscore the need for college level courses and more training in gifted education for preservice teachers.

Promoting Democratic Citizenship Values Through Methodological and Scientific Interpretation of Historical National Events

Liman Varoshi & Vilma Tafani, *A. Xhuvani University*

This study aims at orientating student-teachers towards the creation of democratic citizenship values through methodological and scientific interpretation of historical national events. Traditionally, the teaching of national history has been informative. After the 90's, there has been a greater interest in formulating 'how' and 'what' to teach through national history. Recently, the education reform stresses new requirements for history, taking into consideration the priorities of EU. Alongside with the strengthening of the scientific content, pedagogical approaches are crucial for educating citizenship values through national history, where the teacher and the quality of teaching methods are at the heart of this process. Based on various scholars' theoretical writings, which provide abundant information, this study tries to answer the questions: Can national events promote democratic citizenship values? Can we avoid mediocrity in judgments made in the present without understanding the historical past? Can such a creative interpretation of historical national events be regarded as history? The research methods commonly adopted in this study are descriptive and comparative, trying to map the vital function of history in education. Central to this study is a relatively new concept of creating democratic citizenship values through interpreting national events. The role that history has played in shaping democratic citizenship values is being witnessed by the considerable growth of interest towards such events, developing a set of ideas which have emerged over the course of research. The study concludes by considering history not as a peripheral subject; it has a greater importance in the formation of the younger generation. The conclusions have the roots in the close investigation and observation of historical national events context. The researchers try to emphasize the interrelations between the scientific content and teaching methods, exploring in details theoretical and practical issues, focusing on realizing objectives, promoting learner autonomy, through student-centered approaches.

Replicating Reality Through Thoughtful Incorporation of Authentic Activities

Xiaopeng (David) Ni, *Franklin University*

As technology continues to breakdown classroom walls, new approaches to learning have emerged that foster a strong connection between the academic world and the real world. In response, instructional designers are considering pedagogical methods that integrate real world components into courses to facilitate authentic learning.

In this proposal, we first review instructional design trends that focus on integrating authentic activities and assessments. Next, we share two cases that demonstrate authentic learning in two online courses. Finally, we discuss potential pedagogical benefits of integrating real world elements into teaching and learning.

Research 101: Research Assignments from Students' Perspectives

Alyssa Archer, *Radford University*

This poster explores three facets of students' research processes; how students go about conducting their research, their affective feelings towards the process, and whether these affect student success. The examination is based on a qualitative analysis of narrative papers. First-year students in a low-stakes environment were asked to write a response to the prompt "Tell a story about an experience where you had to research something for school. How did this experience influence your current attitudes or feelings about academic research? How do other experiences you have had with research compare with the one you chose to write about?" This prompt is taken directly from an earlier qualitative study in the field of information literacy research (Detmering & Johnson, 2012, p. 11). This poster builds on this earlier research, by examining how the relationship between the qualitative aspects of their narratives correlate to rates of success on actual research projects. Does library anxiety or frustration with research lead to poor grades? What affective feelings correspond to success in undergraduate research assignments? By better understanding these relationships, the author of this poster searches for practical tools to help address negative aspects of students' feelings towards research assignments, and what implications these may have for student success. The goal is to improve future experiences for both the students and faculty involved in research endeavors.

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Service-Learning Across Courses: Interdisciplinary Collaborations for Optimum Student Outcomes

Jon C. Pope & Kim Becnel, *Appalachian State University*

Many instructors partner with local, off-campus agencies to set up engaging, meaningful service-learning projects for their students. While these partnerships often produce mutually beneficial results, but they can also be logistically challenging and sometimes prove to be more hassle than the benefits justify. In many cases, it is possible to avoid some of the potential pitfalls of these partnerships while achieving similar outcomes by setting up relationships and service-learning projects with classes in other departments on campus. The presenters will use their own experience having library science students work as embedded librarians in undergraduate composition classes to discuss the benefits of cross-course service-learning and provide strategies for how to identify partners, create and manage service-learning projects, and evaluate the success of these projects.

Student Learning and Changing Misconceptions in Large Classes

John A. Chermak, *Virginia Tech*

A "Resources and the Environment" course at Virginia Tech has been taught in a large lecture format for more than 10 years with an average class size of approximately 200 students. I have taught this course from Spring 2003 to Spring 2008 and from Fall 2011 to present. Since 2011, I have used the iClicker student response system in the course (Immerwahr, J. 2009). iClickers have allowed me to poll students to identify student attitudes on many different subjects as well as evaluate content related understanding using multiple choice and/or true/false questions. I have been conducting pre/post testing on 15 to 20 content related questions for more than 8 years. Data analysis shows classroom averages on the multiple choice and true/false questions to be approximately equal to 48% for the

pre-test mean and ranging from 80 to 95% on the post-test mean. Only recently with the use of iClickers have I been able to start to identify student misconceptions of the material and document student short and long term retention and "learning". As an example, one class of 175 students answered a question related to the metal that is recycled in the largest quantities in the US as aluminum which is the incorrect answer. Approximately 64% of students answered this question incorrectly. After a long discussion and presentation of why iron is the correct response the students were asked to answer the same question again and 95% of the students recorded iron as the correct answer using their iClickers. Two days later on their exam the identical question on US recycling was asked and more than 50% of the students answered the question incorrectly as aluminum. Data collected using iClickers have identified numerous examples where there have been challenges in terms of changing student's original misconceptions.

Taking the Long Road: How Early Research-Grounded Field Experiences Affect Teachers' Classroom Practices and Beliefs

Mary Norris, Alma Robinson, George Glasson, Brenda Brand, Leo Piilonen, John Simonetti, & Catherine Amelink, *Virginia Tech*

The Virginia Tech Physics Department and School of Education are in their third year of a collaboration with the Physics Teaching Education Coalition (PhysTEC) to increase the number of highly prepared physics teachers graduating from the university. Among the techniques employed to realize this goal are providing early field experiences for students and providing a course on physics-specific pedagogy. In the past two years, six students have graduated from the program with their master's of education (MAEd). All currently teach high school physics. All of the candidates completed early field experiences such as outreach to local schools or working with a high school robotics team and all either took the physics-specific pedagogy course or worked closely with its instructor during their student teaching. While all science teaching candidates have a middle-school field placement in the fall and student teaching at a high school in the spring of their final year in the MAEd program, PhysTEC students also had graduate assistantships involving teaching physics during this year. The many factors which tend to make first-year teachers' classroom experiences stressful include determining appropriate expectations for students, grading and evaluating student work, pacing lessons, and dealing with students of varying abilities (Coronado, 2011). First year teachers may fail to incorporate all of the research-based practices that they have learned during their education. Smeaton and Waters (2013) found that even effectively prepared first year teachers used a "limited repertoire of instructional strategies" most often relying on direct instruction and rarely incorporating formative assessment, constructivism, or group projects into their lessons. This study follows the six alumni of the PhysTEC program to evaluate the impact of their early field experiences and exposure to physics specific pedagogy on their classroom practices and beliefs using data gathered from interviews and self-rating scales.

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Teaching in Higher Education: Is There a Need for Training in Pedagogy in Graduate Degree Programs?

Terrell E. Robinson, *Tallahassee Community College*
Warren C. Hope, *Florida A&M University*

The number of students graduating with masters' and doctoral degrees from the State University System of Florida (SUSF) has increased over the past thirty years. However, no research has been conducted concerning the preparation of graduates to teach in higher education. PK-12 teachers are taught how to teach. Should college and university faculty members also receive instruction in pedagogy? Graduate curricula have a focus on a discipline's knowledge base and research. It is postulated that college and university faculty members should possess

pedagogical skills, have knowledge of lesson planning, and know how to deliver content. This research sought to ascertain professors' level of perceived need for graduate degree programs to include training in pedagogy that prepares students to teach in higher education. To what extent do university professors perceive a need for graduate degree programs to include training in pedagogy to prepare students to teach in higher education was the research question behind the inquiry. Two hundred full and part-time faculty members in the State University System of Florida responded to survey items, which rendered an overall mean that addressed the research question. These individuals completed and electronically submitted the National Faculty Survey on the Need to Prepare Graduate Students to Teach in College and University Settings. The mean was higher than the midpoint which indicated that professors recognized a need for training graduate students to teach.

Teaching Metacognitively: Metacognitive Techniques in Higher Education

Alia Sheety, *Cabrini College and Walden University*

One of the major goals of higher education is to prepare leaders who are not only skillful and knowledgeable problem solvers, but who are also self-aware, reflective, ethical, and fully integrated in their intellectual and personal capacities. *Metacognition*, which is identified as thinking about thinking, seeks to bring to self-awareness and self-regulated learners. Research indicates that teaching students how to learn is not less important than teaching them content, especially in a rapidly changing technology era. The interactive session twill provide a short description of the brain structure and functions and how it affects learning and then provide opportunity to experience three metacognitive techniques that could enhance learning in higher education milieu. A reflection on each of the techniques will help make the transformation to teaching various subject matters.

Teaching Strategies to Enhance Engagement and Learning in Computer-Mediated Courses

Susan Bickerstaff*, Community College Research Center*
Jason Lachniet, *Wytheville Community College*

To address low success rates in some high enrollment courses, many colleges have adopted a computer-mediated approach to delivering the curricula. For the purposes of this presentation, we define the computer-mediated instructional model as one in which students work individually using a software program to learn content while instructors provide additional teaching and support as needed. In some cases, traditional teacher-led activities are replaced entirely by the learning technology (Karnjanaprakorn, 2012). Some evidence suggests that this classroom structure, often called an "emporium" approach, can improve student success rates (e.g., Twigg, 2011). Yet despite the rapid adoption of this approach in some sectors (e.g., developmental mathematics), the field lacks a robust understanding of how instructors can most effectively support students in this model. In particular, how can they promote student engagement in a classroom environment that significantly alters student-to-student and student-to-teacher interaction patterns? How can they identify students' learning needs and provide instruction to enhance success? The presentation draws on interviews and focus groups with faculty and students and observations of computer-mediated developmental mathematics classrooms at nine community colleges. These data are analyzed to provide a broad view of the range of instructional practices faculty employ, the nature of interactions between and among students and instructors, and how students experience this instructional environment. The presentation also features the perspective of a college faculty member who will share specific pedagogical techniques to meet student learning needs in the computer-mediated classroom. Following the presentation, session participants will have time to raise questions and share their own experiences teaching in technology-enhanced courses. This session will provide valuable insights for college practitioners on ways to structure computer-mediated classes for improved student learning and success.

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The Effects of the Poverty Simulation, an Experiential Learning Modality, on Students' Understanding of Life in Poverty

Etty Vandsburger & Rana Daston Duncan, *Radford University*

This quantitative research examined the impact of the Poverty Simulation Project, an experiential learning modality, on students' understanding of life in poverty. University students from the middle and upper classes have little experience with poverty and the quality of life on welfare. This may reduce their potential for competent professional intervention with this client population (Nickols & Nielsen, 2011; Strasser, Smith, Pendrick Denney, Jackson, & Buckmaster, 2013). Recognizing the need for students to develop an understanding of life in poverty, the poverty simulation was developed in 1997 by the Reform Organization of Welfare (ROWEL) Education Association of Missouri. The Missouri Community Action Poverty Simulation Project (2010) is a two hour community education program designed to challenge commonly held beliefs about poverty and guides students through a transformational learning process. One hundred and one students representing five undergraduate majors in a university in central Virginia, College of Health and Human Services, participated in the Poverty Simulation training. They completed measures of critical thinking (four subscales, Cronbach's *Alpha* = .45-.62), understanding of others (Cronbach's *Alpha* = .87*)*, and the active learning scale (Cronbach's *Alpha* = .86), before and after the training. Although students did not change their thinking about the causes of poverty, they changed their perceptions about the difficulties of the daily lives of the poor, increased their ability to analyze life situations, and stimulated their further thinking about poverty. Implications for teaching about poverty and the poor, especially as it relates to experiential learning, are discussed.

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The Impact on the Collection of E-Learning Students in the Department of Arabic Language in Experimental Study on Students at King Saud University

Majid Almajed, *King Saud University*

E-learning technology is the most prominent and the most exciting, fastest, and sophisticated, so researchers are interested in studying the impact of e-learning on students from different educational levels and a variety of disciplines. As a result, prospective study says that e-learning system sometimes student refuse to accept the technology. At other times the class does not expect the presence of a positive effect on achievement while another class expects that a positive effect on achievement, and many expect that e-learning replaces education regulars. This study comes in response to the conflicting positions of the aforementioned categories, in response to the recommendations and proposals of the previous studies and research, and in the absence of any local study or Arab-based study of the impact of e-learning.

The Implementation of Interpersonal Boundaries in Teaching and Learning: Is it Really Black and White?

Sanaz Rezaei & Maya Rookard Hall, *Mercer University*

While issues of interpersonal boundaries between faculty and students is not new, more recent influences such as current generational differences and the demonstration of maintaining a healthy level of productive interaction/relationships have created a new set of dilemmas. According to qualitative based studies, pervasive throughout the literature both teachers and students construct the meaning of their relationship differently. Results confirm that boundaries are crossed through careless behavior, thus ethical professional education is recommended. Kohlberg's cognitive developmental education is the pedagogical practice examined in this poster presentation. Kohlberg's (1972) theory has been applicable across disciplines. This theory is relevant to interpersonal boundaries in education as it focuses on a set of stages of development in both the moral and intellectual domains, ranging from thinking that relies on external consequences for moral action to thinking that is more internally principled. At the conclusion of this poster presentation participants will be able to answer the following questions reflectively (1) how do we set appropriate expectations regarding teacher and student relationships within the academic setting? (2) how do we maintain our ethical obligations and promote effective learning in a postmodern era where relativism maybe a governing factor? and (3) what are some particular boundaries to consider in maintaining a healthy and productive level of interaction?

The Influence of Social Climate Factors on Public Middle School and High School Teachers' Voluntary Turnover in the US

Yingqi Wang, Yincheng Ye, & Andrea Sharpe, *Virginia Tech*

The annual high turnover rate of middle and high school teachers is a global problem and has had a negative impact on schools' ability to function as an organization as well as influencing staff trust and student achievement. Our study investigated the relationship between school climate and the turnover of middle and high school teachers in the United States. The following factors were examined because they have been identified to predict the turnover of middle and high school teachers in previous studies: administration, content standards and testing, teacher payment, and the interaction between teachers and students. We used 3902 responses from the national Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) distributed by the National Center for Education Statistics (NCES) from 2007 to 2009. Exploratory factor analysis was employed to check scale validity. Two important factors: administration and interactions with students were found to contribute to the internal construct of school climate. ANOVA and Logistic Regression were also conducted. Results indicated that new teachers held more positive attitudes toward administration than senior teachers did. However, senior teachers favored students more than new teachers. The percentage of teachers who moved and left the profession was comparatively high. The results also showed a positive and significant correlation between teachers' attitudes toward Administration and Student Behavior; however, administrative support appears to be more important than Student Behavior. Moreover, teachers who remained in current teaching positions perceived more administrative support than those that transferred to different schools or left the teaching profession. Finally, teachers who remained in current teaching positions had more positive attitudes toward student behavior than teachers who moved but less positive attitudes toward student behavior than teachers who left the teaching profession.

The Utility of Teaching Observations to Graduate Student Instructor's Teaching

Amanda J. Watson & Tyler A. Hassenfeldt, *Virginia Tech*

Sprague and Nyquist (1989, 1991) identify three stages in a teaching assistant's (TA's) development. TAs, they argue, begin their careers as "senior learners" who are more similar to students than instructors. As they develop, TAs gain topical knowledge and confidence, becoming "colleagues in training." Finally, as "junior colleagues," TAs have stronger pedagogical strategies and are better communicators. The current investigation aims to examine

graduate teaching assistants' (GTAs') use of teaching observations to improve their pedagogy as they transition to "junior colleagues." At a large Southeastern University, GTAs in the psychology department were encouraged to have their teaching observed by an advanced peer supervisor. Of the 34 GTAs, 10 recitation, laboratory, and full course instructors agreed to have their teaching observed. They also met with the observer to discuss pedagogical practices, and received a letter of recommendation based on the observation. Nine observed GTAs provided feedback in an end-of-semester survey. Feedback was unanimously positive, emphasizing the utility of the observations to improve current and future teaching, and to enhance student engagement. GTAs indicated that constructive feedback from the observer prompted more thoughtful pedagogy and specific changes within the classroom. Findings will be elaborated upon during the presentation, and implications of these findings will be discussed.

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They Want to Believe, Don't They? Teaching with Conspiracy Theories

Cinder Cooper, *Montgomery College*

Research shows that the more engaged students are with the material the more likely they are to retain information and transfer learning to other disciplines. This session will model strategies that can be used in college classrooms to facilitate student interest, critical and logical thinking, and source evaluation. The "I Want/Don't Want to Believe" Conspiracy Theory assignment allows students the opportunity to access, evaluate, and posit conclusions about the merit of conspiracy theories versus stories of record. The assignment calls for higher-level critical thinking, research synthesis, and argumentation. Participants will be given techniques for introducing the assignment/thematic unit, connecting it with argumentative strategies, and applying the assignment across disciplines.

Three Criteria to Evaluate Mixed Methods Studies

Yingqi Wang, *Virginia Tech*

In the past decades, mixed method has been increasingly applied to the dominant research fields of social, behavioral or human sciences. It was widely recognized as the third research approach or paradigm aligning with the quantitative and qualitative research methods. However, the researchers could not reach a consensus about rigorous criteria to evaluate and ensure the high quality of mixed method studies. Grounded on the previous studies on evaluation of mixed studies, this research is intended to develop and validate three criteria to evaluate mixed methods studies to assist future researchers to identify what is mixed method research and to clarify what crucial elements mixed research studies should be included. The primary considerations for qualifying as a good mixed methods study have been discussed as follows: (1) the researcher should clarify the mixed methods design by choosing a specific and rigorous research design after researchers decided to use mixed methods for their studies; (2) the researcher should provide a rationale for the use of mixed methods by clarifying and justifying why a mixed methods is necessary or superior to others; and (3) the researcher should identify the amount of mixing or integration. The three criteria were employed to evaluate the quality of three mixed methods studies. In the present study, each component of a mixed method study is assessed by assigning a score (from 0 to 3 points) according to 4 levels of each criterion. Three studies from the educational field were evaluated by the three criteria to test their validity. Based on my three 4-level mixed method criteria, the three studies can be easily placed on three levels of quality.

Understanding Learning and Motivation from the Perspective of College Students

Anuradhaa Shastri & Jen-Ting Wang, *SUNY Oneonta*
Sundari Gandhi, *Maharshi Dayanand College*

Students' motivational orientations and learning strategies are two factors that have consistently been found to be essential in college students' academic achievement. The higher education system in India is diverse and ranks third in the world next to China and the United States. The Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. (1993) is designed to assess how college students learn and what motivates them. The MSLQ has been utilized extensively in various countries of the world, such as China, Germany, Greece, South Africa, and Thailand. Little is known about its utility when applied to college students in India. The primary objective of this study was to examine the motivational orientations and learning strategies as measured by the MSLQ and its relationship with academic performance amongst college students in the United States and those in India. The sample included 115 students from a college in the United States and 104 students from a college in India. The pattern of correlations among MSLQ scales indicated that students were more motivated in the India group and used the learning strategies more frequently than the US group. For the academic performance measure, the course grades were converted to z-scores to enable meaningful comparisons between the two samples. For both the groups the correlations of course grades with test anxiety were statistically significant. On the whole the pattern of correlations among MSLQ scales indicates similarities in motivational beliefs and learning strategies for both the US and India samples providing evidence for the utility of the MSLQ to college students in India.

Use of Camtasia® Enhanced Lessons to Improve Distance Learning

Laura R. Link & Carole L. Porter, *Jefferson College of Health Sciences*

Health sciences programs typically do not offer distance education courses that include components of the clinical experience, as it is difficult to duplicate the hands-on experience students will receive in the laboratory. One such course is Phlebotomy, where hands-on experience gained during clinical rotations is essential to the mastery of the subject. The use of Camtasia®-enhanced lessons to supplement the Phlebotomy lecture portion of students' distance education was used to better provide students with the background information and foundational knowledge needed to begin clinical rotations in the practice of Phlebotomy. Previously, PowerPoint presentations, videos and self-directed lessons were used to prepare students before they attended lectures on campus and started clinical rotations. The effective use of Camtasia® as an additional tool for instructors to prepare interactive and engaging lectures for the distance portion of the subject was examined. A small (n = 5) group of students who had previously completed the distance course were asked to complete a Camtasia®-enhanced lesson in this pilot study. These students were then asked to complete surveys employed through Blackboard® to gather their perceptions on the usefulness and effectiveness of the two lesson formats. Information gathered in the pilot study showed that the use of Camtasia®-enhanced lessons could improve students' understanding of techniques used in successful Phlebotomy procedures.

Use of Pop Culture and Social Media to Increase Interest and Retention of Information

Soyoung Yun & Adrienne White, *Mercer University*

Universities and educators alike have been looking for innovative ways to increase technology within pedagogy. However, the growing age of technology and the increase of technologically savvy students has not been inclusive of the continued lack of interest, comprehension, awareness, and critical thinking that is displayed amongst underclassmen, especially with respect to students taking prequisite classes. These researchers propose that the use of pop culture and social media will increase undergraduate students' social and culture awareness, increase the retention rate of the materials presented, and promote critical thinking by offering students the opportunity to discern between sensationalism and factual information. Research found in New Media Trend Watch reported that 23% of all teens (aged 13 to 17) own a tablet, 80% own a computer, and 78% own a cellphone and 37% a smartphone. This

research proposes to bridge the gap between the increase in technology use by students and the actually decrease of student comprehension. Research shows that students in our targeted age group have an increase in instant gratification, have become overly dependent on devices and have become shallow consumers of information. The positive side to the increase in technology use includes student's ability to be efficient multi-takers and increased ability to absorb more information and numerous reports and research have found that social media has a huge impact on a person's learning and thinking pattern. The objective of this poster session is to discuss how educators can combine the trend of increased technology amongst American youth, high access to social media, and the growing need to update and improve pedagogy to be inclusive of these trends.

User Experience in 3D: How Collaboration Among Students, Faculty, Librarians and a Company Resulted in a Better Design for Research Databases

Elizabeth Kocevar-Weidinger & Tatiana Pashkova-Balkenhol, *Longwood University*

This practice session will demonstrate how collaborative partnerships outside of the classroom enhance students' learning experience and prepare students for the real world scenarios. During the 2012-2013 academic year, the Design Lab, a student-run graphic design agency, partnered with EBSCO Corporation, a global supplier of K-12 and higher education library research databases, to evaluate and redesign their interfaces. During this partnership, Longwood's graphic design students experienced the full cycle of the design process including user experience research, usability testing, prototype design, and presentation of their findings and recommendations to the client.

Using a Team Approach to Redesign the First Course in a Master's Level Instructional Design and Performance Improvement Program

Barbara Carder, E'lise Flood, Joe Gardner, & Sharon Taylor, *Franklin University*

Franklin University introduced the Instructional Design & Performance Technology (IDPT) program in 2011. The first course of the program, IDPT600 Principles of Learning Theory, was first taught during summer trimester 2011. As the IDPT program continued to develop and grow, the Program Chair and a group of stakeholders realized that the course needed to be redesigned to more effectively (1) prepare the students for success in the IDPT program, (2) introduce them to the learning theories that are most relevant to instructional design today, and (3) provide them with opportunities to reflect on how learning theories influence the design of instruction. The Program Chair gathered the group of stakeholders and began a unique process during which the group analyzed the existing course, redesigned the course structure and content, and developed the instructional materials. The process used was unique because the design team included the IDPT Program Chair, the Adjunct Faculty member teaching IDPT600, and two students in the IDPT program who are also staff members of the College of Arts, Sciences, & Technology. Each of these individuals provided their unique perspective and made valuable contributions to the design effort. This poster presentation describes the unique team process used to revise IDPT600. We also describe the course content and show how it better prepares our students for graduate studies and professional growth, aligns with industry standards, and features real world application.

Value-Added Hybrid Learning: Using Online Resources in the Community Arts Adult-Education Setting

Jason DeCristofaro, *Joyful Noise Community Music and Arts Center*
Claire DeCristofaro, *Ashford University*

Hybrid learning is not exclusive to the college classroom, but can be implemented with equal effectiveness in the adult continuing education setting. In order to increase the student's depth of knowledge regarding subject content and to reinforce aural and theoretical capabilities, the use of online delivery methods for selected resources was added to a traditional onsite experiential community arts class in jazz theory and improvisation. A variety of instructor-created digital multimedia learning objects, together with explanatory transcripts, provided the adult learner with supplemental materials to reinforce the content presented in the traditional weekly classroom. Software

applications such as Camtasia, Finale, Adobe Acrobat, and PowerPoint, together with computer soundboard hardware, were utilized to develop materials that support multiple learning styles including visual, aural, read/write and kinesthetic sensory (VARK) modalities as described in the Fleming and Mills model. These resources included narrated audio files and portable document format (PDF) transcripts of PowerPoint synopses and notated music, the focus of which were designed to reinforce classroom discussion and musical practice. Online storage sites such as GE.TT that supply file transfer protocol (FTP) download options provided a free and convenient means of accessing these resources in the absence of a Learning Management System (LMS). The initial implementation of this hybrid learning experience involved three selected classroom lectures over an in-progress 15-week semester. In summary, topics which traditionally rely on face-to-face and experiential teaching can be strengthened through the use of hybrid learning methods, and can be replicated in the community setting with readily-available software, hardware, and internet applications.

Video Capture and Measurement of Teacher Student Interaction and Reflection in Face-to-Face and Online Classes

David D. Carbonara, *Duquesne University*

This poster discusses the procedures to measure and reflect on teacher student interaction in higher education online and on-ground classrooms using video capture techniques and coding strategies. When teachers and students interact with each other in higher education classrooms, it may be possible to forget the sequence or frequency of events. Some instructors may lecture during the entire class period, while others may provide an interactive, learning environment. Strategic coding strategies capture the interaction between instructors and students. It was once thought that these strategies could only be used in a face-to-face higher education classroom (Tripp & Rich, 2012). Recent thoughts of the TOPM (Teacher Observation Performance Model) enlighten a strategy could be used in various online classes. Doctoral students could gather sequence and frequency of teacher student interactions along with an anecdotal account of the session. The sessions could be face to face or could be recorded synchronous and asynchronous classes. The TOPM strategy could be used to identify teacher student talk, teacher student questions, wait time and other behaviors in a learning environment. Dr. Hu (Personal Communication, 2012) used video capture of pre-service teachers (PST; Rich & Hannafin, 2009) at Shaanxi Normal University in Xi'an, China. Video capture equipment is used in laboratory classrooms in Xi'an and over fifteen sites around rural China. Pre-service teachers practice a lesson in the classroom laboratory while the session is captured on video. Education professors assess and evaluate the performance of the PST's later that evening. The TOPM strategy opens opportunities to evaluate teaching in higher education. Video capture of a lesson could take place one day and colleagues and supervisors could review the video and collaboratively reflect on it another day (Barber, 2009; Tripp & Rich, 2012).

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What is Basic About Basic Writing? A Dialogic and Culturally Responsive Classroom Management Pedagogy Approach

Mwangi Chege, *University of Cincinnati Blue Ash*

In fall 2012, I conducted an analytical ethnographic study to investigate pedagogical innovations I needed to make to help my developmental wring students. The study was prompted by an intriguing observation that the proportion of African American students in the developmental classes I had taught to that point was mostly higher than White

students despite the fact that, overall, there were more white students enrolled in the school than African Americans. Second was the observation that African American students were more conscious of their struggles with grammar than their white counterparts were. After analyzing students' writing, observing their interaction in class, and meeting them in conferences in light of existing literature in the field, it was found that indeed African American developmental writers are more conscious of their grammar issues than their white counterparts and that contrary to what some scholars in the field have suggested, I did not find any strong connection between students' oral competence and written competence. These findings suggest the centrality of materiality of literacy and the need for basic writing teachers to adopt pedagogies that promote student agency in the teaching and learning process.

Wednesday

February 5, 2014

Session 3

1:50-2:40 PM

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Effectiveness of PBL in a Large, Undergraduate Classroom Setting

Christine E. Cutucache & Lauren M. Dahlquist, *University of Nebraska at Omaha*

Abstract: The major goals of problem-based learning (PBL) activities include improvement of social skills, increased academic aptitude, mastery and retention of information. Although we are aware of the potential benefits of PBL activities, few studies of the effectiveness of including PBL activities at the undergraduate level have been conducted. We hypothesized that students would gain a greater understanding of material presented in the PBL format. To test this hypothesis, we evaluated student comprehension of material using pre- and post-tests to discern whether information from PBL activities was more quickly understood compared with didactic lecture (n-91). Furthermore, we examined the changes in student communication skills during PBL activities. Lastly, students completed a Likert scale to determine the usefulness of PBL activities in the undergraduate classroom. We observed that student participants in PBL activities have a greater mastery of the material based on a significant improvement in post-test scores ($p<0.01$), an observed improvement in communication skills, and improved long-term retention of the material covered in PBL compared to didactic lecture series ($p<0.01$). In conclusion, the use of PBLs in the undergraduate classroom favors increased understanding and retention of material. Based on these results, we suggest PBLs become commonplace as an improvement in science pedagogy in the undergraduate classroom.

Literature Review

Problem-based learning (PBL) exercises have increased in their use over the past decade. However, the use of this type of teaching has been restricted mostly to graduate-level and professional-level education (Husain 2011; Okubo *et al.,* 2012). The goal of PBL exercises are to engage students in the learning process, enhance their critical thinking skills, and boost their long-term retention of material (Wiznia *et al.,* 2012). Therefore, it seems appropriate that professional programs and/or graduate courses offer this type of instruction to adequately prepare students for the workforce by providing potential scenarios to work through.

The types of scenarios that are presented and discussed in PBL exercises are especially helpful for pre-health students. These scenarios or case studies give students the opportunity to think through a problem and collectively come to a conclusion without the stress of a real-life situation. These types of activities in the classroom initiate collaboration and active discussion among students. Therefore, we aimed to evaluate this same paradigm at the undergraduate level with pre-health students.

Methodology

Briefly, students were taught the same material using either traditional, transmittal lecture or using PBL. The effect of each on understanding and long-term retention was assessed using pre- and post-tests in addition to end-of-year surveys. Furthermore, students completed a self-assessment at the end of each semester to reflect on personal opinions regarding PBL versus transmittal lecture. Changes in GPA and course grade between PBL participants and non-participants were also determined. Statistics include a Student's t-test, ANOVA, and Pearson correlation.

Results

Assessment of Knowledge Acquired During PBL Exercises

Students were assessed for their incoming knowledge on all PBL topics in order to determine whether outside information, other than the PBL itself, led to an improved comprehension and/or long-term learning retention. The average pre-test score for all PBLs were 31.9% (Figure 1). Following the PBL exercise, students were assessed using a post-test. Compared with pre-tests, the average post-test scores were 90% (Figure 1) indicating a drastic improvement in understanding during the problem-based learning exercise ($p<0.00001$). The overall percent improvement from pre- to post-test score based on PBL activities was 58% (Figure 1).

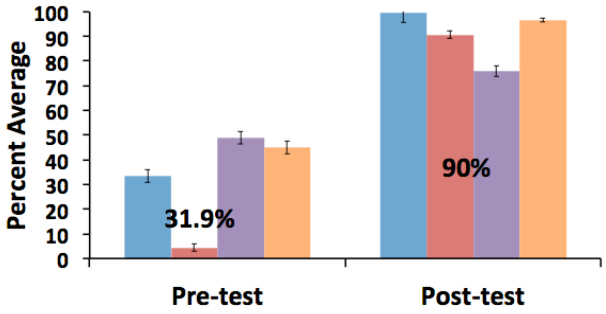

Figure 1. Student knowledge before (pre-test) and after (post-test) a problem-based learning activity. n=91.

The long-term retention of material taught by PBL exercise compared with material taught by traditional lecture was also assessed. Students retained information presented in PBL exercise better than information that was presented via traditional lecture. Importantly, students answered 78.6% (SD = 0.07) of questions on information taught using PBL correctly on an assessment 60 days after PBL presentation. Students answered only 60% of questions on topics presented in a traditional lecture format correctly. These data suggest the importance of presentation of material using PBL or critical thinking types of methodology for long-term retention of material.

Discussion

PBL has been described in the classroom for many years, yet PBL has not been implemented in many classrooms to date. Consequently, we investigated the impact of PBL in large classrooms on student understanding and long-term retention. We observed a significant increase in understanding following PBL as compared with transmittal lecture and an improvement in long-term retention. Moreover, student participants in PBL activities showed improved communication skills and reported having more confidence in their ability to communicate with others.

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Teaching the Large First Year Experience Class: Evaluating How Clickers can Create a Seminar Experience for Hundreds of Students

Craig Leonard Brians, Rachael Kim & Rachel Ellena, *Virginia Tech*

Abstract: Digital technology has gained a solid foothold in higher education classrooms in recent years. The student response system (i.e., clickers) is among the most common teaching technologies incorporated into classrooms (Immerwahr 2009; Winograd & Cheesman 2007). These personal devices permit students to contribute their individual opinions and quiz responses in real-time, during class. Given clickers' growing popularity over the last decade, particularly among those teaching large enrollment courses, dozens of studies in fields ranging from biology to physics to political science have sought to evaluate clickers' effects on learning (e.g., Beavers 2010; El-Rady 2006; Salemi 2008; Stuart, Brown, & Draper 2004; Winograd and Cheesman 2007). Not studied in the literature, though, is how clickers may affect learning in large first-year experience classes. Among college courses, these classes present unique challenges and opportunities, because these are novice students who are also eager to learn about their new institution and major. This can be a difficult course to scale-up, since it is intended to increase student engagement in their education but large classes can increase student anonymity and isolation. Additionally, few incoming students have previously used the clicker technology, potentially adding to an increased learning curve. With these obstacles in mind, this paper studies the use of clickers in a large FYE course. Featuring both quantitative and qualitative evidence, this project offers students a voice to describe and analyze their learning experiences in this introductory setting, alongside about 150 other classmates.

Literature Review

In recent years, technology has gained a firm foothold in higher education classrooms. The student response system (i.e., clickers) is among the most common teaching technologies incorporated into classrooms today (Immerwahr 2009; Winograd & Cheesman 2007). These personal devices permit students to contribute their individual opinions and quiz responses in real-time during class. Given clickers' growing popularity over the last decade, particularly among those teaching large enrollment courses, dozens of studies in fields ranging from biology to physics to political science have sought to evaluate clickers' effects on learning (e.g., Beavers 2010; El-Rady 2006; Salemi 2008; Stuart, Brown, & Draper 2004; Winograd and Cheesman 2007). Not studied in the literature, though, is how clickers may affect learning in large first-year experience classes. Among college courses, these classes present unique challenges and opportunities, because these are novice students who are also eager to learn about their new institution and major. This can be a difficult course to scale-up, since it is intended to increase student engagement in their education but large classes can increase student anonymity and isolation. Additionally, few incoming students have previously used the clicker technology, potentially adding to an increased learning curve.

Methodology

To address the causal mechanism void in the literature, this paper explicitly studies several competing hypotheses, each seeking to explain exam score improvement (or even learning gains) from clicker use. Exploring this relationship in large classes (i.e., 150+ students), this study empirically examines these potential mechanisms using a range of data: quantitative and qualitative student surveys, experimentally comparing (individual-level) in-class clicker question performance to exam question performance, and focus group responses.

Results

We find that clickers improve students' performance through several mechanisms: (1) enhanced pre-class preparation, (2) more consistent class attendance, (3) increased classroom participation and attention, (4) opportunity to practice timed testing, and (5) signaling high-priority course content. Additionally, these processes appear to operate simultaneously and interactively, although with different intensities for different students, depending upon a student's initial motivation level.

Table 1: Clicker Quizzes Build Exam Confidence

Do the clicker quizzes help you feel more confident when taking exams in this course?	
Yes	93%
	(262)
No	7%
	(19)
Total	100%
	(281)

Table 2: Clicker Quizzes Aid Studying

Have the in-class clicker quizzes helped you to study in this class?	
Yes	96%
	(273)
No	4%
	(10)
Total	100%
	(283)

Discussion

Using clickers appears to reduce student distractions in a large lecture course, due to the need to pay attention to frequent, interactive questioning. With these obstacles in mind, this paper studies the use of clickers in a large FYE course. Featuring both quantitative and qualitative evidence, this project offers students a voice to describe and analyze their learning experiences in this introductory setting, alongside about 150 other classmates.

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Wikis as a Vehicle of Class Discussion

Emily Ravenwood, *Wittenberg University*

Abstract: This practice session will demonstrate how wikis can be used as a primary vehicle for online class discussion, and discuss what advantages wikis offer for that purpose and what measures must be taken to generate the most benefit. The presentation will model how best practices for online discussion can be applied to wikis, and how best practices for wiki use can be applied for discussion purposes. Participants will view samples of wiki pages framed with discussion guide questions, and the resulting class discussions; discuss how and why the wiki succeeded in fostering and structuring productive class discussion; and practice how to construct useful wiki discussion frameworks and evaluation rubrics for their own subject areas.

Literature Review

Research on distance education has identified some advantages that the mechanics of wikis offer, in particular the control wikis give students over the structure of any wiki-based project and their collaborative nature (Dreon Jr. & Dietrich, 2009; Jones, 2010; Farabaugh, 2007; Hazari, North, & Moreland, 2009). Wikis have been popular enough tools that we also have a growing body of research into best practices and approaches to their use, especially the need for instruction in how such an open-ended tool should be used in a given class (Engstrom & Jewett, 2005; Wheeler, Yeomans, & Wheeler, 2008; Elgort, Smith, & Toland, 2008). This research, however, has generally dealt with the use of wikis for specific tasks and assignments, rather than as a vehicle for class discussion. Similarly, there has been significant research into what approaches foster quality discussion online, especially the appropriate balance of instructor presence and participation (Mazzolini & Maddison, 2007; Clarà & Barberà, 2013; Mokoena, 2013), but much of this research has focused on discussion boards and forums. The less structured nature of a wiki offers some new opportunities to apply the insights of the research into online discussions.

Goals and Objectives

The session will review some of the best practices for online discussion in general, such as visible instructor participation and feedback, and some of the best practices for using wikis, such as instruction in wiki mechanics, clear rubrics for evaluation of participation, and emphasis on how to structure contributions collaboratively. Participants will observe a model of how to prepare students for using wikis, and discuss how that preparation can vary online and in person. We will also discuss how wikis both demand that instructors provide some framework for discussion and encourage instructors' creativity in doing so, and how a wiki discussion may be evaluated. As part of the discussion, participants will generate possible discussion frameworks for their own subject areas and, time permitting, an evaluation rubric suited to their own classes. Participants will finish the session with an outline of basic principles and good practices to apply to the construction of a wiki for class discussion, and a first draft of the framework they might use for such a wiki.

Description of Practice

I will give a brief overview of the research thus far on productive practices in online discussions and the literature on the use of wikis in distance education, and model how a class might be prepared to use a wiki for class discussion. I will show some samples of wiki pages seeded with questions and suggestions to guide class discussion, and then at least one sample of the discussion that resulted on those pages, and discuss with participants how the principles of both online discussion and wiki use worked out in practice. In the course of the discussion, I will collect the observations of the participants into a list of guidelines and ask participants to use our collective list to each generate a "seeded" wiki page for their own subject areas. Time permitting, I will end with a model grading rubric and a discussion of how the participants might formulate their own rubrics.

Discussion

As a literature teacher, many of my classes, even large ones with undergraduate non-majors, are conducted seminar-style and focus on class discussion and student analysis of the material. This presents challenges in an online environment. A discussion board or forum often does not encourage sufficient contact between the various insights

of the students, and students default easily to speaking only to me rather than pooling their interpretations with each other. A wiki seemed far more suited to a group generating a multi-faceted, sometimes even contradictory, and yet essentially collaborative understanding of a text. The resulting discussions, when framed by the context that I and student presenters could offer, was as successful as any in-person class discussion.

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"Teaching without Talking"…Educating Adult Reflective Practitioners

William J. Davis, Jr., *United States Army Command and General Staff College*

Abstract: One of the most significant challenges for any educator is how to effectively communicate tacit knowledge to students. Being a professional educator and subject matter expert guarantees neither expert teaching by faculty, or expert learning for students. Most faculty have a vision of the perfect seminar environment and desired outcomes (maximum student-to-student interaction, self motivated lifetime learners, nuanced insight from participants, etc.), but the majority of faculty will fall short of this vision. This session will provide theory based proven techniques which were developed over fifteen years of graduate seminar teaching, to overcome obstacles. The end result of attending this session will be a faculty member who can reflect in action to construct a positive adult learning environment that maximizes critical thought. This will produce students who appreciate not only the complexity of the subject matter but also its relationship to and how it might be affected by the environment.

Literature Review

Argyris and Schon (1974) clearly defined what is known as single-loop and double-loop learning. Single-loop learning occurs when a person who takes action perceives that the action taken did not generate the expected outcomes and another action is tried to generate the expected outcome. Double-loop learning takes place when the person who takes action evaluates not only the action taken, but also the governing variable (value) that drove the action in the first place and asks the deeper question "why am I even taking action?" It is the deeper more reflective wisdom generated by double-loop learning that provides a more competent professional (Argyris, 1991). In teaching professionals, it is critical to intertwine any expected educational experience to the principles of andragogy (adults are self-motivated, experienced, goal oriented, relevancy oriented, practical, and want to be respected) (Knowles, 1984). It is these principles that have been the catalyst for many trends now in higher education such as the 'flipped' classroom, experiential learning, and the concept of faculty behaving as coaches (Beret, 2012; Kolb, 1984; & Schon, 1987). Seminar learning has its roots in constructivism, and it is that philosophy of education that underpins the use of all of the members of an adult seminar as a resource to achieve higher learning outcomes (Dewey, 1916; Vygotsky, 1978). With so many valid complementary theories, it is imperative for any faculty member to internalize the nuances of each theory to be able to intricately understand the right theory to apply at the right time to maximize learning.

Objectives

Upon completion of the session, the participants will be able to:

1. Understand and appreciate the relationship among various adult education theories and principles that are the basis for the "flipped" classroom, the Socratic method, and increased student learning.
2. Develop an interactive, discussion-based lesson plan that increases learning and supports the development of a reflective professional.

Description

This practice session will model a positive interactive adult learning seminar based upon the model in figure 1.

1. Discussion – What constitutes the "perfect" seminar, what are the common barriers encountered, and how have/should the participants overcome these barriers? (10 minutes)
2. Critical discussion of author's model for developing lesson plans to create positive seminar performance (10 minutes)
3. Practice – Develop lesson plan concepts based upon participants internalization of model presented or own model (15 minutes)
4. Process the learning experience (15 minutes)

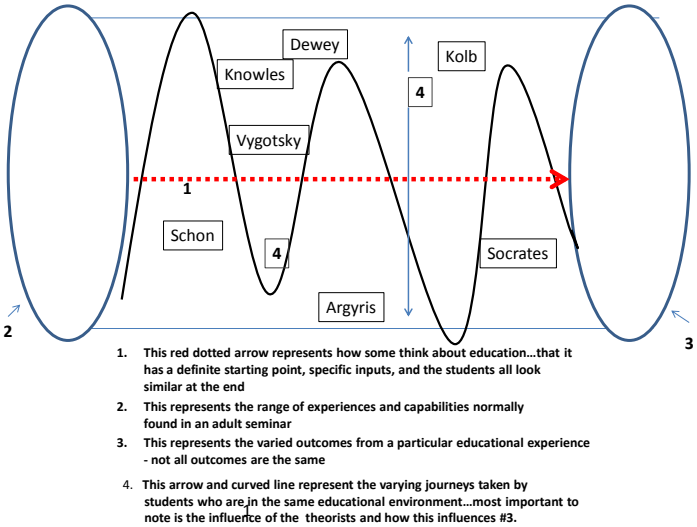

Figure 1. Model for basis of creation of adult seminar

Discussion

I first became captivated with the question of how to best teach the artistry of a practice when I was coaching high school sports. I found that some individuals were almost fluent from their earliest efforts; while others seemed never to understand their overall role in the success of the game. Later on, when I was teaching air combat maneuvering (think TOPGUN), I encountered the same challenges in expanding the "learning space" of my charges. Learning space is loosely defined as how learners perceive the context of their learning. For example, do they only consider the classroom and the materials in their learning; perhaps they begin to think about practical application of the concepts, or are they able to envision and apply their knowledge to the real world environment (Kolb & Kolb, 2005). As an educator of strategic and operational military planners, it is absolutely imperative that my students begin to think about the volatile, uncertain, ambiguous, and complex environment within which they will attempt to apply their art. I have, over the last fifteen years, developed a principle based reflective design for developing the perfect adult learning seminar (I have been evaluated by over one thousand students at 100% for creating an active adult learning environment for the last thirteen years). As a faculty member, I realize that I am only one of the individuals in the classroom, and as such, I strive to only speak as much as one person should, while at the same time ensuring the learning objectives are exceeded. This is accomplished through the careful preparation and application of a confluence of adult education theories and principles, and a shrewd questioning strategy, which will be a focus of this practice session.

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Interactive Education on Mobile Devices: The Introduction of Place Based Cinema

Philip W. Lewis, *New Mexico State University*

Abstract: This practice session will demonstrate a new mechanism for learning history through the creation of an open theatre called *Place Based Cinema*. Developed by Professor Philip Lewis, *Place Based Cinema*, displays beautifully produced narratives (using images, video, sound and music) that immerse the audience into a location's history using portable devices such as iPods, iPads and smartphones. This new production experience interweaves interactivity, new technologies, local history and cinema into a new filmic and learning experience. Participants at the presentation will view the films, learn the details of how the films were made, and be able to discuss the many pedagogical ramifications that might come from this method.

Description

While portable, touch screen devices are pervasive in our society -- with 61% penetration of smart phones (Pew, 2013) -- interactive narratives have largely been limited to nefarious games that offer little in the form of education. However, the gamification of learning has been recently suggested to be one way to attract youth (in particular) to subjects that are typically, and easily, ignored in schools.

The invention of *Place Based Cinema* in 2012 was an attempt to remove the cinematic experience from the theatre, and produce narratives that immerse the audience into films that are historical in nature and designed to engage audiences using 'game-like' techniques. *Place Based Cinema* essentially takes the student on a "historical geocaching" hunt through their phone's GPS or mapping system, and then presents video material about that location which is accurate, well produced and dramatized on their portable devices. Imagine finding the location, pressing the start button on your tablet device and watching as this location -- and the events that historically took place here -- unfold. Characters from the period address you, give you information, and you can even interact with them and ask them questions about what was happening in, say, 1888 at this location. This is *Place Based Cinema*.

In the current stages of *Place Based Cinema's* development, viewers of the film will also be able to vary their experience by choosing the role that they play within the place. For example you may choose to be a priest who is passing through Mesilla Plaza (which is on the Camino Real) on your way to Santa Fe, NM. Characters in the film will address you as the priest and may ask you to bless their horse and buggy to assure a safe passage through the Jornada del Muerto (the Journey of the Dead Man).

The NMSU History Department is currently adopting *Place Based Cinema* in their Public History program and especially the area of Digital Humanities. Students in the program are taught how to utilize this new form of communication and further their research in various parts of the country and world through studying the effects *PBC* has on learning.

Literature Review

Place Based Cinema has become a learning experience that supports or easily leads to doing qualitative and quantitative research on how a student learns using new technologies. This research delves into the areas of Contextual Learning and especially specific research that recognizes environment as an important role in the learning process (Tessmer & Richey, 1997). By adding place to the already engaging cinematic experience, the authors of *Place Based Cinema* are allowing the audience to further contextualize the information presented which might be help us further understand issues of comprehension and retention.

The impact of this research is both measurable and ongoing. Emerging and portable technologies are permeating the environment and nearly every person has access to technology that can show films outside the theatre. Further, the way that native technologists are gathering information has fundamentally changed. This research is a chance to measure the impact and explore the possibilities of historical understanding through the use of these devices.

Interactive technologies and their narratives have increasingly taken the authorship away from the writer and has given the audience more power over the narrative experience – giving them the opportunity to interact with the

narrative in meaningful way (Ryan, 2004). *Place Based Cinema* is taking advantage of this model and future developments are being designed with more and more interactivity built in.

Initial investigations have found that audience members not only enjoyed the experience, but also came away with a rich understanding of a place that was otherwise unknown to them. The audience felt they were immersed into a period of history and, frankly, amazed at the experience. Many have attempted to duplicate this experience in their own areas – in Holland, Sweden and Finland at cultural museums there.

Goals And Objectives

The objective of this practice session is to introduce the concept of *Place Based Cinema* and allow the participants to witness its power and possibility and also learn techniques that will allow them to create their own. Participants will be able to view Lewis' first film – Journey to Statehood: Mesilla Plaza, New Mexico, 1880-1912 which is a media experiment that combines video/sound narrative with GPS and GIS technologies to create a simply produced, portable, gamification of history (Kapp, 2012). Participants will then be provided with qualitative evidence that will detail the successes and pitfalls of the production as well as the impact of historical learning objectives. Through this, the participants will come away with a clear, step-by-step understanding how to make a *Place Based Cinema* experience in their own area or classroom including a list of equipment, typical supplies and writing techniques that will engage audiences.

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Increasing Student Self-Awareness: Practical Activities that Facilitate Discussion and Reflection

Caroline M. Brackette*, Mercer University-Atlanta*

Abstract: Self-awareness increases an individual's levels of competent and ability to effectively engage with diverse groups of individuals (Sue, Arredondo, & McDavis, 1992). This practice session will review three pedagogical practices that incorporate components of engaging students in practices that facilitate reflection and discussion in an effort to foster greater awareness of self. In particular the presenter will highlight the constructivist, transformative, and emergence pedagogical models for their focus on creating new knowledge through personal experience, self-awareness, and reflection (Guiffrida, 2005; McAuliffe & Eriksen, 2011; Mezirow, as cited in Guiffrida, 2005). The presenter will also engage the participants in, and model the process of facilitation and discussion for, a series of creative group and individuals exercises designed to increase self-awareness that participants will be able to incorporate into their classroom sessions.

Literature Review

Self-awareness is regarded as an important component of being a culturally competent individual who is able to effectively engage with diverse groups of individuals (Sue, Arredondo, & McDavis, 1992). This is important for higher education institutions as they engage to prepare diverse groups of individuals to function in diverse classroom and professional settings. A constructivist pedagogical approach posits that through conversation, knowledge is created. Students actively create new worlds as they experience it, and this new knowledge is subject to their past cognitions and understandings (McAuliffe & Eriksen, 2011). A transformative pedagogy purports that student awareness of their internal frame of reference is important. In this model they are guided towards a new frame of reference that is more inclusive in nature, integrates their experiences in the process, and is self-reflective (Mezirow, as cited in Guiffrida, 2005). Guiffrida (2005) combined these two models into a more comprehensive and effective method for teaching in what he calls emergence pedagogy. Incorporating self-awareness activities in classroom curricula is a practice that has been researched and can positively impact the personal, social, academic, and career development of college students.

Goals and Objectives for the Practice Session

As a result of participating in this practice session, participants will:

1. Gain knowledge on literature on self-awareness and its role in cultural competence
2. Gain knowledge of pedagogical models that incorporate self-awareness and reflection as a main practice
3. Experience and understand various group activities that can be incorporated into course session to assist in increasing students' self-awareness
4. Be able to effectively facilitate and process self-awareness oriented group and individual activities

A practice proposal should include the author(s) name, department, institution, abstract (not to exceed 200 words), literature review, goals and objectives for the practice session, description of the practice to be modeled, and a discussion. In addition, practice proposals will be evaluated based on the following questions: Is the title accurate, broadly descriptive, and inviting? Does the proposed practice incorporate a scholarly and innovative approach to teaching and learning? Is the practice grounded in literature and/or data and evidence? Are the session goals and objectives achievable? Is the description of the practice clear? Is there an interactive component to the session? Is the take-home message clearly provided in a way that can be generalized to other fields and disciplines? Is the proposal well written? Does it follow APA format?

Description of the Practice to be Modeled

This is an interactive session in which attendees will participate in several engaging group and individual activities that are grounded in research and pedagogical models. The session will begin with a review of research, literature, and pedagogy related to self-awareness and reflection. The presenter will then facilitate several small group activities and provide resources and an overview for other activities that can also be used in any classroom to assist students in increasing self-awareness. All activities are designed to engage students through the process of

increasing self-awareness through reflections and discussion. The presenter will report anecdotal data and results from personal experiences facilitating self-awareness oriented activities in class and through assignments.

Discussion

The practices discussed in the session will cover activities for which the presenter has received very positive feedback on, and have created much discussion and reflection from participants. The practice of incorporating self-awareness oriented exercises into classroom sessions is an important component of preparing future leaders. Many students have reported in evaluations, emails, and through face to face appointments that these types of exercises have been very meaningful for them in their academic, personal, social, and career development processes. As educators we have a responsibility to equip students to succeed and be leaders in a diverse and constantly changing world. Self-awareness is the beginning of that journey and can be the catalyst for a higher level of learning and engagement throughout a person's lifetime.

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Incorporating Assessment Training in Graduate Curricula: Innovative Teaching Methods

Jennifer Helms, Kate McConnell & Kim Niewolny, *Virginia Tech*

Abstract: This practice session will model an innovative approach to incorporating assessment training in graduate curricula across disciplines. The scholarship of assessment has gained momentum in higher education in response to calls for accountability by stakeholders. Through the process for implementing an independent study that is context bound to graduate student research needs, an educational framework will be shared.

Literature Review

Greater accountability of teaching and learning in higher education has influenced the growth of institutional and individual assessment (UNESCO, 2009). This growing sense of accountability is often contributed to stakeholder demands for quality education and the growing competitiveness in the *knowledge market*. Institutional effectiveness and student outcomes are evaluated in response to this call for accountability (Judd & Keith, 2012). Simultaneously, institutions are experiencing a shift toward a more student centered paradigm and innovative instructional practice put forth by faculty (Barr & Tagg, 1995). This shift in higher education pedagogy is nested in the scholarship of assessment. A systematic, ongoing approach to the collection and use of evidence to determine level of student achievement toward student learning outcomes is a desired skill for educators that can enhance pedagogical practice. The scholarship of assessment is composed of a diverse range of methodologies and purpose, leading to a complex view of the field, and possibly some of the tensions arising across institution's administration, faculty, and assessment professionals (Stake, Contreras, & Arbesu, 2012). Some of the barriers to comprehensive assessment are opposition to formalization, administrative misunderstanding, lack of resources, political implications, reaction to assessment, ownership of data, and expectations of the data, and self-promotion (Stake, Contreras, & Arbesu, 2012). While there are a few graduate programs that specifically target assessment and evaluation, most focus on methodology (e.g., psychometrics, quantitative statistics, etc.). Programs within teaching and learning also tend to focus on individual student-level or classroom-level assessment, rarely program-level assessment (Secolsky & Denison, 2012). Acknowledging the great variation in assessment methodology and purpose it is an important area of graduate student training for future faculty roles.

Goals and Objectives of the Practice Session

The goal of the proposed practice session is to share innovative ways to incorporate assessment training into graduate studies. The scholarship of assessment further develops competency in both quantitative and qualitative methodology, promotes understanding of accountability in institutions of higher education, and becomes a reflective tool for future faculty to implement in their work.

As a result of attending this session, participants will be able to:

- Objective 1: Identify how assessment is being used in their discipline/department, and the importance of graduate student training in this area.
- Objective 2: Understand the connection of assessment methodology to student learning assessment and program evaluation.
- Objective 3: Collaborate on developing/enhancing assessment training in graduate curricula.

Description of the Practice to be Shared

This session addresses the need for and an innovative approach to incorporating assessment training in graduate studies. During this practice session the experience and process of a PhD student working collaboratively with a committee member in an independent study will be shared. The independent study was designed to teach assessment methodology, embedded in the program the student was currently serving as graduate assistant. The context of the independent study also included insight into the research topic for her forthcoming dissertation.

The presenters will first introduce the scholarship of assessment, planning for the independent study, the learning process, and the implementation of assessment through construction of a program evaluation plan. Second, a

framework for an independent study as an example of integrating assessment training in educational graduate programming will be shared. Through a discussion format, the embeddedness of assessment in home discipline/department graduate programs will be discussed. Additionally, resources will be shared for building a literature reference to guide this scholarly approach to graduate curriculum.

Discussion

Historically, the purpose of institutions of higher education was to teach and serve a growing population; however, movement in higher education toward a specific disciplinary research focus swayed the faculty reward system (Boyer, 1997). More recently calls for a transformation of higher education, incorporating innovative pedagogy, accountability and institutional effectiveness, and emphasis on student outcomes has engaged the academy in an emerging scholarship of assessment and teaching and learning. The impact of assessment in the scholarship of teaching and learning has influenced the alignment of content, students, and instruction with focus on pedagogical practice (McConnell & Doolittle, 2012). Hence, attention paid to the professional development of future faculty in the area of assessment and teaching and learning when applied to scholarly work enhances the potential for institutions of higher education to answer the historical call for change set forth by the Carnegie Foundation for the Advancement of Teaching (Boyer, 1990).

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'Something arose Between and Around Us: Embedding Contemplative Pedagogies into 'Higher' Education Through Mindfulness

Leigh Burrows, *Flinders University of South Australia*

Abstract: This presentation focuses on a journey towards embedding a contemplative approach work in university teaching through the vehicle of 'mindfulness'. This presentation explores the literature on contemplative pedagogies and mindfulness in higher education, demonstrates a range of mindfulness activities that are being successfully integrated into university teaching. Participants will have the opportunity to participate in a 'soles of the feet' meditation and engage in discussion. While formal contemplative activities are important the session will also highlight informal ways in which mindfulness can be infused into teaching and learning spaces.

Literature Review

> To me, the personal learning (my social and emotional development) is what has transformed me as a person, not so much the formal degree. More significant than any training was the opportunity (you provided) to grow into myself. You have shown how to create spaces in and around the challenges to allow personal transformation to occur .For the most part there was no way previously to have this recognized or valued in what felt like a very narrow window of valid tertiary work. This was one of the noticeable gaps across the academic curriculum. (from a post graduate student, see Burrows, 2010)

This presentation is drawn from case study research that explores the experience of gradually embedding contemplative pedagogies in my university teaching. As Lessem and Sheiffer (2013) suggest universities tend to be 'imbalanced with a tendency to over-emphasize rationality, logic and pragmatism and therefore require a greater focus on community and sanctuary'. For me, like Barnett (2007) contemplative pedagogies require that higher education institutions provide alternate curricular spaces in which students can make their own explorations. In this presentation I share how I am increasingly infusing mindfulness into my teaching and learning spaces.

Mindfulness is not easy to understand, and to talk about mindfulness is usually even more difficult than experiencing it. I believe however we need to honor and explore our experiences since it is early days yet in terms of understanding this phenomenon and as Greenberg (2012) has observed: 'It requires great sensitivity ... to illuminate (its) richness and complexity'. For this reason according to Roeser, Skinner, Beers, & Jennings (2012, p171):

> Phenomena finding investigations that use rich descriptions, case studies of exemplars, and other forms of qualitative assessment of mindfulness in education seem particularly important.

Mindfulness is most commonly associated with the experience with the aim of reducing an individual's stress and suffering (Kabat –Zinn, 2003). Mindfulness can however also be understood as 'a spiritual awareness that is embodied and feelingful' (Stanley, 2012). This relates to the North American medicine wheel teachings (Bopp, Bopp & Lane, 1984) where spirituality is seen to include being passionately involved in the world, compassion, anger at injustice, the refinement of feelings, empathy and the ability to set strong emotions aside to serve others.

In the more relational approach to mindfulness I adopt in my teaching and research the intention is to deepen awareness of the present experience, with acceptance, and to facilitate the development of the capacity to connect with another (Burrows, 2011; Surrey, 2005). In this approach I try to attend to the flow of relationships and the shifting qualities of connection and disconnection, aiming to stay emotionally connected with my students through a process of empathic attunement.. As Cairns (2002, p165) suggests, I acknowledge the experience of stillness when it occurs and try to 'hold' it for short periods so that the students can begin to develop 'a pattern for peacefulness'. This space has been referred to by Riikonen and Vataja (1999,p181) as an 'area of emptiness' that can begin to come in between what happens and our reactions, which can generate a sense of emotional freedom.

Contemplative pedagogies to me, therefore are grounded in the teacher's use of awareness to pause and hold the space as Simmer Brown (in Simmer Brown & Grace, 2011) puts it so well in her book on contemplative higher education:

> I find as I experiment with infusing spaces of time around questions and directions before and after answers and within transitions the whole rhythm of the room changes. It feels more fluid, less solid.

For McCown, Reibel and Micozzi (2010) it is indeed essential to have a mindfulness guide who authentically embodies the spirit or essence of the practices being taught. They see this as an important element in being able to successfully catalyze the capacity for mindfulness within others. Through the contemplative/mindfulness processes, practices and activities in my topics many students find they are able to 'grow into themselves through drawing on, expressing and sharing their experiences in rich, reflective, holistic, multidimensional and connected ways many indicate were not previously available to them during her studies. It would appear we are just beginning to glimpse the potential of contemplative and mindful pedagogies to facilitate students' journeys toward being and becoming throughout their program of study, and their lives.

Aims for this practice sharing session

Participants who attend this session will:

- experience a 'soles of the feet' (Singh et al, 2007) meditation (see this link for a video clip of this mindfulness meditation in a teaching rooms at my university: (http://www.youtube.com/watch?v=lzoerv42KDw&feature=emshare_video_in_list_user&list=UUhAumjy26uts_hvywCSdgvQ).
- engage in conversations about their experience of the phenomenon of 'feeling into' the soles of the feet and its effects
- hear about case study examples of using this meditation in higher education classrooms
- learn how the teachers' own experience of mindfulness mediation underpins the ability to infuse mindfulness and presence into teaching and learning spaces to improve learning and relationships
- hear about case study examples of the benefits of mindfulness practice for teachers
- become aware about a range of other mindfulness activities and resources

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Conversation: Do 3D Printed Tactile Learning Objects Change Reasonable Accommodations Expectations

Michael Kolitsky, *The University of Texas at El Paso*

Abstract: 3D printers produce real objects from designs created in the digital world. The challenge for blind or visually impaired students lay in sensing the structural elements represented by digital learning objects. 3D printed real learning objects can now be made for a tactile learning experience. Real and touchable learning objects in structure-based disciplines such as Anatomy, Histology, Cell Biology, Astronomy and Geology can now be made and linked to 3D printed Braille as well as audio from programmed Livescribe pens. Tactile learning objects will be available for attendees to touch and feel themselves. Conversation will explore the potential impact of 3D printed tactile learning objects on how we define ADA "acceptable accommodations" now followed by most universities, colleges and schools today. New technologies will change how we can provide more complete learning experiences for blind or visually impaired students and consequently will change what is accepted as "acceptable accommodations". Thousands of digital learning objects may have to be redesigned as tactile learning objects for use in the real world. This conversation will explore how faculty, instructional designers, library staff, teaching and learning centers and book publishers will be involved in this redesign process. Copyright issues will also be discussed since 3D printing makes it so much easier to make things one does not own. 3D printing is one of the predicted disruptive technologies and we should be preparing ourselves as well as our institutions for future change.

Literature Review

A recent settlement (Office of Public Affairs, 2013) was announced by the US Department of Justice with Louisiana Tech University for not providing adequate access to course materials for a student who is blind. In Philadelphia at the annual meeting of the National Association of College and University Attorneys recently (Ingeno, 2013), the President of the National Association on Higher Education and Disability said "with the growth of online education, it is now largely the obligation of the instructors themselves to proactively design courses that are equally accessible to all students." In early June 2013, the National Federation of the Blind proposed a draft bill to ensure "students with disabilities are not left behind on college campuses by a wave of new technologies" (TEACH Act, 2013). And lastly, a "proof of concept" report (Kolitsky, 2013) shows 3D printing to be a promising technology to make tactile learning objects in image-centered STEM disciplines such as Anatomy, Histology, Cell Biology, Astronomy and Geology.

Goals and Objectives

Conversational goals and objectives include the following:

- Describe current "reasonable accommodation" expectations in the classroom and laboratory for blind or visually impaired students.
- Predict what future change will be expected for "reasonable accommodation" when 3D prints of microscope, telescope and satellite imagery become available.
- Discuss faculty role in making sure that the images in virtual learning objects are transformed to 3D printed tactile learning objects able to exist in the real world.
- Identify the institutional support units that should be available to assist faculty in making tactile learning objects (instructional technology, library staff or teaching and learning centers, student interns?).
- Predict how large a job it would be to make 3D printed tactile learning objects for image-intensive STEM disciplines such as anatomy, cell biology, histology, astronomy and geology and other disciplines.
- Discuss the role of publishers in making images available for 3D printing or as a source of 3D print files?
- Analyze the impact of copyright and fair use on faculty desires to make available 3D printed tactile learning objects for their face-to-face and online students?
- Discuss if making a 3D print of a copyrighted image produces a derivative work?
- Identify who would own a 3D printed learning object made by a faculty member or an institutional unit working with a faculty member.
- Discuss institutional image resources that could be made available for 3D printing.
- Explore use of 3D printed tactile learning objects for kinesthetic learners who are reported to learn better through hands-on methods.

Description of Topic to be Discussed

3D printing changes the way one thinks about a learning object. Most learning objects today are primarily digital and designed for interactivity using multimedia and web access. Digital learning objects, especially those that are strongly image-based, offer learning challenges for blind or visually impaired students. In addition to digital learning objects, hands-on labs in which microscopes, telescopes and satellite imagery are observed also present blind or visually impaired students with the same learning difficulties due to not being able to see the images that sighted students can see. Now with the availability of 3D printers and software to make 3D prints from 2D images, many of the images and views observed with microscopes, telescopes and earth viewing satellites can be made into 3D prints and designed as the central component of a tactile learning object making the digital world real by touch and feel. It is also conjectured that kinesthetic learners may also benefit from a learning experience involving a hands-on methodology.

Will 3D printing change ADA expectation of "reasonable accommodation" especially in courses with substantial use of images using microscopes, telescopes and satellites? Online courses may be under more scrutiny since many online lab experiences include use of high quality images embedded within learning objects of a digital nature such as those available at repositories (Merlot 2013). Will the burden fall on faculty shoulders for making sure that the images used in virtual learning objects and those able to be viewed with microscopes, telescopes and satellites are transformed to 3D printed tactile learning objects? Will instructional technologists be available to assist faculty in making tactile learning objects or should library staff or teaching and learning centers or student interns trained in 3D printing methods also be part of the solution? What role should publishers take in making 3D prints available for images they use or own? As the availability of 3D printers grows, will copyright and fair use issues delay faculty desires to make available 3D printed tactile learning objects for their face-to-face and online students? At your institution, do faculty and/or the institution own online course materials including any future produced 3D printed learning objects? If an institution owns a photographic or image file collection, would 3D printing those images lead to a source of income for faculty, departments and/or the university or college? With what we know about different learning styles, would the users of tactile learning objects broaden beyond the blind or visually impaired to kinesthetic learners as well who are reported to learn better through hands-on methodologies?

Facilitation Techniques

The initial portion of this presentation will involve letting attendees touch and feel 3D prints of images to be used in the design of tactile learning objects so they may begin to recognize the potential impact of 3D printing on tactile learning object design (Kolitsky, 2013 and Kolitsky, 2013). The conversation questions listed above will be open for discussion in the participatory section of the presentation. Attendees will be asked to answer a short pre-discussion questionnaire that will be followed at the end by a post-discussion questionnaire so that a sense of knowledge learned about the impact of 3D printing on the need to produce tactile learning objects can be ascertained. During last year's conference, the opportunity to use clickers was made available for my presentation by a vendor displaying the technology at the conference and it would be useful and faster if a clicker response tool could be made available for gathering pre- and post-discussion responses.

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Teaching the Curriculum: A Conversation on Academic Advising as Pedagogical Practice

Kevin D. Egan, *Drexel University*

Abstract: This conversation session will explore the ways in which academic advising can serve as a pedagogical tool in "teaching the curriculum." Specifically, it will apply advising theory and best practices developed in Individualized Major Programs (IMPs) to the broader curricular mission of higher education. The session will develop a theoretical basis for the symbiotic relationship between advising practices within IMPs and the "advising as learning" model of academic advising, with a conversational focus on expanding the ways in which we understand how teaching takes place through advising. Finally, it will discuss three primary learning goals derived from the activation of teaching the curriculum through advising: (1) student empowerment through self-directed learning; (2) the ability for students to draw meaningful methodological and epistemological connections across disciplines; and, (3) the development of effective communication skills as students become advocates for their own academic and professional objectives. Affinity diagramming will be used to promote discussion of these topics and how they can be applied to participants' academic programs.

Literature Review

The theoretical basis for advising as learning built upon the developmental model of academic advising, first articulated by Crookston (1972), through a series of recommendations made by Hagen (1994), Laff (1994), Kuh (1997), and Lowenstein (1999). In essence, advising as learning resituates the development of the self within the curricular mission of the university (Hemwall and Trachte, 2005). Advising as learning makes the practice of advising analogous to teaching; as Lowenstein (2005) contends, "an excellent advisor does the same for the student's entire curriculum that the excellent teacher does for one course." The emphasis here is on the curriculum – perhaps the most important function of the advisor, in this sense, is to help the student understand the "logic of the curriculum" (Lowenstein 2000). That is, students should be able to draw connections across disciplines, to understand how courses relate to one another, to understand and critically assess the mission statement of the university (as well as how their specific curricula relate to the mission statement), and to generally understand and articulate the context and broader educational goals of their academic choices. These imperatives fit well with the Boyer Report's (1998) call to "remove barriers to interdisciplinary education." Accordingly, they merit exploring ways in which they might be incorporated into other academic programs.

Goals and Objectives

Upon completion of the session, participants will be able to:

- Describe the fundamental principles of the advising as learning model.
- Recognize some of the benefits of empowering students and promoting interdisciplinarity through advising.
- Synthesize advising theory and instructional practices as a means of teaching the curriculum and activating self-directed learning.
- Brainstorm and develop specific strategies to foster student empowerment and interdisciplinarity that can be applied to their respective academic programs.

Description of Topic to be Discussed

As an academic advisor and instructor, I occupy a unique position in an Individualized Major Program that allows me to incorporate the dictates of advising as learning in all of the capacities of my role as an educator. This unique position has also allowed me to draw interesting connections across advising practices and teaching practices. This session will draw out many of those connections and the value of treating advising as a pedagogical tool to empower students, especially in terms of thinking across the curriculum and making intentional interdisciplinary associations. It will also encourage discussion of new possible connections and specific applications to participants' academic programs through the technique of affinity diagramming.

Facilitation Techniques

Participants in this session will use affinity diagramming to identify and examine the ways in which teaching through advising can apply and benefit their specific academic programs. Affinity diagramming is a tool that allows for the collection and organization of ideas developed through brainstorming sessions, interviews, and presentations. It encourages identification and organization of ideas based on natural relationships among concepts, applications, methods, etc. I will begin the session with a brief discussion of the advising as learning model of academic advising, its applications to teaching across the curriculum, and the learning goals that can be derived from these practices. Participants will record individual reactions and reflections based on the presentation on note cards; they will then work in groups to organize these thoughts based on their relationships. This process, and the groupings that result from it, will form the basis of the reflective discussion that will explore the meaning, value, applications, and even limitations of teaching through advising theory and practices across the spectrum academic programs represented among the participants.

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Wednesday

February 5, 2014

Session 4

3:00-3:50 PM

http://www.cider.vt.edu/conference/

Impact of Service Learning Courses on Undergraduates: How does Experience Open Students' Eyes

Rachel Shor, Jenna Calton, & Lauren Cattaneo, *George Mason University*

Abstract: Service learning courses educate students by engaging them in the classroom as well as the community. Research on student service learning has focused on the benefits students receive, and how courses should be structured to increase the likelihood of producing those benefits. This study focuses on student experiences rather than course structure, to try and identify the aspects of service that are most influential. We conducted qualitative analysis of essays written by 45 college students who participated in a one-semester service learning course. Results indicated that regardless of whether experiences were conceptualized as positive or negative, students overwhelmingly identified direct contact with community members as being eye-opening. Additionally, we found that students identified experiences that resulted in cognitive shifts as being particularly impactful, in that they challenged their assumptions.

Background

Part of the mission of most universities is to provide a well-rounded education to students, and in turn to create well-rounded citizens who contribute to the community (Garver et al., 2009). As one means to this end, universities across the United States are increasingly recognizing the value of including service learning in academic curriculum. The presumption is that service learning courses can be transformational for students, by offering both knowledge and experiences about a variety of issues and populations to which students may not otherwise be exposed. Theoretically, such exposure would increase the interest and ability of students to engage in their communities.

Research exploring this presumption has focused in large part on the types of benefits that students and community partners acquire through these courses, and how service learning programs should be formatted to yield the greatest change in participants. Celio and colleagues (2011) conducted a meta-analysis of 62 service learning programs for elementary-school through college age students to identify best practices. Their findings supported four essential elements outlined in the National Youth Leadership Counsel's *K-12 Service-Learning Standards for Quality Practice*: linking service learning to academic and program curriculum, incorporating youth voice, involving community partners, and providing opportunities for reflection. In terms of the kinds of changes such practices are likely to promote, research has shown that in the aggregate, service learning students make significant gains in attitudes towards the self, interpersonal skills (Moely, McFarland, Miron, Mercer, & Ilustre, 2002), and attitudes towards school and learning (Celio, Durlak, & Dynmnicki 2011; Higher Education Research Institute, 2000). However, there is a lack of research examining which types of experiences are cited as most impactful, and *how* they influence the way students see themselves, others, and the world around them. This study focuses on what, specifically, happens in the process of service that leads to change for students by assessing the types of experiences they describe as eye-opening, and analyzing how students make meaning out of them. Identifying which service learning experiences are more transformative for students will potentially allow us to more explicitly facilitate and build upon them.

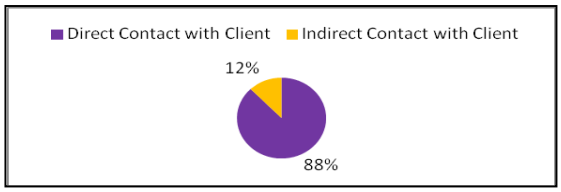
Method and Results

Participants were 45 students enrolled in a service-learning course, one in fall and one in spring, at a large mid-Atlantic university. Students engaged in 20 hours of service at a pre-selected organization within the community, in addition to attending weekly classes. In one assignment, students wrote a paper in which they were instructed to "describe an interaction with a client that has been eye-opening for you in some way."

Consensual qualitative research (CQR) methods were used to the identify core ideas in students' responses according to two domains: the types of experiences that students identified and the ways these experiences influenced them (Hill, Thompson, & Williams, 1997). The core ideas within the types of experiences students identified included whether students had direct or indirect contact with clients, and whether they perceived the experience to be positive or negative. The majority of participants (88%) reported direct experiences with clients (See Figure 1 below). Indirect experiences tended to be stories told by staff members to students about clients' lives. When the interactions were direct, students tended to describe the experience with regard to positive or negative emotionality, and it was possible for both types of interactions to be eye-opening to students.

With regard to the way these experiences influenced them, students reported physical, emotional, or cognitive reactions. For example, in describing an emotional reaction to an interaction, one student said, "…I wanted to cry that this was happening in my very own community." Most students described cognitive shifts as a result of their interactions with clients. A theme that emerged across these reactions was the loosening of assumptions about the population students served. In some cases, these assumptions were challenged by a realization that a student was very different from a client (e.g., "…I had never even considered what it would be like to be homeless and to have a child...that is unimaginable for me."), and in others there was a discovery of some similarity between the student and the client (e.g., I've learned...that many of them are not so different from myself. We live in the same general area, surrounded by affluent neighborhoods and families, and in the midst of it all we are struggling to make our lives meaningful"). Finally, some students remarked on emotions or attitudes they did not expect among clients who are struggling, such as pride or determination. It is important to note that most students articulated assumptions they continued to hold about clients, reminding us that change is a long-term and dynamic process, unlikely to completed in one interaction or one course.

Figure 1.



Discussion

Service learning courses offer students the opportunity to learn in both the classroom and the community. This study provides beginning information on what kinds of experiences might best be built on in the classroom in order to promote student growth. We learned that with minimal prompting, students make use of both their positive and negative interactions with clients in order to reconsider their pre-existing assumptions. Instructors might build on this process through literature and classroom discussion. In particular, early in the class students might be encouraged to articulate assumptions, and then revisit these assumptions later. Instructors might also actively encourage students to talk about the interactions they find emotionally loaded, and to explore what those interactions have to teach them. Depending on relevant issues or populations, scholarship could inform this critical thinking process. Future research on students' experiences in service learning could focus more specifically on how student self-report about influential experiences correlates to measureable changes in thoughts, feelings, and behaviors. Additionally, longitudinal research could assess how students continue to be impacted by service learning after completing coursework.

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Are We Doing a Good Job? Teaching Assessment in a Culture of Demonstrating Student Learning

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Abstract: In 2010, the National Council for Accreditation in Teacher Education (NCATE) called for more research on the ways that institutions of higher education are preparing teachers to assess and to determine student learning. In 2012-2013 Virginia began evaluating teachers on their ability to demonstrate student learning. In response, the RU Teacher Preparation Program is concerned with preparing our future teachers to adequately face the challenges of measuring, critically evaluating, and reporting student learning. To respond to these national, state, and local concerns, eight members in the RU College of Education implemented a multi-methodological action research study to examine assessment, where it is taught, and its effectiveness in training future and current teachers. Methods employed included curriculum analysis, surveys, focus groups, and college assessment data. Subjects comprised future teachers, cooperating teachers, and principals. Initial key findings include; teacher candidates in early field experiences rated themselves higher than those in student teaching; self-ratings were higher following a semester of field experience; and teacher candidates rated themselves lower on item in Standard 7 (Student Academic Progress) than in those for Standard 4 (Assessment of Student Learning). Qualitative data from focus groups with the cooperating professional's revealed concerns for increased test-based instruction, the potential for competitiveness among teachers, and lack of consistency among schools in teacher evaluation procedures. Additional data and a final recommendation for programmatic adjustments will be included in this session.

Literature Review

Rosseau, Anderson, & Tate (2008) indicated that multiple studies have linked teacher competence to student achievement. Interestingly, many teacher preparation programs may not sufficiently train students in assessment skills and rarely include a course that is focused on assessment (Stiggins, 1992; Leighton et al., 2010; MacPhail & Halbert, 2010). Therefore, new teachers may be expected to design, analyze, and report on assessments with little understanding of how this can be done to enhance student learning. Even when new teachers are given assessment tools, it is important they understand the principles linking assessment to teaching and learning and that they are able to reflect on these connections. In the context of a teacher preparation program, the student teaching experience should include instruction, experience, and reflection on the multiple forms and uses of assessment. According to the NCATE (2010) report referenced above, research over the past decade indicates that "no in-school intervention has a greater impact on student learning than an effective teacher." As a result, NCATE calls for more effective teachers and encourages rigorous evaluations of how teacher preparation programs train students to enter the profession and to use assessment to enhance/document learning.

Methodology

The research team chose to focus on Standard 4 (Assessment of and for Learning) and Standard 7 (Student Academic Progress) of the Virginia Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers. The mixed method design enabled collection and analysis of quantitative data from large samples and also qualitative data from smaller samples that highlighted perceptions and subjective experiences. Methods included: Curriculum Review; Questionnaires for future teachers; Teacher Candidates' self-ratings (Before and after field experiences); Cooperating Professionals ratings of student teachers; School Administrators ratings of early career teachers; and Focus Groups of Cooperating Professionals and School Administrators.

Results

While the research team continues to analyze information collected, early data reveals several key findings. Teacher candidates in early field experiences generally rated themselves higher than those in student teaching. Self-ratings were higher following a semester of field experience. There is similar pattern for all 11 performance indicators. Teacher candidates rated themselves lower on the indicators for standard 7 than for those on standard 4. A summary statistic was computed for each standard and the difference in the means were significant. Qualitative data from

focus groups with the cooperating professionals and school administrators revealed great variety in how schools were implementing the new teacher evaluation procedures. Some teachers were unaware that a new standard had been added, while others received training in how to set goals and track student academic progress. Curriculum analysis indicates that programs are covering Assessment Standards 4 & 7 in multiple courses. Following subsequent analysis, the remaining data will be included in the presentation.

Discussion

The group has shared some preliminary findings and we are preparing to present the remaining results to the teacher preparation faculty. So are we doing a good job? The answer based on data thus far indicates that we are covering assessment in a variety of ways in classes and students are becoming more confident in their use of assessment, but there is still work do. Because of this study and the information leading up to the study, many members of the research team have made changes to program and course content. One member added a course in assessment to her program. Several members have attended workshops on assessment and student learning to become more familiar with policies and procedures. At least two members have changed their courses in hopes of better preparing future educators. One member is offering a professional development workshop on assessment for future teachers. All of us are thinking and talking with other faculty in our respective areas to help determine what future teachers and principals need to know. In addition to voluntary changes in the way we teach, our hope is that this study will not only inform our college about assessment-based professional preparation, but also will provide incentive for additional evaluation and research on how to better prepare future teachers.

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Engaging Students through Virtual Classrooms: The Use of Blackboard Collaborate in Online Education

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Abstract: As online education continues to move into the world of higher education at a startling rate, faculty and administrators grapple with the challenges of meeting the demands of today's online learner while retaining the pedagogical qualities that traditional face-to-face programs embody. In light of these challenges, virtual technologies have emerged as a possible conduit for bringing those pedagogical qualities from traditional programs to online education. In this session, the presenters will discuss the attributes of virtual technologies that can enhance the quality of any online program and demonstrate how they incorporate the virtual technology Blackboard Collaborate into their graduate and undergraduate teacher education programs. Participants will be encouraged to engage in an open dialogue regarding the implementation and use of virtual technologies at their home institutions.

Literature Review

Despite the unyielding drive for more online education programs, research on the impact of online learning has highlighted a number of quality concerns prompting calls for improved delivery methods, cost benefits, and improved learning outcomes (Boulos, Maramba, & Wheeler, 2006). These concerns continue to challenge faculty and administrators who must meet the demands to today's online learner while ensuring their online programs adhere to the same high pedagogical standards as their traditional face-to-face programs. One possible solution to the bridging this gap between online and traditional programs is the use of virtual technologies. The use of virtual technologies in higher education has been expanding at an exponential rate due to their ease of use and rapidity of deployment (Boulous, et al., 2006). They offer the opportunity for powerful information sharing and ease of collaboration with faculty and peers. By utilizing synchronous software, such as Blackboard Collaborate, faculty can blend the pedagogical practices of traditional face-to-face programs and technology into a flexible a learning environment that promotes student engagement, peer interaction, and critical thinking all while providing critical cost saving measures (McBrien, Jones & Cheng, 2009).

However, a number of misconceptions and myths are associated with the difficulties in identifying, implementing, and preparing faculty to use virtual technologies. With the current landscape of higher education, educators and administrators plagued by budget concerns, retrenchment, and program restructuring face a perfect e-storm (Kim & Bonk, 2006). By looking beyond the flaws in the misconceptions and myths surrounding virtual technologies and adapting online programs to incorporate the use of programs such as Blackboard Collaborate, faculty have the opportunity to "liberate and tie learners together, creating dynamic learning communities" (Boulos et al., 2006).

Goals and Objectives

At the conclusion of this presentation, participants will be able to:

- Understand the importance of student engagement through virtual technology in higher education
- Generate ideas for incorporating virtual technology at their home institutions
- Identify possible barriers to implementing virtual technology as well as viable solutions for success
- Understand the functional capabilities of Blackboard Collaborate for virtual classrooms

Description of Practice

Presenters will establish the framework for the importance of student engagement through virtual technology in higher education by briefly discussing the relevant literature regarding this topic. The presenters will then engage participants in discussion focusing on their current use of technology and aspirations for future implementation. The discussion will then challenge participants to brainstorm possible barriers to implementing virtual technology as well as viable solutions for success. Finally, the presenters will demonstrate how they enhance student engagement through the use of Blackboard Collaborate.

Discussion

As one of the top online graduate programs for Special Education in the nation, Slippery Rock University's Special Education Department is committed to providing an innovative approach to teacher preparation through online education. Students are provided the flexibility of an online education in conjunction with virtual technologies including Blackboard Collaborate and the online learning platform Desire 2 Learn. As one student commented, the use of Blackboard Collaborate "helped me understand what we were doing so much better." This combined approach allows our student to reach their academic goals through distant education while benefiting from the same pedagogical practices that established Slippery Rock University as one of the leading teacher preparation programs in the region.

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Spreading the Gospel with Speed Designing: Faculty Development through Peer Coaching

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Abstract: A recent innovation in faculty development, Speed Designing, involved faculty peers sharing effective strategies for teaching and learning in a rapid, round-robin exchange of ideas modeled after the "speed dating" matchmaking concept. Instead of rotating among potential dating partners, however, faculty attendees rotated among tables where their peers were prepared to spend 12 to 15 minutes sharing what they had learned about new teaching strategies for active, engaged learning. Peers introduced new practices and provided "how to" tips as well as lessons learned from their own implementation of a strategy. Innovative approaches introduced included Team-Based Learning, Process-Oriented Guided Inquiry Learning (POGIL), Case-Based Learning, Just-in-Time Teaching, simulation, and assessment strategies such as the use of rubrics and peer assessments. Peer teachers functioned as coaches and early adopters of these new strategies in a School of Medicine where faculty have traditionally relied upon didactic methods of teaching. Early adopter faculty who functioned as peer coaches drew upon their common experiences and shared knowledge of curriculum design and instructional strategies acquired as members of a learning community of scholars engaged in graduate studies in education during the previous six months. The Speed Designing workshops allowed them to "spread the gospel" by diffusing the innovative new practices with a much wider group of faculty colleagues than would have been possible in traditional models for faculty development. Positive impact reported by faculty participants who attended the Speed Designing workshops indicated that peers' adoption of these new approaches for teaching and assessing students was a major factor in spurring their own interest in learning new techniques for engaging students through active learning methods. This adaptation of peer coaching can be adopted by many disciplines in higher education.

Literature Review

The teaching practice we introduce draws upon several well-established concepts within the faculty development and organizational change literature and uses these as the basis for a novel approach for peer learning to extend the range of faculty development initiatives. Three strands of literature form the basis for the Speed Designing workshops that were developed to introduce faculty to new strategies for teaching and assessing learners: peer coaching (Gottesman, 2009; Showers & Joyce, 1996) with its concept of peers sharing insights on teaching practices; faculty learning communities (Cox, 2004; Richlin & Essington, 2004) as networks of colleagues that support each other in learning new ideas for teaching practices; and the concept of diffusion of innovation (Rogers, 2003), in which early adopters of innovative practices lead the way for others to follow. Each of these contributes to the basis for our approach to involving peers in sharing instructional design practices with their colleagues, a strategy we call Speed Designing.

Traditionally, faculty teaching their peers in higher education has involved a structured method of peer observation and feedback called peer coaching (Gottesman, 2009; Showers & Joyce, 1996). Showers and Joyce trace the history of peer coaching to their work with staff development in the 1970s and 1980s when they discovered that as few as 10% of their staff development participants actually implemented what they learned in seminars designed to improve teaching practices.

This lack of transfer from the site of learning to on-the-job performance is well-documented in the training and development literature, as well as in higher education settings (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010; McDermott, 2011). To counter the poor rate of implementation, Showers and Joyce (1996) began to form peer coaching groups composed of seminar participants to extend the learning from seminars with practice and dialogue among colleagues. The faculty who engaged as peer presenters in our Speed Designing workshops were all participants in an intensive graduate education learning experience as a community of scholars, having much in common with the concept of a faculty learning community (Cox, 2004; Richlin & Essington, 2004). As early adopters, the faculty who shared their learning of instructional and assessment strategies with colleagues followed the diffusion of innovation model introduced by Rogers (2003). This model explains how people change to adopt innovative ideas, behaviors, or objects perceived as new. Rogers classified innovators as only 2.5% of the population, while early adopters (13.5%) and the early majority (34%) comprise almost half of the population, with

others he identified as either the late majority or laggards. The diffusion of innovation model follows a bell-shaped curve to describe relative proportions of those willing to adopt to change initiatives. Among the major elements that Rogers identified as necessary for adoption to occur are peer to peer communication and peer networks. Speed Designing capitalized on this peer exchange to disseminate new ideas for teaching.

Goals and Objectives for the Session

By the end of this session, attendees will be able to: (a) recognize the value of peer coaching to support faculty development; (b) consider Speed Designing as a model for spreading innovative teaching practices learned by early adopters to other interested faculty within higher education settings; and (c) appreciate the benefits of intensive development of a core group of faculty learners as early-adopting peers for sharing best practices in teaching and learning.

Description of Practice

Early adopter faculty members were recruited from participants in Virginia Commonwealth University's *Teaching in Medical Education (TiME) Faculty Fellows Program* that consists of graduate courses in educational methods offered to our faculty through the VCU School of Education. TiME participants had all completed courses in either instructional strategies or curriculum design which provided them with a shared knowledge base and consistent language to talk about learner engagement through active learning methods. These early adopter faculty had developed the skills, knowledge, and enthusiasm for innovative teaching strategies; they had also "bought into" the benefits of active learning and were now using these teaching strategies. Many expressed willingness to share their learning with other faculty members. Speed Designing workshops were created to help disseminate the active learning paradigm to the "early majority," faculty who were interested but who may not have been sufficiently engaged to enroll in a graduate course. Each Speed Designing workshop began with an overview of curriculum design, followed by round table discussions that were led and facilitated by the early adopters. Speed Designing participants rotated among tables every 12 to15 minutes for conversation, demonstration, and discussion in the three-hour sessions. A roundtable to discuss Bloom's taxonomy and its use in creating goals and objectives for active learning was also part of the workshop.

Discussion

Medicine, as well as other disciplines in higher education, is moving from traditional lectures to more active learning methods such as Process-Oriented Guided Inquiry Learning, Team-Based Learning, Case-based and Problem-based Learning and Just-in-Time Teaching. At VCU, we offered graduate level courses to faculty innovators and early adopters at the forefront of a cultural change in the School. The next step was to engage faculty who remained quite skeptical about these techniques and to "whet their appetites" in a time-efficient manner. While we realize the limitations of a three-hour workshop, our goal was to demystify the techniques and garner our peers' interest in pursuing additional learning opportunities. The Speed Designing forum provided a low-stress environment to allow faculty to see how they, too, might use innovative new strategies in their own teaching situations. This practice holds potential for increasing the effectiveness of faculty development in many disciplines.

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Group Techniques to Engage Students in Developing Effective Leadership Skills

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Abstract: Higher education settings offer an excellent opportunity for students to engage in practices to enhance their leadership skills. Modeling the way, inspiring a sharing vision, challenging the process, enabling others to act, and encouraging the heart are five principles that have been identified in exemplary leaders (Kouzes & Posner, 2007). This session will focus on four principles from a review of literature on leadership that the presenter has aligned to the Kouzes and Posner (2007) themes. The presenter will guide the participants through group activities and process questions to facilitate leadership skills development in college students in the four areas of listening skills, trust, social awareness, and self-awareness.

Literature Review

Kouzes and Posner (2007) offer five practices of exemplary leadership which include modeling the way, inspiring a sharing vision, challenging the process, enabling others to act, and encouraging the heart. These principles can be effectively incorporated into college curriculum to foster the development of effective leadership skills in students. The concepts of trust, listening skills, social awareness, and self-awareness are often embedded in research and literature on leadership (DuBrin, 2010; Kouzes & Posner, 2007; & Sears & Davis, 2003). Experiential pedagogical practices can be effective means for teaching professional principles (Dollarhide, Smith-Glenn, & Lemberger, 2008; McAuliffe, & Eriksen, 2011). These models can also assist with helping students enhance their leadership skills. Educators can utilize engaging and informative activities in class to assist students in learning and practicing effective leadership skills.

Goals and Objectives for the Practice Session

As a result of attending this session, participants will be able to:

1. Understand the five principles of exemplary leadership
2. Understanding important abilities of effective leaders
3. Participate in experiential leadership group activities
4. Facilitate group sessions on leadership in their own classrooms

Description of the Practice to be Modeled

This session will introduce concepts from the research on leadership development, and focus on principles of exemplary leadership and common themes in the literature. Participants will interact with one another through a series of group exercises that will be both engaging and informative. The presenter will facilitate the exercises and provide process questions for discussion and creation of new knowledge. Resources for books, articles, group activities, student leadership assessments, and curriculum ideas will also be provided.

Discussion

The principles of effective leadership have been well researched and documented. This session will take the common theme from the literature and bring them to life in practical and engaging manners that will help students to clearly understand the concepts. The use of group activities is an effective method to allow students to personally experience the idea of the concepts; based on those experiences, they will be able to critically apply the new knowledge they gain to various real life situations.

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"Thinking Where Words are Still Missing"*: Radical Listening as a Tool to Promote Creative Thinking and Interactional Self-Reliance

Ram Eisenberg, Technion, *Israel Institute of Technology*
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Abstract: This interactive practice session will offer instructors a chance to experience the benefits of "radical listening" and examine its possible applications in learning situations. The term "radical listening" is used to describe the task of the companion in "Focusing" and "Thinking at the Edge" (TAE) partnerships (Gendlin 1981, 1987, 2004), two techniques that develop the ability to explore the liminal area of knowing. In the liminal, implicit state, knowing is still a notion which cannot yet be expressed in words. At this point, having access to a dedicated listener has a powerful impact. In the words of Gendlin (1987): "The silent company of another person is no small thing. It changes one's whole way of being [. . .]". Radical listening is a fundamental element in the "Thinking at the Edge" method, one which can easily be applied in various teaching and learning circumstances. The presenters—a landscape architect and a literary scholar—will discuss the precepts of radical listening and its uses in the classroom. They will give theoretical background and examples of assignments that foster student engagement in a deep and intentional exploration with the material through the simple practice of learning to listen to one another. Participants will then be invited to reflect upon an authentic challenge relevant to their current professional life, engage in a guided radical listening exercise with a listening partner, and, finally, discuss their experiences in the large group. Together, we will consider how radical listening can be used in a variety of fields to enhance learners' ability to support each other in explicating their ideas, while kindling their interactional self-reliance and sense of community. This session will particularly appeal to faculty wishing to foster creative thinking and cultivating students' personal involvement with and passion for their subject.

Introduction and Review of Prior Literature

My dear thoughtful friend: if there is something you want to know without being able to find it out through meditation, turn to any acquaintance you run into to talk about the matter. There is no need for him to be a sharp mind. Also, I do not mean to say that you should ask him about this matter: Oh no, never! Rather, you should tell him the solution yourself! (von Kleist,1878)

Harnessing one's implicit knowledge in the learning process is rarely taught in the academy. Yet, a great deal of creative discovery and thought depends on accessing the preverbal levels of our consciousness. In his essay *On the Gradual Production of Thoughts Whilst Speaking* quoted above, 19th century German poet Heinrich von Kleist describes the process of turning one's implicit knowledge into explicit thought with the assistance of a dedicated listener. Eugene Gendlin's work (1981, 1987, 2004) on "Focusing" and "Thinking at the Edge" further confirms that having a caring, attentive listener fosters the development of ideas as well as emotional growth, irrespective of the status or expertise of the listener. This idea that a listener, who does not give advice or instruction but simply listens mindfully (Rome & Martin 2010), can serve as a catalyst for helping learners construct knowledge and meaning for themselves has powerful implications in the context of education. It has the potential for dissolving the hierarchy between teacher and learner and for elevating the role of peers in the learning process. Thus, Gendlin's philosophical exploration provides phenomenological underpinnings and a useful technique for the new generation of teaching methods that heavily rely on peer instruction (Angelo, Major & Cross, 2001; Mazur, 1997) and interactional contemplation (Barbezat & Bush, 2013; Palmer & Zajonc, 2010).

In this session, the presenters – an environmental designer and a literary scholar/educational developer – will draw on their experience with teaching design studio, literature seminars, and pedagogy courses in which they utilize a peer listening process that fosters learners' ability to support each other in articulating ideas and cultivating interactional self-reliance. Driven by their desire to help burned-out literature and architecture students rediscover their own voice—and with it their passion for reading, writing, and designing—the presenters developed the method of "radical listening." Grounded in Gendlin's precept of "interaction first", this method acknowledges that we are essentially interactive creatures, that is, that we constitute an environment, and therefore function better when

interacting with other people (Gendlin, 1997). It is further based on the premise that a learner's deep passions and implicit knowing can best be mobilized in a carefully nurtured community of trust.

Description of the Practice

The session will begin with a short icebreaker, after which the presenters will describe the goals and method of radical listening and how they integrated this technique into an undergraduate literature class and a studio seminar for undergraduates in landscape architecture. The presenters will illustrate how they used radical listening to nurture students' ability to access and utilize inner resources for creative thinking. Presenters will provide (a) a pedagogical rationale for their approach (b) an accessible radical listening protocol via handouts and Q & A, and (c) evidence for the intervention's impact on learning in the form of student work and feedback. Participants will then engage in a 20 minute listening exercise to resolve an authentic query in their professional life thus allowing them to experience first-hand the potential of the technique. The session will conclude with a group discussion about ways of using the radical listening in a variety of fields to enhance students' ability to support each other in explicating their ideas, while kindling their interactional self-reliance and sense of community.

Goals & Objectives for the Practice Session

This session will particularly appeal to faculty wishing to foster creative thinking and cultivating students' personal involvement with and passion for their subject.

Participants will leave the session with:

- a first-person experience in radical listening, both as listener and as focuser
- a simple method and set of instructions they can apply in varied circumstances
- concrete ideas for bringing students' implicit knowing to bear in the learning process.

Interactive Discussion

Throughout this interactive session, the facilitators will be responsive to participant interests and questions, and give opportunity for learning from others' perspective and expertise.

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On the Fast Track: Motivating Faculty Developing Online Courses

Lujean Baab, Deyu Hu, & Aaron Bond, *Virginia Tech*

Abstract: In this practice session, the presenters will describe the rationale and results of integrating faculty cohort to instructional design that is structured through professional development and one-on-one consultation to improve the collaborative course development efforts at Virginia Tech. We will first examine issues and challenges experienced in the one-on-one consultation approach. After reviewing relevant literature on the cohort approach, which provides us the theoretical foundation to address those issues and challenges, we will describe how we implement the cohort-based course development. Results of the implementation indicated that the enhanced model is effective in helping faculty develop a quality course in one semester. Recommendations on further improvement and actions taken following analysis of data will also be discussed. From these findings and plan for future actions, instructional designers, faculty, and administrators at other higher education institutions can utilize a similar process to improve the development of high quality courses.

Literature Review

To ensure the quality of online courses, many higher education institutions adopted a team approach to design, develop, and deliver courses (Almala, 2006; Chao, Saj, & Hamilton, 2010; Hoffman & Ritchit, 2001; Oblinger & Hawkin, 2006). In this collaborative team approach, faculty team up with a group of professionals who can support them with instructional design, sound use of technology and pedagogy, media production, and such, to create quality courses. The collaborative online course development approach has been successful at Virginia Tech. However, we also faced some persisting problems. First, faculty participation varied greatly and some faculty could not complete the course development on time. Second, although the collaborative work with the instructional design team has been helpful, it did not provide faculty opportunities to interact with and learn from their peers.

"Learning is a social and interactive process" (Tisdell et al, 2004, p. 118). However, faculty in higher education are lonely teachers and there is a lack of collegiality in "curriculum planning and pedagogy work" (Cox, 2004, p.6). Barnett and Muse (1993) argued that cohort is "a collegial support system for the improvement of the teaching and learning process" (p.403). Relevant to our problems in mind, we found the following features of cohort can help us address the two major issues that we faced: first, it provides structured opportunities to support group interaction in that members of a cohort are generally required to exchange ideas and provide and receive critical feedback to and from peers; second, a cohort offers social support to its members through shared goals and experiences, friendship, and camaraderie; third, the cohort approach utilizes a more structured administrative framework, including focused topics, structured timelines, and positive peer pressure that keep members moving forward, remain in a program, and get things done (Dinsmore & Wenger, 2006; Drago-Severson, et al, 2001; Hill, 1992; Prawat, 1999; Saltiel & Russo, 2001). Therefore, we adopted the cohort approach in our course development program and integrated it with the guided one-on-one instructional design process.

Goals and Objectives

Upon completion of this session, participants will be able to:

- Describe what is a collaborative course development model and its rationale
- Discuss the benefits of using cohort in collaborative course development
- Explain the phases, purposes, and activities involved in each phase of the cohort-based collaborative course development model

Description of the Practice

In this enhanced model, all participating faculty serve three roles—as students, course developers, and peer reviewers during the different phases of the program. Before the start of this 16-week program, all faculty meet with the program facilitator face-to-face to kick off the course development process. In the first six weeks, faculty are mainly students for a series of online lessons that covers issues, challenges, options, strategies and best practices of designing and teaching an online course. In the following eight weeks, faculty work with their individual instructional designers on course development: brainstorm course design choices, determine activities and tasks for content and learning object development, solve problems, and follow up with feedback continuing to the next scheduled meeting. Once a course is fully developed, the course is evaluated according to the standards of the Quality Matters (QM) rubric. In two weeks, faculty first provide evidences and examples of course elements satisfying the QM standards. They then serve as peer reviewers for another faculty's course. Based on feedback from the reviewers, they work on areas that may need to be supplemented or revised.

Discussion

The enhanced model was implemented in spring and summer 2013 through two cohorts and another cohort is ongoing for fall 2013. For spring and summer 2013, a total of 17 faculty have finished our program. All cohort faculty were able to finish the course development within a semester though a few faculty needed a two-week extension. At the end of the course development, an online survey was conducted to collect feedback from faculty participants regarding their experience with and perception of the process, such as: the effectiveness of the short course, the facilitator, and the instructional designers; the transition between short course and course development with instructional designers; workload; usefulness of cohort and QM review; and overall satisfaction with the program. Detailed results from all three cohorts will be shared with participants.

In retrospect, we contribute the success of our program to six factors: 1) a more structured administration of the program through cohort; 2) the short courses at the beginning of the program; 3) discussion forums and other learning activities that foster peer interaction and utilize peer pressure; 4) reinforcement and recognition within the cohort; 5) unique needs of each faculty were addressed through the one-on-one guided instructional design process; and 6) most importantly, commitment from faculty. At the end, we will discuss recommendations on further improvement and actions taken following analysis of data. Participants of this session will be encouraged to ask questions regarding our practice and share course development practices at their institutions.

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Implementing Service-Learning Pedagogy: Strategies and Challenges

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Tereza Joy Kramer, *Saint Mary's College of California*
Rich Rice, *Texas Tech University*

Abstract: As institutions of higher education respond to internal and external pressures that call upon the academy to better articulate their value to society, community engagement has come to be one of the ways in which universities respond. What that engagement looks like, however, differs depending on factors such as school size, institutional mission, and disciplinary expertise. The proposed practice session explores not only the ways that service-learning pedagogy can transform classroom learning experiences but also the way that it may transform the larger institutions within which it is employed.

Literature Review

Service-learning pedagogy initially emerged in the 1960s, but traces its roots back to Dewey's early-20th-Century notions of experiential learning (Cone & Harris, 1996). Currently, the Corporation for National and Community Service (2013) provides the following key outcomes of this pedagogy:

> Service-Learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. … Through service-learning, young people—from kindergarteners to college students—use what they learn in the classroom to solve real-life problems. They not only learn the practical applications of their studies, they become actively contributing citizens and community members through the service they perform.

In addition to the potential impacts on student learning, scholars in the field of service-learning suggest that it also may open dialogue about what the university is or should be (Boyer, 1996). Even beyond its potential impacts on notions of "appropriate" scholarship, Maurrasse (2003) argues that campus/community partnerships create a greater accountability in ways similar to corporate social responsibility. Ideally, at least in Maurrasse's view, service-learning encourages universities to be more responsive to their communities, their sources of income, and to themselves. From this vantage, service-learning becomes a fulcrum of change—a pedagogy that also works "upward" to push the university into new, more effective relationships and impacts.

Additionally, at least for Zlotkowski (2003), service-learning *reciprocity* (the idea that both the academic partner and the community organization must share responsibilities and benefits) "significantly qualifies the academy's traditional claim to preeminence by virtue of its expertise" (p. 64). In contrast to disembodied expertise, Zlotkowski suggests that service-learning projects can promote synthesis of theoretical expertise with lived/embodied expertise.

Goals and Objectives

The proposed practice session will not only consider the impacts of service learning on classroom practice but will more importantly take up questions of the ways that service learning projects can reveal other ways of acting, knowing, and valuing. Our goal for participants is that they:

- Develop/expand a framework of key concepts of service-learning pedagogy
- Learn concrete strategies for implementing service-learning projects in their own institutional sites/settings
- Recognize the positive challenges to institutional culture that are raised by service-learning

Description of the Practice

From a pedagogical standpoint, service-learning commits its attention to four key aspects, represented by a matrix that suggests interaction of these focuses and directs the development of service-learning courses:

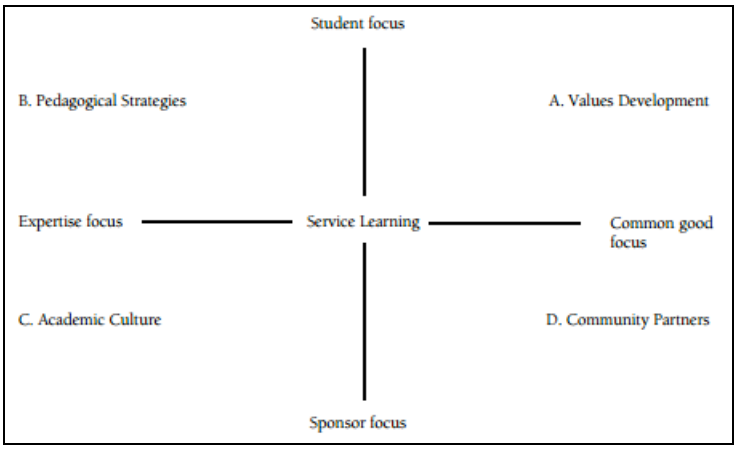

Figure 1. The service learning conceptual matrix (Zlotkowski, 1998)

Additionally, Heffernan (2001) defines engagement, reflection, reciprocity, and public dissemination as the four basic principles which guide development of service-learning courses. However, both the nature of the community partner as well as the purpose of the project can substantially shift the implementation of this pedagogy. We believe a strength of our group is breadth: represented are, for example, a private religious school with an international service-learning commitment, a graduate-level project with a for-profit organization, and a service-learning practitioner whose scholarship investigates community through a feminist lens. Our goal within the session is not necessarily to suggest a coherent depiction of practice but rather to discuss the various strategies for implementing effective projects which—despite their variety—adhere to central principles of service-learning pedagogy.

Discussion: Tentative Session Approach

From our perspective, service learning not only provides measurable benefits in student outcomes (Hurd 2006), but it also challenges some of the most cherished traditions of the university, including those of "real" scholarship as well as "expertise." To explore the benefits of service-learning, we envision a session with three key components:

1. A brief overview of service-learning pedagogy and its central principles.
2. A brief explanation, from each panelist, about his/her specific project and two to three major tips for implementing similar projects.
3. A directed cross-conversation, primarily aimed at the session panelists but potentially including attendees as well, to explore the ways that service-learning pedagogy may challenges previous assumptions about and relationships with their home institutions.
4. An open Q&A session to extend the discussion in the direction of attendee interests/disciplines.

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A Conversation About Co-Teaching: Roles, Power, Planning

Pamela L. Eddy & Sharon Stone, *The College of William and Mary*

Abstract: Acquiring teaching skills often receives scant attention in doctoral programs, as a main focus is on obtaining content knowledge and research skills (Gappa, Austin, & Trice, 2007). For this reason, the majority of new faculty face challenges when they enter their first classroom because they do so feeling stressed and underprepared (Austin, Sorcinelli, & McDaniels, 2007). One way to prepare graduate students for the teaching profession is by co-teaching with a seasoned faculty member (Eddy & Mitchell, 2006). Additionally, the growing emphasis on teaching from an inter-disciplinary perspective means that more and more faculty are facing co-teaching for the first time in their careers (Letterman & Dugan, 2004). Faculty and graduate students, as adult learners, face new learning situations with a rich and varied background that allows them to incorporate new learning into their existing schemas (Knowles, Holton, & Swanson, 1998) and potentially to engage in transformational learning (Mezirow, 1991). The intention of this presentation is to offer a survey of what is known about co-teaching, to facilitate a conversation about what others have experienced, to exchange best practices, and to create an ongoing network of professionals interested in the scholarship of teaching. The current co-teaching experiences of the presenters will serve as a starting point for this conversation.

Literature Review

The scant literature on co-teaching reviews the benefits and challenges involved with co-teaching. Conderman and McCarty (2003) noted how professional growth is possible for those involved in co-teaching due to the need for reflection on the process by the teachers, whereas students benefit from the variety of learning strategies presented by the co-instructors. Although positive learning experiences are available for both instructors and students, it is important to recognize power differentials for the instructors, particularly when senior faculty teach with untenured faculty or faculty members with graduate students (Eddy & Mitchell, 2006). A willingness to be open and receptive to different perspectives helps support co-teaching (Leavitt, 2006).

What remains silent in previous writing on co-teaching is the role of instructors as adult learners. Leavitt (2006) concluded that co-teaching provides an opportunity for instructors to look at topics differently, allowing them to "get out of their own conceptual boxes" (p. 4). The author stops short, however, of linking this learning by instructors to adult learning theory. Knowles' (1980) theory of andragogy highlights how adult learners are self-directed and link new learning to past experiences. The andragogical approach also emphasizes facilitative rather than directive methods (Knowles, 1980). The instructor becomes a co-learner with students and must continually reflect on the degree of authority he or she chooses to assert (Knowles, 1980). Having previously held notions challenged can provide instructors with an opportunity to reflect on their own assumptions and potentially transform their schemas (Mezirow, 1991). According to Kegan and Lahey (2009), there are three plateaus for adult mental development: the socialized mind, the self-authoring mind, and the self-transforming mind. Shifting to ownership over learning and questioning of underlying assumptions moves adult learners to more advanced stages of development and creates more learning opportunities. Co-teaching can create the context for this learning to occur.

Goals and Objectives

The intended goals and outcomes of this conversation session are designed to be highly interactive and to provide an opportunity for shared learning. The conversation has the following learning objectives:

- *Objective #1:* To define the concept of co-teaching.
- *Objective #2:* To discuss best practices for how to support co-teaching, in particular when crossing disciplinary areas or when working with others who may possess more status and power.
- *Objective #3*: To identify key learning outcomes for the faculty/students involved in co-teaching based on adult learning theory.
- *Objective #4:* To review the challenges of co-teaching.

Participants will leave the session with a set of resources to access for their own co-teaching experiences and a network of other faculty/students who are engaged in this type of teaching activity.

Description of Topic to be Discussed

Co-teaching is increasingly used in college settings to aid in interdisciplinary approaches of learning for students (Letterman & Dugan, 2004), to provide graduate students with modeling for their own faculty careers (Eddy & Mitchell, 2006), and as a means to mentor new faculty (Sorcinelli & Yun, 2009). As adult learners, faculty members approach new situations with a host of experiences that they use to inform their new learning (Cranton, 2006). Having an opportunity to participate in a shared conversation around issues involved with co-teaching can increase the information faculty have about this type of teaching and aid in moving faculty members along to self-authorship of their learning and potentially transformational learning (Cranton, 2006; Kegan & Lahey, 2009). The goal of this session is to support faculty as learners regarding the topic of co-teaching.

Facilitation Techniques

The conversation will begin with a brief overview of the literature on co-teaching and a summary of the co-teaching experience by the facilitators. A set of guiding questions will be provided for the audience to allow for maximum focus on the conversation about co-teaching. Included in these questions will be a focus on common challenges faced when co-teaching, strategies to employ to get the most out of the co-teaching experience, and a collection of best practices from audience participants. The final moments of the session will provide an opportunity for collecting group information that will be posted on a publicly available web link for future access.

- 15 minutes—overview of the literature and facilitator experiences
- 30 minutes—engagement in conversation using guiding questions
- 5 minutes—summary and posting of key points

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Bridging the Digital Gap: A Conversation on Uniting BYOD and Instruction in the Higher Education Classroom

Juel L. Smith, *Community College of Allegheny County & Duquesne University*
Kelli B. Murphy-Godfrey & Bekir Mugayitoglu*, Duquesne University*

Abstract: The proliferation of personal devices has grown to astronomical levels. This is an untouched resource in many educational facilities because it is viewed that students are not disciplined in their use of technology in the classroom. Many educators and schools are putting in their syllabi not to bring or use technology during class. As instructors, if allowing students to BYOD how do we keep students on pace or on track with tasks? You want to give the freedom to use technology but will freedom yield effective results? What instructional changes should be implemented to effectively incorporate the use of personal devices (laptops, iPads, smartphones etc.)? This is a conversation of how we, as educators, can effectively incorporate personal devices while maintaining classroom integrity.

Literature Review

Bring your own device, BYOD, is an increasingly common occurrence in educational facilities that permits the use of one's own personal device in conjunction with the Internet as part of learning and instruction. (DiFilipo & Kondrach, 2012). The utilization of personal devices has the potential for altering the way teachers instruct their students as well as how students learn in an educational environment. (Singh, 2013). Using technology allows students to get immediate feedback so they can adjust their thinking and actions in order to develop their own connections or niches. This allows students of all ages and learning potentials to approach the educational process in a manner that is suited to their learning style. (Collins & Halverson, 2010) The multitude of school improvement reforms through the increased use of technology in classrooms has added pressure to today's educators. (Keengwe, 2007) According to Singh's (2013) research, a chasm exists between the availability of technology today and its effective use in instruction or the classroom. The educator is critical to the effective transformation of our education system. (US Department of Education, 2013). This conversation will focus on the efforts of the educator for the integration of BYOD in the classroom and its effect on student learning.

Goals and Objectives

The goal for this session is to create a conversation to discuss the effective integration of the BYOD phenomenon into higher education classrooms. This session will focus on:

- Distinguishing how to maximize BYOD use while maintaining classroom integrity,
- Defining BYOD and its importance in today's classroom,
- Discussing strategies on how BYOD can be utilized effectively in higher education,
- Identifying the issues associated with this process while pinpointing potential resolutions, and
- Promoting conversation to identify how BYOD can become a part of the curriculum.

Description of Practice

Participants who attend this session will gain a greater understanding of BYOD and its evolving importance in current and future education. Conversation with the presenters will be encouraged by all attending participants regarding the challenges they face as well as the potential benefits that are associated with permitting device utilization in the classroom. Additionally, we will be encouraging and monitoring back channel chat and adding it to our ongoing conversation.

Facilitation Techniques

The session will begin with a brief summarization of BYOD giving us common ground with which to move into our conversation. This conversation will be guided by a panel of facilitators who will provide the perspective of the instructional technology design specialist, the higher education instructor, and the learner. The conversation will be guided by the introduction of various questions such as:

- What benefits does BYOD present for both the instructor and student?
- How distracted are BYOD learners and what methods/technologies are available to stimulate focus?
- What are some common barriers that threaten the proper incorporation of this multimedia opportunity?
- How can we as instructors actively incorporate BYOD in our classrooms yet maintain classroom integrity?
- What instructional changes should we implement to effectively incorporate the use of personal devices?

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Wednesday

February 5, 2014

Session 5

4:10-5:00 PM

http://www.cider.vt.edu/conference/

Prospective Entrepreneurs Profile (PEP): Inventory of Engineering Students' Entrepreneurial Skills and Intentions to Design Competency Based Curriculum for Entrepreneurship Education. A Case Study from India

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Abstract: According to recent census data (Deccan Herald, Sunday, 8th September 2013, front page), 74% of Indians are below 40 years, teens up to 18 years comprise 38.8% and 28.9% are aged between 19 and 35. Growth of technological institutions in India is exponential. As per Annual Technical Manpower Report (ATMR) from National Technical Manpower Information System, there has been excess of supply over demand in the job market. Hence, the engineers need to generate jobs for engineers and others. This paper suggests a model of prospective entrepreneurs' profile (PEP), as a comprehensive measure for soft skills of entrepreneurial competencies, perception, orientation, self-efficacy and self-employment intentions. An instrument was prepared compiling standard tests to inventory above soft skills with student demographics. This instrument was pre-tested with a small sample at the campus of Dayananda Sagar College of Engineering, Bangalore. After establishing its validity and reliability the sample size was determined and the field work was planned to survey pre-final year students across the university, who took the core course on management and entrepreneurship. During 2008-2009, the researcher took responses from 875 students from 9 branches of engineering belonging to 8 colleges coming under all the 4 different regions of VTU. The instrument was subjected to detailed validity and reliability analysis. An index was assigned to each of these soft skills. Mapping entrepreneurial soft skills indices with self-employment intentions indices, prospective entrepreneurs were identified who scored high on both soft skills and intentions. A composite index chart was developed as prospective entrepreneurs' personality index (PEPI) chart. It is found from this study that 9.2% of engineering students are prospective technical entrepreneurs who need competency and motivation training. This study helps Entrepreneurship trainer-motivators for designing competency based curriculum for Entrepreneurship education. This study is the doctoral research work of the author.

Introduction

It is the social responsibility of universities to provide alternate career opportunities for their graduates. In an effort in this direction, to foster and promote entrepreneurship among technical students, Visvesvarayya Technological University (VTU), Belgaum, India introduced a core subject 'Management and entrepreneurship' for pre-final year students of all branches of engineering. What cannot be measured cannot be improved. In the Indian context, there has not been a systematic effort to identify prospective entrepreneurs.

Methodology

This study suggests a model of prospective entrepreneurs' profile (PEP), as a comprehensive measure for soft skills of entrepreneurial competencies, perception, orientation, self efficacy and self-employment intentions. An instrument was prepared compiling standard tests to inventory above soft skills with student demographics. This instrument was pre-tested with a small sample at the campus of Dayananda Sagar College of Engineering. After establishing its validity and reliability using composite reliability, Average Variance Extracted (AVE) and Cronbach alpha coefficients, the sample size was determined and the field work was planned to survey pre-final year students across the university, who took the core course on management and entrepreneurship. During 2008-2009, the researcher took responses from 875 students from 9 branches of engineering belonging to 8 colleges coming under all the 4 different regions of VTU. An index was assigned to each of these soft skills. Mapping entrepreneurial soft skills indices with self-employment intentions indices; prospective entrepreneurs were identified who scored high on both soft skills and intentions.

Analysis and Discussion

159 (20.54%) students are likely to start their own enterprises within 5 years after their graduation. 162 (20.93%) students are likely to start technology based businesses.71 (9.17%) students are likely to start technology based businesses and also within 5 years after graduation.

According to ATMR report, 2% of engineering graduates in Karnataka, go for self-employment and among the unemployed, nearly 1% have intentions for self-employment. According to GEM 2008 India report, early stage entrepreneurial activity for age group of 18 -24 years is 15%. According to ATMR report, there has been excess of supply over demand in the job market and an increasing rate of unemployment. GEM 2008 India report states that in factor driven economies like India, higher the quality and quantity of after school training, the higher the levels of necessity driven entrepreneurship. Hence there is a scope for fostering both opportunity based and necessity based entrepreneurship. Also, GEM report says that the quality, quantity and levels of entrepreneurship education have a positive impact on entrepreneurial attitude, aspirations and activities. This study helps Entrepreneurship trainer-motivators to identify specific training needs and design competency based curriculum for entrepreneurship education. From GEM 2008 India report, the Post school level Entrepreneurship education and training for the adult population has been poor with less than 5%. This calls for a rigorous and continuous entrepreneurship development programs in campuses of higher learning which accelerates supply stream of entrepreneurs.

Suggestions and Recommendations

The paper concludes with following suggestions: a) EDP model for an Engineering campus, which is in tune with the GEM model of entrepreneurial process and operational definitions focusing on development of knowledge & skills and identification of potential entrepreneurs through entrepreneurship education & training b) As a policy prescription, Continuous Students' Entrepreneurial personality inventory system (SEPI system) needs to be set up at all colleges with a database of prospective Entrepreneurs. c) e – SSIT, an online interactive software for administering Entrepreneurial Soft Skills Inventory test d) prospective Entrepreneurs' Personality Index (PEPI) Report.

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Ensuring Academic Integrity with Online Proctoring

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Abstract: As students navigate through a world with a plethora of resources available to them, plagiarism and academic dishonesty continue to be major problems in academia. According to a survey conducted over three years (2002-2005) by Donald McCabe of Rutgers University, 36 percent of undergraduates admit to "paraphrasing/copying few sentences from Internet source without footnoting it." Another 42 percent self-reported that they were "working with others on an assignment when asked for individual work" (McCabe, 2005). In an effort to curb or redefine academic dishonesty, some instructors tailor their online exams so that outside resources are permitted. This weakens the integrity and lowers the educational standards of the exam. Instructors need to be aware that most plagiarism comes from social networking sites, Wikipedia and other online resources where students can collaborate and share work from previous classes. Specific strategies such as strategic exam design and online proctoring can help alleviate some of these factors and ensure academic integrity.

Literature Review

According to a 2012 survey conducted by the Babson Survey Research Group, the number of students taking at least one online course has surpassed 6.7 million (Allen & Seaman, 2013). The same report showed that thirty-two percent of higher education students now take at least one course online. Maintaining academic integrity remains a perennial concern for educators and the need for new methods and technologies that adapt to the changing nature of education are becoming increasingly necessary. There have been two methods that have been at the forefront of online proctoring services: record and review and live, face-to-face proctoring. The record and review model relies on automated software and records each exam session, which is reviewed hours or days after the test has been completed. The face-to-face model replicates the in-classroom testing experience where issues of academic dishonesty can be addressed in real-time.

Goals and Objectives

Participants in this session can expect to learn the difference between identity authentication and attendance verification, how to employ anti-plagiarism tactics and ways to develop secure exam structures. The session will cover key elements in creating a culture of academic integrity among administrators, students and faculty members. The presenter will also discuss how online proctoring should be modeled after the "in classroom" experience and define the phrase "slippery slope exam." This session would be appropriate for those who work in K-12, higher education, corporate, government, military, telehealth, and international markets or industries.

Description of Practice

ProctorU's online proctoring service is designed to replicate the "in classroom" experience by connecting examinees with a live person that is designed to ensure academic integrity for distance education programs. Proctors can see the student, their environment and verify the identity of the student through a patent-pending three-step authentication process. Proctors interact with students in real time through audio and video connections, in addition to being able to see anything that happens on a test-taker's screen via screen-sharing technology. ProctorU works with more than 100 colleges, universities and certification organizations, including the University of Florida, the University of Arizona and Northwestern University.

Discussion Questions

1. What are the major differences between the record and review model versus live proctoring?
2. What is the authentication process?
3. How do you store video and data?
4. What constitutes a secure testing environment?

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Improving the Quality of Instruction and Increasing the Affordability of Higher Education through the Adoption of Open Education Resources (OERs)

C. Edward Watson, Sherry Clouser, & Denise Domizi, *University of Georgia*

Abstract: According to the 2011 National Survey of Student Engagement (NSSE), over a third of University of Georgia (UGA) students had unmet financial needs. Financial needs contribute to student attrition and extend graduation rates. Textbooks and other educational materials contribute to those financial challenges, costing students an average of $900 to $1200 a year (Wiley, Green & Soares, 2012). Open Education Resources (OERs) are textbooks and other learning materials in the public domain with open copyright licenses that are available at no cost to faculty, students, or the institution. While high quality OERs are plentiful, the challenges for faculty are the time and incentives to abandon textbook-based lesson plans in favor of OERs. This practice session will highlight the course redesign strategies, financial benefits, and pedagogical opportunities inherent in the adoption of OERs in higher education.

Literature Review

The reasons for increases in college tuition are well documented, and ultimately, such increases result in students shouldering more of their college costs each passing year (CBS MoneyWatch, 2012). Most certainly, such increases impact many students' ability to complete college on time or at all. As reported in the University of Georgia's Complete College Plan, more than one-third of those who responded to the NSSE at UGA in 2011 indicated that "after all financial aid is taken into consideration, [they] still have unmet financial need that makes pursuing a degree difficult" (University of Georgia, 2012, p. 2). Such statistics highlight the scope of the financial challenges students collectively face at many state institutions such as UGA. It is imperative that colleges and universities consider a portfolio of strategies that have the potential to positively impact the financial challenges students face. One such domain is in the cost of textbooks and other related educational resources. Textbooks and other educational materials contribute to those financial challenges, costing students an average of $900 to $1200 a year (Wiley, Green & Soares, 2012).

While Open Education Resources (OER) have existed for over a decade, "OERs have not noticeably disrupted the traditional business model of higher education" (Kortemeyer, 2013). With that said, recent accomplishments in what is termed the Textbook Zero model suggest that new avenues and opportunities are now emerging which have the potential to lower the cost of higher education to students and, as a result, positively influence college completion rates. The broadest example of the efficacy of such a model can be found at Tidewater Community College in Virginia, where the total cost of an associate's degree in business administration was cut by one-third by simply using OER textbook alternatives instead of traditional textbooks (Hulette, 2013). While decreasing the total cost of a degree at a four-year university by one-third through textbook elimination is improbable, tangible and significant cost savings do exist. This has been demonstrated at the University of Massachusetts – Amherst, where they estimate over $750,000 has been saved by students in classes that utilize OERs instead of textbooks at their institution (UMass Amherst Libraries, 2013). In short, courses that opt for OER textbook alternatives could contribute significantly to improving time to degree and decreasing the financial burden of college. Additionally, the process of thoughtful course redesign that results from the adoption of OERs provides exceptional opportunities for changing the way that courses are taught (Fink, 2013).

Goals and Objectives

The purpose of this practice session is to share the course redesign process associated with the adoption of OERs in large enrollment biology courses at the University of Georgia. Those who attend this session will:

- Understand the tangible financial benefits for students associated with the adoption of OERs;
- See the pedagogical benefits associated with course redesign processes that are required when moving to OERs; and
- Have resources for pursuing the adoption of OERs in their own courses and programs.

Description of Practice

The Center for Teaching and Learning (CTL) at the University of Georgia is engaged in the university's Complete College Georgia initiative, a program designed to increase graduate rates as well as time to graduation for students. According to the 2011 National Survey of Student Engagement (NSSE), over a third of University of Georgia (UGA) students had unmet financial needs, and these needs are among the issues that contribute to student attrition and extend graduation rates. Textbooks and other educational materials cost students an average of $900 to $1200 a year (Wiley, Green & Soares, 2012), so the CTL, with a $25,000 Incubator Grant from the University System of Georgia, began a program in Fall 2013 that focused on course redesign in large enrollment courses that currently use an expensive, traditional textbook. Specifically, the adoption of an open textbook and the processes of course redesign facilitated by this change are at the heart of the practices described within this session.

Open Education Resources (OERs) are textbooks and other learning materials in the public domain with open copyright licenses that are available at no cost to faculty, students, or the institution. Three faculty in the Biological Sciences Department agreed to abandon their current textbook, *Discover Biology* (Norton Press, $97), in favor of an OER biology textbook freely available through OpenStax. The funds from the grant were used to hire a graduate student dedicated to assisting the faculty with this transition.

Discussion

The two courses to adopt the OER textbook are BIOL 1103 (Concepts of Biology) and BIOL 1104 (Organismal Biology). During the 2013-2014 academic year, the faculty in this team will teach four sections of BIOL 1103 and three section of BIOL 1104 using the selected OERs. BIOL 1103 has an enrollment capped at 320 per section and BIOL 1104 is capped at 250. In total, approximately 2,030 students will be impacted during the 2013-2014 academic year, and it is estimated that as a result of this project, students enrolled in these courses will collectively save $198,850. These savings will multiply each year, and in five years, UGA students who enroll in these courses will together save nearly $1,000,000.

While these saving are in and of themselves exceptionally compelling, the processes of course redesign required of faculty jettisoning existing lesson plans based on current textbooks provide opportunities for faculty to rethink their assignments, pedagogy, and assessments as they integrate the new textbook. As a result, OERs provide openings for course improvement for faculty as well as cost savings for students. Collectively, these benefits provide a compelling argument for the broad adoption of OERs in higher education.

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Evolving the First Year Experience Course: New Practices for Integrating Information Literacy

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Abstract: First Year Experience programs have been in existence since the 1970s, with courses being of differing credit hours, of different content, but usually of similar, small class sizes. Six departments in Virginia Tech's College of Agriculture and Life Sciences (CALS) developed an interdisciplinary First Year Experience (FYE) course designed to meet the needs of a large number of first year students while incorporating learning objectives from Virginia Tech's Quality Enhancement Plan as well as learning objectives for the departments. Learning objectives included problem solving, inquiry, integration of learning, information literacy skills, communication skills, and interdisciplinary understanding. This course integrated several high-impact practices of teaching as discussed by the American Association of Colleges and Universities and targeted several learning outcomes, but was done in a large class setting and in the constraints of one semester credit. Findings from two years of data indicate the need for greater instruction on information literacy, and this practice session will highlight efforts and strategies utilized to improve this outcome. Specifically, this practice session will focus on the CALS partnership with Virginia Tech's University Libraries and the products of this partnership that were developed in order to improve information literacy. These products include modules that "chunk" information literacy related content and disseminate it throughout the course at critical points through web-based modules, and a redesigned final project that relies on students' ability search for and access information, evaluate information, and use information ethically.

Literature Review

The Freshman Year Experience began in 1974 at the University of South Carolina as a result of student turbulence during the 1960's (Watts, 1999). There is now a long-standing tradition of First Year Experience (FYE) programs throughout the United States and many other countries. Tobolowsky stated that "seminars may be academic, extended orientations, basic study skills, or a bit of all the above" (2008). In a review of 61 First Year Experience programs, differences were noted in number of credit hours, whether the course was required or an elective, and the content and type of course. The one similarity noted in 57 of the 61 courses included small student enrollment per class Nearly 73% of the programs reviewed enrolled 20-25 students per section while 25% of programs enrolled less than 20 students per section (Tobolowsky, Cox, & Wagner, 2005 and Griffin & Romm, 2008). Only one program reported a large enrollment (n=170), however this course was a 3-credit course that met twice each week in the large section and once each week in sections of 22 students (Tobolowsky, Cox, & Wagner, 2005). Given the current condition of limited resources and tightly structured curricula, departments and colleges must consider unique ways to build effective learning environments in a large classroom without expanding the number of credit hours required for the degree.

In particular, it can be challenging for large courses to effectively integrate skills, such as information literacy skills, within the limits of a single credit hour. The Association of College & Research Libraries (ACRL) (2000) identifies five specific standards that guide instructional content connected to a student's ability to locate, access, evaluate, and use information appropriately. The challenge of effectively integrating this content into the curriculum for the 1-credit CALS FYE course does not have a simple solution, and this practice session offers an honest and reflective discussion about how the presenters have used data and their experiences to alter their approaches to this challenge during the three years of the course's existence.

Methodology

Six departments in the College of Agriculture and Life Sciences at Virginia Tech, along with collaborators from other on-campus departments, developed a 1-credit First Year Experience course that was first offered in Fall 2011. The group project in the course was designed to meet three primary learning objectives: problem solving, inquiry, and integration. As the group project was developed, other learning objectives were identified, including information literacy skills, communication skills, and interdisciplinary understanding.

Students were divided into 29 interdisciplinary groups made up of 5-8 students. All groups were assigned a peer leader who helped facilitate each step of the group project. Through this project students had to demonstrate the ability to define a research topic, evaluate information for reliability, credibility and appropriateness to the project, and incorporate their findings into the group project. Additionally, students were required to demonstrate the ability to use information ethically. Two years of quantitative and qualitative data indicated that students needed additional support for defining their research topics, searching for relevant information, evaluating information, and ethically using the information that they found for their own research purposes.

Results

This course integrated several high-impact practices of teaching as discussed by the American Association of Colleges and Universities and targeted several learning outcomes, but was done in a large class setting and in the constraints of one semester credit. Findings from two years of data indicate the need for greater instruction on information literacy and efforts to improve this outcome will be discussed. These efforts include a deeper integration of inquiry and information literacy components and a stronger collaboration with faculty from Virginia Tech's University Libraries.

Discussion

A particular focus of this practice session will be the analysis of qualitative data related to information literacy, and interventions designed to improve students' understanding of the ethical use of information. Specifically, this session will focus on the CALS partnership with Virginia Tech's University Libraries and the products of this partnership that were developed in order to improve students' information literacy skills. These products include modules that "chunk" information literacy related content and disseminate it throughout the course at critical points through web-based modules, and a redesigned final project that relies on students' ability search for and access information, evaluate information, and use information ethically. The presenters, the CALS FYE course coordinator and one of the College Librarians for CALs, will share the evolution of the course. Participants will have the opportunity to share in their discussion, offering feedback and suggestions related to the course's evolution, and asking questions about the process of adjusting and enhancing the course in order to meet learner needs.

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iPad/Mobile Learning Strategies: iLearn, iPractice, and iEvaluate

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Abstract: While some educators have stepped very gingerly into the waters of educational technology, others have been willing to take risks and explore the possibilities. For example, Larson (2010) reports a study of the use of the Kindle in a second grade classroom. She explained how the features of the digital reading device enabled students to customize their reading experience by changing font size, for example. The students read in more comfortable physical positions compared to reading on desk computers or laptops. Moreover, the Kindle allowed them to deepen their comprehension by making notes in the text and utilizing the audio-enhanced dictionary.

Researchers have investigated using technology within an education setting for decades (Rhodes & Milby, 2007). Commercially developed programs, e-books often with text-to-speech, and computerized learning games all have research to document their varying degrees of effectiveness (Balajthy, 2007; Hasselbring & Goin, 2004; Moody, 2010). But as new technologies become available, we need to thoughtfully consider how we can use technology to help students acquire content as well. Most often it is educators trying technology in their classrooms who then provide leadership and direction to research (Leu et al., 2004). Such seems to be the case with the iPad. As educators of "digital natives" in a dynamic society, we are charged to identify the most efficient system to support students' acquisition of content in a thoughtful, critical way.

During this yearlong action research project, pre-service teachers use iPads for their own educational needs as full-time undergraduate students at a liberal arts institution, as well as, as pre-service teachers working with kindergarten through grade twelve students in local school settings. Data, including students' reflections from three different settings; Hot Apps 4 HOTS (iBook) online book discussion, app usage and ratings, and data from apps used as interventions will be shared.

Literature Review

The ability to learn within one's own context when on the move in time and space is arguably the central learning affordance of mobile technologies, and it is vital that this idea is captured in any definition of mobile learning (Melhuish & Falloon, 2010). M-learning is defined as just-in-time, situated learning, mediated through digital technology in response to the needs of the user (Traxler, 2009; Laurillard, 2007; Peng, Su, Chou, & Tasi, 2005). However, what makes m-learning different from other forms of assistive technology learning is the way it can mediate and facilitate learning experiences (Peters, 2009) for at-risk students "in the moment" when facilitated by a trained individual. These learning experiences are critical to capture in an optimal learning environment for students (Jenkins, Klopfer, Squire, & Tan, 2003), since the individuals negotiate meaning for themselves in a differentiated context (Melhuish & Falloon, 2010). Melhuish and Falloon (2010) recommend five distinct affordances for using iPads within an educational setting for students: portability, affordable and ubiquitous access, situated, 'just-in-time' learning opportunities, connection and convergence, and individualized and personalized experiences. Certainly all 21st century educators are keenly aware of technology in the educational setting. Very early in the new century, Leu and colleagues (Leu, Kinzer, Coiro, & Cammack, 2004) brought to our attention how the new technologies have come to redefine literacy in school, work, and home. They believe that information and communication technologies (ICTs) are the most critical for schools to be concerned with. Interestingly, they also point out that these technologies are difficult to define because they change so rapidly. Indeed, the iPad did not exist when their article was written, but it certainly qualifies as an ICT.

Goals and Objectives

It would be most helpful if participants who attend this session have some knowledge and minimum experience with how an iPad works. During the session the presenters will share how apps were introduced to the undergraduates, how the apps were rated and how the data from the iBook chats fueled the iPad usage on campus and within the school settings. The *Peer Learning Associate* (undergraduate student who took the course in a previous semester)

will share reflective anecdotes to demonstrate the essence of the study from the perspective of the collegiate. The instructor will share data to show the implications this study has on learning in multiple settings; campus as well as in K-12 settings. Therefore, by the end of the session, the participants will be able to use the recommended tools, apps, and action research format for their own needs.

Description of Practice

In order to capture the essence of learning that occurs via the pre-service teacher as well as the kindergarten-grade twelve users, an action research framework was used. The researchers framed this action research using a "learning – practice – evaluation cycle." Early in the study, participants completed a questionnaire to share their personal experiences of using an iPad. Furthermore, data from the eight synchronous chats has been collected, coded, and analyzed in order to identify trends and support for the questionnaire research. At the end of the semester-long action research project, participants shared their reflective thoughts considering the impact of learning in the college setting as well as the impact of learning in a K-12 setting. These reflections will be shared through the lenses of the *Peer Learning Associate* and the instructor.

Discussion

This innovative practice explored how mobile learning strategies can be implemented in a pre-service teacher preparation program at a liberal arts college. Questions to include during the discussion of this practice session include:

- How does mobile learning impact the learning culture in undergraduate courses at a liberal arts institution?
- How does mobile learning impact the learning culture in K-12 classrooms?
- What social technologies are available and useful for undergraduate students? How can social technologies be used most effectively in our college classrooms? In our K-12 classrooms?
- What is the pedagogical impact of social technologies and mobile learning within our college classrooms as well as the k-12 classrooms?

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Generation No Child Left Behind: Strategies for Empowering New Students to Think Critically in the Humanities

LaTricea D. Adams, *Tennessee State University*

Abstract: In 2001 under the Bush Administration, the *No Child Left Behind Act (NCLB)* was born under the reauthorization of the Elementary and Secondary Education Act (ESEA). In 2013, the first traditional aged cohort of freshmen entered into college classrooms with a high school diploma with a No Child Left Behind *seal of approval*. This standardized tested, "bubble in here" generation often struggles at the collegiate level when they are simply asked to think *outside of the bubble*. This presentation focuses on 3 major strategies that empower students to think critically: 1) Close Reading; 2) Socratic Questioning; and 3) Authentic Intellectual Performance Tasks. Participants will explore exemplars and engage in a simulated experience of all 3 strategies. Participants will also discuss how these strategies will impact their pedagogy and assessment methods.

Literature Review

In order for a shift to occur in students' critical thinking abilities, there must be a culture shift in pedagogy (instruction). There are two types of instructional approaches: didactic and interactive. An advocate of didactic instruction tends to focus on gaining a clear understanding of basic skills before engaging in more cognitively demanding activities, coursework, discussions, etc. An advocate for interactive instruction believes that instruction should be structured around assignments that require more *intellectual demands* from students while simultaneously embedding practice of basic skills (Newmann et.al., 2001). This is not to diminish the need to cover basic skills, but to emphasize higher order thinking skills (HOTS). Critical, logical, reflective, metacognitive, and creative skills are all components of HOT. HOTS are best stimulated when students transfer these skills to novel or authentic situations. HOTS move along a continuum from lower order skills, simple application and analysis, to cognitive strategies that are linked to prior knowledge. A learning environment that stresses the importance of HOTS allows room for students to expand their cognitive capacity as well as increase students' persistence, self-monitoring, and open-minded, flexible attitudes (King et.al., 1997 & Brookhart, 2010).

Close reading is a newly adopted strategy beginning in grade 6-12 which was encouraged by The Partnership for Assessment of Readiness for College and Careers (PARCC).

> Close, analytic reading stresses engaging with a text of sufficient complexity directly and examining meaning thoroughly and methodically, encouraging students to read and reread deliberately. Directing student attention on the text itself empowers students to understand the central ideas and key supporting details. It also enables students to reflect on the meanings of individual words and sentences; the order in which sentences unfold; and the development of ideas over the course of the text, which ultimately leads students to arrive at an understanding of the text as a whole. (PARCC, 2011, p. 7)

Despite the secondary level introduction to close reading, colleges and universities are reaping the benefits of this strategy as it shifts the culture in the purposes of reading: 1) Considering the author's purpose 2) Developing a "Map" of Knowledge 3) Avoiding Impressionistic Reading and 4) Reading Reflectively (Paul & Elder, 2008).

Socratic questioning is a very methodical questioning technique that aims to shift thinking in many directions for a plethora of purposes: to explore complex ideas, to get to the truth of things, to open up issues and problems, to uncover assumptions, to analyze concepts, to distinguish what we know from what we don't know, and to follow out logical implications of thought. Socratic questioning serves instruction in two ways: 1) to profoundly probe student thinking; and 2) to encourage students to ask thought provoking questions (Paul & Elder, 2007).

Goals and Objectives for the Practice Session

As a result of this session, participants will be able to:

- Self-evaluate on the current level of critical thinking of their students as evident by their current pedagogy (by way of a survey—pre- and post).
- Apply knowledge of the 3 strategies in a modeled experience

- Analyze and evaluate the modeled experience
- Collaborate with other participants to brainstorm norms and desired outcomes for incorporating the 3 strategies into their practice
- Build the framework for facilitating close reading and Socratic questioning (Socratic Seminar) and creating authentic intellectual performance tasks.

Description of the Practice to be Modeled

The participants will take a brief critical thinking survey to assess their current pedagogy. An overview of each of the 3 strategies will be presented. The participants will then go through each of the 3 strategies, evaluate the process, and take the post critical thinking survey to track the growth in their thinking. Participants will collaborate with each other to develop next steps for incorporating the strategies into their instruction (i.e. will be guided by the discussion questions listed below).

Discussion Questions

1. What are some deficits in your students' critical thinking abilities? How do you think No Child Left Behind affected your students' level of critical thinking? (opening questions)
2. How does allowing students to do the heavy "intellectual lifting" look? What are some common instructional practices for establishing this type of learning environment?
3. What are some concerns with facilitating a classroom around Socratic Questioning (Seminar)? How can these concerns be addressed (organization of the process)?
4. What are the standards of mastery for students' critical thinking?

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Is This How You Pictured It? Using Visual Methodology as an Empowering Tool in the Classroom

Stefanie Benjamin, *University of South Carolina*

Abstract: This practice session will showcase the use of visual methodology as an empowering and engaging educational tool to support college classroom learning. Students are constantly on their phone and posting photographs onto social media sites to their family and friends. Instead of eliminating personal technology from the college classroom, why not harness its power to engage and educate? Allowing students to use their Smartphone, camera, or iPad as a visual methodological tool empowers them to take charge of what they deem is important and valuable. However, with this power comes great responsibility. Visual images, such as photography, invoke strong emotion and promote an effective, participatory means of sharing expertise and knowledge. Images also have the power to create unspoken narratives that can elicit conversations about authenticity and stereotyping various cultures or people. To model both the power and responsibility associated with the use of visual methodological tools, participants will view and discuss examples of original tourist brochures and student-created Power Point presentations of tourist sites. to grasp how images can be in representing a place, landscape, or people.

Literature Review

Visual methods can act as a tool to convey the power of an image and create knowledge about phenomena that cannot be readily accessed with the sole use of the more traditional non-visual methods. As noted by Rakic and Chambers,"An increasing focus on the visual, visuality and the use of visual methods has been evident across a wide range of disciplines and fields of study for quite some time now" (2012, p. 3). Volunteer-employed photography, also known as auto-photography, is a visual methodology that is widely used as a way to understand how subjects view their environment, their sense of place, and what is important. Photography provides the medium through which people's visions and voices may surface (Wang & Burris, 1992) along with enabling respondents to share, unwritten and unspoken knowledge that at times evade consciousness (Meyer, 1991). In tourism industry, for example, a photograph has the power to tell a story about the landscape and place of that destination. However, what type of narrative is that photograph telling? Who is being represented in the image and how authentic is that image? As Scarles observed, "Photography therefore enhances how tourists 'see' touristic spaces, creating a series of gazes as images weave a veil of fantasy through imagination that ignites tourists' senses and they feel, touch, taste, smell and see what is shown" (2004, p. 44). Investigating the power of an image is crucial to the understanding of why certain photographs represent a certain space, and by giving respondents the authority to take such photographs, will create a dialogue of authentication.

Goals and Objectives

Session participants will be encouraged to consider the power that an image can hold and the (perhaps various) narratives it can tell. Participants will then be encouraged to consider how visual methods such as auto-photography can elicit their students to more deeply reflect on the various narratives represented in the images these students capture as part of classroom pedagogy. To provide a common basis for discussion, they will evaluate student samples of selected work from the undergraduate course within the Foundations of Tourism class. Further, participants will brainstorm ways they can use auto-photography in their classrooms. This technique was first introduced to me during my master's work within the geography department. It is a wonderful tool that can be used in all disciplines to familiarize students with the processes and politics of place promotion.

Description of Practice

I will present examples of tourist brochures that my students created in addition to their "*be a tourist*" experience. Each student was asked to be a tourist for the day and experience a tourist attraction within their "own backyard" of the town in which they resided. While at the site, the student took five pictures of what they liked and five pictures of what they did not like about the site and placed each photograph within a Power Point presentation. Additionally, they researched the history behind the site, how it was funded/marketed, the types of tourists there, and why they chose that site. The students were also asked to create a tourist brochure and to focus on a targeted audience.

They were asked to explain why they chose to include and exclude certain images along with the below questions:

a. How and why did you select the target audience for the brochure?
b. How and why did you select images to be included in the brochure?
c. What images would you not include in the brochure and why?
d. How and why did you make the final design of the brochure? In other words, what message are you attempting to communicate with the layout?
e. How would you evaluate or grade your partner, his/her contribution, and your general experiences in working with someone?
f. How did this project help you better understand the place promotion process and the selective nature of images used in the aria of economic development?

With these two projects, the students became aware of the power that images have in representing a place, people, and culture along with becoming conscious of how tourism sites can exclude certain people and create inauthentic settings.

Discussion

As a PhD student, I have not only studied within the field of education but also worked with other disciplines including tourism, geography, and anthropology. The interdisciplinary hat I wear allows me to pick up other methodological tools and create spaces for creativity. The purpose of this group project is to construct promotional images of a place, reflect on the selectivity of the process, and hence understand the process and politics of selling place. Allowing the student to choose what tourist site to visit and what images to place in their brochure, empowered them to take control and really use their creative juices to create a project that they are proud of while internalizing how powerful an image can be. I am most proud of how excited my students were to present their work to their colleagues. They not only enjoyed using visual methodology, but also had lasting memories of places within their own backyard that they were unaware of including historical sites and natural parks.

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Digital Badges: A Conversation on the Teaching and Learning Implications for Higher Education

Brett Bixler, Chris Lucas, & Ken Layng, *The Pennsylvania State University*

Abstract: In today's era of high unemployment, there is a disconnect between the skills of the unemployed and the skills required for unfilled jobs, resulting in lost job opportunities. In higher education, the ability to show valid and reliable student assessment is critical for program success and accreditation. Digital Badges could potentially revolutionize higher education instructional practices, assessment, and student portfolios, bridging the gap between institutional credentialing and potential employers. The session will include a brief overview of digital badging that includes a breakdown of an idealized badging structure, the potential pros and cons of digital badging, the current status of badging in higher education, methods for incorporating a badging initiative, and the relevant literature for acquiring additional information. The main portion of the session will be a group "think" on the strengths, opportunities, weaknesses, and threats that digital badging affords for teaching and learning in higher education. Participants will leave the session with a firm understanding of how badges may transform current teaching, learning, and assessment practices, and methods they might employ to begin their own badging initiative.

Literature Review

Digital badges hold both great promises and threats for higher education. They can enhance their affiliates' digital identities, enable global perspectives, foster improved instructional design, facilitate better instructional management, define skills and professional development, promote institutions, and establish new business and monetization models (Bixler & Layng, 2013; Duncan, 2011). They can help employers locate ideal candidates for a position. At the same time, they threaten traditional models of assessment and the accreditations of assessed individuals and programs that follow (Olneck, 2012). Badges force us to examine our current assessment and credentialing structures (Olneck, 2012). Traditionally, a university degree is seen as the source of authority and competence. If an individual acquires a suite of badges from various external sources, they can become evidence of competence in a given area or discipline. When prospective employers begin to accept suites of badges as truthful evidence of competence in a discipline, the traditional university degree begins to lose value (Carey, 2012).

While the very nature of "pure" badge design seems to demand validity, reliability, and credibility, many questions in these areas remain open (Casilli, 2012). Indeed, the entire research base for digital badging is in its infancy. For example, champions of digital badges extoll their motivational benefits, but it is unclear if badges are seen by all as motivational. Motivational studies by Deci (1972) indicate that external rewards can be demotivating over time. If badges are viewed as a reward and not as a symbolized recognition of achievement, their motivational benefits are suspect.

As over 100 organizations have or are implementing the use of badges and badging systems (MozillaWiki, 2013). policy and administrative infrastructures needed to support a badging system are becoming increasingly important. The technological infrastructure needed to support a badging system is complex but obtainable. The policy decisions surrounding badging and the changes badging brings to assessment and accreditation are far more complex, and will require time to plan for and implement (Hickey, 2012).

Goals and Objectives

Upon completion of the session, participants will be able to:

- List common teams and concepts related to digital badging.
- List the common strengths, opportunities, threats, and weaknesses related to digital badging.
- Reflect upon their curricula/program/organization in terms of implementing digital badging initiatives.

Description of Topic to be Discussed

A digital badge is a clickable graphic that contains an online record of (1) an achievement, (2) the work required for the achievement, (3) evidence of such work, and (4) information about the organization, individual, or entity that issued the badge. Mozilla has created an Open Badges Infrastructure (OBI) standard that includes a display platform called the Badge Backpack so that badge earners will have a free, hosted, public location for management and display of their digital badges. Thus, badges earned by individuals from disparate organizations that use custom badging platforms may be aggregated in one location for others to view (Bixler & Layng, 2013). Digital badges can be used, among other things, to depict course completion, establish micro-credentials, represent honors, show event participation, and demonstrate community membership.

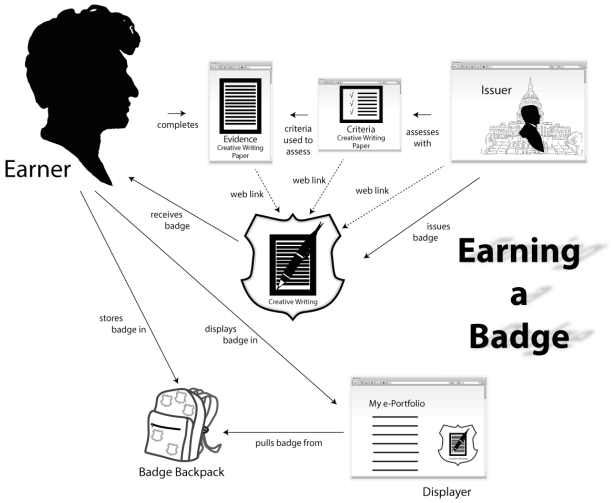

Figure 1. Earning a badge (Bixler & Layng, 2013)

Facilitation Techniques

This session will begin with a brief presentation on digital badging concepts and terminology, followed by an open discussion with the audience. The open discussion will center on the strengths, opportunities, weaknesses, and threats that digital badging affords for teaching and learning in higher education. "What if" implementation scenarios will be examined in this light (i.e., "How might one approach administration about implementing a badging initiative?"). It is anticipated that the participants will come to understand (1) that digital badges transcend any specific discipline and are a universal game changer in the areas of higher education assessment, accreditation, and student portfolios, and (2) methods they might employ to begin their own badging initiative.

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Changing Times in Graduate Teacher Education: A Conversation About Effectively Delivering Graduate Degrees Online

Sara Olin Zimmerman, Melanie W. Greene, & Barbara B. Howard, *Appalachian State University*

Abstract: It is clear that the US education system as well as the global market are shifting towards a more technological base. Higher education faculty are increasingly encouraged to embrace and incorporate online learning in a way that supports sound pedagogical practice. In this conversation transitions to online teaching will be examined along with the training and implementation process, assessment measures of effectiveness, and reflections after teaching in online programs. Questions that prompt a lively discussion will be used and the conversation will be guided by three faculty members that have taught online using numerous methods of curriculum delivery.

Literature Review

Distance education is a concept that has existed for almost two decades. Technological advances have led to continual changes in the higher education landscape. Initial attempts to transform courses for the online classroom (Palloff & Pratt, 2001) used many of the traditional methods and materials. As some of the capabilities of technology were realized, there was a shift in pedagogical design to more fluid, flexible learning environments that allowed students more freedom with individual learning strategies and even class participation (Wisher, 2004). An abundance of research has been completed that addresses the issues of teaching and learning in online environments. Student perceptions comparing online to traditional lecture class quality (Ryan, 2000), the achievement of students in distance education and traditional classrooms (Schulman & Sims, 1999), the reeducation of teachers and students to learn online (Zimmerman & Greene, 2002), designing inquiry-based online environments (Gunawardena, 2004), interaction and engagement at the graduate level (Ruhleder, 2004), and evaluating web-based learning (Nam & Smith-Jackson, 2007) are examples of documenting and evaluating this education delivery system. Today, we are exploring the concept that with technology and online learning, perhaps real education happens outside of traditional classrooms (Gee, 2013). Further we must acknowledge that students have changed in the last decade. Digital natives are those who grew up connected to the virtual world (Tapscott, 2010). And as more of our graduate students are part of the digital native generation, we must pay close attention to their differing learning styles.

Goals and Objectives

In this session, three faculty members from two departments will share their unique experiences in scheduling and teaching in a totally online graduate degree program. All three professors have taught using online video streaming, self created web pages, platforms such as Moodle, and both asynchronously and synchronously in our college created virtual world and have studied conceptual frameworks such as constructivism, multiple intelligences, Keegan's distance learning theory, and Moore's transactional theory. We would like to spark a conversation around the realization that teaching online is not teaching as we were taught. Most of our faculty members are being asked to transition to online teaching to stay current and valuable to our graduate programs. Our goal for this session is to create a rich discussion with the objectives of: 1) brainstorming ideas for more effective training of faculty, 2) discussing ways to create more creative and valuable assignments, 3) thinking about ways to collaborate between subject areas and faculty members, 4) thinking through potential roadblocks such as internships and other face-to-face visits, 5) engaging students in their learning, and 6) most importantly, determining the effectiveness of teaching and learning online.

Description of Topic to be Discussed

The demand for graduate classrooms delivered online has recently escalated as graduate students in teacher education are faced with political systems that diminish the value of graduate work through lack of respect and financial compensation. Colleges of education are facing lower enrollments in graduate classes and are cancelling graduate degree programs in North Carolina. For our Curriculum Specialist program we have implemented a variety of online educational practices in order to meet the needs of teachers, lower financial commitments, and to improve classes by incorporating meaningful, evidenced-based practices into the curriculum.

First, we have trained faculty to use the Moodle, Elluminate, Qwaq, web design, Skype, and our own virtual word, the AET Zone. We have also focused on the learners' needs and ways in which we can better tailor their digital learning styles with activities and assignments. Second, we have created communities of practice in our college that span across departments and serve as support networks with online teaching. These groups also serve as a model for integrated and collaborative teaching. Third, we strive to create high-quality assignments that represent theoretical perspectives for the students' areas of study and also represent real-life educational challenges. And finally, differentiation within online teaching and learning must exist. The push for online education is not only from universities and also from students. Students must navigate new technologies in addition to learning new skill sets in their curriculum specialist studies.

Facilitation Techniques

The 2014 Conference on Higher Education Pedagogy is a perfect platform to accommodate a conversation on pedagogical approaches to online learning. Three faculty members will facilitate the conversation that will center around the following questions:

1. What are your thoughts regarding online classes for graduate students? Have you experienced a shift in pedagogy with the increase of online learning?
2. How do you meet the needs of a variety of students online? How do you motivate them? How do you help them understand their responsibilities in the online learning environment?
3. What tasks or assignments have been successful online? What delivery platforms have been effective for various tasks?
4. What types of assignments do you require? Readings and written assignments, forum boards, quizzes, PowerPoints? Do you tailor activities and assignments to meet the digital abilities and learning styles of your students?
5. Do you work in a community of practice or other support network with your online teaching? What support systems have you found valuable?

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Thursday

February 6, 2014

Presentation Sessions

http://www.cider.vt.edu/conference/

Thursday

February 6, 2014

Session 6

9:00-9:50 AM

http://www.cider.vt.edu/conference/

Supporting Students to Develop Collaborative Learning Skills in College Classrooms

Sumeyra Sahbaz, Steven M. Culver, & Penny L. Burge, *Virginia Tech*

Abstract: This study examines the perceptions of 1,852 senior college students' collegiate experience at a large southeastern land-grant university in the United States. We analyzed the survey items that were asking about students' level of perceived proficiency as entering freshmen and as exiting seniors on 12 core skills and abilities, such as written and oral communication, critical thinking, leadership, and ethical reasoning. Exploratory factor analysis (EFA) provided insights into the structure of the data and revealed collaborative learning skills as the primary factor for both of the survey questions. Multivariate analysis of variance (MANOVA) was used to explore differences in perceived collaborative learning skills of the entering and exiting college students by gender and study discipline (i.e., Engineering, Business, Liberal Arts and Human Sciences). Results indicate statistically significant relationship between students' gender and perceived skills and abilities. Significant relationships were found between both entering and exiting male and female students' gender and their perceived *interpersonal skills*, *organizational skills*, *ability to communicate with people different from yourself*. Other significant relationships were found between entering students' gender and their perceived *leadership skills* and their *ability to work in teams to solve problems*. Among graduating students significant relationship were explored between gender and students' perceived *oral communication skills*. Further MANOVA examining the relationship between students' study discipline and perceived skills and abilities indicated that significant relationships exist for both entering and exiting college students in their perceived *interpersonal skills*, *organizational skills*, *ability to work in teams to solve problems* and *ethical reasoning*. Both faculty and institutions may regard these differences in order to help college students improve their skills and abilities by considering students' background such as gender and students' study discipline.

Literature Review

Collaborative learning enables peer interactions in a college classroom and provides opportunities to improve students' social skills and lead to higher academic achievements. Positive relationship was found between collaborative learning and conceptual gains, positive attitude about learning (M. Cooper, 1999), and persistence in college (Springer, Stanne, & Donovan, 1997). Teamwork as a practice of collaborative learning has been demonstrated as having effects on academic success and psychological health of students (Johnson, Johnson & Smith, 1998) and being necessary for students' chosen careers (Colbeck, Campbell, & Bjorklund, 2000). Simply being exposed to collaborative learning environments enhance students' collaborative learning skills and enable them collaborate effectively in subsequent projects (Colbeck et al 2000). Other researchers examining the relationship between collaboration among college students and student outcomes demonstrated a positive relationship between collaboration and educational gains (Kuh, Pace, & Vesper, 1997). To date very little research has been conducted on the relationship between gender/study discipline and collaborative learning skills.

Methodology

A 40-item web-based survey was administered in early spring 2013 to all graduating senior students at a large southeastern land-grant university in the United States in order to determine students' attitude and perceptions toward what skills and abilities they possess prior to entering the college and how they change when graduating from college. This study was guided by three research questions that required the use of multiple statistical approaches (i.e, exploratory factor analysis, multivariate analysis of variance) to answer the corresponding research questions. Exploratory factor analyses were conducted to address Research Question 1: What is the underlying structure of the two survey questions asking about students' skills and abilities? MANOVA was employed to address the Research Question 2: To what extent does the perceived proficiency level of students' collaborative learning skills vary by gender? And Research Question 3: Do students vary in their perception of collaborative learning skills based on their study discipline? This question was addressed through the use of MANOVA. This procedure examined the effects of the student characteristics on their skills and abilities.

Results

Students' responses to two survey questions were closely investigated in order to explore the data structure and underlying constructs, the growth and differences based on gender and study disciplines. According to the EFA results for the first question asking college students' level of perceived proficiency as entering freshmen three factors were extracted and they

accounted for the 52.5% of the total variance of the data. For the second item asking college students' level of perceived proficiency as exiting seniors two factors accounting for 41.6% were extracted. In both cases one of the extracted factors was related to skills needed for "Collaborative Learning" and the other ones were related to skills needed for personal development. The first MANOVA examined the effects of gender on entering female students' perceived skills and abilities. The MANOVA results revealed there were statistically significant differences found between entering male and female students' perceived interpersonal skills ,$F(8,1657)=33.23$, $p< .01$, leadership skills $F(8,1657)=4.85$, $p< .05$, organizational skills $F(8,1657)=113.14$, $p< .01$, ability to work in teams to solve problems $F(8,1657)=15.2$, $p< .01$, and ability to communicate with people different from yourself $F(8,1657)=11.41$, $p< .01$. Further MANOVA found significant relationships between exiting students' gender and skills listed below in the Table 1. When examining the relationship between students' study discipline and perceived skills and abilities indicated that significant relationships exist for both entering and exiting college students in their perceived interpersonal skills, organizational skills, ability to work in teams to solve problems and ethical reasoning.

Table 1. Perceived Skills and Abilities of the Exiting College Students

	Male Students		Female Students	
	M	SD	M	SD
Oral Communication Skills	3.57	.53	3.50	.56
Interpersonal Skills	3.53	.59	3.63	.51
Organizational Skills	3.46	.62	3.65	.54
Ability to communicate with people different from yourself	3.60	.53	3.67	.48

Note. For all of the values statistically significant results exist with $p < .05$.

Discussion

These study results provide information that may be useful to university administrators and faculty. The results of this study provide useful information for university administrators and faculty in terms of being aware of students' differences of perceptions regarding their abilities and skills. Furthermore these differences may be considered when helping college students develop their collaborative learning skills. Both faculty and institutions may regard these differences in order to help college students improve their skills and abilities by considering gender and study discipline differences. This study focuses on how, based on students' responses, these skill areas may be grouped. Knowing areas where students feel they have made lesser gains than in other areas can help faculty, administrators, and staff to re-examine curricula and to offer more focused educational opportunities for maximum student benefit.

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Fostering Collaboration Using Personal Tablet Devices: Challenges and Reflections on Space and Place

Robert Beaton, Ashley Robinson, & Manuel Pérez-Quiñones, *Virginia Tech*

Abstract: We describe our experiences using iPad tablet devices in the classroom to help foster in-class collaboration. We discuss the use of iPads through the lens of space and place. We deployed iPads to students in two separate environments across different age ranges: graduate students in a Usability Engineering class and middle school girls in a Computer Algorithms workshop. We discuss forms of collaboration that took place in the classroom, ways that devices were used, and present our observations. We also provide specific examples of where iPad use helped or hindered students' collaboration and the iPads' affect on the current place. Our experiences found that the current form factor and applications available in tablet devices did not support collaboration within a small collocated group.

Background

Researchers, such as Lindquist et al. (Lindquist et al., 2007) explored introducing mobile devices (e.g. cell phones) into classroom activities as a way to enhance active learning. Student cell phones in the classroom were not a replacement, but rather a supplemental addition to the students' supplies (Cheung, 2008; Lindquist et al., 2007; Murphy, 2008), which mitigated adoption time. Being mobile and originally designed for individual use with limited screen space, screen sharing has been used to create a shared view to facilitate a collaborative environment (Wilkerson, Griswold, & Simon, 2005).

The use of screen sharing in the classroom suffers from the convoluted notions of Space and Place (Harrison & Dourish, 1996). In their work, Harrison and Dourish make the argument that space is not the appropriate framing structure for work areas. In our work, the virtual space for video mirroring can be divided into two spaces: open (and public) and closed (to those that have the password). The open space was clearly problematic as it allowed outsiders of the classroom to display their personal device to the classroom display. This constitutes a clear intrusion of classroom space. The 'closed' space was almost a perfect match for a representation of classroom place. All students sharing the 'place' had equal access to the display. This not only worked flawlessly but worked much better than expected as students were able to share iPhone, iPad, and Mac's screens and a few were able to share a picture from their Android devices.

Using Harrison and Dourish's definition of 'spaces' and 'places' (Harrison & Dourish, 1996) we set out to analyze our observations of tablet use in the classroom. We consider the classroom itself as the 'space' where class meets. Using their terminology, the class was "located in space" (classroom) but the classroom activities "occurred in place." Based on our observations, we identified four different "places" in the classroom. Note that this enumeration is strictly based on (and possibly dictated by) the type of activities we did in the classroom. A different set of activities quite possibly would have afforded a different identification of 'places.' As Harrison and Dourish (1996) stated, "A space is always what it is, but a place is how it's used" (p. 69).

Methodology

In the deployment with middle school girls, iPads were used in two computer science workshop topics: Computer Algorithms and User Interface Design. These workshops were conducted at local YMCAs and Boys and Girls Clubs. In the computer algorithms workshops, a total of 15 girls participated. In one activity, each girl was given an iPad 2 and instructed to work in groups of two to play a challenging, problem-solving game. No form of screen sharing was used in this workshop. Interviews were conducted at the end of the workshop session.
In the graduate student deployment, we gave every student in a cross-listed Usability Engineering course an iPad 2 device. The course had 27 students, 20 of them were Computer Science graduate students and 7 were from Industrial and Systems Engineering. Students were told they were to use the device for the class and encouraged to use it for other daily activities at their discretion. The instructor and TA gave suggestions about applications they used for UE tasks in the past, but the students were not required to use specific applications. We gave them very generic instructions: "use them for classwork inside and outside of the classroom." We did not require they use any particular software and encouraged them to install whatever software they needed or wanted for use in the class. We

conducted a focus group session at the end of the term. The full results of a grounded theory analysis of student comments are available as an upcoming tech report and conference publication.

Results and Discussion

In our observations, we found that the classroom can hardly be classified as a single 'place'. When class was engaged in a session, the classroom worked as a single 'place.' However, when we broke into groups for activities, the classroom became multiple 'places.' Groups working in class found it hard to collaborate or to share a 'place.' In the middle school computer algorithm workshop, every student had an iPad 2 and were instructed to work in groups. These girls were all friends who chose their own partners. They also often admitted that the problem solving game that they were instructed to play was very challenging. However, students were so engaged in using their individual iPads that it became a challenge to encourage them to collaborate. There were girls who would struggle and become extremely frustrated with a level while their partners sat content, a few levels ahead sitting right beside them. In this case, every iPad became a different 'place'. It was so much of a separate place that it was a struggle for students to cross boundaries in order to collaborate and look onto a friend's iPad, even when trying to overcome a challenge.

In the graduate course, students discussed using their iPads as a way to easily share their work with the class through the use of AirPlay, a streaming protocol that allowed iPads to share their audio and video signal to the main classroom projector regardless of the program they were using. The tablets in our classroom did not enable collaboration in small group work. They did, however, come into play at the end of activities as students quickly used them to take pictures of their work and project it for the class to see. The iPads were useful in creating a show & tell environment where students could easily present their work, as said by one student "Since the entire class had tablet devices, we were able to visually show the other students items on the projector from our tablets so that we could discuss diagrams and such." In practically all of the class activities that required producing a drawing, invariably one group would walk up to the wall and use the chalkboard as their work surface. The classroom had 2 full walls of chalkboard, so it was easier to collaborate there than to collaborate using devices with smaller surfaces (including laptops and paper notebooks). They then used the iPads to capture their work & to share it with the class.

Conclusion

In general, collaboration within a small group that is collocated is not aided at all by the current form factor and applications available in tablet devices. Robinson et al (Robinson, 2012) indicates that mobile device software plays an important role in collaboration. They found that software that supported screen sharing, where students were able to have access and control one another devices from their own devices, facilitated collaboration. Shared control of the drawing surface (at least in our study) seemed to be requirement that these devices were not able to provide.

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Online Students Are Talking, Are We Listening? Using Student Data to Create a Dynamic Online Environment with Free Tools

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Abstract: Online education, once considered a novelty or, at best, an alternative delivery method aimed primarily toward an idiosyncratic population of students, has moved aggressively into the mainstream of higher education. As online education continues to grow in teaching institutions worldwide, it is our responsibility as educators to continue to grow with it. We are tasked with not only redesigning content to fit into the online environment, but also designing it in such a manner as to engage and bring together our students in a collaborative and meaningful way. A recent survey conducted by presenters Dr. John Huss, professor, and Shannon Eastep, instructional designer, sought to examine this medium from the perspectives of those who actually *take* the courses. Using the feedback from 1,085 online students, in accord with a synthesis of the literature on student satisfaction in online courses (including the Community of Inquiry Framework), a university course was created that delivered the necessary content while using tools that are free or easily accessible to all instructors. Through live interaction with this university course, we will share with attendees not only these free tools that can be used to support, enhance and deliver material, but also instructional design principles that help in creating strong learning environments.

Literature Review

The essential elements of this presentation are inspired by the Community of Inquiry (CoI) theoretical framework (Garrison & Cleveland-Innes, 2005), which was developed in the context of the literature on teaching and learning in higher education and is becoming increasingly influential for explaining and prescribing the effective conduct of online learning. The framework consists of three dynamic interdependent elements: teaching presence, cognitive presence, and social presence, all of which serve to define a successful learning climate in terms of open communication, cohesion and inter-personal relationships. Indeed, the aforementioned components of CoI address such issues as instructor clarity, the creation of online community, and the instructor's ability to provide information from a variety of sources (Arbaugh, 2008). Our session is also grounded in the literature on student satisfaction in web-based environments. Responsiveness of the faculty to student needs (Herbert, 2006; Hodges & Cowan, 2012; Kuo, Walker, Belland, & Schroder, 2013; Sheridan & Kelly, 2010), the design and ease of the learner interface (Shee & Wang, 2008), instructor and peer presence in online courses (Richardson & Swan, 2003), and student self-efficacy (Liaw, 2008) are among the critical components. Domains used within the presenters' survey were influenced by the typology of online interaction by Moore and Kearsley (2005) and included: learner-content interaction, learner-instructor interaction and learner-learner interaction.

Goals and Objectives

Upon completion of the session, participants will:

1. Become acquainted with the overall results of a recent student survey conducted by the presenters regarding online learning experiences (Embedded within the practical demonstration, presenters will share both quantitative and qualitative data results, including specific feedback on what has been successful and unsuccessful in students' online encounters).
2. Experience open source tools that can be used to achieve a successful learning environment.
3. Receive instructional design tips for organizing content for student success.
4. Interact with a "live" designed university course within Blackboard.
5. Obtain tips, suggestions and tools for effectively communicating with one's online students.

Description

Based upon findings from the aforementioned survey, in concert with a synthesis of the literature on student satisfaction in online courses, a professor and an instructional designer worked together to create an online course that delivered not only the necessary content but used tools that are free or easily accessible to all instructors.

Therefore, through live interaction with this university course, we will share resources for designing and delivering web-based instruction to better meet the expectations of students while, at the same time, providing a substantive academic experience. As examples, podcasts and digital files are used to commence each module of material. VoiceThread and audio/video PowerPoints are incorporated to teach and encourage collaboration among students. A class wiki is presented to enhance the learning experience while teaching the students how to use a collaborative workspace. A free online timeline creation tool displays historical content in a new and interactive way. As conference participants navigate through the course, Jing tutorials are introduced to assist with new technologies. How and why these particular free tools work in unison to produce a highly engaging, collaborative learning environment where the students learn, share information, and build a community of learner support is the kernel of this presentation. All demonstrations are consistent with the literature on student satisfaction.

Discussion

The purpose of the presenters' study was to explore the attitudes and perceptions of students at Northern Kentucky University who were enrolled in at least one fully online course. The study used a survey instrument, blending a quantitative component in the form of 23 fixed response items with a qualitative element accomplished through two narrative response questions. The subsequent responses from students (n=1,085) has aided in better understanding student expectations for course materials, course organization and the instructor's role…and how open source tools can address these critical variables in a variety of online or hybrid courses.

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Project-Based Learning as an Instructional Model in Higher Education

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Abstract: Today, conventional thinking about learning is changing dramatically, and the emphasis is shifting quickly from traditional teacher-directed *sit-and-get* approaches to a constructivist student-directed learning format. McKeachie and Svinicki (2006) suggest that educators need to "recognize students' need for self-determination and autonomy, and opportunities for choice and control" (p 149). The focus of this presentation is to discuss the construction and implementation of Project-based Learning (PBL) within a higher-education course. It will also provide research results examining the change in students' critical thinking and intrinsic motivation after completing a course designed around project-based learning for undergraduate teacher candidates.

Literature Review

Advances in technology available to students and instructors, as well as increased research on the nature of creativity, has shed light on the learning process and changed the way modern educators conceptualize the learning process (Friedman, 2005; Gardner, 2006; Papert, 1993; Wagner, 2012). Many leading educators today view learning through a constructivist lens - as a collaborative process through student to student and students to teacher discourse (Ginsburg-Block, Rohrbeck, & Fantuzzo, 2006**;** Papert, 1993; Wolters, 2003). Current research also indicates that optimal learning occurs when the learner has the freedom and autonomy to engage in purposeful and relevant educational material and use his or her unique creativity to integrate new information and concepts with pre-existing perceptions (Hmelo-Silver, 2004; Wolters, 2003; Pink, 2006; Wagner, 2012). Therefore, creating a structured and safe learning environment where students collaborate, communicate, direct and control their learning becomes the role of the instructor (Barron, 2003, Ginsburg-Block, etal,, 2006; Hmelo-Silver, 2004). This is accomplished through projects that require critical thinking and problem-solving abilities (Hmelo-Silver, 2004). The end result is that the learner not only analyzes and evaluates new material, but retains synthesized knowledge through the opportunity to create something new that has personal significance. Moreover, research increasingly demonstrates that through constructivist approaches, learners retain new information longer and is increasingly likely to feel motivated to continue through the learning process (Ginsburg-Block, etal 2006; Dochy, Segers, Van den Bossche, & Gijbels, 2003).

Objectives

Upon completion of the session, participants will be able to:

1. Identify the differences between and purpose for project, problem-based and project-based learning.
2. Identify the essential elements of project-based learning used as a delivery model in higher education teacher education courses.
3. Apply the project-based learning format to their course structure.
4. Construct a project-based learning framework for their course content

Description

The presentation will discuss the development and implementation of project-based learning (PBL) in higher education. Participants will brainstorm possible PBL's for their undergraduate and graduate courses that integrates real world evidence to the relevance and purpose of course content. The presentation will also present the results of a mixed-method pilot study of 82 undergraduate teacher candidates enrolled in a fall term early childhood cognition course using the PBL model at Sam Houston State University. The study was designed to analyze the use of project-based learning to promote student engagement in critical thinking and intrinsic motivation. The objective of the study was to determine to what extent does students' active engagement in an in-depth project (PBL)increase intrinsic motivation and critical thinking based five affective domains identified in Deci and Ryan, Pink, Goldman, Wagner, Glasser and Jung's research: autonomy, perspective-taking, mastery, purposefulness, and evaluation? Results indicate that critical thinking including the development of perspective thinking and intrinsic motivation was evident in the quantitative and qualitative data analysis. Results of the independent samples t-tests revealed a lack of statistical significance in mean score change from pre-to post-intervention for three subscales: autonomy, $t(1, 147) =$

1.21; $p = .228$, mastery, $t(1, 147) = .058$; $p = .954$, and evaluation, $t(1, 147) = 1.805$; $p = .073$; $d = .47$. Two subscales, perspective-taking, $t(1, 147) = 2.766$; $p = .006$, and purposefulness, $t(1, 147) = 2.163$; $p = .032$; $d = .35$, revealed a statistically significant change in mean scores from pre-intervention to post-intervention with a small-medium effect size. The change in mean score for the overall questionnaire was also statistically significant, $t(1, 147) = 2.003$; $p = .047$; $d = .32$, with a small-medium effect size. Qualitatively, the latent patterns that emerged were stress, frustration, and confusion (change)- 30%; critical thinking/metacognition (perspective- taking, sense of purpose) – 25% : collaboration (sense of purpose/self-determination - autonomy) – 15%; persistence (perseverance - autonomy) – 15%, time management and organization (self-regulation - autonomy) – 15%.
A change was apparent in student intrinsic motivation and critical thinking using a PBL model. Developing a degree of perspective-taking and learning how to integrate real world evidence to the relevance of course content brought a sense of purpose to what candidates were learning. A sense of purpose, intrinsic motivation and commitment became apparent in the quantitative and qualitative data.

Session Construction

Project-based learning is a constructivist pedagogical approach that requires the active engagement of learners as constructors of their own learning. Workshop participants will review and determine how project-based learning can promote and support students' critical thinking including perspective-taking and intrinsic motivation. Emphasis is on pedagogy that stimulates student collaboration, self-reflections for personal growth, and critical thinking for sustainable learning through dialectical/dialogical reasoning based on complex, relevant, real life situations and experience. Therefore, participants will collaborate and construct a concept web for a PBL for one of their courses. The following format will be used:

1. What is project-based learning – clicker group discussion?
2. Overview of how PBL was implemented within a teacher education course i.e. Documentary Project – participant questions
3. Participants construct concept maps that include the 8 PBL elements that will fit a set of course outcomes.
4. Participants share their ideas and make suggestions.
5. Presenter will close highlighting the use of PBL in higher education, experiences and student responses as well as quantitative and qualitative results.

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Increasing Student Engagement in Large Classes through Questioning, Reading, and Response

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Abstract: Student engagement refers to a number of modes of instruction that focus the liability of learning on the learners (Bonwell & Eison, 1991). In essence, learners are actively engaged in the learning process. When done well, students become an important part of a given class and remain engaged throughout the session. The outcome is higher student achievement. Studies support student engagement, or active learning, as an effective method of instruction (Armstrong, 1983; McKinney, 2010). This interactive practice session will share, model, demonstrate, and discuss various strategies to increase student engagement in large enrollment classes through questioning technique, active reading tactics, and student participative responses.

Literature Review

Questions are important to student engagement (McKeachie & Svinicki, 2006). These include both study questions and test questions. Study questions are key, topical questions, tied to learning objectives. They help guide the class and the teaching-learning process. Especially valuable are higher end questions (Andre, 1987) at the beginning of a class (Wilhite, 1983). Study methods and learning are also impacted by the type of questions teachers use when testing. Following Bloom's Taxonomy (1956), higher-end questions cause students to dig deeper into a topic.

Reading is essential to student engagement. Educators have long realized the importance of reading the texts. It is not simply because the instructors lack the time in class to go into rich details, but rather because research has consistently shown that students retain more from reading than listening (Hartman, 1961). Teachers need to emphasize the importance of reading the course material. Too often students skim the text and fail to actually interact with it. As a result, students struggle with comprehension or even basic recollection. A better method is to invest a little bit of time into teaching students to actively read or engage with the text (McKeachie et al. 1985; Weinstein & Mayer, 1986).

Having students respond helps ensure student engagement. Students who are actively interacting with the class are also engaged and paying attention. There are a number of quick, easy ways to engage students with responses, including: (a) moderating a general classroom discussion or debate (Bonwell & Eison, 1991); taking surveys; (c) handing out one minute papers or short writing assignments (Armstrong, 2012); or (d) think/ pair/ share (Bonwell & Eison, 1991).

Goals and Objectives for the Practice Session

Upon completion, participants will be able to:

1. Utilize study questions to guide student learning
2. Recognize the importance of higher-end questioning in student assessments
3. Implement a strategy for teaching students to actively read and engage with the text
4. Increase student participation through various participative response techniques
5. Use technology, wait time, and breaks to increase student engagement and learning.

Description of the Practice to Be Modeled

This interactive practice session will share, model, demonstrate, and discuss various teaching strategies that can lead to increased student engagement in large enrollment classes through the effective implementation of sound questioning technique, active reading tactics, and student participative responses. These strategies can be used in day-to-day classroom teaching.

The presentation will provide a background to study questions and emphasize the need for higher-end questions in student assessments. Since reading is critical to student success, the practice session will outline a strategy for teachers to train students to actively read and engage with the text. In an effort to increase student engagement

through participative response, several techniques will be demonstrated and practiced. Closing with a few easy to implement strategies, participants will learn the value of technology, wait time, and breaks.

Discussion

Having one or two study questions will help capture the students' interest and keep it throughout the class. It is important for teachers to realize the impact that their test questions have on how students prepare for their class. If a teacher's questions are merely factual, students will memorize facts; but if they are higher-end, students will search for a deeper understanding of the subject area.

Students who come to class prepared with the readings done are likely to succeed in the course, pay attention in the class, and contribute to the teaching-learning process. If teachers agree that reading the course material is vital to their class, then they may wish to give the students some guidance into how they should actively read the text. Similarly, students who pay attention and actively participate in a class are likely to master the content. Teachers can increase participation in large enrollment classes with a few easy to master student engagement strategies.

Student engagement is critical to the teaching profession. It goes hand and hand with learning. If teachers believe that student engagement improves student achievement, then they should make it one of their course objectives or goals, as well as a class expectation. Education has value. Students should be expected to pay attention and be involved in the teaching-learning process. They will learn more, like the class more, and earn better grades.

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Put on Your Thinking Hat! A Creative Approach to Argument Analysis

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Abstract: Skills expected of college graduates include being able to construct their own arguments using supporting evidence and claims as well as analyzing the arguments of others. The challenge is for students to move beyond an emotional response to a true critical analysis of an issue. We adapted a critical thinking approach, De Bono's six thinking hats, to help students analyze arguments in a logical manner. Students were expected to summarize the author's argument, identify the strengths and weaknesses, provide their emotional reaction, and identify the audience that benefits from the argument. We found that investigating an argument from a particular viewpoint (i.e., thinking hat) and then working together as a group to fully analyze the issue to be a successful teaching strategy.

Literature Review

The ability to evaluate and create arguments is considered to be essential to critical thinking (Ennis, 1991; Kuhn, 1991; Kuhn & Dean, 1994). However, teaching students argumentation skills has been a challenge in higher education (Pithers & Soden, 2000). Some educators have reported success in advancing students' critical thinking abilities through the use of creative techniques such as De Bono's six "thinking hats" (De Bono, 1985), which stress the need to consider different perspectives when confronted with a problem. Professors in business, nursing, and education have employed the six thinking hats in problem-solving and decision-making assignments (Hodge & Ozag, 2007; Geissler, Edison, & Wayland, 2012; Karadag, Saritas & Erginer, 2009; Rivzi, Bilal, Gaffar & Asdaque, 2011; Schellens, Van Keer, De Wever, & Valcke, 2009). While the literature supports the six thinking hats approach in terms of problem solving, it does not explore its role in teaching argument analysis.

Goals and Objectives

Upon completion of this session, participants will be able to:

1. Describe how thinking hats can be used to analyze an argument;
2. Apply thinking hats for argument analysis; and
3. Incorporate thinking hats in discussion boards and class activities.

Description of Practice to Be Modeled

As instructors, we struggled with ways to help students analyze arguments that required them to offer more than just their personal reactions. Since other educators had experienced success with De Bono's thinking hats, we decided to adapt this approach for argument analysis. De Bono's thinking hats emphasize parallel thinking: a constructive approach that focuses on exploring different perspectives rather than attacking an adversarial position. Because De Bono's intent was to encourage problem solving rather than analyze arguments, we modified the thinking hats accordingly (Table 1).

Table 1. Adaptation of De Bono's Thinking Hats for Argument Analysis

Hat Color	De Bono's Use	Argument Analysis Use
White	Information known	Summarize the author's argument
Yellow	Positives	Identify the strengths of the argument
Black	Negatives	Identify the weaknesses of the argument
Red	Emotional reaction	Provide your emotional reaction
Blue	Control mechanism	Identify the audience that benefits from this argument
Green	Future possibilities	Not used

To prepare students to complete an individual argument analysis we started by explaining our version of the thinking hats in detail. Next, students were divided into groups and assigned a different article for analysis. Each student in a group was assigned a hat color and asked to respond to the article according to the corresponding role in argument analysis. The assigned role and articles changed weekly.

Analysis began on a discussion board where students were required to post their initial response. This allowed for some reflective thinking outside of class. Students were then asked to respond to other group members and expand on what each had posted in order to advance the discussion beyond initial thoughts. This interaction fostered critical thinking and enhanced their understanding of argument analysis, while also providing a way for student to engage with the material and other students. Finally, each group presented their argument analysis to the class.

Discussion

The ability to understand, analyze and evaluate arguments is crucial to critical thinking. In fact, the GRE revised General Test now includes a section on analytical writing that requires test takers to "Analyze an Argument" (Educational Testing Service, 2013). The thinking hats provide a structured approach to analysis, encouraging students to explore different aspects of the argument. Breaking the argument apart made it much easier for the students to offer critiques. As instructors, we also found the red thinking hat was beneficial as it gave a safe place for students to discuss their own reactions to the arguments while isolating the personal reflection from the more rational thinking hats. Consequently, when we brought the groups together and told them to put the red hats aside and focus on the other colors for their final analyses, the students then successfully evaluated the logical structure and evidence in the argument.

Thinking hats are not a new way to engage in problem solving; in fact, institutions of higher education have been both teaching and using this process for years. What is innovative is the idea of using this process to analyze arguments. By working in small groups and applying the thinking hats, students were able to summarize the varying components of an argument, discuss the strengths and weaknesses, explore their emotional reactions, and identify potential consequences. As a result, we saw a marked improvement in students' argument analysis abilities.

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The Challenges of Using ePortfolios in a Fully Online Class with 300 Students: Can We Achieve Metacognition, Reflection, Motivation, Community, and Assessment at Scale?

Kevin Kelly, *Wiley Learning Institute*

Abstract: As a community of practitioners, we'll conduct a hands-on evaluation of the class-level ePortfolio for a large-scale, fully online class called How 2 Lrn w ur iPod. We'll actually use the ePortfolio platform itself (Pathbrite) to analyze what works and what doesn't work when teachers, TAs, and hundreds of students use ePortfolios for metacognition, reflection, motivation, community, and assessment. Participants will also share their own practices. It's a win-win situation, so join us!

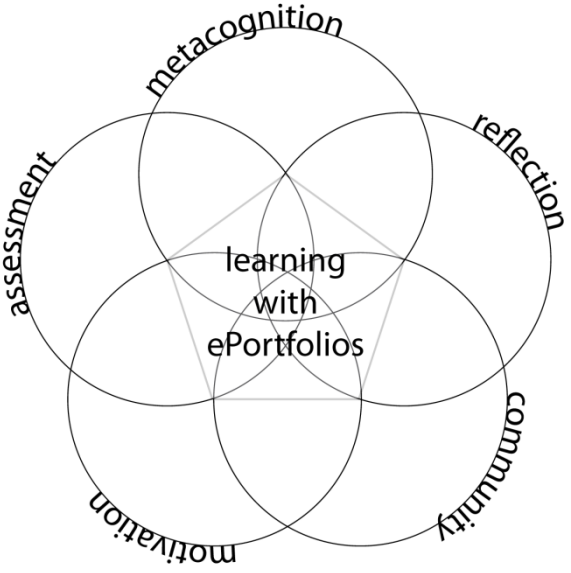
I lead a team-taught, large-scale (250-300 students), fully online class called How 2 Lrn w ur iPod. I have finally begun to incorporate ePortfolios, after fearing workload overload, mass student confusion, and using technology for the wrong reasons. When we finally took the ePortfolio plunge, we aimed for the deep end of the pool!

Throughout the class we ask students to reflect on their own learning, experiment with metacognitive and technology-enabled learning strategies, apply what they learn to real-life learning situations, and synthesize their experience. Therefore, we use ePortfolios to engage students in metacognition and reflection; provide avenues for instructor, peer and self-assessment; and increase student motivation through community involvement; and have fun while we're at it!

As a community of practitioners, we will analyze the class-level portfolio we used to document both teaching and learning, as well as solicit participants' practices to inform the discussion.

This presentation will answer the following questions:
WHY should we consider ePortfolios?

- My hypothesis going into the experience, ePortfolios would serve to foster (at least) five aspects of learning—metacognition, reflection, community, motivation, and assessment. This presentation provides suggestions as to what actions instructors should take to achieve each aspect of learning, as well as the Venn diagram overlap areas.



WHAT are some ways to improve ePortfolio implementation efforts?

- After years of working with programs at San Francisco State University, I developed a framework for ePortfolio implementation efforts to make sure institutions are aware of elements they have not considered. Shared and explained through a matrix, we cover stakeholders (teaching and learning, technology, organizational administration) and steps in the process (identify, align, (re)design, engage, support, and assess).

HOW can we use ePortfolios for professional development?

- We'll share examples of ePortfolio use for professional purposes in higher education and discuss the next stage of investigation.

All this, plus we'll have fun!

Student Perceptions of their Learning Environment, Why Should We Care?

Jacque Pelzer, Jennie Hodgson, & Stephen Were, *Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech*

Abstract: The learning environment or climate, has an impact on a student's overall academic performance. Therefore, it is essential to gain insight into the student's perceptions of their learning environment which can provide significant feedback regarding the curriculum. Tools have been developed to allow reliable and valid ways in which to quantitatively measure these perceptions affording the opportunity for change. Results from these tools can be used to change the learning environment to enhance student learning.

Literature Review

The environment in which students learn can have a significant impact upon the quality of the learning process. This theory has been gaining increased attention in medical education and a recent report from the International Association for Medical Education (AMEE) predicts this trend will continue(Kennedy, 2013). Although the concept of an educational environment appears rather intangible, almost 30 years ago Genn and Harden argued the effects of the educational environment are substantial, real, and influential (Genn and Harden, 1986). As a result, educators and researchers have attempted to define and measure the medical education environment and its impact on student learning.

The impact of the educational climate on student learning has been the subject of a number of studies. Research in medical education has shown that learning environments may influence student behaviour, academic achievement, course satisfaction and aspirations, as well as sense of well-being (Plucker, 1998; Pimparyon et al., 2000; Genn, 2001a, 2001b; Audin et al., 2003; Mayya and Roff, 2004). It is also important to note that in addition to being measurable, the educational environment can also be changed. Results can serve as a framework for enhancement of the quality of the environment and the medical educational process itself in line with the institutions own mission (Genn and Harden, 1986).

Various methodologies are utilized to investigate students' perceptions of their learning environments in medical education. (Roff et al., 1997; Audin et al., 2003; Sobral, 2004; Soemantri et al., 2010). The most widely used questionnaire in the health sciences is the Dundee Ready Education Environment Measure (DREEM). The DREEM consists of a 50-item, closed-question tool which measures students' overall perceptions of their learning environment as well as five different focus areas; perception of learning, perception of course organizers (faculty), academic self-perception, perception of atmosphere, and social self-perception. The DREEM has been translated into at least ten languages(Miles et al., 2012), and applied in multiple healthcare professional settings in over twenty countries (Ostapczuk et al., 2012).

The DREEM has been used for a variety of purposes within medical education programs where it acts as the basis for the diagnosis of practices or situations within an institution.(Genn and Harden, 1986) For example, it has been used diagnostically to identify areas of strength and weakness in an educational environment (Roff et al., 2001; Bassaw et al., 2003) and to compare different medical institutions (Roff et al., 2001), students at different stages of the course (Roff et al., 2001; Till, 2004) and gender (Roff et al., 2001; Bassaw et al., 2003; Mayya and Roff, 2004). The DREEM also has been used to measure the existing educational environment as a precursor to curriculum change, to identify priority areas for change, and to act as a baseline for comparison after curriculum change (Al-hazimi et al., 2004). Finally, the DREEM has been used to compare old and new curricula(de Oliviera Filho and Schonhorst, 2005), and to investigate the impact of a new curriculum on perceptions of the educational environment (Till, 2005; Edgren et al., 2010; Shehnaz and Sreedharan, 2011).

Sessions goals and objectives

The learning environment will be defined in an interactive format and the impact it has on student academic success will be discussed. Tools will be presented which can be used by health professional programs to assess their learning environments with one specific tool the focus of the discussion. The objectives of the session are:

- By the end of the session, the participant will be able to define the learning environment in the context of their own education program.
- By the end of the session, the participant will be able to determine critical factors which impact a student's learning environment both in a positive and/or negative manner.
- By the end of the session, the participant will be able to determine which appropriate tool to use for measurement of their learning environment
- By the end of the session, the participant will be able to identify the appropriate analysis of survey data and how to determine strengths and weaknesses, from a student's perspective, of an individual program.

Take home message: Gaining student's perceptions of the learning environment is imperative to the overall success of both the academic program and the student's within.

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Conversation: A Cross-Disciplinary Consideration of Purpose, Placement, and Content of College Teaching Courses for Novice and Future College Instructors

Michelle L. Hardee, Stefanie K. Benjamin, & Michelle A. Maher, *University of South Carolina*

Abstract: The need – and obligation – to provide the next generation of college instructors with formal pedagogical training is beginning to be addressed, as many academic units offer dedicated college teaching courses and institutions sponsor training for graduate teaching assistants. However, virtually nothing is known about the intended outcomes, topics, assignments, and evaluation methodology that commonly define this training. Additionally, measured consideration of purposes (explicit and implicit) and placement of this training within graduate student professional development is rare. Using the results of a content analysis of almost 30 syllabi from various disciplines, including sciences, social sciences, humanities, and professional schools, this conversation session will support active consideration of the purpose, placement, and content of formal pedagogical training for novice and future college instructors on today's college campuses.

Literature Review

Earning a doctorate through focused inquiry into a highly specialized domain was once thought to qualify a doctoral recipient to teach at any level and on any related topic on the college campus (Gardner, 2005). Increasingly, however, there is growing recognition that this once commonly accepted practice poorly serves students, instructors, the academy, and society at large (Light & Cox, 2005). Further, across the disciplines, faculty and administrators have been required to respond to insistent calls for increased teaching effectiveness from external campus stakeholders (McAlpine & Amundsen, 2011; Peters & Olssen, 2005). What happens in the college classroom matters and is now seen as vital to the preparation of an educated citizenry and a workforce that can remain innovative and competitive in a global economy (U.S. Department of Labor, 2007). Accordingly, the need – and obligation – to provide the next generation of college instructors with formal pedagogical training is beginning to be addressed. Many academic units across the campus now offer dedicated college teaching courses for students who aspire to join the professoriate upon graduation. At an institutional level, many universities sponsor Graduate teaching assistant (GTA) training (e.g., Calonge, Chui, Thadani, Mark, & Pun, 2011). This type of formal pedagogical training is sorely needed, as some estimates suggest that graduate teaching assistants (GTAs) instruct almost half of undergraduate courses offered in the United States (Branstetter & Hendelsman, 2000).

Goals and Objectives

While recognition of the critical need for formal pedagogical training for novice and future college instructors is welcomed, virtually nothing is known about the intended outcomes, content, and techniques that commonly define this training. In response, we propose a conversation session dedicated to discussing this important cross-disciplinary instructional issue. We situate our proposed session within an analysis of the almost 30 courses and workshops from various disciplinary units on our campus that provide formal pedagogical training. Further, we invite an active participant discussion about informing and being informed of how other multi-disciplinary campus communities provide formal pedagogical training for novice and future college instructors.

By attending this session, participants will:

- Be apprised by the results of a syllabi content analysis of almost 30 different credit-bearing courses and workshops offering formal pedagogical training on our campus in which learning outcomes, topics, assignments and evaluation methodology are compared and contrasted to identify commonly accepted or "standard" conceptualizations of the college teaching domain across disciplines;
- Contribute their ideas regarding what "should" or "should not" be included as part of formal pedagogical training, regardless of disciplinary context;
- Contribute their ideas and feedback regarding the place of formal pedagogical training within the professional development of novice and future college instructors;
- Contribute their ideas and feedback regarding the replication and likely outcome of such an approach at their institution.

Description of Topics to be Discussed

Within a 50-minute conversation session, these topics will be discussed (although we anticipate that, depending on participant background and interests, other related topics may also arise):

- The purposes (explicit and implicit) of formal pedagogical training in the professional development of novice and future college instructors;
- The placement (e.g., in semester-long credit-bearing classes, one-day required workshop, etc.) of formal pedagogical training in the professional development of novice and future college instructors;
- Common and uncommon learning objectives, topics, assignments and evaluation methodology represented in current formal pedagogical training;
- Commonalities and differences of the above among various disciplines, including sciences, social sciences, humanities, and professional schools;
- Levels of institutional support and internal resources available for various types of pedagogical and professional development training among participant institutions.

Facilitation Techniques

Facilitation techniques will include the following:

- A brief facilitator-led discussion in which the overarching topic is introduced and session goals and objectives are identified;
- A brief interactive presentation in which results of a syllabi content analysis of almost 30 different credit-bearing courses and workshops offering formal pedagogical training on our campus are offered and discussed;
- Pair-share activities in which participants are asked to reflect and share their thoughts on the purpose, placement and content of formal pedagogical training for novice and future college instructors on their campus; the pair-share activities will then flow into a whole-group discussion and consideration of these topics;
- A brainstorming session on what "should" be included in formal pedagogical training, regardless of disciplinary context.

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Conversation: The What, Why, and How of Critical Pedagogy

Jenny Dale, *University of North Carolina at Greensboro*
Lauren Pressley, *Virginia Tech*

Abstract: Critical pedagogy is built on the idea that education has the potential to change lives, change society, and ultimately change the world. This conversation session will focus on the implications of this theoretical framework for the practical work that we do as educators. The presenters will provide a brief overview of critical pedagogy with a focus on Paulo Freire's foundational ideas and bell hooks' and Henry Giroux's more contemporary applications. These theoretical foundations will serve as a springboard for a practical conversation about how we enact critical pedagogy in our own teaching. The values of critical pedagogy – a revision of the teacher/student relationship, a focus on education for social change, a rejection of the "banking method" of education, and a commitment to problem-posing education – can be applied across disciplines and learning environments. This conversation session will provide a forum for sharing experiences with and ideas for enacting critical pedagogy in the classroom and beyond.

Literature Review

The purpose of this Conversation Session is provide a brief overview of critical pedagogy in order to start a discussion about how it functions in higher education. As such, we will be providing participants with a list of recommended readings rather than sharing a formal literature review. We will highlight key literature that helps define and shape critical pedagogy as a framework. Paulo Freire's *Pedagogy of the Oppressed*, originally published in 1970, is a critical text that introduces the foundational ideas of critical pedagogy: a rejection of the "banking method" of education, a focus on problem-posing education, a collapsing of the traditional teacher/student dichotomy, and an emphasis on education for social change (Freire, 2000). More contemporary proponents of critical pedagogy still focus on these elements. Henry Giroux, for instance, describes critical pedagogy as "the educational movement, guided by passion and principle, to help students develop consciousness of freedom, recognize authoritarian tendencies, and connect knowledge to power and the ability to take constructive action" (Giroux, 2010). bell hooks implies that teachers who enact critical pedagogy are those who contribute to the spiritual education of their students in addition to sharing content knowledge (hooks, 1994). Freire's values are alive and well in higher education today, and are being enacted in many disciplines. As librarians, we will provide examples of the practical applications of critical pedagogy from the literature in our field (Accardi, 2010; Elmborg, 2006) to open up a conversation about the interdisciplinary application of this pedagogy.

Goals and Objectives

This session will begin with a 15-minute overview of critical pedagogy and discussion of why it matters. The rest of the session will be conversation-based, as outlined in the "conversation sessions" description. In order to model the pedagogy we are discussing, this conversation will be guided by the principles of problem-posing education and a collapsing of the presenter/participant dichotomy. By the end of the session participants will have an understanding of what critical pedagogy is, why it matters, and an idea of what it might look like in their discipline.

Description of Topic to be Discussed

This conversation session will include an overview of critical pedagogy with a focus on Paulo Freire's foundational work and the more recent work of bell hooks and Henry Giroux. We will follow this broad overview by presenting case studies from the literature that highlight the implementation of critical pedagogy in different disciplines. These case studies are meant to start the facilitated conversation that will comprise the remainder of the session.

Facilitation Techniques

As this is a conversation session, we hope that discussion will progress organically. To facilitate the conversation, we plan to employ the following techniques as necessary:

- Prepared questions for reflection and discussion
- Pair/share activities
- Case studies for the group to consider

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Thursday

February 6, 2014

Session 7

10:10-11:00 AM

http://www.cider.vt.edu/conference/

Using a Video Clip Analysis Activity to Assess Learning and Promote Discussion

Lisa A. Rohde, *University of Georgia*

Abstract: This study examined a method for teaching and assessing learning during a lesson on classroom management in an introductory educational psychology class. Following a class lesson on "building the classroom environment," students watched a series of television and movie clips depicting various classroom situations. After each video, they were asked to identify various elements of classroom management which they had previously learned and their observations were discussed as a class. Their completed worksheets were then analyzed to determine the degree to which the students understood concepts taught in class. Overall, most students were able to effectively identify elements in the video clips and engage in deeper analysis of the situations they observed. Further benefits of this strategy are also discussed.

Literature Review

The purpose of this study was to examine a particular teaching method using video examples to engage students in a deeper analysis of content and assess mastery of concepts introduced. Although videos can be used purely as a way to provide a visual example of a concept, others advocate for involving videos in class as a part of an active learning exercise (Gregg, 1995; McKinney, 2011). Video analysis allows for active learning in which the students become more engaged and are asked to think more deeply about the material than when they are simply listening and passively taking notes on a lecture or even a video presentation (Bonwell & Eison, 1991; McKeachie & Svinicki, 2006). Creating discussion and interaction around a specific video or videos moves a passive activity, watching a video, into a more active experience, concept analysis within the video. This activity was specifically developed for teaching a lesson on classroom management in an introductory educational psychology class, but may be applicable to a variety of classrooms. This study sought to assess student learning and examine the ways this activity can help engage students in the material. Although video analysis activities may be commonly used in teacher education (Kale & Whitehouse, 2012; Tripp & Rich, 2012; van Es, 2012), they are beneficial across disciplines and thus offers a simple way to introduce video analysis into non-education classes.

Methodology

This study was designed as an action research study primarily using document analysis of a classroom activity. The data included worksheets of student work created during a class session, and participants included all the students in one section of my introductory educational psychology class (n=16). After I had given a traditional lecture on classroom management, students completed an activity to identify and analyze elements of classroom management in three video clips of teachers from "Stand and Deliver," "Boy Meets World," and "Dead Poets Society." Students were given worksheets to complete after each clip which included spaces for each of five elements of management discussed in the prior lecture (*physical environment, communication, social relationships, teaching methods, and encouraging students to change*). After each video, participants were asked to list as many examples of each of the elements as they could. A whole class discussion followed, drawing on the elements students had identified and their observations of how these elements impacted the classroom environment or the students' behavior in the video clip.

Data Analysis and Results

Completed student worksheets were analyzed in several ways. Responses were compiled and organized to determine the number and type of responses given, the number of students who provided correct examples, and the pattern of incorrect responses. First, their responses were listed and categorized both by video and within each of the five elements that students were asked to identify. In preparing for the discussion, I had already created a detailed list of aspects for each video that students' should identify. Student responses that did not match my list were further examined to determine whether they also fell into any of the five same categories.

Across the three video clips, students were mostly able to identify correct examples, although this varied based on their familiarity with the clip, the length of clip shown, and the element they needed to identify. The students were much more familiar with the second and third clips, which were also longer, allowing them to identify many more examples from the video clip. For each clip, every student was able to provide at least one correct example of a way

that the *physical environment* or *communication* affected the classroom and the teacher's ability to maintain order in the classroom. However, responses to the other three elements varied greatly. For the first video, thirteen participants were able to correctly give examples under *social relationships*. Eight students identified an example of *teaching strategies* accurately for the first clip. Only six participants provided correct responses for the last category (*encouraging students to change*), six participants left it blank, and another three participants give incorrect responses. For the second video clip, all students identified one correct example for *social relationships*, and *teaching strategies,* but some students were still confused; there were 16 misidentified elements for *communication* and *social relationships* or *communication* and *teaching strategies*. Only ten participants were able to correctly identify examples of how the teacher *encouraged the students to change*, and the incorrect answers for this category tended to focus on misidentified *teaching strategies*. For the final video clip, thirteen participants were able to correctly identify examples for *social relationships* or *encouraging students to change*, and fourteen participants were able to do so with *teaching strategies*. The misidentified comments tended to confuse elements related to *communication, social relationships* and *teaching methods*. Misidentified elements seemed to be the result of how these aspects of teaching may overlap in practice, rather than a fault in the instruction on the concepts.

There were additional classroom benefits for the students as well. This activity lasted the entire 50-minute class period, largely due to the amount of classroom discussion which resulted from the videos and the concepts. Watching the videos and recording their thoughts afterwards typically would have only taken about 20-25 minutes in total. This means that about half of the class was devoted to an in-depth discussion of the videos and material, and clarifying misunderstandings. Although discussions are common in this class, rarely are all students equally participatory. Often a smaller group of students actively participate in whole class discussion rather than the entire class. Perhaps the most notable result of this activity was not just the amount of discussion, but who was involved. In the class of 16 students, 13 students actively participated in the discussion by giving examples from the videos and explanations of why those demonstrated various classroom management elements. Many of the students who spoke were those who did not typically participate in large class discussions. This suggests that this activity may have been able to reach students who otherwise might have continued to remain uninvolved in the activity.

Discussion and Conclusions

This study provides evidence for an innovative teaching method that could be implemented in a variety of classroom settings. While videos may be widely used in classrooms, they may not always be used to assess learning. Although, this activity focused on teaching classroom management this has applications beyond this topic or education classes. Any video used as an example of a concept could be used for this purpose, for example, students could identify characteristics of a psychological disorder on film or a part of a biological process given video examples. This activity demonstrates how active learning can be generated in a university class through guided video analysis (McKinney, 2011). While not necessarily a novel idea, the amount of discussion provided and the students' performance indicates how effective video-based analysis may be within a university classroom (Gregg, 1995). Discussing the potential applications from the scenarios helped students develop a deeper understanding of the material and its applications. Students' enjoyment of the videos also fostered greater engagement and discussion of the material, making what could have been a potentially dull lesson into an energetic, interactive experience.

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The Benefits of Cumulative Exams

Natalie Kerr Lawrence, *James Madison University*

Abstract: There are surprisingly few studies that examine the benefits of cumulative exams in college courses. The purpose of this study was to determine whether students who take cumulative exams throughout the semester have better long-term retention than students who take a single cumulative final exam. As expected, students who took cumulative exams throughout the semester did better on the cumulative portion of the final exam. This main effect turned into an interaction on a follow-up test administered two months after the course ended. The long-term retention of good students was unaffected by the type of exams they took. However, low-scoring students remembered more of the course material when they took cumulative exams throughout the semester.

Literature Review

"Will the final exam be cumulative?" This is one of the first questions students ask about a college course. The answer to this single question may determine whether students enroll—or stay enrolled— in a course. Clearly, many students dread taking cumulative final exams. What is not clear is whether cumulative exams actually benefit students. In a laboratory study, Szpunar, McDermott, and Roediger (2007) asked participants to learn a series of word lists and tested them after each list. They also administered a cumulative "final exam" 30 minutes after the initial testing. Some of the participants were aware of the final test; others were not. Not surprisingly, the participants who expected the final exam did better than those who had no expectation. Szpunar et al. argued that the final test encouraged continued processing of the material, which made the words more accessible at the time of the final.

Szpunar et al.'s (2007) work suggests that the expectation of a final exam may enhance students' long-term retention. However, taking a "final exam" in the laboratory is very different than taking one in the classroom. Students usually take a final exam several weeks – not minutes – after learning begins. There is an obvious need for applied research, but there are surprisingly few studies that examine the benefits of cumulative exams in the classroom.

The purpose of the present research was to investigate the effects of cumulative exams in a college course. Though Szpunar et al. (2007) found that the expectation of a cumulative "final exam" encouraged participants to continue processing the material, this may not be true for students taking a final exam in a college course. In most cases, cumulative final exams cover several weeks of material. Many students are likely to "cram" for this type of exam rather than continually process the material over an entire semester. Indeed, a single cumulative final exam at the end of a long semester may not be the best strategy to boost long-term retention. A better strategy might be to have several cumulative exams spaced throughout the semester. This notion is consistent with research in cognitive psychology on the spacing effect (see Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006, for a review) and the testing effect (e.g., Karpicke & Roediger, 2008). The goal of my study, then, was to determine whether students who take cumulative exams throughout the semester would have better long-term retention than students who take a single cumulative final exam.

Methodology

Students were 59 women and 46 men enrolled in one of two sections of an introductory psychology course. The two sections were equivalent in every possible way, except for the type of exams they took. Students in one section (the noncumulative section) took three noncumulative exams plus a cumulative final exam. Students in the other section (the cumulative section) took four cumulative exams.

Two months after the course ended, I gave students a follow-up test that measured their long-term retention. The primary dependent measures in this study were scores on the cumulative portion of the final exam and scores on the follow-up test.

Results

Previous research shows that low- and high-performing students are differentially affected by classroom interventions (e.g., Forsyth, Lawrence, Burnett, & Baumeister, 2007). For this reason, I performed a median split on the scores for the first exam and created two groups of students: low-scorers and high-scorers. I then analyzed students' scores on the cumulative part of the final exam. The analysis revealed that students in the cumulative section did better than students in the noncumulative section – regardless of the type of student.

When I analyzed the scores on the follow-up test, I found that high-scorers did well regardless of which exams they took. The low-scorers remembered more of the course material after taking multiple cumulative exams (see Table 1). One explanation for this result is that having multiple cumulative exams motivates low-scoring students to engage in behaviors that improve their performance and long-term retention (like spacing out their study). The good students do not benefit as much from the intervention because they are already doing the things they need to succeed.

Table 1. Mean percentage correct on the follow-up test as a function of type of student (low scorers vs. high scorers) and section (cumulative vs. noncumulative).

	Cumulative Section		**Noncumulative Section**	
	M	*SD*	*M*	*SD*
Low-scorers	73.38	12.58	65.09	13.40
High-scorers	75.30	11.17	78.56	5.77

Discussion/Conclusion

The results of this study suggest that students may benefit more from taking multiple cumulative exams rather than taking a single cumulative exam at the end of the semester, especially those who do not get off to a great start. Teachers are encouraged to use repeated testing in their own course to maximum the learning potential of exams.

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Applying Brain-Based Learning Principles in Online Courses

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Abstract: With the proliferation of Web 2.0 and interactive software applications, instructors have more opportunities than in the past to incorporate activities within their online courses that engage students in interactive, meaningful learning experiences. Drawing upon recent understandings offered by brain-based learning theory, this session will explore online instructional strategies that deepen learning and foster transfer of knowledge and skills to new domains. Participants will learn key instructional principles to consider in the design of online learning, experience a focused set of applications, and consider ways to revise or create courses to incorporate brain-based learning opportunities for their students.

Literature Review

Brain-based education, defined as "the engagement of strategies based on principles derived from an understanding of the brain" (Jensen, 2008, p. 4), is a field which has grown rapidly in the past 20 years. Given technological advances, specifically MRI and fMRI, which provide neuroscientists with the capability to see inside the brain, much has been gleaned that can be transferred to instructional settings (e.g., Taylor & Lamoreaux, 2008). General tenets of brain-based learning that have emerged from the growth in the neuro-science and cognitive science research revolve around the uniqueness of each individual's brain, the role that context and prior experience play in influencing learning, and the importance of connecting new information to pre-existing knowledge (Tokuhama-Espinosa, 2011). In essence, brain-based learning theory offers another lens through which to consider principles of teaching and learning based in the cognitive sciences and constructivism (Caine & Caine, 2006), and does so in ways that can be practical and engaging for instructors.

Another field that has burgeoned within the last decade is that of online education. With online course offerings becoming commonplace at most institutions of higher education, the need to develop courses that are aligned with research-based pedagogical principles becomes paramount. The quality and quantity of web-based and other technological tools that have proliferated provide educators with many options for engaging students in meaningful, relevant, and active learning experiences.

While the technologies have become more sophisticated and accessible and the psychological/pedagogical research base that undergirds the use of technology as a teaching/learning tool has continued to grow, direct applications of the tenets of brain-based education to online learning in postsecondary education is minimal. Although some authors have begun to address broad issues related to including such strategies in online environments, i.e., fostering learning communities (Braidic, 2009) and adapting instructional design models specifically for online brain-based learning approaches (Cercone, 2006), there exists a need to identify specific strategies that speak to how technology can be leveraged to facilitate appropriately engaging learning experiences for online learners in postsecondary education.

Goals and objectives for the practice session (what should the participants know or be able to do after the session?)

- Apply Brain-Based Learning Theory to evaluate the strength of specific instructional practices/strategies in fostering meaningful learning
- Specify technologies that can be used to facilitate active and authentic learning experiences in an online environment
- Identify strategies for translating existing practices to an online environment

In order to discern pre-existing knowledge related to the topics, participants will work in small groups to identify and reflect on brain-based strategies that they currently utilize in traditional face to face settings, as well as activities they have attempted in an online setting. The presentation will include discussing and demonstrating a number of strategies that exemplify principles of brain-based learning, including mind/concept maps, advanced organizers, reflective journaling/blogging, and collaborative writing activities. Attention will be given to exploring tools that are available to perform activities; therefore, theory, practice, and technology will be discussed in an interactive group setting.

Discussion

Although brain-based learning activities and strategies broadly encompass areas spanning from visual learning to emotional learning to social learning and beyond (Jensen, 2008), paying specific attention to cognitive strategies that assist learners with making meaning and actively processing information is needed to counteract traditional/typical 'content delivery' models of online learning. Leveraging technology to include activities such as mind/concept maps, advanced organizers, reflective journaling/blogging, and collaborative writing activities provide students with opportunities to attach relevance and meaning to course content and to hence become active participants in their own learning process.

This session will attempt to bring to the forefront of conversation some pedagogically relevant strategies for designing and delivering online classes. Using a sampling of activities and technologies, we will situate the conversation within the framework of cognitive principles that can be extrapolated from the larger body of brain-based learning research.

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Active Student Response (ASR) Can Keep Students Engaged

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Abstract: As educators, we must realize the importance of instructional strategies that can easily be incorporated into lessons to help increase students' opportunities to respond, thus, increasing student achievement. The use of high and low-tech active student response (ASR) systems in post-secondary courses keeps the students actively involved in learning course content. In addition, in undergraduate courses designed for teaching candidates, ASR systems serve a dual purpose in helping the students realize their duty as future, licensed teachers to use evidence-based practices to increase achievement. This session describes the role of ASR in teaching and learning and explores the implementation of high and low-tech methods in higher education. Participants will discuss the benefits of promoting ASR, explore effective instructional practices to promote ASR, and learn ways to easily incorporate ASR into their instruction in post-secondary courses.

Literature Review

Instruction in higher education classrooms often consists of large group instruction in lecture format. In this format, students only interact with the lesson when called on by the instructor. Therefore, only a few students actively respond to the instructor's questions. Low achievers frequently do not have the opportunity to receive enough practice and feedback needed to acquire knowledge. Consistent research suggests student learning improves when teachers increase the frequency with which students respond during instruction (Brophy, 1986; Greenwood, Delquadri, & Hall, 1984). Active student responding (ASR) involves participation in class by answering questions and has been shown to be an effective way to improve student behavior and to increase academic skills of students during instruction (Maheady, Michielli-Pendl, Harper, & Mallette, 2006). One low-tech, efficient way to improve student achievement that can enhance student engagement is the use of response cards, boards, signs, or cards that can be held up simultaneously by students to display knowledge (Heward, 1994). Most research on ASR focuses on elementary or secondary students. However, there is growing evidence that active student involvement in post-secondary setting improves correct responses on questions (Kreiner, 1997), increases end of class quiz scores (Kellum, 2001; Marmolejo, 2004), and improves end of week quiz scores (Malanga & Sweeney, 2008). The use of a high-tech alternative for engaging students, "clickers," has also shown promising results as a valuable tool for improving learning in the large lecture classroom (Gok, 2011; Malanga & Sweeney, 2008; Smith, Shon, & Santiago, 2011). With well-documented positive results throughout the research literature, incorporating various methods of active student response (ASR) in post-secondary settings is warranted.

Goals and Objectives for the Practice Session

Following this session, participants will be able to:

- Demonstrate knowledge of the importance of promoting ASR
- Identify effective instructional practices that get students involved in learning
- Describe specific techniques for high and low-tech methods of ASR with students in higher education
- Incorporate ASR into classroom instruction to increase students' opportunities to respond

Description of the Practice Session

The aim of this session is to share numerous methods to encourage active student responding (ASR) during instruction. When students are engaged and actively participating in class, students learn more; therefore, participants will learn how to effectively include methods for increasing ASR in post-secondary classrooms. Response cards, guided notes, and choral responding are commonly used low-tech strategies for increased active student response. Handheld devices called "clickers" are a relatively new high-tech option to electronically record student responses and send them to the instructor for immediate knowledge of student understanding. This session will focus on examples in courses with preservice teachers prior to their student teaching experience in order to increase the likelihood that the teacher candidates will use response systems in their own future classrooms. In this session, participants will gain knowledge of the importance of promoting ASR with high and low-tech alternatives in the classroom. The learner will also gain knowledge of effective instructional practices, the benefits of using pre-

printed and write-on response cards, the benefits for using clickers for ASR, and specific techniques for using high and low-tech methods of ASR with students in post-secondary settings. The audience will participate in this session by actively participating with the material, discussing topics with peer groups, participating throughout session with response cards, and participating in a review game using response cards. Session participants will demonstrate knowledge gained by earning tickets for answering questions during final review game. Time will also be allotted for questions and answers.

Discussion

Given the fact that increasing opportunities to respond using ASR in the classroom produces higher achievement levels, this innovative approach serves a dual purpose when used in education courses. The teacher candidates benefit from the use of the response cards because of improved understanding of course content. Additionally, it is important for all beginning teachers to have knowledge of evidence-based instructional strategies; therefore, modeling this approach will enable the students in the classrooms of these future teachers to benefit from increased opportunities to respond, which improves student achievement. Furthermore, the instructor of the teacher education course gains formative data that can inform instruction to ensure students are meeting learning outcomes. Using various methods of ASR in higher education, especially preservice teacher training, creates a situation where all participants have positive outcomes. Regardless of the type of course, this instant feedback provides the instructor with valuable information to create an interactive learning environment by reteaching concepts, providing clarification, or stimulating further discussion based on students' understanding.

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Crossing the Boundaries: Models for Interdisciplinary Co-Teaching in Undergraduate Courses

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Abstract: Interdisciplinary co-teaching in higher education enhances the learning experience for both students and faculty. Students explore content from diverse disciplinary perspectives, while faculty expand their knowledge and pedagogical skills by engaging collaboratively in inquiry, teaching, and learning. Thus students build their critical thinking skills beyond traditional pedagogical approaches and observe faculty continuing their professional growth through challenging, thoughtful activity. At the same time, students and faculty examine current issues through multiple lenses, perhaps deriving deeper understandings. The presenters will describe their experience developing and teaching interdisciplinary undergraduate courses at a small college, as well as present research and practice-based suggestions for others considering the journey.

Literature review

Co-teaching, or team-teaching, has long been incorporated in classrooms from pre-school through college education. In higher education, the practice can be challenging in the context of faculty course load calculations, finding time and space for nonstandard class sizes or schedules, and a typical focus on discipline-specific knowledge and skills. In an environment that features increasingly complex issues, demands creative approaches to problem-solving, and prepares graduates to enter professional fields that cross traditional boundaries, college faculty have recently reported co-teaching in a variety of areas including medicine (Orlander, Gupta, Fincke, & Manning, 2000), sustainable development (Hoare et al., 2009), physics (Henderson, Beach, & Famiano, 2007), and health and social care (Crow & Smith, 2005). While acknowledging the challenges (Kohler-Evans, 2006), researcher/practitioners report benefits for both students and faculty. Students are encouraged to deal with difficult and complex topics creatively (Eissen, Hall, Tong, & Zupko, 2009; Kerridge, Kyle, & Marks-Maran, 2009); and engage in thoughtful, professional conversation (Woods, C., 2007). Faculty find that co-teaching promotes the "feel" of innovation (Henderson, Beach, & Famiano, 2007), benefits their own professional development (Crow & Smith, 2005; Orlander, et al, 2000), and may promote deeper learning in students (Lattuca, Voight, & Fath, 2004).

Goals and objectives

Upon completion of the session, participants will be able to:

- Compare varied models for interdisciplinary co-teaching;
- Understand and anticipate benefits and challenges to co-teaching;
- Identify opportunities for interdisciplinary co-taught courses in their institutions;
- Plan and develop their own co-taught interdisciplinary course.

Description of Practice

This presentation will describe three interdisciplinary co-taught courses at a small private college. The culture at this college encourages pedagogical innovation and interaction among faculty across traditional disciplines and departments. A revision of the core curriculum, currently in progress, introduces a new sophomore course co-taught by faculty from two different disciplines. With this shift already beginning, we continue to explore strategies to develop and deliver interdisciplinary courses that engage both students and faculty in challenging topics and creative problem solving.

The presenters will focus on three sets of courses they have designed and co-taught. These courses share important features while following slightly different models. Shared features include faculty from two different disciplines, course topics and themes that transcend a specific discipline, and student populations drawn from multiple major programs at the college. Variations include the number of credit hours students receive, goals of the courses, and students' class standing. Our experience with co-teaching includes:

- *Learning to Teach, Teaching to Learn*: Three-credit first year seminar for students entering education programs taught by faculty from education and computer science; introduces first-semester students to seminar and major content, academic expectations, and campus life; faculty share an interest in instructional technology as a tool for teaching and learning.
- *Children and Violence:* Three-credit upper-level elective course co-taught by faculty in justice studies and psychology and cross-listed in those departments; engages with complex issues contributing to children becoming victims of or perpetrators of violence; these disciplines naturally interface to address child maltreatment and youth violence.
- *Persuading People, Preserving Planet:* Four-credit sophomore-level course co-taught by faculty in psychology and environmental studies; initial offering of a new core curriculum course; confronts students with issues and challenges related to sustainability and changing human behavior.

In a panel format, we will provide a brief overview of each course, the model of co-teaching we followed, a central assignment or project, our reflections on the course's strengths, and suggestions for next time around. We will conclude our panel with suggestions for best practices for interdisciplinary co-teaching, reserving the final 10-15 minutes for audience discussion.

Discussion

Co-teaching may involve faculty through strategies as basic as sharing class time equally or as complex as sharing specifics of planning, teaching class sessions collaboratively, and co-assessing student work. As we talk with the audience about the possibilities for co-teaching, we will identify this range of complexity and suggest ways in which they can consider how co-teaching can benefit their students and their colleagues.

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Emerging Technology to Enhance Collaborative Learning and Student Engagement

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Abstract: Majority of the students are the generation who grow up and living in the world of technology. Instructors need to understand this and keep up with the technology that their students are using. It is important for instructors to know how to keep up with the rapid growth of technology. They need to be adaptable to the emerging mobile technologies. This practice session will demonstrate how the emerging mobile technologies can be used in classroom to engage students in effective learning and ensure positive outcome. Participants will view sample mobile technologies that can be integrated in the class, will learn how to provide better learning environment leveraging those technologies and how to improve technological skills to employ technology. Participant will discuss on different ways to incorporate those technologies into their own curriculum, and motivate students to study using mobile technology without sacrificing academic standard.

Literature Review

Integration of emerging mobile technology is now inevitable in every sphere of life including instruction and learning. Mobile technologies are new instrument for instruction in higher education. Many educational opportunities are now possible because of these technologies' unique characteristics and positive impacts on learning process. Consequently, increasing number of higher education institutions are adopting these innovative technologies as instructional tools. A new area of learning environment called *Mobile learning* or *M-learning* emerged that provides education to larger segments of the population (Abrantes & Gouveia, 20010). "M-learning, being the digital support of adaptive, investigative, communicative, collaborative, and productive learning activities in remote locations, proposes a wide variety of environments in which the teacher can operate" (Laurillard 2007, 172). Thus, mobile learning is anytime, anywhere seamless learning. A mobile device can impact learning outcomes by improving access to education while maintaining the quality of education delivered. A number of mobile devices are being used in learning environment are: laptop, net book, e-book (Kindle, Nook, etc.), tablet (iPad, Android), iPod, smart phone, etc. Also the emerging *cloud technology* that can be employed as learning tools are: Web 2.0, Blogs, Wikis, Social Media - Facebook, Twitter, LinkedIn, Google+, YouTube, etc. Web 2.0 is the perceived evolution of the Web in a direction that is driven by collective intelligence, realized by IT, and characterized by user participation, openness, and network effects that can facilitate collaborative learning. Collaborative learning is a social interaction involving a community of instructor and students who acquire and/or share experience or knowledge (Kamthan, 2009). Literature points to a variety of benefits that mobile technology could have on education. Mobile technology ensure personalized, learner-centered, situated, global, collaborative, and lifelong learning. Mobile technology can impact educational outcomes by improving access to education while maintaining the quality of education.

Goals and Objectives

This presentation will focus on how to integrate emerging mobile technologies in learning environment to enhance collaborative learning and student engagement. Upon completion of the session, participants will learn:

- The types of mobile technologies are currently being used in instruction
- What type of mobile apps are suitable for instructors' own curriculum
- How to integrate mobile technologies in class to achieve effective learning
- The benefits of using mobile technologies in learning process

Description of the Practice

Participants in this session will learn about different emerging mobile technology devices and apps that cam be employed in class as learning tolls. Two-thirds of online adults (66%) in USA use social media platforms such as Facebook, Twitter, MySpace or LinkedIn (Smith, 2011). Social media enable people to socialize, organize, engage and learn; hence, can be used for collaborative learning purpose. Students often learn as much from each other as

from instructors or textbooks. Blogs in social media can offer mechanism for peer-to-peer knowledge sharing and acquisition. Instructor and students can use blogs to express their opinions, promote dialogue, and support teaching and learning. Structured exercises and clear goals can further enhance the educational value of blogs. Instructor can set guidelines and expectations to maximize blogs' educational benefits (Luo & Gao, 2012). Participants in the session will learn how to use social media and other cloud technology for collaborative learning. Additionally, any given instructional strategy can be supported by a number of contrasting technologies, similarly any given technology might support different instructional strategies. But for any given instructional strategy, some technologies are better than others. To decide which technology to use for their instructional strategy instructors need to consider the accessibility, usability, privacy, intellectual property, workload, and time management factors of the technology. In the presentation, participants will learn how to find mobile technology that is appropriate for their curriculum and the criteria need to set for that purpose. The presentation will also review the benefits of employing effective mobile technologies as collaborative learning tools to get best learning outcome.

Discussion

As the advent of mobile technologies has deeply influenced the learning environment, these technologies are becoming a valuable tool for instructors and students. Mobile technologies allows a method of educational delivery that could be cost-effective (Cochrane, 2010). Mobiles enable immediate feedback that provide continued motivation and deliver collaborative learning process. Students learning outcomes can be positively impacted by collaborative learning. Mobile technology can also facilitate personalized learning that are effective in diverse learning situation and can increase student achievement, satisfaction, and success in class. Realizing that mobile technologies started playing a crucial role in education, an increasing number of colleges and universities are adopting these technologies as their instructional tools. Instructors and students can use mobile devices virtually at all major locations on campuses as more buildings and places are being connected with wireless networking. Libraries, lecture halls, cafeterias, and research centers on campuses are now equipped to provide wireless access (Sheng, Siau, & Nah, 2010). Consequently, it is important to know: 1) the type of mobile technologies are available, 2) which mobile is effective for a particular curriculum, 3) the measures need to be taken to find appropriate mobile apps, and 4) the benefit of using mobile technology in learning process. Without understanding these issues the collaborative learning using emerging technologies in higher education may be unachievable.

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Blogging in the Classroom: Does Writing In-Class Reflective Blog Posts Improve Learning?

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Abstract: Blogging has been implemented in higher education in a variety of formats and for a variety of pedagogical purposes. Short in-class writing assignments have also been used in a variety of higher education settings to enhance learning and active engagement, especially in large lecture courses. This presentation will address the use of structured blogging in a lower level university course, including a discussion of research underway in fall 2013. The study compares two sections of the same course - one includes brief in-class reflective blogging exercises while the other presents the reflective prompts as homework. Outcomes of this research, including results from a pre- and post-test assessment, will inform recommendations for practice. Following an overview of blogging practices and the discussion of current research, participants will be asked to engage in a discussion of how blogging could be implemented to meet course-specific learning objectives.

Literature Review

Blogging has been implemented in higher education in a variety of formats, from an electronic version of a personal reflective journal (Bouldin, Holmes, & Fortenberry, 2006) to group blogs (Cameron, 2012; Fischer, Haley, Saarinen, & Chretien, 2011) to the "hub-and-spoke" model (Walatka, 2012). Pedagogically, the literature discusses blogging with the goal of increasing active learning engagement (Cameron, 2012; Deng & Yuen, 2009), encouraging reflective practice (Kerawalla, Minocha, Kirkup, & Conole, 2009; Bouldin et al, 2006), and providing an opportunity for formative assessment (Walatka, 2012). Ultimately, the learning objectives of the course must determine the design and implementation of blogging, as different formats and assignments will serve different pedagogical purposes.

In addition to serving the pedagogical goals noted above, evidence suggests that brief in-class writing exercises can enhance learning. Stewart, Myers, & Culley (2010) found that students who completed short graded in-class writing assignments scored higher on exams. Other studies have found that short ungraded in-class writing assignments were also correlated with improved performance on exams (Butler, Phillmann, & Smart, 2001; Drabick, Weisberg, Paul, & Bubier, 2007; Nevid, Pastva, & McClelland, 2012).

Objectives

As a result of this session, participants will be able to:

- Describe multiple models for implementing blogging in a college/university level course
- Examine ways blogging can be incorporated into active learning exercises
- Evaluate the costs and benefits of devoting class time to reflective blogging activities
- View and discuss examples reflective blogging exercises used in an information literacy course
- Discuss outcomes of currently in-progress research comparing reflective blog posts assigned as in-class activities versus homework

Description

As part of an overall approach emphasizing active learning, the presenter has incorporated blogging into her sections of Academic Research and the Library, a lower level undergraduate course on information literacy. In Fall 2012 and Spring 2013, students wrote weekly reflective posts during class time, responding to prompts that were designed to reinforce lessons covered that week or get students thinking about the topic to be discussed the following week. The prompts were carefully crafted to emphasize the application and transferability of skills. Homework assignments were also posted to blogs. Students were then required to post comments on classmates' posts, similar to common requirements for posting in discussion boards.

The in-class writing takes valuable class time – does it actually serve the intended goal of solidifying the new knowledge on the spot, or would students learn more by using that time for more hands on practice, and then writing a similar post within the days after the lesson?

This presentation will discuss a comparison of two sections of the course in Fall 2013. One section will blog on the Wordpress platform and use class time for reflective posts. These students will then have to post comments on classmates' reflective posts as homework. The other section will use Blogger, where they will post reflective essays as homework assignments. This section will not be required to comment on classmates' reflective blog posts. After the semester ends, the presenter will compare outcomes, using a pre- and post-test, to determine the comparative benefits of using class time for blogging and of requiring students to comment on classmates' reflective posts.

Discussion

This presentation will introduce a variety of models for implementing blogging into higher education courses and explain the reasoning behind the version chosen for this course. It will then explain the research described above and report on the outcomes available by February, including a description of how blogging is practiced in this course. The presenter will then facilitate a discussion of how participants have used blogging or how they might incorporate it into future courses.

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Planning for Choice: Leveraging New Literacies to Differentiate Instruction

Katie Dredger, *James Madison University*

Abstract: This practice session will review the theoretical underpinnings of teaching practice that allows for student choice in four areas of instruction: course content, processes of learning, student interests, and course assessments. Grounded in constructivist and New Literacies theory, teaching that allows for student choice supports thinking and sets a foundation for lifelong thinking and learning in specific areas of study. The digital tools and applications available today allow for teachers to differentiate instruction to meet the needs of diverse learners and can help to develop students that have the autonomy and agency to invest in their individualized learning experience.

Literature Review

Participants at this session will be invited to consider making the dispositional shift in teaching practices from centralized expertise to shared expertise and from fixed knowledge to individualized thinking on the part of students. Dewey (1916) distinguished knowledge from thinking, suggesting that thinking is individual and personal. Thinking suggests "an inquiring, hunting, searching attitude" (p. 345). Teaching to diverse learners means allowing for varied ways that students grasp concepts within a discipline (Alvermann, Phelps, & Gillis, 2011; Mintz, 1998; Salisbury-Glennon, Young, & Stefano, 2001). Within this paradigm of inquiry is the expectation that students must be allowed to generate authentic questions guided by the instructor (Bain, 2004; Rademacher, Hildreth, Bridges, Walker, & Callahan, 1998). Because New Literacies is a dispositional theory that suggests that today's learners accept that centralized expertise has been replaced by distributed expertise, the information age of today demands that classrooms allow for this distributed expertise (Dredger, Woods, Beach, & Sagstetter, 2010; Knoebel & Lankshear, 2007; Leu, Kinzer, Coiro, & Cammack, 2004). When students are given autonomy in making even limited choices in classrooms, they become more responsible for constructing meaning that is personal and meaningful (Dredger, 1993; Kohn, 1993; Zmuda, 2008). Differentiation, the heart of this practice session, means that instructors value varied types of classrooms learners and see that utilizing students in making classroom choices will help each individual student develop greater understandings of course content (Tomlimson, 2003).

Objectives of Session

Upon completion of the session, participants will be able to:

1. Recognize how emerging digital tools allow flexibility in classrooms for the texts, projects, and deadlines that are assigned.
2. Consider differentiated choices, either limited or open, that students can make to optimize learning.
3. See New Literacies teaching as a dispositional shift in this current information age.
4. Apply principles of a differentiated classroom to the content and process that are taught and to the varied ways that students can demonstrate conceptual understanding of a course of study.

Description of the Practice

Bain's (2004) analysis of outstanding university teachers showed that good teaching consists of dispositional positions on the practice of teaching, specifically that student-centered instruction be at the forefront of practice. Because of emerging digital tools and large amounts of readily available information, offering choice to promote thinking is easier in today's information age. With this grounding, allowing for student choice as much as possible has opened up deeper motivation for student learning in the study of even advanced topics and inquiry.

Differentiation with Emerging Tools

Differentiated classrooms ideally fall into four areas that may be differentiated: 1) content, 2) process, 3) affect, and 4) product. The content of classroom instruction is most easily understood by the example of the assigned textbook and stated learning outcomes that may be found on any instructor's syllabus. In order to offer choice in this area, an instructor may have different course modules that students can choose from, or may simply suggest that students choose from two or three course textbooks. Varied texts, including documentary films, webinars, or digital course packs may be offered as ways that students can access material in new ways. The second tenet of a differentiated classroom is process. One of the ways to offer choice in process is in

offering choice in due dates on assignments. This means that students decide, within windows assigned by the course professor, when assignments must be submitted to course management software sites. Professors may choose to allow students to upload podcasted discussion on a topic instead of the traditionally typed responses. Not only does this capitalize on the microphones built into most computers, it lends authenticity to a task where plagiarism by way of cutting and pasting may plague instructors. In order to differentiate by affect in a classroom, university instructors may conduct online interest surveys to find areas of interest of students and place students in affinity groups on the topics of the course. In order to use emerging tools to allow for student choice in product, attendees of this conference session will be introduced to varied ways that students can demonstrate their learning instead of on one final exam as a measure of conceptual understandings of course content.

Example of Practice

Participants in this session will have an opportunity to see sample course syllabi that incorporate student choice. They will participate in group brainstorming sessions wherein varied disciplines can consider how to offer individualized experiences for student learners so that the students are supported as they take responsibility for continued learning and have more autonomy in their own educational experiences. Because of tools and ease of access to information that are available to learners today, this dispositional shift to distributed expertise is possible.

Discussion

Now that the internet is available in all classrooms, the ideal that the professor in a classroom is the only expert on any subject has shifted. Embracing this notion allows for varied perspectives in the classroom. This shift also makes the course instructor a learner along side of the students. Today, locating and distilling information, discerning biases, and carefully choosing between varied and easily accessible scholarship is more important than knowing facts of any content area. While specific facts of each discipline remain, how we get to this content can be different for each student. At the minimum, instructors may let students choose to read one of two academic articles or research reports. This choice gives learners autonomy and agency. When they make the shift to being responsible for their own learning, then the teacher can begin to see that the learning that any course offers is just an introduction. We need to see that our instructional practices are a springboard to future learning. As such, we introduce learners to the texts of the field of study. These texts are always changing and are in varied forms. Although we may assign readings from textbooks, academics see that the writings of any field of study now come in the form of list servs, academic blogs, conference papers, peer-reviewed journals, practice reports, tweets, and other forms. When students are offered the agency to follow their own academic questions and to explore the digital spaces that offer proposed answers to these inquiries, university instructors and assigned text books are an additional invaluable sources instead of the only privileged places where knowledge resides.

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The Conversation of Forbidden Conversations: Using Taboos to Increase Student Engagement and Effective Teaching

DorothyBelle Poli, *Roanoke College*

Abstract: Upon entering college, students are hungry to learn about subjects not previously discussed in their curricula. However, professors dive into the discipline specifics and work on content-heavy lectures resulting in students turning off and not being engaged. Often, professors give a lot of traditional or safe examples for a particular topic. This conversation is encouraging all instructors to strive to engage students by talking about topics that are considered taboo. Examples like sex, drugs, and religion can easily become the main lecture anchor for any discipline. The result is engagement: classes of students who pay attention, ask questions, and dive deeper into the topic during their own time. Through the conversation, participants will identify taboos for their own use and as a group will discover new approaches to using these taboos.

Literature Review

Since it was reported that engagement was critical for student learning, educators have been searching for new and unique ideas to bring into the classroom. Undergraduate institutions have been encouraging active and collaborative learning techniques, and want students to experience new things. Faculty must interact with students and challenge higher-order cogitative activities (Umbach & Wawrzynski 2005). Instructors have become creative in their examples and in methodology. Yet, we still have these conversations about engagement! In order to generate true inquiry into a student population, educators must find ways that continue to engage students *outside* of class. Therefore, using taboo topics that become the center of late night dorm chats to teach course content may be an unexplored area for many of us. Students are often sheltered in high school from topics that are not parent approved. Topics of sex (Poli, 2011b), drugs (Poli 2011a), religious questioning (Poli & Lassiter 2012), evolutionary theory (Poli et al. 2012), and blowing things up (Vogel et al. 2011) are unique entries into the undergraduate interests that have presented learning benefits beyond the initial course material. Using tattooing to teach biology and physics continues to draw data (Fleenor, Poli, & Rearick 2010; Poli, Fleenor, & Rearick 2012). All of these examples have led to increased student learning and engagement; all of these topics were questioned and considered taboo to reviewers and colleagues alike.

Goals and Objectives

At the end of this conversation, session participants will have been

1. introduced to examples of successfully implemented taboos into course lectures (Step 1 in Facilitation Techniques),
2. encouraged that taboos would work for student engagement in any discipline (Step 1 & 2 in Facilitation Techniques), and
3. provided the opportunity to find taboos that would work within their own courses and to consider ways to implement those taboos (Step 3 in Facilitation Techniques).

Description of Topic to be Discussed

Taboos can be something that instructors feel is too risky to enter a classroom conversation but this session is designed to show an instructor how to use these topics in a positive manner. I have published several papers around taboo topic use within a classroom (e.g., using condoms to teach the scientific method, using tattooing to teach biology and physics). I successfully have implemented many taboo topics in courses with different focus, audience, and levels and aim to lead others into the power of their application.

Facilitation Techniques

Step 1: This is a technique that can be used in any discipline, by any instructor, if specific "rules" are followed. Therefore, after a brief 15-minute TED Talk inspired PowerPoint presentation about how topics like sex, drugs, religion, and tattooing have been the main focus of lectures (within a freshman writing course, and major and non-major science courses) the conversations will begin.

Step 2: As session participants enter the room they will be given a number of 1-5 that will aid group formation later in the session. As a large group, session participants will be asked to brainstorm a series of taboo topics (general or specific) for 5 minutes; the group will form a master list at the front of the room. Then in smaller groups (5 minutes), the participants will be asked to pick a discipline that could be linked to each taboo. This will be easy and allow participants to see how any field could use this technique. Utilizing the jigsaw method, session participants will be asked to challenge those original matches by adding additional (and non-obvious) disciplines to those same taboos. (Note: if the audience size or rooms do not work for movement, then conversations will be held at the group level.)

Step 3: After the jigsaw, the large group will reconvene and conversations will be encouraged by asking the following questions:

- How easy was it to think of taboos to fit the original matches?
- How easy was it to match taboos to additional disciplines?
- Share a taboo you could use and how you think you may bring it into your class?
- Are there other questions or ideas you would like to bring to the group?

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ePortfolio Effectiveness: A Conversation on Accessing the Evidence

Jessica R. Chittum, *Virginia Tech*
Lauren H. Bryant, *North Carolina State University*

Abstract: As ePortfolio becomes more ubiquitous in higher education, practitioner access to empirical research on ePortfolio becomes imperative. In this conversation we seek to engage educators in an exchange of ideas to address the lack of accessibility of existing empirical research on ePortfolio via a web-based tool. Through previous inquiry into peer-reviewed literature regarding ePortfolio (Bryant & Chittum, in press), we found that there currently exists a lack of empirical evidence on the effectiveness of ePortfolio related to learning outcomes and that, often, the evidence that did exist was difficult to locate. In the beginning of the session the authors will introduce a web-based tool designed to help practitioners easily locate high-quality ePortfolio research, especially empirical research. Included in this tool is a function for users to also suggest peer-reviewed ePortfolio research articles that are not currently included in the database. Participants in the session will have the opportunity to navigate the site, discuss its usefulness, and make suggestions to improve the tool based on their own needs.

Literature Review

The use of ePortfolios in higher education has increased dramatically in the last decade. Colleges and universities are now using ePortfolios in individual classes and institution-wide, where incoming freshman create and update their ePortfolios throughout their entire undergraduate careers. As practitioners make greater use of this pedagogical tool, and devote time and resources to its implementation and use, it becomes increasingly important that they have access to empirical research on the effectiveness of ePortfolio to inform their decision-making. Through our previous inquiry into the body of literature regarding ePortfolio (Bryant & Chittum, in press), we found that our sample of the peer-reviewed research fell into four categories: *Descriptive*, including theoretical arguments for and personal experiences with ePortfolio; *Empirical, Affective*, where articles presented original data on students' affective responses to the tool; *Empirical, Outcomes*, which included research that tied ePortfolio use to student learning outcomes, and *Technological*, where articles presented data and models on the structure and usability of ePortfolio platforms (see Table 1; Bryant & Chittum, in press).

Within the *Descriptive* category, the theoretical foundations for the use of this tool were strong, and cited improved reflection, engagement, learning outcomes, and knowledge integration in users (Acosta & Liu, 2006; Doig, Illsley, McLuckie, & Parsons, 2006; Hartnell-Young, 2006; Heinrich, Bhattacharya, & Rayud, 2007; Jenson, 2011; O'Brien, 2006; Peet et al., 2011; Riedinger, 2006; Sherman, 2006). Although these theoretical arguments are sound, they are not sufficient to justify widespread use of ePortfolios. Additionally, empirical articles on the affective responses to this tool do not provide sufficient evidence for its use, given that, often, students do not prefer the pedagogical strategies that result in the greatest learning (Milheim, 1989; Morrison, Ross, & Baldwin, 1992; Ross, Morrison, & O'Dell, 1989; Steinberg, 1989).

Through this research, we came to three important conclusions: first, that most of the literature on ePortfolios felt into the *Descriptive* or *Empirical, Affective* categories. Second, we found that there was a dearth of empirical research on the impact of ePortfolio and student learning outcomes, with fewer articles in the *Empirical, Outcomes* category (Bryant & Chittum, in press). Third and finally, we found that much of what was considered the "seminal" work of ePortfolio research was difficult to find or locate. We hope to expand on our third finding through the creation of a web-based tool that will allow researchers and practitioners to compile and locate relevant ePortfolio findings.

Goals and Objectives

In a previous examination of the current state of ePortfolio research, we found that empirically validated research examining the effect of ePortfolio as an educational tool on student outcomes is less abundant in the literature than expected (Bryant & Chittum, in press). In particular, we had some difficulty locating peer-reviewed, outcomes-driven publications, especially relating to the leaders in the field, during several iterations of the search. As ePortfolio grows in popularity, so too should scholarly research which can guide planning, design, and implementation of pedagogy consistent with our institutions' goals in encouraging Scholarship in Teaching and Learning (SoTL). Through this conversation, we will first describe the difficulties we had in locating peer-reviewed research, followed by a brief overview and conversation concerning the current body of peer-reviewed research updated for 2013 from Bryant and Chittum (in press). Following this, we will display an online resource we developed to meet this need, and enlist the participants' support in refining the tool in terms of design, content, offered resources, usability, and any additional areas of need and/or resources we have overlooked through a conversation with interested (and perhaps invested) peers. Our guiding question is: "What do *you* need from this tool?" Our primary objectives include formative feedback and ideas for further development of the online resource, in addition to directions for future scholarly research and web-based endeavors.

Description of Topic to be Discussed

We plan to begin with an overview of our previous research findings, which will be published in Volume 3, Issue 2 of the *International Journal of ePortfolio* (Bryant & Chittum, in press). Further, we will discuss changes in these data updated to account for developments in 2013. Our focus during this part of the conversation session will be on our description of this process, including our difficulties in locating the important, seminal (peer reviewed) articles, which will segue into a discussion of an online "tool" we developed to meet that need. Our primary objective is to enlist the participants' assistance in helping us improve the tool so that it is useful and comprehensive.

Analysis of our sample, including a comprehensive list of those peer-reviewed publications we could easily access with resources we believe to be similar to our compatriots in seeking ePortfolio knowledge, makes clear that and increased focus on original data presented in empirically validated research focused on student outcomes is needed. We had particular difficulty locating peer-reviewed sources from the better-known figures in the field.

Our search for peer-reviewed and student outcomes-oriented publications was fraught with difficulty, and spanned two years. To alleviate others' potentially difficult search for the same, we developed a website in which we organized these data and made the resources accessible to a wider audience. Through this conversation session we hope to enlist the help of the participants in perfecting this tool by providing feedback on how they might utilize it and what aspects of the website are still needed or could be improved/modified/removed/added. We will present the website as a "living document," in that, with the help of the conversation session and website visitors, the database of resources will continue to grow and improve.

Facilitation Techniques

We will facilitate the discussion by first presenting our experiences (interactive question: "What do *you* know about ePortfolio?"), research, and an overview of the primary components of our online tool (we will share the link with the group at large for access on personal tablets and laptops during the session), followed by leading questions, including: "What do *you* need from this tool?" "What is one thing you want that you do not see?" "How could this be improved?" What do you like about this tool?" "Suggestions for applications, organization, technological tools?"

Discussion will be open during our initial presentation in that we will welcome others sharing their similar experiences and current research and use of ePortfolio. Depending on the size of the session, we hope to begin with introductions including the following information: name, institution, why I'm here, one adjective I use to describe ePortfolio. We will conclude by passing out information for website access, as well as providing time to address comments we did not discuss post-session.

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Thursday

February 6, 2014

Session 8

11:20-12:10 PM

http://www.cider.vt.edu/conference/

Creation of a Course Facebook Page to Increase Classroom Engagement

Deborah J. Good, *Virginia Tech*

Abstract: With over 1.5 billion users, including most college students, Facebook use as an educational tool is growing. In this study, a Facebook page was created for a large enrollment nutrition course, and student engagement with, and attitudes about the page were assessed using both Facebook metrics and student surveys. The majority of the class (69.4%) joined the page, and 97% of those remained members even after the academic term ended. Student engagement with the page was lower than expected and declined during the semester, with the exception of posts specifically mentioned in class, or relating directly to course (i.e. tested) material. Only 11.6% of students reported viewing the posts daily, and few "liked", "shared" or commented on posts made by the professor. The results suggest that use of bonus points for engagement (likes, clicks, comments, posts) or the use of directed questions based on class material as the Facebook post should further engage students outside of the class time.

Literature Review

There are over 1.5 billion active users of Facebook (Noyes, 2013). In 2008, The Horizon Report described "social operating systems" as an emerging educational tool in the 4-5 year range. This year, 2013, marks the end of that hypothetical range. When first designed in 2004, Facebook was used only as a social networking site for college students, as only those with a ".edu-type" email address could register for an account (Nguyen, 2004). College students still make up a major group of Facebook users. However, the majority of college students still use Facebook as a social site, and not as an educational medium. In studies that examined educational uses of Facebook by college students, the results are disparate. While some studies report motivated use of Facebook news stories, websites and comments by students (Roblyer, McDaniel, Webb, Herman, & Witty, 2010; Schroeder & Greenbowe, 2009), others suggest that Facebook users have lower grade point averages, and spend fewer hours per week on school work, when compared to non-users (Kirschner & Karpinski, 2010). Students spend about 12.35 hours per week going to class, and 5.43 hours in personal communication through social networking sites such as Facebook (Hanson, Drumheller, Mallard, McKee, & Schlegel, 2011). Thus, while students clearly use Facebook as a social medium, is unclear whether a Facebook course page can provide true pedagogical tools, and if students want to engage with professors in this social medium during non-class times. In this study, a Facebook page for a 235-student metabolic nutrition course was created. Students were asked to provide survey data and comments about their usage of the site, and Facebook post statistics, and student grades were analyzed.

Methodology

Students were enrolled in a department-required metabolic nutrition class, which focused on the roles of vitamins and minerals in metabolism, nutrition and health, and was at part of departmental requirements at a state university. Membership in the Facebook page was not required for participation or grading in the class, and a pre-survey was used to determine student interest. The IRB approved the study as "exempt" and the Facebook page was set up as a group education themed page (*Figure 1A*). The "education" category was chosen for the page. Daily posts were made during the academic semester (excluding weekends). Sakei-based polls and quiz surveys were used to collect student data. Facebook tools "Page Insights" were used to collect post-specific data, trend analysis, and total "likes" of the page or post. Students were informed of their involvement in a research study at the end of the course prior to taking an online survey. All data was collected into Excel™ workbooks, where averages, standard deviations/standard errors were calculated and graphs were made.

Data Analysis and Results

Membership: Of 235 students enrolled in the course, the majority (88%) indicated that they would join the page, and 21% indicated that they would post on the page. These numbers are slightly higher than the total number of individuals who joined the page (170 as of 8/19/13, with an average of 162 individuals during the course semester), representing 69.4% of the class of 235 students. Of note, there was no difference in the average final grade for students who took the post-survey and indicated that they joined the Facebook page, compared to those who indicated that they did not join the page (84.99 ± 7.71 versus 84.49 ± 8.06, *N.S.*).

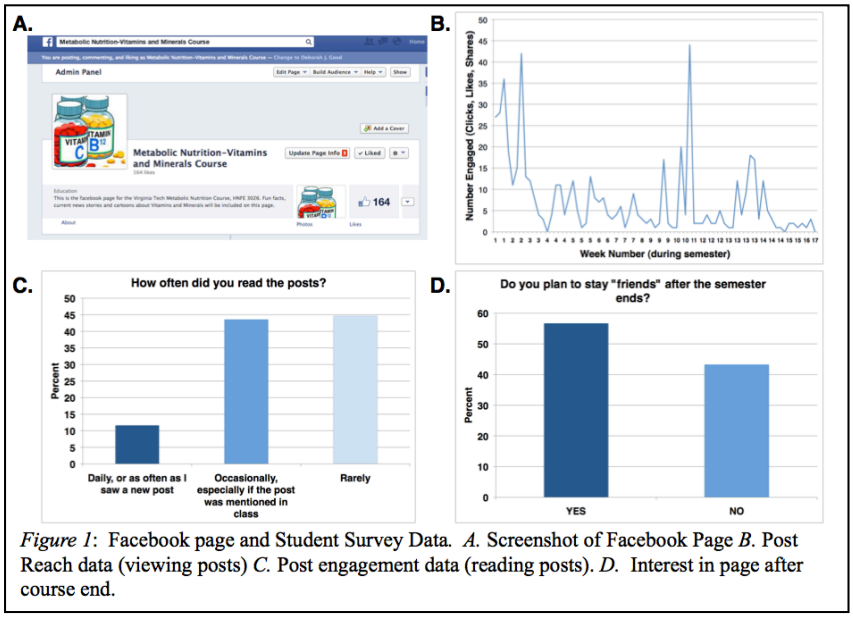

Figure 1: Facebook page and Student Survey Data. *A.* Screenshot of Facebook Page *B.* Post Reach data (viewing posts) *C.* Post engagement data (reading posts). *D.* Interest in page after course end.

Reach and Engagement in the Facebook page: After the first two weeks of class, there was a decline from approximately all readers viewing the links (reach) to an average of approximately 92 readers viewing the post or 56.7% of the Facebook users of the page. Survey data from the students and comments indicated that the students were more engaged with the page if the article or information was mentioned during class. However, approximately 45% of the students indicated that they rarely viewed the information on the Facebook page, and this was supported by Facebook tool data, showing an average engagement of about 7.5 users per post, and less than 1 "like" or share per post (*Figure 1B, 1C)*. While student engagement declined, 56.7% students indicated that they planned to continue as members of the page following the end of the course (*Figure 1D*), and as of 3 months following the survey, there are still 164 (96.4%) page followers.

Individual Student comments on the Facebook page: Based on individual student responses collected from the post-survey were collected, many students felt the Facebook page provided facts about nutrition, vitamins and minerals that related to every day life, and made class material more relevant for them. Those students who posted a more negative comment either stated that they were not interested in content that was supplemental and not required for the exams, or that posting a daily review question or other incentive for getting bonus points for using the Facebook page might entice them to use the site more than they did.

Conclusion

In summary, the majority of students enrolled in the metabolic nutrition course joined a Facebook page, which provided news stories, and anecdotes on vitamins and minerals, even though no course grade or bonus points were associated with joining. Reach and engagement decreased as the semester progressed, which could be due to increasing demands on student time, or decreasing interest in the material posted. Based on these data, future use of the Facebook page will continue to include relevant news stories and posts, but also an opportunity for students to receive bonus points for posting stories or making comments on the professor's posts. This strategy should increase page reach and engagement for, thereby creating an effective individualized online supplemental learning environment for the course.

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"Do You Want to Take a Survey?" Exploring Tools to Increase Undergraduate Student Response Rates

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Abstract: Low survey response rates are a pervasive problem in research on undergraduate students. This study aims to address the problem of low response rates by finding the best method of data collection that satisfies the needs of the researcher while grabbing the attention of the student. In particular, this study focuses on discovering the most effective method for collecting data about student's experiences learning engineering in real-time. Real-time data collection for this study is described as gathering information about experiences within the context of the current situation. Capturing data in the moment helps to eliminate possible memory loss with regard to experiences and also clarifies the context of the question. Using focus groups, this study compares undergraduate students' perspectives on data collection tools from popular social media, institutional, and traditional online survey software. The outcomes from this study include ways of prompting students to take the surveys (impetus) and suggestions for the format of the survey to increase response rates. Surprisingly we found that students suggested pen and paper as a top choice over electronic methods, even though this approach was not among our suggested options. These outcomes can help researchers develop effective strategies for real-time data collection.

Literature Review

Students, particularly in higher education, are constantly bombarded with surveys imploring their opinions on specific issues. In higher education, and across many research contexts, response rates remain low. Researchers have investigated low response rates from many perspectives, in one case finding that the pervasiveness of computers on a campus contributes positively to response rates (Porter & Umbach, 2006). Therefore, we anticipated that using electronic means of collecting real-time data would increase response rates. However, given the trend towards low response rates to surveys in general, we thought it prudent to investigate students' perspectives before investing further resources into survey development tools. Response rates are particularly important for the context of our study which includes real-time data collection. Grounded on the Experience Sample Methods (ESM) framework (Hektner, Schmidt, & Csikszentmihalyi, 2006), real-time data collection means gathering information about experiences within the context of the current situation. In our study, we want to gather information about engineering students learning in engineering classrooms. While many instruments have been developed that measure success in academics using different learning strategies, very few (if any) have focused on collecting data in a real-time format as students are learning in class. This study aims to address this problem by finding the best method of data collection that satisfies the needs of the researcher while grabbing the attention of the student.

Methodology

Focus groups with semi-structured questions (Patton, 2002) were used to gather information about a series of proposed survey tools including social media such as Facebook and Twitter, standard survey software such as Qualtrics, and classroom technologies such as clickers or interactive software. Our intention was to determine which survey tool would be the most effective in garnering student responses and why. Our focus groups consisted of students enrolled in either a summer pre-college preparatory engineering program or participants in a summer research program for engineering education. Two focus group sessions were conducted over the course of the summer. The focus groups were different in size with one consisting of one person and the other consisting of eight people. Despite this size difference, themes were consistent across each group such that we believe the samples are representative of the larger population. Participants were recruited in-person by a study co-investigator though two researchers conducted each focus group together. Questions focused on the students' prior experiences with surveys, the types of survey tools to which they are most likely to respond, and their willingness to participate in surveys given during class periods. A presentation was shown to give examples of several different real-time survey tools. Focus group interviews were recorded, transcribed *ver batim* and analyzed using open coding (Miles & Huberman, 1994). The interviews were reviewed (audio recordings and transcriptions) until a finalized set of codes emerged. The researchers discussed the coding and final codes finding that they grouped into two main categories: format and impetus. *Format* described the proposed survey tool while *Impetus* gave the reason for a student completing the survey in class.

Results

Surprisingly, our results demonstrate that students prefer pen and paper for real-time data collection in classroom settings. This method emerged in both focus groups even though it was not presented as an original option in the example presentation. The stated reasons for selecting pen and paper included a desire to be free from on-line distractions, having the ability to add comments in the margins if the stated questions missed key points (similar to the idea of free response boxes on quantitative surveys), the pen and paper and the presence of the researcher (survey distribution and collection) are physical reminders to do the survey. These reasons cover both *Format* and *Impetus* categories. We also found that it was important to students to be able to give their feedback to instructors for the purpose of course improvement, though some preferred more anonymity in such responses than others.

Table 1: Final Codes, Sub-codes and Definitions

Code	Sub-Code	Definition
Format	Pen and Paper	Participants mention a preference for or against pen and paper
	Short and Simple	Preferences on length and complexity (all mentions seemed to be short and simple)
	Free Response Box	Mentions of liking or not liking free response boxes on surveys
	Electronic Formats	Mentions of liking or not liking any of the proposed electronic formats
	Anonymity	Preferences for anonymity
Impetus	Opinion matters	Reasons for taking or not taking a survey that has to do with their opinion being important to a person, to research, as feedback, etc.
	Pen and Paper	Mentions that pen and paper serves as a physical reminder to take the survey, there is also often a person present evoking a desire to help the person
	Incentives	Mentions of benefits of tangible incentives

Discussion and Conclusions

We believe these research study outcomes will help researchers increase survey response rates particularly with regard to real-time data collection. Our assumption was that students would choose a survey tool related to technology because of the current generation's integration of technology. We set about with the idea that we needed to find the right technology to appeal to students and minimize classroom disruptions for the students and instructor. However, we were surprised to find that student prefer pen and paper which was contrary to our original assumption. Participants believe that pen and paper surveys would be the most effective in format and impetus in getting students to take the survey. They also believe this would be the least disruptive to class learning as students would not be tempted to use electronic media beyond the survey for social networking and internet searching during class. Implementation of the pen and paper method in real-time will be a complex task even though it is low technology. For example, the decision of when to pass out the tools during class and alerting the students of when to answer the question will depend on the lecture structure of the class, the professor's teaching style, and the layout of the classroom.

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"Flipping" an Online Course Using Google Hangouts

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Abstract: Interactive learning is vital to schooled learning because it encourage and enables the exploration and application of knowledge. The difficulty of providing for this learning-based interaction among students who never meet in person has been a continuing concern in online education. In this session I will discuss and demonstrate five ways I was able to use Google Hangouts to structure "virtually face-to-face" discussions and activities in an online class and how my students responded to these opportunities. I will then facilitate an open discussion during which participants will share additional strategies and develop ways in which one or more of the strategy(ies) presented or shared might be most useful in their own practices.

Literature Review

Current constructivist theories of learning (e.g., Piaget, 1970; Rogoff, 1990; Vygotsky, 1978) hold that people learn best through social interaction around authentic activities and questions because it is through exploration and application of knowledge that people learn most and best retain that knowledge. Though traditional lecture-based instruction remains a dominant mode of teaching (Chaudhury, 2011), those concerned with higher education pedagogy have long sought alternatives that would better foster this sort of interactive learning (e.g., NIE, 1984). An increasingly popular strategy in K-12 education, now gaining a foothold in higher education (Authors, 2013), is colloquially known as "flipping" a course. A "flipped" course reverses the traditional course design, so that "instruction that used to occur in class [e.g., teacher lectures] is now accessed at home, in advance of class. Class becomes the place to work through problems, advance concepts, and engage in collaborative learning" (Tucker, 2012, p. 82; see also Bergman & Sams, 2012). In face-to-face classes, this is usually accomplished with the aid of video and online technologies. Ironically, most completely online courses lack an effective interactive space for students to do this type of real-time, collaborative learning.

Lack of such interactivity has been a serious concern in online learning since its early days (Muilenburg & Berge, 2005; Song, Singleton, Hill, & Koh, 2003), and remains a significant problem to this day across all academic areas (Baran, Correla, & Thompson, 2013; Keengwe, Adjei-Boateng, & Diteeyont, 2013). Indeed, the high rate of student attrition in online courses is partly attributable to the sense of isolation and disengagement students can experience due to the lack of familiar types of social interaction (Roberts & McInnerney, 2007).

Description of Practice

For all of these reasons, I became determined that my online students should be able to experience, as nearly as possible, the kinds of learning interactions that students in my face-to-face classes experience--flexible large and small group discussions and problem-solving activities, with and without teacher mediation, occurring in real-time (without artificial turn-taking constraints), orally (without the constraints of typing and reading), and with the added cues of vocal and facial expressions.

Google Hangouts is a free video-conferencing tool in which up to ten people can interact online in real-time both orally and visually, as well sharing screenshots, videos, and documents. During this session, I will model five discussion structures I developed using *Hangouts* that allowed my students to interact "virtually face-to-face," discussing pros and cons, potential problems, and data on student responses:

Large group discussions - Because I had 15 students, I scheduled biweekly, 75-minute large group meetings back-to-back, each with 7-8 students (*Google+ Pro* would permit meeting with all 14 students at once). Students had already accessed articles, videos, and screencast mini-lectures I had recorded and posted on YouTube, so most large group meetings centered on discussion of key points and questions raised by these materials, plus short Q & A sessions, when students could ask me questions about upcoming assignments or resources for projects.

Virtual "Show & Tell" - In these large group sessions, students would share digital products, in draft or completed form, and be able to get immediate feedback from their peers, allowing them to improve their work prior to turning it in, and increasing students' engagement in assignments, since I was no longer the only audience.

Small, break-out groups - Just as in f-t-f classes I would often divide students into small groups to share experiences, answer questions or discuss case studies, *Hangouts* enabled me to quickly "invite" students into small discussion

groups and then bring them back to report on their discussion. I was even able to "eavesdrop" on these discussions, shifting my focus from one group to another, just as I would in a f-t-f classroom.

Independent project groups - Similar to project groups that would meet on their own outside of a traditional f-t-f class, the interaction among students in these groups who lived many miles apart was greatly facilitated by their ability to meet and share and edit documents through *Hangouts*.

The "Virtual Poster Session" - One of the most unusual uses I developed for *Hangouts,* this interaction structure allowed students to quickly present the findings of their individual Student Expertise projects to one or two peers, and then rotate, allowing each student to "visit" the "poster" of every other student during the session.

Goals of the Session

Participants will have the opportunity to (1) access research supporting the need for more and better student interaction in online learning environments; (2) observe demonstrations of five specific discussion structures using *Google Hangouts* that can facilitate real-time, face-to-virtual-face (i.e., both audio & visual) sharing, discussion and problem-solving among students, both with and without instructor monitoring/participation; (3) consider evidence from student products and feedback about the benefits and drawbacks of using Hangouts in these ways; (4) share other strategies they have used or considered to facilitate such sharing, discussion, and problem-solving in online instruction; and (5) discuss and develop ways in which one or more of the strategy(ies) presented or shared might be most useful in their own practices, and ways to evaluate their effectiveness when tried.

Discussion

Students on the whole have responded positively to the opportunities for virtual f-t-f interaction offered through *Google Hangouts*, with one who is an IT specialist at our university remarking after our first meeting that "This is so much better than Wimba!" Discussion has been brisk in most sessions, with overlapping talk and laughter and civil disagreements and spontaneous sharing of relevant personal experiences, just as you would find in the best f-t-f classroom discussions. I also feel I know my students much better than I could have, had I only encountered them as typed words in a Discussion Forum. As a teacher in higher education, I believe I not only have the responsibility to help my students learn as best I can, to which research has shown this sort of interaction to be crucial, but also to demonstrate practices my students can eventually use in their own work and lives (Authors, 2005), whether as teachers or business professionals or community leaders. *Google Hangouts*, with its free access to anyone, flexible and user-friendly structure, and multiple affordances for sharing live talk, text and video, has proven very helpful in meeting these two goals.

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Introducing and Assessing Learner-Centered Principles To and Among the Next Generation of College Professors

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Abstract: This practice session will provide an overview of a graduate student seminar developed to introduce future teachers to the concept of learner-centered pedagogies, as well as an assessment study designed to measure the extent to which graduate students adopted a more learner-centered approach as a result of participating in the seminar. Session participants will engage interactively with the session facilitators by taking portions of the assessment and participating in a mini-demonstration of a portion of the seminar. A discussion will follow on how session participants may use components of the seminar and/or assessment in their work with graduate student or faculty professional development.

Introduction and Review of Prior Literature

In 1995, Barr and Tagg fundamentally changed the landscape of college teaching and student learning with the publication of "From teaching to learning—a new paradigm for undergraduate education." While the concepts they introduced in their work were not new or even developed by the authors, their use of the terms "instructor-centered" and "learner-centered" curricula provided a name to the growing movement away from the style of college teaching that focused primarily on the passive transfer of information to one in which students actively co-construct their own meanings.

It is now generally acknowledged that student learning is better achieved through a dynamic process that engages student motivation and active learning (Bonwell & Eison, 1991; Huba and Freed, 2000; Schunk, Pintrich & Meece, 2007; Svinicki 2004; Tagg 2003), yet colleges and universities are still far from adequately providing learner-centered learning environments. Professional development programs for graduate students have the potential of becoming crucial catalysts for transforming college teaching toward a more learner-centered teaching culture. Not only do graduate students perform a large portion of undergraduate teaching as instructors and teaching assistants, they are also the next generation of college faculty; thus, an investment in this population will not only affect current instruction, but instruction for decades to come.

Description of the Practice

The seminar: Faculty of a university teaching center developed and facilitated a semester-long bi-weekly seminar to help advanced graduate students develop the following skills: a) understand and begin to apply basic theories of student learning, development, and motivation in their teaching; b) critically reflect on concepts such as teacher-centered vs. learner-centered instruction, deep/surface vs. strategic learning; c) apply principles of backward and integrated course design to create a syllabus including course goals, assessments and activities; d) generate proactive and reactive strategies for dealing with critical classroom situations; e) analyze personal beliefs and practices about teaching and learning; and f) design and conduct a class session using a variety of instructional strategies. Seminar activities included teaching observations, online discussions about readings, and working in field specific learning teams to write reflective teaching statements and design a syllabus.

The assessment: In addition, a research center at the same university dedicated to the empirical study of college teaching and student learning partnered with the teaching center to assess the extent to which graduate students who enrolled in the seminar adopted a more learner-centered mindset to their teaching beliefs and practices. One of the major differences in the assessment of the seminar, however, is that this study goes further than merely evaluating changes in teaching philosophies and confidence, and instead attempts to examine both teaching beliefs and actual practices. Research on the long-term impact of teaching development programs is beginning to emerge (Kalish et al., 2011; Palmer & Little, 2013; Taylor, Schönwetter, Ellis, & Roberts, 2008), but it is largely perception-based. The pre/post assessment design for this initiative included an examination of students' 1) perceptions of their teaching self-efficacy; 2) priorities in constructing a new syllabus; and 3) interpretations and recommendations to a challenging teaching dilemma. While the survey of teaching self-efficacy queried graduate students' changes in perceptions about their teaching confidence pre- and post-seminar, the syllabus and the teaching dilemma

assessments revealed actual changes in their intended practices, by observing pre/post differences in syllabus construction considerations and interventions for challenging teaching difficulties. Both the seminar and the assessment were funded through an award from the Teagle Foundation.

Goals & Objectives for the Practice Session

This practice session will focus on providing an interactive overview of both the structure of the seminar and the assignment design and findings. The session will begin with session participants taking a shortened version of the assessment pre-test. Then, the session facilitators will briefly present an overview of the topics and activities included in the graduate student seminar, and engage participants in a "mini-demonstration" of one seminar activity designed to help instructors generate proactive and reactive strategies for dealing with common teaching challenges. Following the mini-demonstration, the session facilitators will briefly summarize the findings from the assessment. The final portion of the practice session will be devoted to working with session participants on how they might implement versions of both the seminar and the assessment on their campuses, as well as learning from participants what other activities we might pursue in either the seminar or the assessment.

Thus, it is our goal that, upon completion of the session, session participants will be able to:

1. Consider innovative programming for helping graduate students (and faculty) adopt learner-centered approaches in their classrooms.
2. Identify portions of the graduate student seminar that they may infuse into their work with the professional development of graduate students.
3. Adopt portions of the assessment instrumentation into their work that may be appropriate in evaluating their graduate student and faculty teaching interventions.

Interactive Discussion

In addition to simulating the graduate student seminar experience through both the pre-assessment and the mini-demonstration, we intend to take our cues from the session participants to guide the interactive discussion portion of the practice session. Should the participants wish to learn more about certain facets of the seminar or the assessment, we will provide that information during the discussion. Alternatively, in order to help improve our work and the work of others, we may use the final portion of the practice session to discuss questions related to the goals of the session, as described above.

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Interprofessional Collaborations: Using Disciplinary Expertise to Build Good Teaching Practices

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Abstract: Being a scholarly teacher, one who using evidence to drive each area of good instruction, can be extremely challenging. Experts, often of national prominence, reside on every college campus. These experts have disciplinary knowledge in every conceivable area related to good teaching and learning. In this session we will explore which disciplinary areas may be beneficial to building a repertoire of scholarly teaching. The goal of this session is to help you to learn how to get off the carousal of burning time and energy attempting to be proficient in areas that you could very quickly (with just a bit of assistance) be exceptional.

Teaching is a difficult profession, mostly because it consists of many different components and skill sets. Aside from being a content expert, to be an effective educator you must also be proficient in areas such as interpersonal communication, managing large groups, assessment, evaluation, stage performance, and effective learning strategies. Unfortunately, despite intensive and extensive education in graduate school, faculty members often enter new positions feeling ill prepared for their new roles as teachers (Gappa, Austin, & Trice, 2007; Rice, Sorcinelli, & Austin, 2000).

One framework from which to deliver excellent opportunities for students to learn is to take the approach of a scholarly teacher (Boyer, 1990; Hutchings & Shulman, 1999; Richlin, 2001). According to this position, one is as dedicated to every aspect of delivering sound pedagogy as one is in acquiring her or his content expertise. Unfortunately, it continues to be rare for faculty members to take a scholarly approach to teaching and many new faculty members enter the classroom with essentially no specific training in teaching and learning (Gappa, Austin, & Trice, 2007; Rice, Sorcinelli, & Austin, 2000).

Taking a scholarly approach to teaching, although it sounds straightforward, is quite difficult. It is hard enough to become a scholar in one specific content area. How is one to effectively become a scholar in as many as eight to ten difference areas? The argument I propose in this session is that to do this, one must turn to scholars in those areas and seek out their advice and guidance (e.g., clinical psychology, religion, art, music, social psychology, biology, English, and communication).

Following this session, you will be able to:

- list at least five specific content areas that are directly related to teaching and learning in any classroom,
- explain how content expertise from a selected discipline can have a positive impact on your current teaching,
- identify a strategy for obtaining assistance from a colleague, and
- explain how some aspect of your content expertise might assist another faculty member.

Description of Practice

In this session I will use methods identical to how I have taught my classes for over 20 years. A framework will be presented through a 10 to 15 minute mini-lecture. Following the short lecture, individuals will engage in a brainstorming technique to identify areas in which content expertise can be used to inform pedagogical practice for essentially any course. Specific examples that can be put to immediate use will be surfaced through a combination of the expertise in the room and the expertise of the session facilitator, who has been engaged in interprofessional collaboration for approximately 20 years. This session will primarily be facilitated from an engaged learning framework.

Discussion

As an industrial psychologist with over two decades in higher education, I realized very early in my career that to be really good at teaching I would need assistance from my colleagues. Beginning with English faculty members who helped me learn how to better grade term papers, communication faculty who helped me to give feedback on oral presentations, and an economics professor who showed me the value of well-constructed group work, I came to understand quickly the true value of my colleagues in developing my expertise as an educator. This session will

provide a framework, examples, models, and strategies for quickly advancing a college or university faculty career by identifying where expertise lies on campus, methods to collaborate with colleagues, and how best to implement newfound information. Being a scholarly teacher can be exceptionally difficult, but with the proper assistance, it can also be relatively easy…..and fun.

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Best Practices in Classroom Peer Review

Edward F. Gehringer, *North Carolina State University*

Abstract: Peer review between students in a class has a history that goes back at least 40 years. Research has shown that students learn both from the feedback they receive and the feedback they give. Peer review can be done either face to face, during class, or over an electronic peer-review system. F2F reviewing is easier to set up and manage, but electronic review allows students more time to craft their own feedback and reflect on feedback for their work. In either format, peer review works best when a good rubric is used. Students should have a chance to gain competence in using the rubric; often, some sort of "calibration" is used, where students practice assessing a work that has been pre-assessed by experts. A variety of techniques are used to ensure good reviews. Authors can be asked to comment on the helpfulness of reviews they received. A third party can assess these reviews. Or, an electronic system can compute reputation scores, based on comparing reviews given by many students. There are several options in assigning reviewers to authors. The students may be divided into groups, where everyone in the group reviews each other's work. Or, the students may be divided into teams that work cooperatively on an artifact, and the teams are reviewed by outside individuals. The final part of the presentation describes a number of commercial and open-source applications for classroom peer review, e.g., Calibrated Peer Review, Peer Scholar, SWoRD, Mobius/SLIP, and the author's Expertiza tool.

Literature Review

Dozens of studies report on different aspects of peer assessment in an academic setting. A comprehensive survey can be found in Topping, 1998 Experiments with peer assessment of writing go back 40 years (Ford, 1973). Peer review has been used in a wide variety of disciplines, including biochemistry (Hall, Guth, Kohler, & Wolfson, 2003), computer science (Gehringer, 2001), engineering (MacAlpine, 1999), mathematics (Rosenthal, 1995), mathematics education(Lopez-Real & Chan, 1999), and social science (Althauser & Darnall, 2001). The author has designed several electronic peer-review systems, including Expertiza (Gehringer, 2009).

Goals and Objectives

This session has several goals:

- To introduce the audience to the benefits of peer review of student work
- To explore several models for peer review (mutual review within groups, focus groups, review of teams by individuals)
- To highlight the importance of a good rubric, and offer suggestions on how to create one
- To discuss different quality-control mechanisms for ensuring careful reviews
- To differentiate formative from summative peer review, and compare the challenges of each
- To present and compare several online applications for peer review.

Practices to Be Discussed

A. Face-to-face vs. electronic peer review. Peer review in classrooms started as a face-to-face process, but during the last 20 years, online review applications have become more common. F2F review still has its advantages. It is easier to set up; neither the instructor nor the students have to become familiar with an online tool, and nothing needs to be deployed and tested before class. Students interacting face to face naturally communicate more interactively than they would online; subsequent reviewer comments can be influenced by, and adapted to, reactions from the author. Author and reviewer exchange non-verbal cues, which may diminish the danger of misinterpretation. The instructor can see the process as it unfolds, and intervene to clarify or offer guidance.

Electronic peer review can be blind, or double blind. It can allow more time for reading the work, or for writing critiques. The asynchronous nature of the process makes it easier to get feedback from a variety of reviewers. Since feedback is written, it is easier for the author to remember and act upon. The fact that all the data is collected in one place makes it easier for the instructor to assess the feedback and use it for grading purposes.

B. Rubrics. Effective review requires a good rubric. Rubric criteria turn students' attention to issues they might not otherwise have thought of. The instructor may solicit student input about what should be included in the rubric. This helps assure "buy-in" and better acceptance of feedback and assessment. Some applications have students go through a "calibration" process, in which their assessment of a sample work is compared with the instructor's pre-assessment of the same work. This helps decide whether the student is ready to peer-review other students.
C. Quality control. Though important, a good rubric is not enough. The instructor must model to the students what a good review is, by showing examples of good reviews and discussing why they are effective. In some systems, authors give feedback to reviewers, explaining how the reviewers' comments were or were not helpful. These "back-assessment" comments can help an instructor to assign grades. Other systems have third parties—either the instructor or other students—perform metareviews of reviews given by other students, rating the feedback on a rubric. There has been some exploration of automating the metareview process (Ramachandran & Gehringer, 2011). Other systems, including the Coursera MOOC platform (Piech et al., 2013), compute *reputation* scores for each reviewer, based on how well scores assigned by one reviewer compare with scores assigned by other reviewers.
D. Reviewer assignment. Many instructors assign each student to review one, two, or three other students chosen arbitrarily from the class. Reviews can also be done in groups, with each group member assessing every other group member. Or, if team projects are being reviewed, individuals can review teams. This increases the amount of feedback to each team; if each individual, for example, reviews two three-member teams, then each team gets six reviews. An electronic system will often assign reviews dynamically, so that students/teams do not miss out on feedback when one of their reviewers fails to do his/her assigned reviews. The last part of the presentation will compare peer-review applications, such as Calibrated Peer Review, Peer Scholar, SwoRD, Mobius/SLIP, Expertiza, and CritViz.

Discussion

The presenter is the organizer of the NSF-funded PI forum on Peer Assessment: Research and Practice. He is the developer of the Expertiza peer-review system, which has been used at nearly 20 institutions. Since peer review is a fairly common academic practice, the session will be quite interactive, with the audience being invited to share their experiences and contrast them with those mentioned in the presentation. Two or three polls will be taken at appropriate points.

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Comprehensive Pedagogical GTA Development: Preparing Graduate Students to Teach in the College Classroom

Denise P. Domizi & C. Edward Watson, *University of Georgia*

Abstract: The University of Georgia has developed a series of programs for graduate teaching assistants (TAs) designed to prepare them for teaching in the college classroom, and for their eventual role as faculty. In addition to a TA orientation and semester-long pedagogy course, which are required of all GTAs by the university's TA policy, TAs can also choose to engage at any number of levels, from a single workshop to semesters-long programs of study. TAs are also engaged in a community of learners who share a common interest in teaching—a community that they may not find in their own departments. In this session, participants will learn about the different types of programs and levels of engagement. They will also have opportunities to share their own training experiences as TAs as well as current programs at their present universities.

Literature Review

Graduate teaching assistants play an important role in undergraduate education at universities across the United States (Gardner & Jones, 2011). The nature and responsibilities of these roles can vary from instructional support for a faculty member to full responsibility as instructor of record. The pedagogical training that teaching assistants receive for their teaching roles can differ by discipline, department, and institution, and some receive very little or no training (Austin, 2002). It has been shown, however, that pedagogical support for graduate teaching assistants can lead to higher teaching self-efficacy (Young & Bippus, 2008) and increases in effective teaching behaviors in the classroom (Boman, 2013; Pentecost, Langdon, Asirvatham, Robus, & Parson, 2012).

Another challenge faced by graduate students can be feelings of isolation. Attrition rates for graduate students is estimated to be between 40-50% (Lovitts, 2001). Lovitts argues that it is not their backgrounds that impacts student success and completion of graduate school, rather what happens to those students once they are in their programs. Students in graduate programs can feel stress and isolation (Golde, 1998); programs that bring graduate students together can help foster learning communities and promote feelings of belonging, which in turn can help increase student retention (Brandes, 2006; Golde & Dore, 2001). Golde and Dore (2001) found that graduate students are often interested in interdisciplinary collaboration as well as socializing outside their disciplines, but many find themselves with few opportunities to connect to other students or the university as a whole (Brandes, 2006). Comprehensive TA programs can help build bridges for graduate students by complementing the training they receive in their own departments and providing another community for collaborations and socialization.

Goals and Objectives

In this session, participants will:

1. Learn about the design and implementation of several programs—some required and some elective—designed to prepare graduate students for teaching in the college classroom and for their eventual role as faculty members.
2. Share their own experiences as graduate students with regards to training and preparation for teaching in the college classroom.
3. Leave with practical ideas for how to implement TA programs at their own universities.

Description of Practice

The Center for Teaching and Learning (CTL) in collaboration with the Graduate School at the University of Georgia has implemented a broad series of programs to prepare graduate students to teach in the college classroom, and for their eventual role as faculty. The facilitators of this session will share the structure of these programs, successes and challenges.

Participants will have the opportunity to discuss their own experiences and challenges with regards to training and preparation as TAs, as well as share what their current institutions provide in terms of TA training.

Discussion

In accordance with our university TA policy, all graduate students with instructional responsibilities are required to attend a half-day TA orientation, and complete a 3-credit hour seminar on university teaching before they begin their teaching responsibilities. In addition to this requirement, however, the CTL supports a host of other opportunities for graduate students to develop their teaching, including workshops, a teaching portfolio program, advanced teaching and pedagogy classes, a certificate in university teaching, and assistance for graduate students interested in the Scholarship of Teaching and Learning. Additionally, there are several teaching awards that are available to graduate students, as well as a future faculty program—a yearlong professional development program that brings together award-winning teaching assistants from across campus to focus on preparing for their first faculty positions. With the range of programs offered, graduate students are able to choose their level of involvement, from a two-hour workshop to a semester-long class to a several-year commitment with the teaching certificate program.

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Mixed-Reality Computer Simulation: A New Paradigm for Higher Education

Carrie Straub, Lisa Dieker, Charles Hughes, & Michael Hynes, *University of Central Florida*

Abstract: Over 30 universities across the United States are using computer-simulated virtual reality to change the face of higher education. This practice session will explore research-based pedagogy using simulation which has enabled faculty to completely rethink teaching and learning. Attendees will learn how computer simulation is used for interdisciplinary instruction in areas such as teacher education, science, administration, nursing, and even fundraising. Benefits of using simulation for high-risk activities will be explored. Results of a specific application of simulation will be shared from a national research project funded by the Bill & Melinda Gates Foundation, investigating the use of an innovative virtual classroom with teachers in STEM content areas. The majority of the session will be a live demonstration of the TLE TeachLivE^{TM} (TeachLivE^{TM}) virtual classroom, an immersive mixed-reality computer simulation with student avatars that interact with attendees in real-time. At the conclusion of the session, attendees will leave with new knowledge about how computer simulation might be applied to their own scholarship of teaching and learning.

Objectives

Upon completion of this session, attendees will be able to:

1. Define and describe mixed-reality virtual environments
2. Recognize benefits of using simulation for high-risk learning activities
3. Describe an experience in a mixed-reality classroom simulator
4. Identify multiple uses of simulation in higher education

Literature Review

Virtual environment computer simulation can potentially change the face of higher education with innovative program models. A virtual environment (VE) is a three dimensional, real time computer-based representation of reality which simulates the real or imaged world. Mixed-reality, immersive VEs combine real and virtual worlds, providing users with a sense of "presence" or immersion, enabling the user to perceive the VE as an authentic environment in which action can be taken, much like in the real world. However, VEs provide benefits which are unlike the real world: users can engage in activities without experiencing long term consequences of their actions, allowing them to safely practice and learn from mistakes (Dieker, Hynes, Stapleton, & Hughes, 2007). Vera, Campos, Herrera, and Romero (2007) posited VEs are uniquely suited for learning because key stimuli relevant to instructional objectives can be isolated, minimizing competing stimuli that can potentially distract the user. Also, learning activities can be segmented in order to provide instructional time for feedback, coaching, and error correction. Most importantly, VEs involve a perceived element of play which engages users in learning.

VEs provide opportunities to situate learning in an authentic context, rather than as an isolated phenomenon. Brown, Collins, and Duguid (1989) posed a theory of situated cognition, contending "what is learned cannot be separated from how it is learned and used" (p. 88). The theory of situated cognition provides a useful theoretical frame for simulators in higher education. Unlike with real-time learning in simulated VEs, traditional classroom learning in higher education relays disembodied concepts, removed from context, resulting in knowledge that must be applied, generalized, or transferred to authentic environments in order to be learned. However, with simulation-based learning learners are engaged in contextualized learning activities. Further, while it is widely recognized that simulators deliver learning experiences from a learner-centered, constructivist approach (Koc & Bakir, 2010), instructors who experience simulators may be more likely to adopt learner-centered pedagogy themselves in the future (Ertmer, 2005).

For higher education, VEs provide a safe and potentially engaging avenue for individuals to learn those skills which can be approximated in a computer-based simulation. Because the virtual environment can be easily changed with computer modeling, the software provides a flexible platform for use across multiple disciplines. On such application of simulation for higher education is teacher preparation. The TeachLivE^{TM} virtual classroom is an

immersive, mixed-reality simulator housed at the University of Central Florida (UCF) and is currently used by the College of Education and Human Performance to prepare teacher candidates. Users interface with the real-time classroom simulator and software application allowing interaction with five computer-generated, animated student *avatars*, reacting real-time with the user. The virtual classroom is currently part of a national research project in partnership with the Bill & Melinda Gates Foundation to collect and evaluate multiple forms of teacher practice data to establish the efficacy of virtual rehearsal in TeachLivE™. TeachLivE™ is currently used with over 30 university partners with various instructional models integrated into university curricula.

Description of Practice to be Modeled

This practice session will consist of two parts. In part one, we will familiarize attendees with emerging technologies for computer simulation and mixed-reality environments. We will also explore applications of simulation for higher education across disciplines. Part two will consist of an interactive, live demonstration of TeachLivE™, a mixed-reality, immersive virtual classroom used to prepare teachers in the university setting. The classroom is comprised of five middle school avatars who respond to user questions and directives in real-time based on software operating with a hybrid intelligence model. Attendees will be able to step into the simulated classroom environment to interact with the avatars. Users generally experience the phenomena of immersion and suspension of disbelief within one minute, and understand the simulation best from experience. Finally, we will end with a question and answer session to discuss potential applications of this technology to the scholarship of teaching and learning in higher education.

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Conversation: Integrating Popular Culture into the Classroom

Tod Burke & Stephen Owen, *Radford University*

Abstract: The purpose of this presentation is to examine and discuss the effectiveness of popular culture in the classroom. Conversation will include how popular culture can be integrated into classroom discussion and assignments, with particular attention devoted to student engagement and effective pedagogical strategies.

Literature Review

It should come as no surprise that use of popular culture as a teaching tool has the potential to resonate with students. A 2010 report (Rideout, Foehr, & Roberts, 2010) found that young people, defined as those between 8 and 18, consumed on average seven hours and 38 minutes of media per day. This includes television, movies, music, video games, computer and internet usage, and the print media. Johnson (2005) argued that "mass culture [is] growing more sophisticated, demanding more cognitive engagement with each passing year" (pp. xv-xvi), in turn yielding the potential for developing a variety of complex skill sets. *Properly harnessed and processed, the use of popular culture as a teaching tool can allow instructors "to jump outside the box and tap into the worlds of their students in order to make more powerful connections with traditional academic texts and affirm, in meaningful ways, the everyday lives of those they teach"* (Morrell & Duncan-Andrade, 2002, p. 91). Of course, doing so requires a more deliberate approach than "throwing in a video" to expend unallocated class time.

Popular culture has effectively been integrated across a number of disciplines and through various forms of media. For example, popular culture, generally, has been incorporated into the curriculum teaching composition literacy (Smelstor & Weiher, 1976) and nursing leadership (Kirkpatrick, Brown, Atkins & Vance, 2001). Popular music has been used to teach race, class and gender (Martinez, 1994). Graphic novels and comics have proved effective in teaching business ethics (Gerde & Foster, 2008) and sociological issues (Scanlan & Feinberg, 2000). Films have been successfully utilized as a teaching tool for years, such as to teach organizational behavior and management (Champoux, 1999) and about psychological personality disorders (Hyler, 1997). While these are just a sampling of approaches, they share one common theme – promoting effective student engagement in the learning process.

Goals and Objectives

The first goal of the presentation is to promote discussion of the role that popular culture may serve in the classroom through innovative and meaningful assignments. Objectives include consideration of prior research regarding the use of popular culture; and discussion of the strengths and limitations of using popular culture as a pedagogical tool. The second goal of the presentation is to provide a model, grounded in pedagogical literature, for utilizing popular culture in class assignments. Objectives include providing specific guidance on developing assignments; mapping assignments to course or program learning outcomes; and selecting appropriate popular culture artifacts.

Topics to Be Discussed

Conversation will focus on how best pedagogical practices can be used to develop assignments drawing upon artifacts of popular culture, across disciplines. We argue that assignments should meet Light's (2001) principle of being organized around controversy and Bain's (2004) five steps for promoting a "naturally critical learning environment" (p. 99). Each is summarized in the table below.

Drawing upon interdisciplinary examples, we will demonstrate how assignments can be structured around this model. We will also describe our use of the model to structure entire courses around popular culture, as well as our experiences developing assignments within existing courses. In both cases, the use of assignments related to popular culture has fostered meaningful student learning related to complex theoretical concepts.

Criterion		Brief Description	Representative Example
Organized around controversy (Light, 2001)		Debate "opposing arguments" via "structured disagreement" (p. 48)	The film *Sleepers* encourages controversy on issues related to the concepts of justice and ethics. Students are asked to consider several
"Naturally	*The Problem*	Address "authentic and intriguing	

critical learning environment" (Bain, 2004, p. 99)		questions and tasks" (p. 100)	scenes in the film that illustrate the nexus between justice theory and practice, and via responses to precisely structured questions, students must solve problems, apply textual material to analysis of the film, and carefully make and defend their own arguments. In follow-up discussions, theoretical material may be contextualized in a broader pragmatic framework (e.g., Owen & Burke, 2013).
	Guidance	Structure assignments that model, motivate, or guide student work	
	Processing	Apply critical thinking, analysis, and problem-solving skills	
	The Answer	Students advance, explain, defend, and own their answers	
	Now What?	How can discussion of the topic be further extended or applied?	

Facilitation Techniques

Discussion will begin with a brief presentation by the authors, reviewing prior literature and presenting the model described above for effective incorporation of popular culture in class assignments. Then, a dialogue will be encouraged among participants, to consider questions such as: What experiences have participants had using assignments based on popular culture? What are the advantages and limitations of using popular culture in the classroom? How should materials be selected and assignments structured? How can such assignments be used in multiple course formats, such as face-to-face, online, and hybrid? In addition, through small group discussion, participants will apply and critique the assignment criteria presented earlier to existing, or to the development of new, popular culture assignments related to their disciplines and courses.

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A Conversation on Interdisciplinary Curriculum Design for College Algebra

Susan Staats, *University of Minnesota*

Abstract: While interdisciplinary curriculum is widely viewed as a "best practice" for early undergraduates, the complexity and expense of delivering it precludes wide implementation. Still, a supplemental, interdisciplinary algebra curriculum could improve the relevance of the class for the non-STEM majority of enrolled students. This conversation outlines an approach to designing a low-cost, interdisciplinary curriculum for college algebra courses that a single mathematics instructor can deliver. Key elements of the model include an essay and disciplinary introduction co-developed by a mathematics instructor, a disciplinary specialist and a creative writer; explicit learning goals to limit the responsibilities that a teacher feels for expertise in another discipline; and interdisciplinary homework questions. Participants analyze a sample module that connects algebra to social science theories of the educational achievement gap.

Literature Review

In the United States, hundreds of thousands of undergraduate students enroll in college algebra each year, to experience a class that is poorly aligned with their academic needs and interests. Studies in Nebraska and Illinois found that under 15% of college algebra students were pursuing mathematically intensive majors (Herriot & Dunbar, 2009). Moreover, many college algebra students are unsuccessful in the class. In 2000, an estimated 400,000 students enrolled in the class; in some cases, 40% to 60% of students complete the course with a grade of D, F or a withdrawal (Small, 2002, 2006). In short, college algebra is not designed to support the needs of its non-STEM majority. This conversation will focus on the potential of an authentically interdisciplinary college algebra curriculum to create a more relevant learning experience for non-STEM students.

Interdisciplinary learning is a long-held goal both in mathematics and in higher education generally (Ganter & Barker, 2004; Klein, 1990). However, typical means of organizing interdisciplinary education—team teaching and learning communities—are complex, expensive, and require an enormous commitment from institutions and instructors (Boix Mansilla, Miller & Gardner, 2000; Burrill & Hernández-Gantes, 2003; Lattuca, Voigt, & Fath, 2004; Wentworth & Davis, 2002). The best practices for interdisciplinary education are beyond the means of many higher education institutions. Moreover, interdisciplinary learning may be particularly difficult to implement in mathematics due to regimented curricular traditions and disciplinary philosophy (Ewing, 1999; Grossman & Stodolsky, 1995; McGivney-Burelle, McGivney & Wilburne, 2008; Siskin, 2000). A single-instructor delivery model for interdisciplinary curriculum could widen student experience with this important mode of learning, but the curriculum must be designed carefully to enable mathematics instructors to achieve learning goals in a non-mathematical field. This conversation will present a design model for interdisciplinary college algebra curriculum, along with a sample module that connects the discipline of elementary education to mathematics through analysis of theories of the educational achievement gap.

Goals

By participating in this conversation on interdisciplinary algebra curriculum design, participants will:

1. Review principles for learning assessment in any interdisciplinary context.
2. Understand principles of interdisciplinary algebra curriculum design for single-teacher delivery.
3. Identify evidence of interdisciplinary learning goals in samples of student mathematical writing.
4. Develop a personal position on the role of interdisciplinary learning in college algebra classes.

Description of an Interdisciplinary Algebra Module

Interdisciplinary learning involves creating an explanation or tool that could not be produced through the perspective of a single discipline (Boix Mansilla & Duraisingh, 2007; Klein, 1990). An interdisciplinary college algebra curriculum, then, should identify learning goals in a partner discipline along with mathematics, and should clarify for the mathematics teacher the boundaries of information for which they will be responsible. In this way, the curriculum can be authentically interdisciplinary, moving far beyond "math in context." The curriculum design model has five components: an introduction that helps highlight non-mathematical content in the module; a core essay which poses questions or presents scenarios that require consideration of algebra and another discipline;

explicit learning goals for both algebra and the partner discipline; interdisciplinary problem statements; and a short bibliography to support further reading by either instructor or student. The presenter has used this model for interdisciplinary algebra design for the last four years at the University of Minnesota. Participants will review a module on the educational achievement gap and analyze samples of student writing.

Facilitation Techniques

The 15 minute presentation will be conducted in phases. In the first five minutes, the presenter will discuss the need for interdisciplinary college algebra curriculum, followed by discussion question 1. The presenter will then use five minutes to outline the general components of an interdisciplinary algebra module, followed by discussion question 2. In the final five minutes of direct presentation, the presenter will describe a specific module on educational equity, followed by analysis of student writing and discussion questions 3 and 4.

1. Does math really relate to everything? Participants identify topics in the early undergraduate curriculum that seem relatively unrelated to mathematics, and they challenge each other to find mathematical connections.
2. Based on participants' experiences, is the mathematics curriculum really less connected to the general education curriculum compared to other subjects? To what extent can the proposed design model reduce this distance?
3. What evidence of learning goals can you find in the samples of student writing?
4. What are the affordances and limitations of including deeply interdisciplinary modules in college algebra classes?

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Thursday

February 6, 2014

Poster Session B

12:10-1:30 PM

http://www.cider.vt.edu/conference/

Influence of Teacher Personality and Instructional Strategy on the Academic Performance of University Students in Africa

Victor Oziengbe Uwaifo, *Ambrose Alli University*
Ivonne Umuyetu Uwaifo, *Post Primary Education Board Benin-City*

This study investigated the influence of teachers' personality and instructional strategy on the academic performance of students' in universities within the African continent. The stratified sampling technique was used to select a total of 413 respondents from seven universities within the continent. The regression analysis and Pearson product moment correlation statistics were used to test hypotheses at 0.05 alpha levels. Findings revealed amongst others, that a significant relationship exists between teacher personality, instructional strategy, and perceived academic performance of students of higher education. Based on the findings, it was recommended amongst others, that the issues of constant training and retraining of teachers at all levels of education should be given priority in Africa and other developing countries where the governments' attitudes towards education are usually low. This will amongst others update their skills and knowledge required for the adoption of appropriate methods, and strategies in the course of teaching students of higher education.

A Comparative Study of Misconceptions of Physics Curriculum Among the Students of O-Level (University of Cambridge, UK) and SSC Level (2007 Pakistani National Curriculum)

Samia Rehman Dogar, *Federal College of Education*

This study was designed to investigate that whether the required objectives of the curriculum were being achieved, and to what extent classroom teaching was preparing the students to meet the requirements and challenges of the 21st century. The study was for improving the quality of teaching learning process in the subject of physics at the post secondary level. The population of the study was comprised of 16 schools of the Islamabad Capital territory (ICT) offering O-level with Cambridge University's curriculum and 34 public schools of ICT, offering Pakistani National curriculum (2007) for their SSC classes. The sample of the study was selected in two stages. During the 1st stage the researcher selected 25% of the educational institutions as sample of the study through simple random sampling. For O-Level, 02 for boys and 02 for girls (i.e., total of 4 institutions were selected), and SSC 05 for boys and 05 for girls (i.e., total of 10 institutions were randomly selected). In the 2nd stage, 30 respondents (students) were selected through stratified random sampling from each school. The researchers tried to make the both O-Level and SSC groups homogeneous on the bases of pre-test scores. A standardized instrument of TIMMS (2008) was used to collect the data; a content-based achievement test. It consisted of 30 test items which were from 10 common content areas of curriculum. Those 30 test items included four options in which one was the correct key and remaining three were distracters. The misconceptions of both the groups (i.e., SSC and O-Level) were compared before and after the Student Centered Inquiry Based Science Teaching, which was recommended in 2007 (Government of Pakistan, 2006, p. 95) for SSC and for O-Level (University of Cambridge, 2013, p. 7). It was a recommended teaching method for both systems. The data was collected in two phases (i.e., pre-test and post-test). It was analyzed from frequencies and percentages. The hypotheses were tested statistically by using ANOVA and *t* tests through Statistical Package for Social Sciences (SPSS). It appears from the data that misconnections exist among the students of both streams, and male students have sounder concepts as compared to female students. Similarly, at the pre-test stage, although students of both the groups showed misconceptions, O-Level students had fewer misconceptions as compared to SSC Students. It is also clear that the concepts of SSC students became sounder at the post-test stage after being exposed to student-centered inquiry-based teaching.

A Conversation About "Hands-On" Teaching and Learning in Medical Education

Helena Carvalho & Saleem Ahmed, *Virginia Tech Carilion School Of Medicine*

The traditional approach of transmitting knowledge via lecture format has given way to more active forms of learning within medical education. Educators must participate in conversations to identify ways to engage the millennium generation students in active learning activities that increases the student's retention and application of material, and also provides stimulation to pursue life longing learning. This is especially challenging in medical schools due to the large amount of content to be covered and the students' concern with National Board Medical Exam scores that potentially lead them to rely on rote memorization. An ideal environment for teaching and learning Basic Sciences in medical education would feature a "learning laboratory" where students could apply knowledge acquired from lectures and textbooks. At most medical schools there are several challenges to such an approach, including lack of adequate physical space and/or time in the curriculum for the students to practice active learning techniques within the basic science disciplines. At this session we plan to present how we used Instructional Enhancement, Innovation and Exploration Grants from the Center for Instructional Development and Educational Research (CIDER) in our initial attempt in transforming the way we use some of the lecture time available in the curriculum to foster active learning including hands-on, manipulatives and dramatization techniques with first-year medical students. The goal for the session is to exchange ideas with other higher education professionals, share what we have done so far, and gather input on how to incorporate more creative hands-on active learning techniques in support of valuable classroom time.

A Process for Updating a Philosophy of Education Statement

Stephen F. Gambescia, *Drexel University*

Most faculty have been introduced to the idea of having a philosophy of education statement. Although one can find in the literature much information about why educators should have a developed philosophy of education statement (Black, Furney, Graf, & Nolte, 2010), little has been written about the process of developing one's philosophy of education statement (Gambescia, 2011). This poster presentation explains a sample process for faculty to use to create or update their philosophy of education statement (Gambescia, 2013). The author gives a firsthand account of a systematic, disciplined, intellectually liberating, and reflective approach (Dewey, 1933) to articulating one's philosophy of education statement, by considering the writings of select intellectual giants who have acted on human experience, thought, and practice in education. The resultant updated and precisely written statement serves to sharpen one's future role as an educator in any discipline, as well as contribute to his or her journey in lifelong learning.

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A Proposal for Evaluating the Conference on Higher Education Pedagogy

Jessica R. Chittum, Asta B. Schram, Mary Minarovich-Cheniae, Turki Al Zahrani, & John D. Massey, Jr., *Virginia Tech*

Virginia Tech's Center for Instructional Development and Educational Research's (CIDER) Conference on Higher Education Pedagogy (CHEP) provides participants the opportunity to learn about the latest pedagogical research advances in higher education by showcasing some of the best practices in teaching at the undergraduate and graduate levels. To ensure that CHEP continues to offer presenters, attendees, and sponsors a high-quality experience, we designed a formative program evaluation with the goal of both validating those components and activities that are working as intended, as well as identifying activities and/or opportunities that can be improved upon in order to achieve the ongoing mission and program growth goals of this event. We framed the design of this evaluation plan and the included instruments with the following guiding questions in mind: What does CHEP offer that is working well, and how can the conference improve? What can CHEP offer that it is not currently offering? How have participants' interest and value of pedagogy changed due to attending CHEP? How do attendees utilize the information they learn from the conference? What sponsorship opportunities that may be of value have not been explored? How effective were marketing techniques/communications in increasing attendees, proposals, and sponsorship? The main conference attendee online evaluation was modified and new instruments were developed, such as a retrospective survey for attendees, a focus group protocol for CIDER employees, two phases of telephone interviews with corporate sponsors, a non-attendee registrant survey, and a survey for the Inn at Virginia Tech staff. A timeline was developed; we estimated that data collection will be ongoing from September prior to the conference until the following June, and data analysis and presentation of results from June until September. Our evaluation results can be used to recommend improvements and inform future decisions.

Adding Multimedia Materials to Class Sites Using Items You Already Have

L. Lori Poole, *CSU-Global Campus*

This interactive presentation will show participants ways to incorporate multimedia items into class sites. Many of the techniques that will be addressed can be applied to using items instructors already have, uploading and tweaking them for online class platforms. At the end of the presentation, participants will know how to take wording and files they already have and use online resources to add technology and multimedia to their discussions. By uploading PPT or Word files (that many instructors already have) through some online sites, instructors can add audio and visual presentations to their class sites.

Adding Value to the Program Review Process: The Role of Curriculum Mapping

Jovan F. Groen & Patrick Milot, *University of Ottawa*

As outlined by Doren (1956) "college is meaningless without a curriculum, but it is more so when it has one that is meaningless" (p. 108). This session explores approaches to support programs that seek to examine and enhance their curriculum, either independently or in the context of a program revision/evaluation. Via a presentation of the methods used to map program curricula at a large Canadian University, this session will demonstrate how these methods can provide a way to visualize the underlying framework of a program in order to assess if the learning experience is as envisioned and, in fact, taking place as communicated. Participants will have an opportunity to discuss and share best practices relating to the creation of curriculum maps and consequently curriculum analysis.

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Agriculture Based Service Learning Project

Rachel D. Kohl, *Virginia Tech*

This presentation was submitted by my Pratt Scholarship students for the Undergraduate Research Conference in Spring of 2013. The two students were second-year students in the Agricultural Technology program, using information from classes as well as their own research to complete this project under my supervision. Feed is one of the most substantial costs in any livestock operation. Volatile grain markets and rising fuel prices have caused farmers to explore every opportunity to reduce feed cost. To counter high feed costs, livestock operators should consider implementing more efficient use of low cost feed. To this end, we have designed a rotational grazing system that will allow rationing a diverse pasture. Numerous paddocks with a short grazing period and long resting period will ensure adequate regrowth of forage. Our goal is to provide substantial and nutritive forage year round. Achieving this goal requires attentive management and inexpensive temporary fencing. To establish a highly nutritious, yet low cost feed, we permanently rested and renovated the pasture with several different species of grasses and legumes. The renovation was successful, as we have observed an enormous difference in the density and diversity of the pasture. Pre and post weights of cow/calf units and overall forage growth were used to monitor progress. We observed substantial weight gain per cow/calf unit while providing quality pasture and extending the grazing season, thus reducing feed costs.

An Evaluation of the Sustainable Agriculture Research and Education (SARE) Fellows Program

Bradley B. Burbaugh, Courtney Vengrin, Yincheng Ye, & Rongrong Yu, *Virginia Tech*

The purpose of the Sustainable Agriculture Research and Education (SARE) Fellows Program is to provide an educational training opportunity for selected members of National Association of County Agricultural Agents (NACAA). This in-depth program seeks to enhance participant's understanding of sustainable agriculture and give them broad-based, national exposure to successful and unique sustainable farming practices. With a greater understanding of real-life applications in sustainable agriculture it is expected that the Fellow will be better able to meet the needs of their local clientele and create new educational programs to benefit those with whom they work. The program began in 2007 and a formal evaluation has never been completed. The purpose of this evaluation is to measure the program outcomes and provide recommendations. The objectives of this study were to: (1) understand how participants improved their knowledge of the basic concepts of sustainable agriculture and farming systems, (2) determine to what extent participants shared knowledge with colleagues and clients, (3) explain how the program enhanced the capability of participants to deliver sustainable agriculture educational programs, and (4) understand the most and least effective components of the program. A mixed-methods approach will be utilized to study the knowledge and behavior change of program participants; and explore the fellows' experiences in the program as a summative recount of the professional development experience. Two questionnaires have been developed to collect quantitative survey data. The 24 graduates of the SARE Fellows Program will be recruited for the self-report survey and focus groups. Additionally, Fellows will be asked to provide contact information for 4 clients at the end of their self-assessment survey. This evaluation will serve to provide feedback for investors and stakeholders within the organization. Evaluation of such programs is critical for programs receiving grants and other government funding.

An Interprofessional Approach: Positive Experiences with Independent Elderly Improve Student Attitudes Toward Providing Geriatric Care

Carolyn W. Lyon, Laura R. Link, & Douglas G. Wright, *Jefferson College of Health Sciences*

The purpose of this study was to investigate the difference in student attitudes toward caring for elderly patients prior to and after working with independent elderly at a Community Health Promotion Event. There were 40.3 million people 65 and older in the United States in 2010, representing an increase of 5.3% over the 2000 census (U.S. Census Bureau, 2010). An increase in the aging population and demand for services are expected to contribute to a shortage of trained healthcare professionals. There is growing concern about the availability and desire of healthcare professionals to meet these increasing needs. Previous research has looked at positive interactions with the elderly (Montemuro et al., 1999; Muangpaisan, Intalapapron, & Assantachai, 2008) and field experience with the elderly (Cummings, Adler, & DeCoster, 2005). These were associated with more positive attitudes and a greater interest in working with the elderly. The population for the study consisted of Jefferson College of Health Sciences Nursing, Respiratory Therapy, and Medical Laboratory Science students. Faculty from these departments collaborated to design an interdisciplinary learning experience focusing on delivering health assessment and information to the independent elderly population. A Community Health Promotion Day was held at a local facility with the students providing educational health care services to independent elderly citizens. Student attitudes were reported using a previously published survey questionnaire. Pre-event and post-event attitudes were compared to determine if changes in student attitudes had occurred.

Anatomy of a MOOC: Statistics in Education for Mere Mortals

Lloyd P. Rieber, *The University of Georgia*

The purpose of this presentation is to describe the design, development, implementation, and lessons learned from offering a massive open online course (MOOC) on the topic of statistics in education in the fall of 2013. This session will provide a broad overview of the course's design and delivery, the author's motivation for proposing it, as well as an overview of issues leading to resistance on the part of the author's employing university to associate itself with the MOOC, even after its success was credibly demonstrated.

Applying Insights from Merleau-Ponty and van Manen to Pedagogy in Higher Education

Karen Franklin & Sandra P. Thomas, *University of Tennessee, Knoxville*

This poster presentation is designed to stimulate dialogue about applying phenomenological philosophy to pedagogy in higher education. We will highlight seminal contributions of two teachers: Max van Manen (1982, 1990), a Dutch phenomenologist who taught children, and Maurice Merleau-Ponty (1962, 1968, 2207), a French phenomenological philosopher who taught college students. Whereas the work on van Manen is well known to educators, Merleau-Ponty's work is less known—and especially relevant to higher education when controversies are swirling about its costs, quality, and outcomes. We will elaborate on selected concepts from both authors. From van Manen, we highlight *pedagogic thoughtfulness* and *pedagogic tact*. From Merleau-Ponty, we focus on concepts of *ambiguity, holism*, and *chiasm*. We delineate both similarities and differences between the two phenomenologists. We provide concrete application of the phenomenological concepts to instruction in college classes. Based on our analysis of the written works of the two phenomenologists, we conclude that the proper stance toward students is one of humility and respect for the gifts the student brings to the teaching-learning encounter. Instruction must address students as whole beings, by providing experiential activities that address the affective domain, not disembodied minds. The teacher must allow students the freedom to struggle with ambiguity, without providing "right answers." Perhaps the

most important concept for pedagogy in higher education is the *chiasm* (a word Merleau-Ponty defined as "intertwining," as when teachers touch the students in various ways, and are, in turn, touched by the students). It is within the relationship between teacher and student that change is brought about. The desired outcome of higher education is the development of "profound people," described by Merleau-Ponty as "people who can see beyond the surface into the depth of things . . . not merely those who calculate, not merely technicians, [but] people trained through doubt and examination."

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Assessing Student Perceptions of Growth in a Virtual Course

Marlene M. Preston, Brandi Quesenberry, Jennifer Sparrow, & Adam Hughes, *Virginia Tech*

At institutions across the country, service courses are vital. However, the literature reveals that departments often struggle to maintain foundational principles and rigor while institutions and students push for more flexibility, heightened access, efficient delivery models, and new technologies. Unfortunately, most online models of Public Speaking require taped speeches submitted to an instructor without the benefit of classmates as an audience. However, a new model, Virtual Public Speaking (VPS), includes traditional principles of public speaking, while capitalizing on current technology—including podcasts and WebEx—to deliver the course online and to teach presentation strategies for synchronous and asynchronous delivery. While traditional pedagogy was adapted to online delivery, the emphasis on peer-to-peer interaction in a community of learners was maintained. Following a spiral curriculum, students practice and build skills in increasing complexity across the course, especially focused on professional public speaking through mediated communication channels. After two summer trials of VPS, course designers joined with a learning technologies expert to analyze students' perception of their learning. Students were asked to complete a midterm evaluation and a final reflection in addition to an IRB-approved pre-post survey, rating their skills across various presentational competencies and their proficiency with course technology. Students in 8 VPS sections reported growth in every category, including decreased anxiety levels and improved presentational skills. They noted the greatest gains in using technology to record speeches, creating effective podcasts, participating in online meetings and interviews, and developing effective persuasive videos. This SOTL study helped to document the efficacy of the course and allowed the designers to consider further enhancements for subsequent iterations. Although the challenges seemed great, the current model maintains rigor while providing a highly useful course to students who learn strategies not only for this class, but also for their future oral presentations in college and careers.

Assessment Outcomes to Improve Teaching and Learning

Deborah West & M. Renee Prater, *Edward Via College of Osteopathic Medicine*

In response to the dynamic global economy of the 21st century and the need to optimize student preparation to join the workforce, techniques to encourage ownership of learning and ensure a rigorous curriculum are rapidly evolving. Using web-based exam software (ExamSoft) in a novel way, we set out to improve the quality of our assessment data at the Edward Via College of Osteopathic Medicine. The process began with team-based faculty evaluation and revision of lecture objectives to improve content alignment with both the type of assessment (e.g., multiple choice,

performance competency, etc.) and the required level of knowledge to be achieved (e.g., Bloom's taxonomy). These new objectives are then entered into ExamSoft and linked as categories with exam questions. After each exam, individual reports are issued to students which outline each student's performance for each tested objective. Faculty receive similar reports for the class as a whole and can also access individual student reports as needed. Previous exam feedback to students consisted of a final percentage and in-class exam review; faculty feedback consisted of statistical evaluation of the exam as a whole and evaluation of each individual question. However, the data that truly impacted improvement in teaching required hours of data disaggregation. Our novel reporting process benefits both faculty and student. It helps faculty assess the strengths and weaknesses of the curriculum, including content alignment to the assessment, and offers objective evidence to more effectively assist at-risk students. Our new assessment feedback allows students to know the exact content they need to remediate to strengthen their medical knowledge base before moving further along in the curriculum. An additional goal of this initiative is to implement a data-driven intervention program to help us identify at-risk students earlier in their educational program that will be both proactive and remedial in its approach.

Baccalaureate Enrollment for Minority Students in Agriculture and Life Sciences Program Using the Food and Agriculture Education Information System (FAEIS) Database

Anupa Sharma, Mary A. Marchant, Bill Richardson, Eric Smith, Eric Vance,
Chaoping Xie, Kelly Izlar, & Lisa Hightower, *Virginia Tech*

In *Fisher* v. *University of Texas*, the U.S. Supreme Court reaffirmed earlier decisions to allow universities to continue considering race as a factor in admissions. This decision by the Supreme Court has furthered discussion and debates on affirmative action in post secondary education in the United States. In this context, the goal of this research is to set a foreground that calls for policy initiatives in achieving diversity goals across colleges and universities. For the purpose, this research uses the Food and Agriculture Education Information System database to investigate degrees awarded to minority and non-minority undergraduate students enrolled in colleges of agriculture and life sciences at 49 U.S. Land-grant institutions from 2007 to 2011. It includes over 5,000 data points. Diversity initiatives are relevant particularly because of the increasingly diverse population in the United States. The U.S Census Bureau projected the population to be more ethnically diverse by 2060. Consequently, a major concern among educators and institutions of higher education is that diversity in the current U.S. population is not reflected in degrees awarded to various racial and ethnic groups (Connor & Britain, 2004; Engle et al., 2012; Swail et al., 2003). Preliminary national results show that earlier diversity initiatives might have been instrumental in achieving at least some diversity goals. For example, FAEIS data indicates that growth in Baccalaureate enrollment is largest among Hispanic students (42%) as opposed to 11 percent in 2000 (Swail et al., 2003), followed by African American students (17%) which is unchanged and Asian students (7%) which is declining. According to the U.S. Census Bureau's population estimates for 2012, similar patterns are observed in the racial and ethnic share of the U.S population.

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Between Conceptions and Realities of Teaching: Experiences of Four Professors from a Private University in Bogotá, Colombia

Milena Benítez Restrepo, Roberta Flaborea Favaro, & Juan Carlos Olarte Moyano, *Universidad de los Andes*

The conceptions of teaching have been the research focus in education for some decades. However, in Colombia, the lines of research in them in higher education have not been consolidated. In addition to this, there are various and different positions toward the methodological approach of these conceptions. The aim of this research, carried out between the second half of 2012 and the first half of 2013, was to identify, characterize, and analyze the teaching and learning conceptions four professors from a private University in Bogotá, Colombia, have in their disciplines. For this research study, a qualitative analysis based on the grounded theory method was proposed. This is part of an exploratory, descriptive research and transactional analysis since it took place during a specific historical moment. The theoretical contribution of Diaz (2009) is paramount since the teaching culture is seen as a reflection of the beliefs, values, habits and key rules that determine what the social group considers valuable in practice. Tobin and McRobbie (2007) state that the conceptions about how and what a student must learn influence the way the curriculum is implemented and are based, mainly, on the teacher's learning style. The data collection tools used for this research were an initial semi-structured interview, two class observations, and a final semi-structured interview implemented on a sample of four teachers from different areas of knowledge. One of the main findings was that teaching is not necessarily a spontaneous choice, but a response to some professional interests at one time of the professional life. In addition, teaching is a practice in constant change influence by personal, disciplinary and institutional aspects. It was also observed that the conceptions of teaching and learning are affected by the contents and skills from the corresponding disciplines.

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BIM-Integrated Group Learning in Construction Education

Dong Zhao, *Virginia Tech*

Construction industry is a fundamental production sector contributing $558.7 billion worth of value to the U.S. gross domestic product (GDP) in 2012. Over its existence, the industry has experienced a variety of changes in terms of operation and organization. Modern technologies, such as the building information modeling (BIM), have also been a profound driving factor to the change in the construction industry. Further, this change brings about higher requirements to the construction education. As a result, construction-majored graduates are expected to obtain a mixture of knowledge areas in both technical and non-technical competencies. This multidisciplinary knowledge includes but is not limited to construction engineering, building science, basic architecture, estimating/scheduling, computer engineering, interpersonal communication, leadership, management practice and team collaboration. To fulfill the change of industry's requirement and satisfaction, this research introduces an adaptable teaching approach of BIM-integrated group learning which could effectively satisfy both the construction industry and student feature career. BIM is a digital representation of physical and functional characteristics of a facility. The BIM is a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle. It is a digital 3D model that covers information of architectural drawings, fiscal estimating, construction scheduling, materials and other documentations. On the other hand, group learning is a particular instructional strategy designed to support the development of high performance learning teams and provide opportunities for these teams to engage in significant learning tasks. The integration of digital model and group collaboration can raise the teaching effectiveness of knowledge in science, technology, management, collaboration and practice. This will also benefit both learners and instructors in construction education.

Blended Learning Experience of Graduate Students

Wafa Hozien, *Virginia State University*

To increase access to the growing adult population many colleges and universities offer blended programs that include a mix of face to face, online and hybrid courses. Teaching in a blended program requires that faculty members have instructional skills in multiple teaching and learning environments. This has become more challenging since while some receive training, many learn how to teach adults and multiple course delivery formats through experience. This qualitative study investigates 55 graduate student and faculty perceptions of how they learn to teach adults within a blended program influences their teaching practices and how faculty describe the process of teaching multiple course delivery formats within a blended program. Data were collected in this study through semi-structured interviews, focus groups, background questionnaires, and faculty observations. The goal of this presentation is to answer three questions. Namely, how do graduate students perceive the Blended Learning (BL) experience? What are the faculty's perspectives about changes in the delivery of instruction? How has the college or university learning experience been changed as a consequence of BL?

Campus Cultural Activities and Experiential Entrepreneurship Education: A Case Study from an Indian Campus

S. A. Vasantha Kumar, *Dayananda Sagar College of Engineering*

According to recent census data, 74% of Indians are below 40 years, teens up to 18 years comprise 38.8% and 28.9% are aged between 19 and 35. It is the social responsibility of campuses to provide alternate career options for students. Apart from regular teaching work, students and staff always involve in various cultural activities. These activities when observed through an entrepreneurial lens appear as service enterprises with social objectives. It is necessary that these activities, which are regular and repeating in campuses, be given a social enterprise model to improve effectiveness and also create an experiential learning atmosphere. Out of the class experimental approach is superior approach to acquire these entrepreneurial qualities and accompanying skills and behaviors. Significance is being "street smartness" and "suite smartness" Self-starting and self-sustaining qualities extend beyond classroom into professional life. Williams (2003) recognized students developing as social entrepreneurs, through volunteer work and contributing to the economy in a charitable way. Also, the manner in which the students are acquiring knowledge is through what Rae (1999) describes as "social learning." Little (2003) has also examined this in the context of developing "enterprising people" as opposed to entrepreneurs. In an effort in this direction, the author had the privilege of coordinating a number of cultural fests in the campus which formed a platform for students to have experiential management & entrepreneurship education. They are: Intra college cultural festivals: DAYANAMIX 2003, 2004, 2005, 2007, 2008, 2011 and inter college cultural festivals: DAYASPORA 2006, FURORE 2009, 2013. All these fests were considered as projects and formally assigned to students, guide and monitor them. The poster suggests to rate their performance on these projects and developing students' Entrepreneurial personality Indices (SEPI) so as to design courses for fine tuning them.

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Caught in the Act of Great Teaching: Evaluation of a Newly Implemented Teaching Award

Kenneth Brock Lamm, Robert Bledsoe, & Deborah Richardson, *Georgia Regents University*

Maxwell, Vincent, & Ball (2011) argue that if institutions truly value teaching, then faculty must be rewarded for their teaching. This study assesses the impact of the award on recipients and nominees and identifies teaching strategies they judged most significant to their success as teachers. Twelve award recipients or nominees responded to open-ended questions regarding the impact of the award on their classroom environment and their most effective teaching strategies. Utilizing an exploratory qualitative analysis, three judges analyzed responses to identify recurring themes and then coded for the presence of identified themes. The award was generally perceived as having a positive impact on the classroom. The majority of respondents indicated a sense of validation or recognition and others indicated a pedagogical impact or motivation. The results of this study suggest that our attempt to honor teaching led instructors to feel validated and motivated them to attend to their teaching style and content. Although the comments from respondents were generally positive, ceiling effects may have occurred (i.e., award-winning instructors may have little room for improvement in the classroom).

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Chat it Up: Using a Backchannel and a Fishbowl to Teach Focus Groups

Carol S. Cash & Laura D. Kassner, *Virginia Tech*

In an abbreviated four-week doctoral level course in qualitative field studies, we thought creatively about giving students relevant experiences in conducting research without the hassle of identifying their own study subjects, insuring informed consent, and scheduling focus groups outside of class, all while working as full-time practitioners. We wanted to maximize learning time-on-task and minimize the burden on students to coordinate the details. As a result, students were assigned to a small group and a current state-level school reform platform about which to interview their classmates in a focus group setting with the goal of "promot[ing] interactive talk through the creation of a permissive environment" (Rossman & Rallis, 2003, p. 192). Members of Group A interviewed members of Group B while Groups C and D watched the activity, in a fishbowl format. To encourage active engagement and reflection for Groups C and D, as well as to provide members of Group A with an additional data source for analysis, two distinct backchannels, or avenues for digital, synchronous conversations (chat rooms) were established. Members of Groups C were asked to transcribe the proceedings in one backchannel, and members of Group D were asked to reflect on process, comment on body language, point out themes, and observe group dynamics in another. Groups rotated through roles so everyone had a chance to interview, be interviewed, transcribe, and observe process. Course instructors have and will continue to examine backchannel transcripts and student perspectives in reflective journals to cull perceptions of these methods. Preliminary analysis yielded positive results regarding the structure of the course and strong student satisfaction with a relevant learning experience. This practice could be used to teach qualitative research methods in any social science discipline and lends itself well to the concept of the researcher as a learner (Rossman & Rallis, 2003).

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Collaboration, Cooperation, and Competition! Fundamentals of Collaborative Design Experiences

Lorrie Frear, *Rochester Institute of Technology*

Technological developments and cultural shifts are dramatically changing the way graphic designers work with other professionals in the areas of product research and design. Design is becoming more than ever a collaborative process, involving teams working together to create and introduce new products to the marketplace. This poster highlights several multidisciplinary courses conducted within this university as case studies to illustrate pedagogical configurations and opportunities. All courses are for fourth year university students in courses a semester in length. The first course, Editorial Design, is co-taught by a graphic design instructor and a photography instructor with a total of 36 students. The project in this course is a 100 page print magazine that is written, designed, photographed and printed by interdisciplinary teams. A tablet version and website are also produced during the course. The second course, Packaging Design, is co-taught by a graphic design instructor, an industrial design instructor and a packaging science instructor with a total of 45 students. In this course, students work on multidisciplinary teams to create innovative packaging solutions for a corporate sponsor. Students present their solutions to the sponsor and other judges at the end of the semester. The third course, Editorial Design, is co-taught by a graphic design instructor and an illustration instructor with 36 students. Students work on interdisciplinary teams to write, design and illustrate a series of articles, the best of which are entered into the Adobe Design Achievement Awards. These courses involve research, teamwork, visual audits, lectures and demonstrations, critiques, testing and evaluation, physical and virtual prototyping, and verbal, video and written presentations. Collaborative learning experiences are invaluable as students prepare to enter the design professions, where teamwork and multidisciplinary communication are essential skills. The mutual understanding that is gained serves students well as they enter the design professions.

Community College Faculty's International Experience in Teaching

Krishna Bista & Kioh Kim*, University of Louisiana at Monroe*

This study examined the self-reported perceptions of community college faculty from three US community colleges regarding international experience, support for internationalization, international learning interests and benefits of internationalization in teaching and learning. Results suggested that faculty reported a strong positive attitude towards international experience as well as towards international learning interests. But, faculty also reported a less positive attitude regarding perceived support toward internationalization at their colleges. Demographics such as gender, years of teaching, and discipline were not correlated with faculty international experience. Faculty aged 51 or above were more favorable towards to the perceived benefits of internationalization than the younger faculty aged 30 or below. Faculty with an international experience were significantly different than faculty without an international experience on A*ttitudes about International Experience* and *Effects of Internationalization*.

Concept Mapping: Timing is a Factor in Facilitating Critical Thinking

Charles M. Harris & Shenghua Zha, *James Madison University*

The effect of the timing of the construction of concept maps as a critical thinking technique was established in this follow-up study with 240 students enrolled in four hybrid sections of an introductory psychology course. In both the initial and the follow-up studies, no significant differences among participants were found for the covariates, total, verbal, and math SAT scores. The initial study, using a Solomon four-group design, established that students, who constructed concept maps of specified complex concepts, performed significantly better on unit tests than students who did not construct concept maps. In the follow-up study, students in all four hybrid sections of the introductory

psychology course constructed concept maps of specified complex concepts. The independent variable in the follow-up study was the timing of when concept maps were created. In two sections, students created concept maps immediately following lectures in which complex concepts were presented. In the remaining two sections, students created concept maps of those complex concepts immediately prior to performing on unit tests. All students were required to use Cacoo, a free online resource, to construct their concept maps. It was hypothesized that the timing of when concept maps were constructed would not be a factor in facilitating critical thinking during preparation for and performance on unit tests. However, the results show that students who constructed concept maps immediately prior to testing performed significantly better than students who constructed concept maps immediately following lectures in which complex concepts were presented. In summary, the initial study established that students possess adequate academic skills for learning content that is structured in a serial format but require additional skills when coherence and interaction are aspects of complex concepts. This follow-up study established that the timing of when students construct their concept maps is a factor in facilitating critical thinking.

Connecting Across Curriculum: A Collaborative Set of Courses Using the iPad

K. Westmoreland Bowers & Bruce P. Mahin, *Radford University*

The iPad offers a number of tools appropriate for teaching music and video skills. However, the current structure of the college curriculum often makes it difficult to teach these skills at the same time. Fostering learning in both areas is important in introducing students to the interplay between music and corresponding visuals. This Alternative Collaborative Semester looks to bridge that gap by providing students the opportunity to learn basic skills in both music and video and to apply those skills concurrently to short collaborative projects. Each of the groups in the class will focus on building skills in early projects so that they may each create a web-quality video for a non-profit organization by the end of the courses. Placing students in contact with a client puts students in an environment that resembles a summer internship in corporate America. As seen in collaborative courses such as Amy Schmitz-Weiss and Kevin Robinson's "Digital Ninja Workshop," collaboration can foster learning between the disciplines and lead to a better understanding of digital tools as students learn how to use them together (Schmitz-Weiss, 2013). Social media will play an integral role in the collaborative relationship and will serve as a conduit for communications, sharing of audio, video and still image content. While many skills will be taught on technology other than the iPad, most of the work will utilize the features available on a basic iPad. Using this process, students will see how fairly simple technology can now be used to create good quality video and audio. Through the varied approaches brought by students of different disciplines, students should develop a greater understanding of the technology while seeing a broader perspective on how to apply the skills learned to development of quality video and audio projects.

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Culturally Responsive Online Teaching: Recognizing Areas of Opportunity

Maurice C. Hill, *Mercer University*

The continuous advancement in information technology is triggering changes in all aspects of society. The impact of technology in recent years has been particularly felt in academic institutions course delivery system and corporate America's education and training infrastructure thereby repositioning distance learning as a formidable imperative (Anakwe & Christensen, 1999). According to Gay (2002) "culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively." Online teaching, devoid of direct human interaction may present challenges regarding the development of a greater cultural understanding and global awareness through personal engagement with learners of

diverse cultural backgrounds. Wenger (1999) notes that the social aspects of education are the most important and need attention before delving into the exploration of content. In an online learning environment, attention to the social aspects of engagement may become more of a challenge. The ability of educators to address the learning needs of students, including individuals who learn differently as a result of cultural differences is highly important as it relates to meeting educational goals. How can educators address issues related to cultural differences while meeting institutional standards when learning takes place exclusively in an online environment? The results will be discussed in the context of empirically supported techniques related to meeting some of the challenges associated with cultural issues in online education.

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Developing Innovative Thinking Skills Among Undergraduates

Vaishali Nandy, Catherine Amelink, & Glenda R. Scales, *Virginia Tech*

Through this study, we report the efforts made by engineering undergraduate students to effectively use computer, for creative and innovative thinking skills. The research and the analysis of the data cast lights on a significant gap, that computer itself cannot support innovation if the medium of the instruction to use the computer is not designed effectively. Along with this, this study also provides insight on the importance of using computer as a learning and innovative medium in engineering studies. Education is being confronted by the changing needs of a world which is becoming knowledge intensive. Creativity, innovation and reflection on the metacognitive and rational characteristics of learning are becoming extremely important to fit this need. It is evident in innovation and creativity because it involves thinking beyond the normal domains to construct new knowledge in a constructive setting. The exponential growth of computers is having a dramatic impact on learning, innovation and creativity. Computers have enhanced the promptness and imminence of creative and innovative skills of students in universities. This effect has given a different direction of using a computer as a collaborative tool. Technology, at its best, can provide self-control capabilities for knowledge construction, it can constrict or loosen the connections between creativity, innovation, learning, and taking action. Development of innovative thinking skills among engineering undergraduates is of critical importance to the national economy. Computer revolution have encouraged self-directed learner who should innovate, create as well as collaborate in the global platforms. Instructional technology, when used effectively, has been shown to enhance educational environments facilitating active and engaging learning strategies such as providing access to information, ideas, and collaborative exchanges focused on generating innovative solutions. Recent advancements in slate enabled laptop computers, a form of instructional technology, and their impact on innovative thinking skills have been relatively unexamined.

Do I Have Culture? Classroom Conversations About Cultural Identity

Heljä Antola Crowe, Kendra Brandes, Robert Davison Aviles, Deborah Erickson, & Dawn Hall, *Bradley University*

Awareness of one's own culture or one's cultural self-identity is not a given. Professionals need to discuss how their culture(s) and self-identity affect the way they think, do their work and interact with others. Reflecting as a professional is an important tool in developing relationships, making decisions, negotiating challenges and planning. The presentation will include issues of the fluid nature of cultural identity, self, and others in relation to becoming aware of one's own worth as a cultural human being. The purpose of this presentation is to expound on culture and promote discussion of self-identity, voice, visibility, and perspectives in seeing self and others. As the world

becomes more networked and connected, it is crucial for professionals to be able to see the value of culture both within self and others. Culture is an asset, a tool, and an experience. As cultural beings people have power to connect and collaborate. Not being aware about one's culture or its power can diminish the effectiveness of one's personal and professional functioning. The presentation will encourage various strategies to discover what culture is and how to go about identifying it while growing as a professional in various fields of study. Expanding out of lived experiences of team-taught higher education practices in our Global Scholar program, this session seeks to uncover specific understandings about cultural identity and invite further discussion among colleagues.

Does an Evolution/Creation Debate Increase Openness to New Ideas and Evolution Knowledge?

Oliver Pergams, Liza Mohanty,& James Norton, *Olive-Harvey College, City Colleges of Chicago*

Pergams has for several years been implementing an evolution/creation debate in all of his Gen Ed biology sections. Most of our predominantly poor, African-American undergraduate students are creationists, and these debates allow them to express their own beliefs. We think these debates also encourage students to open their minds to new ideas in general and teach them about evolution in particular, and we would like to objectively evaluate this. The purpose of this poster will be to gather feedback on our experimental design and techniques. Focus groups will first be established to help develop appropriate survey instruments. Two groups taught by the same instructors will be established through random assignment: Treatment (Survey→ Instruction→ Debate→ Survey & Quiz) and Control (Survey→ Instruction→ Survey & Quiz→ Debate). Instructors not using the debate will constitute a Pseudo-Control (Survey→ Instruction→ Survey & Quiz). If the debates are indeed effective, openness to new ideas as measured by surveys and evolution knowledge as measured by quizzes will increase. Evolution is the primary and guiding paradigm of all biology, so such increases would lead to stronger student foundations in most aspects of biology.

Dual Roles: Developing Qualitative Research Skills as Investigators and Participants

Carol S. Cash & Laura D. Kassner, *Virginia Tech*

Qualitative research seeks to uncover the "why" of situations, giving researchers the unique opportunity to construct meaning through hearing personal accounts. In an abbreviated four-week doctoral level course in qualitative field studies, we thought creatively about giving students relevant experiences in conducting research without the hassle of identifying their own study subjects, insuring informed consent, and scheduling interviews on their own time, all while working as full-time practitioners. As a result, students were assigned to a small group and a current state-level school reform platform. They conducted literature reviews and document analyses; developed, piloted, and amended interview and focus group protocols; conducted interview sand focus groups using their classmates during class meetings; and transcribed, coded, and analyzed responses for a paper and presentation. Additionally, they kept a reflective journal throughout the course to detail their experiences as participants and observers. This practice could be used to teach qualitative research methods in any social science discipline and lends itself well to the concept of the researcher as a learner (Rossman & Rallis, 2003). Additionally, students in this doctoral cohort had already established strong rapport, a challenge conducting interviews with unknown participants (Seidman, 2006), a benefit to this instructional strategy. Course instructors have and will continue to examine interview transcripts and student perspectives in reflective journals to cull student perceptions of these methods. Preliminary analysis yielded positive student perceptions regarding the structure of the course and strong student satisfaction with a relevant learning experience.

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Encore Entrepreneurship for Retired Rural Residents – Teaching Old Dogs New Tricks?

Forrest Stegelin, *University of Georgia*

The old adage of "you can take the boy off the farm, but you can't take the farm out of the boy" is so true for many farmers who have retired from active farming, only to wake up early each morning and experience depression over wanting to stay engaged and productive in their earlier career endeavor of farming. These retirees may still reside on their farmstead and attend local extension education meetings so as to network with their rural peers, yet it is at these meetings that the question arises as to "What might (my spouse and) I do for a practical agribusiness venture as an encore to farming?" The task becomes taking an individual's earlier career endeavor and experiences, the knowledge and skills acquired, their maturity and finances, and a wide network of professional contacts and associates to design, plan, and start a small agribusiness venture. The encore entrepreneurship extension education program for retired rural residents has four components: understanding what entrepreneurship is in today's economic environment; discovering how to choose a business idea and turn an entrepreneurial idea into a business reality; defining and describing the components to forming a new business, including conducting a feasibility study, developing a flexible business plan, deciding on a business model, and preparing the financial and cash flow budgets; and acquiring the resources to succeed in the new agribusiness. The activity occurs over a two-day period, mostly spent in self-paced training exercises and self-assessment or reflective inquiries (e.g., *The Holland Personality Types* and *Are You a Risk Taker?* exercises), with spouses or partners as collaborators. Additional readings and resources (online and print) are provided to the participants to complete their assignments, as well as encourage active participation to, for instance, role-play *The Leadership Secrets of Santa Claus*, and other references.

Environmental Discourses in Borana Oromo: A Focus on Narratives

Teshome Tafesse, *Addis Ababa University*

This study explored the discourses of environmental narratives as an organized, viable, and dynamic social force basic to the creation and dissemination of environmental messages in Borana Oromo of the southern Ethiopia. Under this major objective, the study discovered environmental beliefs and values, investigated environmental knowledge, power and ideology, and identified environmental positions the community has situated itself in.

ePortfolios: A Student-Centered Approach to Meeting the Needs of Online, Graduate Students

Rochelle Franklin, *American College of Education*

The use of the online portfolio is an effective tool to allow students to demonstrate competency of the program outcomes in addition to demonstrating their proficiency of a variety technology based resources relevant to the modern classroom student. The purpose of this presentation will be to address the graduate level degree completion requirement used by American College of Education. As an online graduate program, the ACE seeks to utilize technology and assessments that are applicable to modern students who are currently working in educational settings. American college of education offers a MEd in three different professional fields. As part of the degree completion requirements students complete an online portfolio that demonstrates their mastery of the seven key foundations of the program. In addition, students create additional work samples to highlight their skills of leadership and mastery of graduate level course work and knowledge. The development of the online portfolio provides the college a method to evaluate student's mastery of the program outcomes as well as provides students with a professional portfolio that they are able to use in their current and future careers. While many graduate programs require graduate students to complete and exit piece, the approach used by ACE allows for students to have a final product that can be used outside of higher education.

Evaluation of a Flipped Classroom: What do Students Think of Flipping? What Would They Change if They Could?

Tracey Birdwell & Jennifer Sparrow, *Virginia Tech*

The flipped classroom has become a popular new pedagogical model for the university classroom. The flipped model promises that by reimagining where and when students engage in certain learning activities (specifically, by learning new materials as homework and then applying that knowledge in collaborative, in-class activities) students will learn more actively and more deeply. But not much is known about how students experience or respond to the flipped model. This poster session addresses the results of an evaluation of a Visual Communication class held in the Spring of 2013 at Virginia Tech. Using interviews and survey data from undergraduates who participated in the class, this poster session will address what aspects of the flipped model the students found appealing, what aspects of the model they disliked, and what struggles they encountered in the flipped model. The interviews and survey data further reveal the ways the flipped model changed the way the students interacted with the instructor, their peers, and the course material. The qualitative and quantitative research presented will include suggestions for how instructors can better build and organize a flipped course.

Evaluation of Reading Assignments and Assessments in Online Learning

Wei Li, Maria Victoria Gonzalez Riopedre, & Jennifer M. Brill, *Virginia Tech*

The purpose of this study was to evaluate reading assignments and the design of assessments for an e-learning course at a United States research university. This three credit hour course is one of the foundational courses in an online master's program. Ten graduate students participated in the study. Interview and survey data were collected. The results showed that participants failed to complete reading assignments and held negative perceptions about quiz design. Factors that influenced the completion of assigned readings are discussed. Based on the results of the study, significant recommendations were made for improving reading assignments and assessment design for this e-learning course.

Exploring the Academic Benefits of Art in School Programs: A Research and Evaluation User-Centered and Participatory Model

Maria Stallions & Leslie Murrill, *Roanoke College*
Barbara O'Brien, *Woodruff Arts Center*

This poster session presents the results from year one (Pilot Phase) of a three-year research and evaluation project and hopes to become an incubator for future studies on the impact of art in school programs on student academic success. As the national discourse for educational reform continues to highlight the need to move away from more traditional teaching and learning methods to innovative instruction that incorporates metacognitive processes, active learning and social/affective constructs, Art integrated programs have gained greater attention (Branford, 1999; Fouts, Brown, & Thieman, 2002). Even though the number of studies with emphasis on the Arts has increased in recent years, more research is needed to demonstrate the added value of an art integrated curricula. Therefore, the findings will be shared as descriptive analyses and are considered exploratory. Yet, they offer a pathway to a more robust research design in years two and three of the UPD project. In this context, the focus of the key findings for year one remains on two fundamental questions: "What do you want to know about your program?" and "Who will use that information and how?" These questions are the framework for the User and Participatory-Driven (UPD) model. The UPD framework is grounded on the User-Centered and Participatory Design approach as well as Action Research practices (Foth & Axup, 2006). This approach encourages participants to take an active role in research and evaluation activities that have a direct impact on their programs and themselves and fosters knowledge generation and strategic decision-making practices (Schlossberg, 1998). The model allows YAWAC staff to

participate in the identification of best practices, collaborate in programming midcourse formative adjustments and provide greater program accountability.

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Faculty and Institutional Effectiveness Working Together: Assessment of General Education Outcomes

Eric G. Lovik, *College of The Albemarle*

Identification, measurement, and improvement of general education core competencies are critical to the success of America's community colleges. Public, two-year institutions are designed both to provide a broad foundation of general education for students who intend to transfer into four-year programs as well as to develop sufficient competencies for students who may never continue their postsecondary studies beyond the community college, but will enter the workforce (Cohen, Brawer, Kisker, 2013). This presentation is based on a case study of a multi-campus community college in the North Carolina system. The institution serves students across a seven-county region that ranges from rural farming communities to large populations of residents along the Outer Banks. Over several years, a core group of faculty evaluated their general education courses and selected common required courses that enhance students' development in five core competencies: oral communication, written communication, information literacy, quantitative skills, and computer skills. Next, the faculty drafted rubrics by which the faculty who teach these core courses would evaluate student achievement in pre-determined activities and assignments. Finally, the general education committee collaborated with the office of institutional effectiveness to create a data reporting system, document the course sampling processes, and analyze and report the data. Professional development is offered to faculty on using the assessment rubrics and submitting the data. Results indicated that, while these direct measures of learning outcomes differed greatly by discipline, most students met the minimum competency targets on rubric scores. Faculty observed that their ongoing collaboration with institutional effectiveness enabled the college not only to measure student learning but also to identify opportunities for improvement in teaching and learning.

Fighting Death by PowerPoint: Exploring an Innovative Approach to Motivating Student Engagement

Maria Sugastti, Cailin V. Clinton, Ruth-Anne E. Poli, & E. Scott Geller, *Virginia Tech*

Interteaching is a classroom procedure that encourages student discussions in dyads prior to an instructor's lecture. It provides instructors with feedback about difficult material for tailoring the lecture. When implemented consistently, interteaching has been found to produce positive effects for learning as well as improving student-student and student-teacher relations in the classroom. This study examined whether intermittent interteaching could impact exam scores, a sense of community in the classroom and student engagement. The sample consisted of 62 students enrolled in an undergraduate psychology course who received Lecture-Only versus Lecture plus Interteaching on alternating days. It was hypothesized that students would perform better on exam questions for which the material had been presented in lectures preceded by interteaching versus a Lecture-Only format. It was also hypothesized that interteaching would increase class participation. Two student observers recorded the number of students using

laptops with on-task behaviors defined as typing notes and off-task behaviors as browsing websites in 15 minutes intervals. Results indicated that interteaching was not a significant predictor of exam scores due to low variance in grades, however an off-task behavior trend among laptop users was discovered. General trends of laptop users indicated that students were on-task at the start and end of each class. Off-task behaviors occurred most at the midpoint of lectures. As the semester progressed, there were substantially more off-task behaviors for laptop users. On Interteaching days, students asked more homework-related questions but on Lecture-Only days, students asked more questions to further explore topics. In comparing this class to their other classes, students reported feeling more comfortable participating in this course. Students ranked PowerPoint lectures and the textbook above interteaching as valuable (n = 21). While the interteaching approach was not judged favorably, students are institutionalized to PowerPoint lectures and the interteaching component requires participation.

Fostering Community Inside and Outside the Classroom: Building a Stronger Disciplinary Department

Adam Childers & David Taylor, *Roanoke College*

A large part of providing majors, in our case mathematics, with quality educational experiences is rigorous, engaging lectures; however, making the students feel a part of a larger community and providing experiences to learn outside of the classroom is imperative. The key to linking the students' experiences is creating the proper balance of opportunity, motivation, and fun. At Roanoke College we have developed a strong community of students in the department through a rich lecture series, encouraging students to meet outside of class, and building a vibrant mathematics club. Providing opportunities is the first step to get students involved outside of class, but, motivating them to participate is equally important. Our Conversation Series consists of one hour discussions from department members and diverse outside speakers that address both of these issues. Students are required to attend lectures and write responses discussing the mathematics involved. The program has been met with excitement rather than resistance because they select the talks they attend and enjoy seeing various applications of mathematics. Encouraging students to meet outside of class to study together is easy but actually getting them to is the real challenge. We have increased our success with this by advertising our "common" room, located close to the departmental offices, having inviting office hours and having instructor-led study periods at night. The Math Club has developed into a popular outlet to socialize and meet others from all academic classifications. Determining the proper balance of content and fun in our bi-weekly meetings has been crucial to attract and maintain high attendance. The students are exposed to mathematics constantly but we do so through games, community service, promoting mathematics on campus, and endorsing conference attendance. Making the students feel like they are part of a community has created stronger, more dedicated, and happier students.

From "English of Specific Cultures" to "English for Specific Cultures" in ELF Era and the Need for EIL-Based Coursebooks

Mehdi Solhi Andarab, *Bahcesehir University*
Dilek Inal, *Istanbul University*

The growth of English into an international language and the diffusion of English across the world have caused considerable tensions and promoted heated debates in the process of English language teaching. This is due to the fact not only those who speak English are more likely to be non-native speakers of English than native speakers, but they are most likely to speak to other non-native speakers of English than to native speakers. Some scholars even believe that English is no longer the sole property of its native speakers. Nevertheless, majority of ELT cousebooks are still being published by major Anglo-American publishers and are based on the norms and cultures of Inner Circle countries, such as the USA and the UK. These coursebooks may cause problems regarding accurate presentation of cultural information and images about a variety of cultures beyond the Anglo-Saxon and European world. In fact, the English applied in such coursebooks mainly represents the culture of native speakers of English and this is what we conceptualize as *English of Specific Cultures*. However, nowadays if English is considered as an international language, it can be used as a language to portray culture ideas of Outer and Expanding circle countries

especially in ELT coursebooks. In this case, this language can be regarded as English for Specific Culture (Yano, 2009). This article argues in favor of 'English for Specific Cultures' in ELT coursebooks, in an attempt to recommend some features for the future global coursebooks in EIL era.

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Graduate Teaching Assistants' Use of Opportunities for Teaching Development

Tyler A. Hassenfeldt & Amanda J. Watson, *Virginia Tech*

When appropriately trained and supported, graduate teaching assistants (GTAs) can be an invaluable resource to the academic community. Park (2004) suggests that when instructional programs are offered at both departmental and institutional levels, important teaching skills are developed early on. Additionally, GTAs can energize an institution's teaching culture, leading to subsequent benefits for undergraduate learners (Park, 2004). At a large Southeastern university, multiple opportunities for teaching development were offered to the GTAs within one department (n = 34). An advanced peer supervisor was provided a stipend to consult with GTAs on teaching concerns, provide teaching observations, and organize brown bag meetings on a number of student-selected topics. At the end of the spring 2013 semester, 19 students (55.8%) returned an online survey regarding their use of these teaching development opportunities. All students surveyed felt that the number of brown bag meetings was "just right," preferring 3-5 meetings per semester. Students were also satisfied with all three meeting topics: student engagement, group work, and summer teaching. Potential future topics were also identified, including connecting with difficult students, textbook selection, technology use, and working with other on-campus organizations. Scheduling conflicts aside, students also reported positive feedback from the brown bag meetings. Forty-seven percent (n = 9) of those who returned the survey had been observed that semester. All GTAs who had been observed indicated that the observation and subsequent feedback positively impacted their current and future teaching. These results show a high level of GTA interest in a wide variety of teaching development opportunities, with considerable promise for future expansion.

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Have Some G.U.T.s! The Grand Unification Theory: Hybrid Education Delivery Systems Utilizing Pedagogical and Andrological Best Practices

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The Grand Unification Theory is a collaborative learning model. This model enhances the future of post-secondary education delivery systems by providing instructors the opportunity to use well established, but often isolated, educational tactics that contribute to enhanced student learning and data retention. Post-secondary instructors can differentiate between pedagogical and andrological delivery formats, but many have never practiced implementation and integration of the two platforms together. Combining the platforms can maximum student data retention. Historically, pedagogy was the art and science on educating children. The term has evolved into a synonym for "teacher focused education" (Conner, 2004) that still governs formal academic environments. In this system the instructor chooses what the student will learn. Some instructors agree that this authoritarian approach to learning is still the best delivery system. Others acknowledge that consideration of andrological learning models that are student centered focused must be incorporated into the formal learning process. Malcolm Knowles understood this concept and presented andragogy as "the art and science of helping adults learn." Since acceptance into education, andragogy theory has asserted that the learner must be the center of the learning process so students can maximize

the amount of information retained. Combining pedagogical practice like subject-centered, teacher-directed learning and andrological practice like learner-centered self-directed learning offers an inter-disciplinary and customized approach to student learning. Therefore, it is important for educators to find ways to incorporate the Grand Unification Theory into the courses they teach and provide opportunities to engage students with a collaborative delivery system.

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Health Professions Students' Self-Ratings of Clinical Knowledge and Performance Before and After Simulated-Based Education

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In a study of Surgery(SR) and Emergency Medicine(EM) clinical education, Evans and colleagues (2012) concluded that successful and sustainable programs require: (a) clear learning objectives, (b) clear expectations for faculty/students, (c) engaged faculty/students, and (d) a culture of accountability. The purpose of this study was to analyze the impact of simulation-based education (SBE) in augmenting medical/physician assistant students' third year SR and EM education. During one academic year, 33 SR students participated in an SBE workshop regarding suturing, knot tying, endoscopic, and laparoscopic skills. A different cohort of 24 students participated in an EM workshop involving a chest pain and cardiac care scenario, and relevant clinical procedures (e.g., central line placement, lumbar puncture). In both exercises, students were observed by faculty and rotated between learning stations every 15-30 minutes through all stations. A 5-point Likert scale (*very low* to *very high*) questionnaire asked participants to self-rate confidence and skills before and after these SBE experiences; students rated themselves on a total of seven items in the SR exercise and 29 items in the EM exercise. Data analyses were performed using Paired Sample *t* test and Wilcoxon Signed Rank test ($p \leq .05$). Self-reported confidence in all 36 measures increased. Students reported that the learning experiences were worthwhile, and were an important supplement to their educational experiences in patient care. Students also stated course objectives were met (95%) and faculty were organized and effective (98%). An overwhelming majority would recommend these specific SBE experiences to a student colleague (98%). This study describes successful integration of SBE into third year medical student clerkship training, and also provided students with an opportunity to demonstrate skills while working with practicing healthcare professionals. Limitations to the study include the small sample size, lack of long-term follow up on educational gains by students and lack of more objective measures of student knowledge and skills.

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How to Think *Inside* the Box and Still Make Instruction Relevant, Meaningful, Timely, and Fun

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The charge to faculty in higher education classrooms is the same of that within all sectors of business, both private and public; that of "working smarter, not harder". The challenge today revolves around two entities: budgetary constraints and the ever changing demographics of the students in post-secondary education. For years the mantra has been "think outside the box" which in its efforts brought faculty to seek methodologies that integrated the great many new "toys" and sociological pedagogies of instruction. In today's educational setting the thrust is towards providing the best instructional design and implementation but now within the finite boundaries presented by both the system and the faculty themselves; thus the need to "think INSIDE the box". Instructional design must now utilize what is already a part of the system both in human and finite resources. It may seem like a return to previous pedagogies but, in essence, it is recognition of the power and ability for faculty make instruction relevant, meaningful, timely and fun for both faculty and students. Higher education has become mired in its obsession to use all the high dollar and time intensive instructional adjuncts when in fact its richest resource is the faculty themselves. Inclusive in faculty resources are the strategies of creativity, student engagement and adult learning principles and can guide this new paradigm of classroom instruction. It is vital to higher education that faculty understand how they are both the motivation and the tool that enhance learning outcomes within the climate of budgetary, political and resource limitations.

Improving Student Performance in Large Lecture Courses in Fifteen Minutes

Jonson Miller, *Drexel University*

A single fifteen-minute meeting between myself and under-performing students of a large-lecture course led to improved test scores, student satisfaction, and student retention in the course. Large-lecture courses tend to create a sense of student anonymity, which leads to lower student motivation and, consequently, poorer performance. Moreover, the large workload of large-lecture courses makes it harder for instructors to provide the student-centered learning and student-teacher interaction that improves student outcomes. I chose to intervene with under-performing students in my 100-student history courses taken almost entirely by freshmen. I required all students who earned a D or F on the first exam to meet with me individually for fifteen-minutes. At the meeting, I encouraged the students to reflect on why they weren't performing as well as they'd like. Then we identified a few tactics to help them improve. Most meetings led to identification of poor note-taking and reading practices as the source of difficulty. The result of these meetings was an average 13- and 23-point (out of 100) improvement between their first and second exams in 2010 and 2011 respectively. This was more than twice the improvement experienced by the class as a whole. The meetings also resulted in the students having a sense that they could still succeed in the course, which led to lower course withdrawal rates after I instituted the meetings. In addition, both student satisfaction and my own joy of teaching increased. It is likely that student improvement was a result of both improved study skills and the increased motivation resulting from student-teacher interaction outside the classroom. While such interventions are time-consuming for the instructor, the results more than justified the effort.

Improving University Teaching: Lessons from the University of Venda, South Africa

Livingstone Makondo, *University of Venda*

This discussion examines efforts being made to improve the state of teaching and learning at the University of Venda since the beginning of 2000s. Historically, South Africa became a democratic state in 1994. The University of Venda is one of the few that did not merge with any other existing institution. The University is located in the northern part of the country in the Thohoyandou rural area. The location is a constraint in that the institution end up experiences some difficulties in attracting and retaining teaching staff members and very good quality of students. It is against this background that this paper interrogates what are the structural, cultural and agential changes the

University of Venda is putting in place to ensure that it becomes a university of choice in the country, region, Africa and world. Using sociological insights drawn from Archer 1995, 1996, 2000, and 2003, this on-going study reckons that proactive structures, agents and culture are requisite for the University of Venda to ensure that its staff compliment adopts and implements teaching-learning facilitation approaches compliment with the 21st ethos. In addition, the ever increasing diversity of the student body calls for teaching staff that thrive on scholarly teaching for them to maximise on their student potential.

Incorporating Service Learning into an Online Social Justice Course

Carmen Mónico, *Elon University*
Dalia El-Khoury, *Virginia Commonwealth University*

The instructors will share their experience teaching social justice for the Virginia Commonwealth University (VCU) Distance Education (DE) program during the summer of 2013. The instructors will share their experience of developing a fully online 8-week social justice summer course, which offered an option to pursue a service learning project as the main assignment. The instructors will make available the syllabus developed, including the description of the assignments and the related rubrics for evaluation. They will also introduce the Blackboard page of the course, and some of the multi-media projects students submitted as a way of reflecting into their service learning experience.

Increasing Awareness and Evaluation of Spatial Environments: While Encouraging the Use of Smart Phones in Class Activities

Elizabeth H. Dull, *High Point University*
Doris H. Kincade, *Virginia Tech*
Alice E. Dull, *University of North Carolina at Greensboro*

Exploring the concept of movement through spatial environments, as evidenced by de Certeau (1984) in his essay, "Walking through the City," allows students to develop a more kaleidoscopic view of their surroundings. To aid their understanding of spatial concepts students, "walking through" spaces, should create a multi-faceted analysis rather than a singular viewpoint of their surroundings. In addition to teaching situational awareness to undergraduate design students, de Certeau's spatial theory can be useful in other disciplines (e.g., geography, anthropology, medicine) for developing in students a more complete understanding of their environment beyond seeing the basic physical spaces. With this methodology, students' viewpoints can be moved from awareness and understanding (freshman year) to application (senior year). To facilitate development of this multi-layered construct in students, freshman, in our interior design and fashion marketing classes, are assigned a walk through campus starting from a location that gives a panoramic view of campus. Beginning with this global view, students proceed to walk across campus, completing the journey when seated in an interior space (e.g., retail store, classroom, dorm room) of their choice. Drawing on learning techniques favored by millennials, students are allowed to work in groups and document their journey with smart phones. They post photographs in real time to the class site, along with their thoughts about the people and objects within the space. Senior students have similar directions for beginning the project and posting their "findings;" however, seniors are asked to work within predefined spaces with specific parameters. Seniors post not only their observational findings but also their suggestions for improvements in the space. The projects have been completed in several classes with excellent success. Students enjoy the use of their phones to complete the assignment and their in-class reflections indicate they do learn to see beyond the singular viewpoint.

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Innovative Competition Based Learning for Engineering Education

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Normah Abdul Aziz, *Teacher Education Institute, Malaysia*

Competition-based learning was first introduced in Intelligent Urban Transport Management System (IUTMS) course in 2012. A project was given to the students, which specifically required them to propose an IUTMS—a mid-size town 35km to the south of Kuala Lumpur. At the final stage of the project, each and every group has to present their design in front of all other students. Their counterparts rated their design using Audience Response System (ARS). The project was part of the course requirement since it was first introduced eight years ago. However, the competition has only been introduced in 2012 as an innovation, while at the same time providing opportunity to the lecturer to study the effect of competition-based learning to the students' learning. It was found that most students not merely motivated to produce an innovative proposal, but also demonstrated better presentation rigor. Analysis and reflection of the findings also found that students' learning to master background knowledge such as artificial intelligent, communication system, sensor, physical architecture and logical architecture is better and deeper.

Integrated Science Curriculum

Gary L. Long, Timothy E. Long, Naya Sou, J. P. Morgan, Michel Pleimling, & John Tyson, *Virginia Tech*

In the past two decades, the traditional methods of science education lacked success in garnering college student interest. Observations by McWilliams suggest this lack of success is the result of passive consumption in the classroom; he proffers it can be addressed through changes in creativity and the use of new pedagogies (McWilliam, Poronnik, & Taylor, 2008). One of these changes must involve teamwork, for despite the best practice models of business education (Kas, Carley, & Carley, 2012), scientists rarely work with others outside their area, let alone teach courses that interface with other STEM disciplines. In Fall 2011, the College of Science introduced the Integrated Science Curriculum (ICS): a new program that intertwines introductory subject matter of biology, chemistry, mathematics, physics and statistics into a two-year offering. Teamwork is a major component for both students and faculty in these four lecture-lab offerings. ISC allows students to achieve a dynamic understanding of a wide range of fundamental principles common within modern scientific practice. ISC allows faculty to more effectively teach common STEM topics. The lectures use problem-oriented exercises to promote mastery of interdisciplinary concepts. The labs meet in the dedicated Integrated Science Laboratory, where a variety of modules explore cell biology, chemical kinetics, physics, statistics, and photosynthesis, and where students are exposed students to state-of-the-art instrumentation. Students finishing the two-year lecture-lab sequence receive credit for first year courses in Biology, Chemistry, Math, Physics and Statistics. The result is a community of students trained in an interdisciplinary strategy for learning, which will benefit them in their major field of study. The program has enrolled 70 students in two+ years of operation. Assessment of ISC employs evaluation efforts crafted around Leaner-Center Teaching (Weimer, 2002). Qualitative analyses involve focus groups and surveys. Quantitative analyses use appropriate statistical methods on: (1) demographics, (2) course performance in other upper level science courses vs. peer groups, and (3) retention rate to matriculation.

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Linking Service Learning, Active Student Engagement, and Student Mentoring to Program Outcomes: A Community-Based Case Study

Paul L. Ewell & Donald V. Lawrence, *Virginia Wesleyan College*

Assessment has become the overarching theme with both regional and discipline-specific accreditation bodies, and as a result, many academic programs are working diligently to make the connections between myriad teaching pedagogies and program learning outcomes. The primary purpose of the assessment process is to, in effect, close the learning loop. This case study examines not only the successes identified but also the opportunities and lessons learned as a result of a collaborative effort between an instructor, a teaching assistant and one undergraduate class. With pedagogical conversation in various circles focused on service learning, active student engagement, and student mentoring and the subsequent effects of these pedagogies on learning outcomes, this field study was undertaken to determine what the outcomes might be if these variables were actually observed in a real class project in an actual community setting. This research effort was executed by allowing all three participating bodies (teaching assistant, instructor, and students in the class) the opportunity to engage in a community-based project, journalize the processes observed (with significant critical attention paid to these processes), and then attempt to assess whether or not or to what level the course outcomes were attained. The research resulted in some valuable insights, particularly the recognition that assessment, if done properly, is an iterative and messy process, one assessment size does not fit all, and continuous process improvement is a must if programs are to reap the real benefit from assessment endeavors.

Mendeley: A Collaborative Learning Tool for the Classroom

Tehmina Khwaja, Pamela Eddy, & Sharon Stone, *The College of William and Mary*

Collaborative work enhances students' teambuilding and interpersonal skills while deepening the learning experience (Nilson, 2010) and technology can enable students to collaborate with each other on projects without the need to meet in person. Deep learning builds on past experiences and the opportunity for adaptive expertise emerges from a solid knowledge base (Budwig, 2013). The opportunity to work collaboratively with peers provides a context for practicing newly gained skills (Nilson, 2010). This study explains how we used the online reference and academic networking tool, Mendeley (Zaugg et al., 2011), as a platform to allow for collaborative learning among students. The project highlighted focuses on a student assignment that involved the collaborative critique of an article, finding and annotating additional relevant literature, synthesis of all group articles, and creation of individual policy briefs. We will use screenshots to show how the collaboration using Mendeley took place and progressed over the course of the semester, and resulted in an individual final product. We used survey data to gauge the experience of the students with Mendeley. We discovered that students found Mendeley useful for organizing the material for the project as well as for their other research work, and also facilitated collaboration. The survey also revealed, however, that there is a learning curve with Mendeley as many students struggled at first with using it as a reference tool, which is one of the most useful features of this tool. This presentation will include survey data and examples from two iterations of a class that used Mendeley as a collaborative tool. This research concluded collaboration was enhanced as a result of the technology, but that scaffolding is required to achieve deep learning outcomes. The hands-on nature of the project afforded students the opportunity to practice their research critiquing skills and ability to synthesize literature.

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Negative Stereotypes and Community College Transfer Students' Academic Performance

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The inequalities and rising costs of college have pushed students, with high academic potential, to begin at community colleges even if it is not their first choice. In addition, the competition for transfer access is likely to increase as States implement stricter four-year college admission standards (Boswell, 2004). While students overcome the obstacles of transfer process and successfully complete the coursework required, many faculty members and administrators at four-year institutions view community college students as "academically suspect" (Cejda, 1997). Moreover, community colleges have been criticized for inadequately preparing students who transfer to four-year institutions (Cejda, 1997). As a consequence, psychological distress and underperformance may arise when students become aware of the negative stereotype associated with being a transfer student. This is a predicament known as *stereotype threat,* which prevents members of a negatively stereotyped group from performing to their full potential (Steele, 1997). This study will examine if stereotype threat helps to explain the phenomena of "transfer shock" that is evident among community college transfer students after they transfer to a four-year institution. Transfer shock characterizes the temporary decrease in students' academic performance (i.e., grade point average, GPA) in the first or second semester after transferring (Hills, 1965; Webb, 1971; Williams, 1973). Unfortunately, studies to date have not examined the possible connection between stereotype threat and transfer shock. Based on the negative stereotypes about transfer students, I intend to explore how stereotype threat accounts for the underperformance of transfer students' at four-year institutions. The suggestions discussed will assist university professionals developing programs for enhancing academic advisement for future transfer students to successfully transition into university life.

Open Source Software to Help Business Students Navigate Costly Software Licensing

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This research study conducted was of the graduate emerging information technology course. Approximately 18 students were given instructions on how to build virtual machines (VMs). These VMs contained the open source equivalent to commercially available software applications that charge license fees. The students were required to locate, install, and integrate these open source software (OSS) applications. The primary objective of this study for the MBA students was to measure the OSS and calculate the cost savings to the business enterprise. Once the MBA students concluded their research, they had to generate a presentation and demonstrate their knowledge of the application to their peers. LibreOffice was one of the applications used and discussed during the presentations. LibreOffice contains a word processor program, spreadsheet program, presentation program, graphics editor program and Base. Base is a database management program similar and compatible to Microsoft Office in some versions that have been recently released. What the students found in their data is many companies are also switching to LibreOffice from Microsoft Office to help in cost savings with licensing fees. This study provides a guide as to how OSS helps them strategically management information technology (IT) license costs and maintenance fees.

Optimizing Standards and Quality of Higher Education in Developing Countries

Ivonne Umuyetu Uwaifo, *Post Primary Education Board Benin-City*
Victor Oziengbe Uwaifo, Clement Dazumi Aigbojie, & Ferdinand Uwaifo**,** *Ambrose Alli University*

This paper examines the issue of standards and quality of education in developing countries with specific reference to the African Continent. It recognizes quality of education in any country as a very important ingredients in meeting

with the world global educational standard, however, its been observed that most outputs of higher education programs in some developing nations lack the competitive ability to prove themselves positively when compared with the outputs of the developed nations. This is essentially true in higher education as compared to industry where clearly definable products with quantifiable qualities exist. The "product" of higher education is intangible and the customer very difficult to identify. However, in most developing countries today, there is mounting concern about the state of schooling at all levels. This is rooted in the realization that literacy levels and academic achievement will determine individual's job attainment and earning as well as the general economic well-being of the society. Moreover, the quality of life in the society will be affected by the level and quality of social skills acquired in schools. It is in line with this that the paper looks at the various issues bordering on standards and quality of higher education in the continent and suggests different options and strategies which can be used to further improve it, especially at the university level.

Outside the Classroom Walls: Transforming Student Perspectives Through Meaningful Service-Learning Opportunities

Katie S. Elmore & Leslie D. Murrill, *Roanoke College*

Service-Learning provides students with the opportunity to connect knowledge gained in the classroom to authentic service experiences in the community. From the initial stages of planning the service to a post-service public showcasing, students engage in ongoing guided reflection, that is, the productive interplay of reflective observation, abstract conceptualization, and active experimentation that is at the heart of experiential learning. This guided process helps students find meaning in their experiences and achieve growth in academic content, personal/professional development, and societal engagement. Ash and Clayton's (2009) DEAL Model provides a detailed method for critical reflection that guides student learning throughout the process. Utilizing methods such as online journal entries, blog posts, and personalized video reflections, students articulate contextualized learning on a continuous basis. Survey data is collected at the culmination for consideration of how the experience has transformed students' knowledge, civic perspective, and sense of vocation. Students synthesize and present learning outcomes at a showcasing event for the broader campus community.

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Pedagogical Integration in Higher Education: Developing Critical Thinking SkillsBuilding Self Confidence

Julia Castleberry, Brent Harper, R. Huth, R. Linville, A. Siyufy, K. Jagger, & E. Swanson, *Radford University*

The primary objectives of higher education are to cultivate critical thinking and problem solving, both essential to the integration of didactic knowledge into practice. Educators can facilitate critical thinking over time and across multiple domains including affective, psychomotor, and cognitive. Education, as a scientific reasoning process, ensures information is sequenced logically and facilitates learning skills. As part of this reasoning process, the literature identifies key factors in critical thinking development, including: Developing Self-Confidence, Active Learning, Open-Ended Problems, Evidence-Based or -Informed, Peer Learning, Rubrics, and Research Experiences (Hannel & Hannel, 1998). Educators can implement the seven-strategies to build the foundation for the development of critical thinking skills beginning with the student's first encounter with his or her peers and instructors. This guided educational interaction cultivates self-confidence and self-direction. Educational socialization experiences challenge students to create and to formulate opinions and to demonstrate knowledge in order to develop critical thinking skills within a structured learning environment. The success of creating learning experiences and critical thinking skills hinges on social encounters with peers and instructors. Radford University's Doctor of Physical Therapy program facilitates students' development of critical thinking by implementing all seven key factors. The

initial building block is founded upon social interaction and engagement in the learning process. Initial student exposure and incorporation of interactive activities throughout the curriculum create a positive perception of the learner within the program of study. The self-confidence gained is necessary for developing critical thinking skills. This confidence is facilitated by the instructor's ability to engage the student in the learning process. Once the student is engaged, it is hypothesized that increased confidence in thinking ability leads to academic success. This process of building self-confidence in order to facilitate the development of critical thinking skills evolves along a continuum applicable across educational curricula and professions.

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Photo Elicitation: A Technique for Undergraduates to Develop Visual Literacy

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The project aims to understand how educators in higher education can use the photo elicitation technique and emergent technology tools to help undergraduate students develop their intercultural competence and visual literacy. Two groups of American and Taiwanese college students were recruited to participate in the cross-cultural project. In this project, the participants used an image-based online discussion Web 2.0 tool, VoiceThread, to communicate with their partners for six weeks. Each week, the participants were asked to upload images related to the assigned topics for their partners to review and discuss. The participants were expected to develop the abilities in finding needed images, to appropriately interpret and analyze the messages embedded in the images and furthermore to develop cross-cultural understanding when they exchanged the ideas with people of different cultural backgrounds. The researchers analyzed the images and the discussion based on the Visual Literacy Competency Standards for Higher Education developed by the Association of College and Research Libraries. The researchers found that the participants sharpened their capabilities in finding appropriate images, creating or using images to make meanings, and interpreting or evaluating images provided by others. Furthermore, the participants cultivated their intercultural competence with which one can view things not only through their own eyes but also through the eyes of others. This study provides college students with the opportunities to develop their critical visual literacy skills and to broaden their horizon in this global village with the aid of emergent technologies.

Plagiarism and Academic Integrity in the College Classroom

Osayimwense Osa, *Virginia State University*

Unacknowledged use of other people's works, plagiarism, is an academic offense that is punishable, but a number of today's students tend to ignore it. Because they belong to a digital age when they can readily get their information with the click of a mouse and the like, many college students today avoid the use of the traditional library and rely 90% on their laptops, iPads, or iPods for instant messaging and instant gratification in search of information. Gone are the days of the long boxes that contained uncountable index cards. While these electronic gadgets are helpful in accelerating search for information and acquisition of knowledge, they are being abused by a number of college students. Some copy and paste with reckless abandon and complete their piece of writing within a day and submit it as a response to class assignments. The result is usually a weak and downright fraudulent product that is odious to

the academic world. This session will educate participants on the nuances and subtleties of plagiarism and academic integrity, and how they are addressed in a graduate writing class.

Political Efficacy and Knowledge: Standard and Alternative Texts in Introductory Political Science Courses

Allison K. Wisecup & Tanya Buhler Corbin, *Radford University*

Research consistently demonstrates the benefits for high-impact pedagogical practices such as service learning projects for student learning and engagement. However, these practices often require significant financial investments. Research regarding the benefits of textbook alternatives is ambiguous, though some studies document increases in student learning. Finally, research consistently demonstrates changes in students' political attitudes and values after enrollment in political science courses. The current research explores whether the use of an alternative text influences students' feelings of political efficacy and political knowledge. We explore the impact of a textbook alternative through a quasi-experimental design and find a significant increase in student learning, especially for those students assigned a combination of standard and alternative texts.

Reconciling Learning and Teaching Styles in a Chemistry Class Through Cogenerative Dialogues

Nelson Nunez Rodriguez, *Hostos Community College of CUNY*

The use of cogenerative dialogues in science disciplines is a pedagogical approach bringing together the plethora of academic and cultural backgrounds of current community college students. Specifically, this project illustrates the effects of integrating cogens in a community college chemistry class for science majors. Cogens are discussions based on shared experiences related to teaching and learning, and can involve students, instructors and researchers. It emerged from the idea of students having a voice in how to better teach them. This dialogue also deepens understandings about the complexities of urban post-secondary classrooms, including teaching and learning expectations, and how such complexities mediate students' academic achievement and attainment. Cogens provide an arena to address these issues by capitalizing on the learners' voices in the pedagogical process as students have increased participation in the class decision making-process. Cogenerative dialogues were implemented in a Hostos Community College spring 2011 chemistry class as follows: eight students from a 25 student-class discussed pedagogical issues with the professor in an informal setting once a week. An integrative assignment connecting typical foods from different countries was used as a framework to reinforce the learning process and to unravel content misunderstanding. The project outcomes transcended spring 2011 semester. A new book has been adopted in the class as a result of the dialogue. Oral presentations, the use of masteringchemistry.com and a forum to create exam questions have been implemented. Office hours are now used to both develop specific class problems and to dialogue with students about learning styles. Overall, cogenerative dialogues have opened a venue to facilitate the learning of difficult science concepts while building an atmosphere of acceptance, respect, and collegiality between instructor and the students

Scenario Based Learning in an Airport Emergency Response

Azhar N. Hussain, *Indiana State University*

Aviation is a field where we take safety so seriously that we as professionals can never think of making a mistake, or pay the consequences. Airports differ in many respects, such as size and operation jurisdiction. However, all airports have one thing in common: they are all subject to emergencies. These emergencies warrant action to save lives, protect property, and protect public health. Each and every airport should have an Airport Emergency Plan (AEP) to address those emergencies, disasters, hazards, and crises presenting a threat to public health and safety. This

presentation examines how we as instructors can generate interest in our learners as well as make them learn the procedures. These procedures, when taught in regular classroom format, can be boring. I could see the boredom in my students' eyes when I did my regular PowerPoint presentations: "Not again. Let's get over with this stuff; it's easy and boring." In aviation, safety is hallmark, and if they do not get the main concept of responding to an emergency, then I have failed. This class is not just about passing the test and getting three credit hours. So, one semester I changed the format in this class, meaning that the first half of the semester I cover all of the theoretical portions, and the later I covered the scenario-based sessions. What a remarkable difference this made in their attitude and attention. I had their undivided attention in my 1 hour 15 minute class. So, I ended up reviewing the theoretical portion by applying it in the scenario-based portion. This made the students become more active leaners and were encouraged to ask questions, and tried to answer them as well.

Self-Efficacy, Textbook Use, and Activity Preferences of College Students in a High-Poverty Area

Lola Aagaard, Ronald L. Skidmore, & Timothy W. Conner II, *Morehead State University*

The purpose of this study was to investigate the relationship between academic self-efficacy and preferences regarding the use of text materials and in-class activities of college students at a university that serves one of the highest-poverty regions in the United States. A convenient cluster sample of 105 students taking summer classes at a regional university in the mid-south were administered a self-efficacy scale and a survey of textbook use and preferences for in-class activities. Frequency tables of study survey items by self-efficacy group (above vs. below the sample average) were produced and visually inspected for effect size prior to statistical testing. Subsequently, three Chi-square tests were conducted with a Bonferroni correction to alpha, lowering it from 0.05 to 0.0167. The data collected supported the idea that students from high-poverty areas enter college with reduced academic self-efficacy, as the average for the entire sample was lower than other published data. Those evidencing below-average academic self-efficacy in this sample were significantly less likely to engage in the strategies that would help them be successful (such as reading their textbooks).

Strategies for Building Classroom Community: Making Connections With and Between Students and Faculty

Nancy Luke, Russell Binkley, & Kelly Tracy, *Western Carolina University*

College instructors who are committed to engaging students in meaningful learning frequently explore innovative and diverse learning strategies so that they are most effective in insuring student success. These instructors seek approaches that lead to active, deep, and sustained learning of the course content (Bain, 2011). One approach that many scholars of teaching and learning agree to be effective is the implementation of strategies that build a community of learners in the college classroom (Davidson, 2012; Harwood & Arthurs, 2012; Tinto, 2003). This poster will offer strategies for how and a rationale for why to build community in the college classroom as a way to support student learning and to develop collegially-connected, professional cohorts. These ideas cross disciplines and include students across multiple stages of their college career. Building community is a worthwhile endeavor in the college classroom as a means of supporting student success in academic and content learning, professional communication and collaboration with peers, and deepening an understanding of themselves as active and responsible members of a college and professional community. Questions guiding this poster presentation include: Why should we seek to build community in the college classroom? What are the benefits to both students and instructors? How can we build a sense of community in the college classroom using specific strategies? How do students respond to these efforts and are these activities ultimately successful in supporting student learning and development? In addition to strategies used in each of the presenters' college classrooms, an analysis of students' survey responses on the effectiveness of these methods and on the importance of community building in their development as future professionals will be offered.

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Structured Design Strategies for Attitude Instruction

Samuel R. Jennings, *Radford University*
Katherine Cennamo, *Virginia Tech*

Social psychologists, believing that attitudes can occur both implicitly and explicitly, have proposed strategies to influence both. Researchers within the field of instructional technology have proposed strategies to influence explicit attitudes within an instructional situation but have yet to implement strategies that encompass implicit attitudes. Researchers from both fields concur that attitudes are malleable and can be manipulated with appropriate intervention strategies. For this study the predominant strategies for attitude manipulation prescribed in the instructional design and technology literature were combined and adapted for online delivery. In addition, proven strategies from social psychology research were integrated into the existing instructional design strategies for implicit attitude manipulation. The independent variable for this experimental study consisted of the prescribed instructional strategies for influencing both implicit and explicit attitudes. For the purpose of this study, the attitude that the instruction was designed to address was the reduction of biased-based policing, thus, the dependent variables were implicit attitudes as measured by the Race Implicit Association Test (IAT), and explicit attitudes as measured by the Symbolic Racism Test 2000 (SR2K). Fifty volunteers were randomly assigned to one of two instructional modules. One module served as a control for 25 of the participants. The second module served as a treatment for the remaining 25 participants. The treatment was based on the incorporation of the recommended strategies for attitudinal instruction found in the literature. Implicit attitude assessment revealed that there was no statistically significant difference between the control and treatment groups as measured by the Race Implicit Association Test (Race IAT). Furthermore, explicit attitude assessment also revealed that that there was no statistically significant difference between the control and treatment groups as measured by the Symbolic Racism Test 2000 (SR2K). Limitations that affected the study also provided insights that can be used to guide a future study.

Student Perspectives on the Complexities of Ethics in Their Profession

Andrea J. Tiwari & Linsey C. Marr, *Virginia Tech*

Ethics as a component of the educational preparation of engineers has been called for in engineering education literature, at both the graduate and undergraduate levels. The study of environmental problems, as well as the public health threats that may accompany them, is a valuable teaching tool for introducing environmental engineering students to the complexity of ethical issues that will likely face them during their careers. While case studies have been used in the curricula of several professional fields, including engineering, to facilitate student exploration of the ethical complexities they may face in their careers, the efficacy of individual and small-group exposure to these concepts has not been studied. This work examines the influence of ethics-focused assignments (both individual and group in nature) on student perception of complex ethical problems within Environmental Engineering, and is situated in an Introduction to Environmental Engineering course. Students involved in such assignments, and those in neighboring sections of the same course who were not exposed to the same ethical course component, were surveyed near the beginning and end of the course. The optional surveys were designed to examine the effect of the ethics assignments on the students' awareness of the ethical implications of environmental problems, and perception of the relevance of ethics to their future careers as environmental engineers. Preliminary results show that most students anticipate ethical dilemmas to occur during their career and believe that ethics needs to be included in their educational preparation. Students also display diverse opinions in other respects, including how optimistic they are about the future impact of environmental problems. Qualitative survey responses from early- and late-semester

surveys will provide a valuable addition to the quantitative measures incorporated in the study. Future work based on this study will investigate the efficacy of teaching ethics using differing teaching methods.

Successfully Navigating the Doctoral Journey: A Multistage Approach

Lucinda S. Spaulding & Amanda J. Rockinson-Szapkiw, *Liberty University*

With attrition rates over 50% nationally, assisting doctoral students in successfully navigating the doctoral journey requires a multistage approach. Unfortunately, the growing body of empirical research and popular press literature primarily focuses on doctoral persistence and attrition in the dissertation phase of the program. However, if doctoral students are to successfully complete their doctoral journeys, university faculty and administration need to assist them in implementing strategies beginning at the entrance stage and continuing through the completion stage of the doctoral journey. Drawing upon research conducted for the book, *Navigating the Doctoral Journey: A Handbook of Strategies for Success* (Rockinson-Szapkiw & Spaulding, in press), we discuss research based strategies to apply at each stage of the doctoral process that can foster doctoral persistence and decrease the potential for students to be included in the 50% attrition rate. Through whole group and small group discussion and interaction, university faculty, administrators, and student in this practice session will have the opportunity to brainstorm and generate discipline-specific applications to the strategies presented for each stage.

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Talking About Diversity: The Faculty Role

Susan Swayze & Rick Jakeman, *The George Washington University*

Diversity and inclusion continue to be university priorities from student admissions to faculty and administrators hiring to classroom discussions. We conducted a study regarding graduate student perceptions of diversity and inclusion in the classroom and found that the faculty role in such discussions is crucial to developing a safe classroom environment. Seventeen graduate students from a graduate degree program took part in individual interviews. Students suggested that discussion ground rules and faculty participation in the discussion not only strengthened classroom discussions but also contributed to a safer environment for classroom discussions about diversity and inclusion. Additionally, a "safe classroom" syllabus statement was created. Our university is proud to be a diverse community made up of students, faculty, staff, and administrators that represent a large variety of communities. As such, discussions of diversity and inclusion are likely to occur in and out of the classroom. In the classroom, it is important that all students feel comfortable while participating in conversations on the topics on race, ethnicity, gender, socioeconomic status, and sexuality. To that end, we suggest the following guiding principles: (a) be a patient listener – remain professional, respectful, and courteous; (b) take comments to be well meaning – we all come from different places and experiences; (c) if you have a strong differing opinion, be gracious with your comments; and (d) appeal to the faculty member when you feel uncomfortable with a discussion. In sum, treat your colleagues in class like you would want to be treated so that we can have fruitful discussions that broaden our thinking. Future work includes conducting case studies of faculty leading discussions regarding diversity and inclusion.

Teacher Authenticity

Amin Shahini

In the present paper, different views of reflective practice in literature are presented. It is argued that reflective practices are not a matter of casual reflection and taking others-directed decisions on courses of actions but are rather a systematic, critical and holistic approach to the appraisal of what teachers do in class. We will go on further to introduce a new concept of authenticity heavily influenced by the concept of critical reflection and will argue that teachers state of idealism is when they can obtain the best understanding of the self and the world around themselves. By getting to the self they set themselves free from the confinements of imitating the herd and consequently can become the transformers of the educational and social circles all with the aim of promoting the personal and social values of the learners who have an undeniable role in the future of any society. Later in the article, transformative learning theory and its four strands of thought as key issues in the process of teacher authentication are proposed.

Teaching Computational Thinking with Real-Time Data

Austin Cory Bart, Eli Tilevich, Cliff Shaffer, & Simin Hall, *Computer Science, Virginia Tech*

Computational Thinking is "an approach to solving problems, designing systems and understanding human behaviour that draws on concepts fundamental to computing" (Wing, 2006). Virginia Tech has declared computational thinking to be a cornerstone of its long-term educational plan (Knox, 2012). Yet despite the growing consensus among educators that all college students should be exposed to computational thinking, the issue of engaging new students to teach them relevant and useful skills remains an open problem (National Research Council, 2011). A promising approach to creating authentic, situated learning experiences is to have students solve problems grounded in "real-time data" (e.g., weather reports, Facebook posts, and stock market data; Egger, 2012). However, working with web-based data can be extremely challenging for beginning students. Real-time data changes constantly, internet connections can be slow, and networks can go down unexpectedly. To overcome these constraints, we have created a novel collection of materials named "RealTimeWeb," designed to enable novice programmers to quickly interact with interesting data sources through a reliable, easy-to-use, scaffolded tool. We have piloted these materials in several early Computer Science courses, and preliminary studies indicate that students find working with real-time data compelling. However, though our existing technology is suitable for computer science majors, the system could be overwhelming for students outside the discipline. To overcome this, we will explore a new web-based tool that lowers the entry barriers even further while retaining pedagogical power. This tool could be integrated into projects for interdisciplinary courses on computational thinking to increase student motivation and give them a clear idea of how data processing can be used to solve relevant, real-world problems. As the project moves forward, we seek the expertise of educators outside of computer science to get a better idea of how real-time data projects can be used to teach computational thinking.

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Teaching the Nature of Science: Strategies for Promoting Science Literacy

Hannah H. Scherer & M. Antonio Silas, *Virginia Tech*

Reform efforts in science education emphasize the importance of engaging students in scientific inquiry to foster understanding. Understanding of the nature of science – including the meaning and role of scientific theories, the variety of methods scientists use in their work, and the role of imagination and creativity in generating scientific knowledge – is a critical learning outcome in this type of science education. It is common for the general public, including science majors, to have misconceptions about the nature of science. These misconceptions often arise from the way that science is represented in traditional classroom and laboratory experiences. Participants in this practice session will engage in a discussion of the key aspects of the nature of science and research-based strategies for teaching the nature of science, using an example from the presenter's teaching practice. The background portion of the session will be followed by a hands-on activity designed to help instructors plan for implementation of these strategies in their own courses. Ideas presented in this session will be of interest to instructors in a wide range of scientific disciplines and course levels.

Testing Aids in Post-Secondary Education: A Meta-Analysis Examining the Impact of Open Book Tests and Student Prepared Testing Aids

Karen Larwin, *Youngstown State University*

Student-prepared testing aids (i.e., cheat sheets or crib notes) and open-textbook exams are common practice in post-secondary assessment. There is a considerable amount of published research that discusses and investigates the impact of these testing aids. The findings of this research are contradictory and inconclusive. The current meta-analytic investigation provides a general measure of the impact of both student-prepared testing aids and the use of open-textbook exams on student achievement in post-secondary education. Results indicate that, overall, testing aids can produce a small-to-moderate impact on student achievement.

The Development and Use of Electronic Multilingual Terminological Dictionary

Olga Kovalchuk, *National University of Food Technologies*

This is an action research to develop an Electronic Multilingual Terminological Dictionary (EMTD) for the use at National University of Food Technologies. This paper also deals with describing advantages of the EMTD as well as usage of the one which both defines terms and displays them together with the English, German, Ukrainian and Russian equivalents. This research, however, does not compare the effect of using a manual to an electronic dictionary but rather more on the benefit of using an electronic dictionary with user-friendly features.

The Effect of Action Learning Model on College Students' Self-Concept and Self-Efficacy

Sungsook Pu, *Kyonggi University*
Boyoung Park, *Radford University*

Action Learning is a process that involves a small group working on real problems, taking action, and learning as individuals, as a team, and as an organization (2013, World Institute for Action Learning). While it was originally established as a staff training program for companies, Action Learning is introduced and adopted in higher education institutions in Korea as well as many other countries. As applied for pedagogy in higher education level, the Action Learning model emphasizes performance in field; process of planning and discussion of the field work; reflection

after conducting field work; and the importance of small group (Choi & Kim, 2005; Jang, 2011; O'Neil & Marsick, 2007). For the research, 27 early childhood education major students agreed to participate in the class that utilizes the pedagogy of Action Learning. The class required students to form small groups; to build a team spirit with various group activities; to plan and practice a mock lesson for early childhood children; and to implement the lesson in authentic early childhood education settings such as preschool classrooms. The instructor of the class was officially trained and qualified coach of Action Learning as well as a professor of early childhood education in a 4-year college in Korea. The instructor facilitated the group discussion and fieldwork providing continuous feedback throughout the semester. The student participants' self-concept and self-efficacy were assessed at the first- and the final class sessions of 16 weeks of semester. According to the *t* test analysis, both self-concept and self-efficacy of the student participants were significantly elevated. Qualitative interview data revealed that the students could enhance their learning about early childhood education theories and practices from Action Learning model class.

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The Effect of Text-to-Self Reading Strategies on Reading Comprehension

Cathy Legg Cutright, *Averett University*

This research practice session will focus on a research study evaluating "The Effect of Text-to-self Reading Strategies on Reading Comprehension" scores between males and females in two Mid-Atlantic middle schools (Cutright, 2010). The foundation of this study is built on constructivist theories including Dewey's pragmatist philosophy, Piaget's developmental theory, and Vygotsky's zone of proximal development. Research questions focused on differences in reading comprehension scores between male and female students in sixth-grade reading and language-arts classes using either guided reading of text-to-self instruction or guided reading using novels. The study involved a quantitative methodology using a pretest–posttest, quasiexperimental design. Two-way factorial analysis of covariance (ANCOVA) was used to compute control- and experimental-group students' mean differences on two independent variables, reading strategies and gender. The dependent variable was the sixth-grade WESTEST reading scores and the covariate was the fifth-grade WESTEST reading scores (both converted to *z*-scores). Results of this study indicate that sixth-grade male and female students in the text-to-self reading program had higher levels of reading comprehension, but only the females' gains were statistically significant, suggesting that the problem of male literacy achievement is multifaceted.

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The Role of Motivation in Improving Student Learning in the Design Studio

Shabnam Kavousi & Patrick Miller*, Virginia Tech*

Motivation is an essential factor in student academic performance and was the basis for this study of student learning. The purpose of this research is to study teaching strategies used in a second year landscape architect design studio in order to identify and understand factors that are important in motivating students towards better learning behavior. This study employed five key concepts of different motivational theories: empowerment, usefulness, success, interest and caring. These five concepts, which are part of the MUSIC model (Jones 2009), have been

applied as a pedagogical framework in lecture and online courses, but have never been applied in the design studio. Following an ethnographic approach, the data was primarily collected through interviews with 10 students, with supporting data obtained from the author's field notes and observations. The findings revealed influential factors such as environment, schedule, feedback, extra educational events, interactive activity, group working, assessment, and relation to real world and future career improve student motivation for greater engagement in the studio project and accordingly, better achievement in the design studio. The findings will contribute to an increase in the effectiveness of design studio courses by implementing teaching strategies that increase student motivation and the efficacy of design studio learning.

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The Rubric Interview: A Technique for Improving the Reliability of Scoring Written Products

Brian D. Beitzel & Nathan E. Gonyea*, SUNY Oneonta*

The rubric interview is a technique designed by the authors to help scorers more reliably evaluate a writing sample. The technique will be described and data from an initial study, showing the benefits of this technique, will be shared. This practice session will also demonstrate how to apply the rubric interview technique to score any written product that has a rubric associated with it. Participants will be given opportunities to experience rubric interviews and develop their own rubric interviews based on their existing rubrics (which they are encouraged to bring to the session).

The Student Perspective on MOOCs

Julie K. Marsh, *The College of William and Mary*

The ease of social media, communication, and access to information has changed the context of learning dramatically. Educators and learners can access online networks outside of brick-and-mortar institutions and change the learning experience entirely (Kop, 2011). Numerous types of learning connections, ranging from one-to-many to networked learning where connections are many-to-many, are changing how participants engage with the learning process. Two major online learning traditions have emerged: *connectivist learning* in which the focus is on collaboration with others and *content learning* in which the focus is on learning resources (Weller, 2007). Both of these traditions are highlighted in the rise of Massive Open Online Courses (MOOCs.). MOOCs are online courses offered to large numbers of learners at little or no cost (Flynn, 2013). They are massive in that they rely on interactions arising from, between, and among a critical mass of learners; they offer open access and allow flexibility for participants to guide their own learning; they use the Internet and other information and communication technologies (ICTs); and they are a course directly benefiting from the expertise of facilitators (Stevens, 2013). The focus of this research study and subsequent paper is to judge the value of taking a MOOC from the student perspective. Millions of students across the world are studying hundreds of topics, but very little research is being done to understand the quality of the student experience. The study involves a group of students working through an elementary statistics MOOC and evaluating the quality of the experience from the student perspective.

The Teacher Dispositions Initiative: Why, How, and When?

Kimberly Evans, *The George Washington University*
Audra Butler, *Anne Arundel Community College*

The development and assessment of teacher dispositions are a high priority in the field of teacher education. This presentation examines how to assess student growth in a self-reflective and cyclical method, particularly in the area

of teacher dispositions. Participants will observe and discuss how the growth cycle for teacher dispositions: taking survey instrument, development of individual growth plans, application of resources, and taking standardized classroom assessments; is self-reflective and beneficial in the development of certified teachers. Participants will examine the evaluative tools for the growth cycle and how they have been developed and applied to a teacher education program.

The Use and Integration of Smartphones in the University

Jonathan Abramson, *Post University*
Maurice Dawson, *Alabama A&M University*
Jeff Stevens, *Jones International University*

Many have examined the use of mobile learning in the university and why it is used in the university (Abramson, 2012; Akour, 2008; Lu & Viehland, 2008), yet there has not been a document that has looked at the latest contemporary applications of the smartphone as actually used by the students. There are many universities that have technology use surveys that are given to incoming freshman as well as other groups of interest (Walker & Jorn, 2011). Being that there is a diverse body of learners (Stevens, 2012) there needs to be a qualitative analysis to aid in the development of more accurate methods to measure what students are using smartphones for. The nature of this document is exploratory in nature and looks to help define the parameters and methods needed to gather the information necessary to define the problem and also add to the knowledge to how students have taken initiative as well as educators using smartphones and in some instances combined with software as a service and other applications in order to deliver content, enhance communication and collaboration in the traditional, online and hybrid learning environments. Particular attention is to be paid to the information technology and education pedagogy theories in order to properly evaluate the approached taken. While this is not a meta-analysis, it is necessary to create categorical system which illustrates the features and functions of the different approaches. More detailed questions to be answered are what sort of metrics can be measured on student access to learning management systems through mobile devices and how to properly identify smartphones via LMS servers and other devices, such as waypoints. Technology is rapidly changing, but there are some constant categories of smartphones which are identified and can provide us with information that will show what academically related and knowledge building tasks these devices enhance.

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The Use of Mixed Methods Research in Distance Education: A Content Analysis

Julaine Fowlin & Wei Sun, *Virginia Tech*

Distance Education (DE) has been criticized for having too many descriptive, poorly designed research studies that often lack a theoretical framework (Saba, 2000). Many are therefore proposing that researchers conduct studies that use appropriate research methods to collect different types of data that capture the complexity of DE (Zawacki-Richter et al., 2009). Mixed methods has the potential to be a very good method for studying the complex issues of DE and recently there has been an increase in the types of publications that classify themselves as employing a mixed methods design (Hauser, 2013). However, there is a need for studies that examine the details of how mixed

methods design is being used in DE and the relationship between the qualitative and quantitative components (Hauser, 2013). This multi-phase explanatory mixed methods study (Creswell & Plano Clark, 2011) investigates the usefulness of using two existing mixed methods classification typologies (Creswell & Plano Clark, 2011; Greene, Caracelli, & Graham, 1989), to categorize mixed methods empirical studies in the field of DE (N=10), and to evaluate how well the articles reviewed adhere to best practices in reporting mixed methods studies. Sixty percent (60%) of the articles reviewed were rated middle level. In addition, 80% of the articles cited references from the mixed methods literature, which adheres to one of the recommendations from the Journal of Mixed Methods Research. Only a few designs from the two typologies were used in DE and there was a high emphasis on the quantitative strand over the qualitative strand. This study shows the need for a greater examination of the types of mixed method designs used in DE and for a similar larger study, in which case this study may serve as a model.

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Three Assessment Techniques to Integrate Experience and Knowledge for Interdisciplinary Field Courses

Gina Bloodworth, *Salisbury University*

Informal and Experiential Education suffers a lack of credibility due to a lack of formal assessments, and nowhere is this more urgently felt than in disciplines where informal education, field experiences and interaction with environment are traditionally valued. Bednarz (2002). and Brunkhorst (1996) have documented the dearth of geographical and geoscience education in the United States in the last 20 Years. One reason for this is a lack of formal assessment. In today's educational climate, most tools of assessment only measure the least common denominator of basic facts; too much attention to the factual domain of knowledge (see Krathwohl et al., 1964) leaves the conceptual, procedural and metacognitive complexities under-assessed. Here are three strategies from field-based courses with a range of structural difficulty to help educators assess students' ability to connect material across academic disciplines, and take into account complex learning styles. In a freshman level course a tool for assessment centers on interactive sensory memory exercises that require students in the field to employ multiple cognitive strategies to explain chains of energy and matter flow between the biosphere, lithosphere, hydrosphere and atmosphere. In an upper-division course utilizing informal learning environments, self-directed cognitive mapping in the field allows students to connect explicit, implicit and conceptual knowledge as it is being processed at that moment in the field. Third, in a senior level study-abroad setting, comparative analysis of place-based response to the same environmental issue, centers on complex analysis of human systems, natural systems, and their interdependence. This poster will include photos of students in field settings, captions with summaries of the techniques or tools, and quoted excerpts from student narratives. Complex learning contexts with open-ended assessment techniques ensure that students engage with their environment at multiple levels, thus minimizing the tendency for passive superficial observation.

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Understanding Faculty's Perceived Barriers to and Disadvantages of Using a Learning Management System

Yang Liu, *University of Georgia*

Currently, learning management systems (LMS) have been widely used in teaching and learning in higher education. However, not all of faculty members tend to utilize them during their instruction. In this interpretative study, I interviewed 12 full-time faculty members, who come from various academic programs at a research university in a university system of a southeastern state in the U.S., in order to understand their own reasons why they do not readily integrate Desire2Learn, a widely used LMS that is adopted statewide, into teaching and learning. Specifically, the research questions addressed by this study are: (a) What are faculty's perceived barriers to integrating Desire2Learn into teaching and learning? (b) What are faculty's perceived disadvantages of Desire2Learn for teaching and learning? Each participant of this interview study has teaching duties, at least one year's teaching experience, and at least preliminary experience in using Desire2Learn. The first round of interviews was conducted to identify faculty's perceived barriers and disadvantages that prevent them from integrating Desire2Learn into instruction as well as to learn their practical levels of use of Desire2Learn. Based on participants' responses, I conducted follow-up interviews with those who are reluctant to employ Desire2Learn in order to gain a deeper insight into their own perceptions of barriers and disadvantages that discourage them from doing so. Each interview was audio-recorded and then transcribed immediately after the interview session. Through thematic analysis and member checks, the faculty's perceived barriers to and disadvantages of using Desire2Learn were identified and categorized. Their own perceptions and reasons were interpreted based on the interview data. In this study, participants were encouraged to elaborate their perceived barriers and disadvantages. By reflecting on their actual use and perceptions, they are likely to overcome those barriers and make better use of Desire2Learn during their instruction in the future.

Using Case Studies to Flip the Classroom

Stacey E. Wild, *East Tennessee State University*

Increased scientific knowledge has led to enormous amounts of material being presented to students in introductory courses. While students attempt to memorize all of the information and expect to achieve satisfactory scores by doing so, assessments are often conceptually-based and rely upon students' ability to analyze data and apply concepts. The idea of the 'flipped classroom' includes the removal of most of the traditional lecture components from class and replacement with problem-based assignments completed in small groups. Advantages include a correlation of the skills we expect students to demonstrate on tests with the primary utilization of class time, and case studies can be used to successfully implement this strategy. However, a survey of student attitudes towards this approach suggests that students are failing to adequately prepare for class or struggling to do so on their own. Consequently, they desire traditional lectures before utilizing case studies to increase their understanding. This may strain resources available outside of the classroom and require that they be increased if instructors completely flip their classes. This study presents ideas about using case studies to flip the class and reports on the benefits and pitfalls associated with this methodology.

Using Conference Roles and Blogs to Enhance Online Course Discussions

Susan Swayze & Rick Jakeman, *The George Washington University*

Online courses are dependent on discussion postings to (1) demonstrate knowledge and (2) provide a feeling of connectedness among faculty and students. However, how to encourage discussion that demonstrates knowledge continues to be perplexing. Moreover, understanding the students' relationship to the online course environment, the

course material, and overall satisfaction with the course itself is crucial to the development and maintenance of online courses. This presentation with discussion regarding the authors' use of Glowacki-Dudka and Barnett (2007) conference style roles and blog technique used to enhance discussion postings and faculty understanding of their students' online experience. Through this presentation, faculty can exchange stories and successes thereby creating a forum to build upon each other's past experiences.

Using Guided Response to Stimulate Student Engagement in the Online Asynchronous Discussion Board

Claire DeCristofaro & Teri Herron, *Ashford University*

The online asynchronous discussion (OAD) board has long been the accepted format for interaction within the online classroom. Although best practices include clear articulation of expectations for posting requirements and participation, the asynchronous nature of the OAD may result in a sense of isolation. The current incarnation of the OAD pales in comparison to traditional face-to-face conversations which include the acknowledgment of statements from each participant in a meaningful interchange, thus supporting both low-level cognitive behaviors such as knowledge sharing and higher-level exploration with the integration of ideas. Adult learners often use management strategies to optimize grading outcomes with the minimum amount of time and effort; many prefer to work alone. In order to increase student-to-student/student-to-instructor interaction the traditional OAD was transformed through a series of specified response parameters which more closely resemble a true threaded discussion. Not only were students instructed to post initially and respond substantively to a defined number of their colleagues, they were also required to respond to those who had posted to their original threads. While in many ways a simple innovation, this moved the OAD discussion forum to the right, thus creating online conversations (OLCs) which more closely resemble an in-class discussion and promote greater interaction and higher level thinking. Intrinsic motivations within the OLC include the gratification of spontaneous facilitation, validation, and an enriched learning environment. Extrinsic motivations, such as grades, reflect the higher level of participation and have also been used to promote desired behaviors within the discussions. The results have included an increase in overall interaction within the discussions as well as greater elaboration of subject content, with challenging topics more fully analyzed through discussion of key concepts. The improved interactive environment illustrates the value of connectivity for students when sharing ideas in a public forum.

Using Quantitative Methods Critically: A Demonstration

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This paper argues that higher education pedagogy needs to not be hemmed in by the market driven ethos of virtually all educational policy. Faculty must realize the potential of higher education for social transformation. One underused method in particular that may allow for this is critical quantitative methods. This study will demonstrate the use of critical quantitative method by focusing on factors that either drive or inhibit enrollment into four year institutions for high school seniors in the state of Virginia. A regression analysis will be used. Regression is a statistical procedure which examines a series of variables in an effort to determine how well they predict or influence another variable (Warner, 2013). A multiple regression analysis allows for a researcher to determine which independent variables have an impact and how much of an impact each one has on the dependent variables. A regression analysis will be performed on the following independent variables; adult population in each Virginia county with Bachelor's degrees, percent of county residents living below the poverty line, the median income of the county, the dropout rate, the enrollment rate of high school seniors in community college and the composite index to determine which factors if any can be used to predict individual enrollment by high school seniors in a four year school upon their graduation. This study will analyze the findings from a critical theory lens and cast them as a

larger component to the obstacles facing potential students in Virginia. The ultimate aim is to illustrate how higher education faculty can use quantitative methods in a critical way in order to better highlight existing problems and to propose solutions to them.

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What Teachers Can Do to Stop Cell Phone Interruptions from Harming Learning

Denise Friedman, Megan McKnight, Clarissa Dulaney, Amelia Taylor, & Lauren Schwarcz, *Roanoke College*

Cell phones are reportedly one of the biggest classroom distractions (Tesch et al., 2011), challenging teachers to compete and win their students' attention (Wei & Wang, 2010). Academic performance suffers when students experience cell phone interruptions (CPIs; End et al., 2010; Wei & Wang, 2010) and teachers struggle to minimize these distractions while keeping students focused on learning. Research indicates using teacher immediacy behaviors increases student satisfaction and motivation to learn (Hanson, 2011; Hsu, 2010), which we hypothesized could be leveraged to keep students engaged when CPIs occur. Specifically, we examined whether using teacher immediacy behaviors would offset the effects of CPIs on retention. 79 undergraduates viewed a video lecture on an unfamiliar topic with either an immediate or non-immediate lecturer. Participants either received no interruption, a generic ringtone, or a song ringtone at the lecture's midpoint. Our hypothesis was supported. Participants who were interrupted performed better when the teacher was immediate than non-immediate, suggesting immediacy may offset the impact of CPIs. Practical strategies for teachers will be discussed.

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When the Shoe Does Not Fit: Designing a Senior Capstone Course for Accelerated Baccalaureate Nursing Students

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Accelerated baccalaureate nursing students (ABSN) and traditional baccalaureate nursing students (TSBN) are different, and how they are educated should be different. ABSN students are not statistically more successful on the NCLEX-RN exam (Bentley, 2006), but the journey getting there is different than that of the TBSN student. ABSN students are older, more likely to be married, and have a higher percentage of males in each cohort compared to TBSN students (Wu & Connelly, 1992). ABSN students have higher grade point averages (GPA) and work fewer hours while enrolled in school (McDonald, 1995). They are similar to most adult learners in that they are highly self-directed, benefit from prior life and learning experiences, are motivated and engaged in their education, and challenge traditional thinking (Beeson & Kissling, 2001; Bentley, 2006). ABSN students want to know that what they are asked to do academically will benefit them in their clinical practice; they do not tolerate "busy work" that lacks academic meaning (Wu & Connelly, 1992).

Nurse educators accountable to these students are challenged to adjust their teaching strategies to meet the expectations and academic needs of these students. Faculty assigned to teach an ABSN senior capstone course embraced this challenge and utilized Knowles' (1980) six principles of adult learning to adapt a capstone course to meet the needs of 29 graduating ABSN students. The faculty sought the students' feedback on what their learning needs were and then designed a course to meet their top ranked needs. Faculty organized numerous guest speakers to broaden the student's professional network and validate the importance of the concepts taught. Additionally, the ABSN students were given academic assignments that were relevant to the students' needs assessment. Course evaluations are pending, but anecdotal evidence has provided positive feedback from students and professional satisfaction from teaching faculty.

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"It's a Lot Different than I Thought it was Going to be": A Phenomenologic Study of a Unique Graduate Seminar

Kristina Plaas & Brenda Murphy, *University of Tennessee, Knoxville*

Pedagogy in higher education has traditionally followed a prescribed process of classroom lectures, reading and writing assignments, testing, and the awarding of grades. A different pedagogical process was employed by one instructor in a graduate seminar on existential phenomenology, generating significant response by students over the years. A phenomenologic study, grounded in the philosophy of Merleau-Ponty (1962), was conducted to understand the students' experience in this course. In individual, non-directive interviews, eight participants were asked "Can you tell me what it's like to be a learner in this class?" Interview transcripts were analyzed by a multi-disciplinary interpretive team and a thematic structure of the experience elicited. The existential ground was change. Themes included: (1) Class was different, (2) connection and collaboration, (3) free and open, (4) relevant and applicable, and (5) comfortable and safe. Participants were pleasantly surprised by the different experience they had in the seminar. They developed deep connections with the instructor and other students. They felt free to be themselves in a class environment perceived as safe and comfortable. They also found the instructor's approach to the course freeing. They readily applied what they had learned to their personal and professional lives. Participants each expressed a profound personal change from their experience of being in this seminar.

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"Who's on the Other Side of the Personal Computer?" A Conversation Examining the Importance of Multicultural Competence Effectiveness with Online Delivery Instruction

Nicole A. Jones, *Mercer University*

Educational delivery has outgrown the traditional face-to-face classroom method. Our society has become more technologically savvy and demographically diverse, moreover several educational institutions have embarked on

delivering online curriculum solely. In a 2010 meta-analysis and review of online learning studies by the United States Department of Education, the key findings stated that online learners performed better on average than students who took the same class face to face. The study also finds that online learning approaches appear broad against different content and learning styles. With that said, as counselor educators it is salient to recognize and support students diversity in an online delivery environment. Face-to-face instructional environments identify individuals to have multicultural differences based on physical appearance, language spoken and other identifiable attributes as well as self-report. As counselor educators, we are charged to adhere to the ACA multicultural competencies. Sue, Arrendondo, and Mc Davis (1994) published a foundation framework of multicultural competencies regarding clients however this foundation may assist counselor educators with students. This conversation will explore current trends in instruction delivery and examine the importance and application of multicultural competence in the classroom and through the personal computer.

Thursday

February 6, 2014

Session 9

1:50-2:40 PM

http://www.cider.vt.edu/conference/

Examining the Influence of a Flipped Mathematics Classroom on Achievement

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Abstract: The flipped classroom approach has garnered significant attention. However, little evidence exists to support or refute the efficacy of teaching using this approach. The purpose of this study was to examine if the flipped classroom approach would help increase overall math achievement in comparison to a 'business-as-usual' class. Results suggested that while there was no significant difference between the two classes on the first assessment, the flipped class students ended the semester with significantly higher grades on the final assessment, final exam, and overall course grade. While additional research is needed, these results suggest a potential positive influence of the flipped classroom approach in improving achievement in math classes.

Background

Technology has the ability to change how teaching and learning occurs during class. However, even with multiple tools and resources available in classrooms and labs, many mathematics instructors still rely heavily on passive in-class lectures as their primary means of instruction. Currently though, technology is now making methods outdated and is slowly forcing in-class instruction to be altered as sites like *YouTube*, *Khan Academy*, and *Academic Earth* allow students to view lectures online. While some believe that such sites may replace face-to-face classes, Salman Khan, the founder of Khan Academy sees it as the perfect opportunity to reinvent what happens during class time. "In the ideal classroom, the teacher is either spending all of their time doing deep interventions with students on a one-on-one basis or facilitating true interactivity—labs, simulations, projects" (Webley, 2012, p. 37).

Many teachers though fear that the time needed for such student-centered instruction will make them fall behind in their already over-filled curricula (e.g.- Hannafin, Burris, & Little, 2001). That is where the flipped classroom approach can provide balance between dissemination of content and interaction needed to build conceptual understanding. By assigning online lecture videos to watch and take notes as the new method of homework, face-to-face instruction can then be spent engaging students in activities that seemed too time-consuming before.

Limited research on the flipped classroom has been primarily positive. Clintondale High School significantly increased passing rates in mathematics and school attendance while also seeing a decrease in disciplinary referrals after transitioning to a flipped classroom approach (Roscorla, 2011). Survey results of students in a flipped statistics course found the flipped method was overwhelmingly preferred to in-class lectures and students believed they were provided more opportunities to participate in engaging, collaborative activities (Dove, 2013). More notably, 95% of respondents stated that they would prefer taking more flipped class as well as recommend their peers take a flipped course. Finally, while not research-based, Khan Academy's website (https://www.khanacademy.org/coach-res/case-studies) includes multiple reports and case studies on improving teaching practices and student's skills.

The purpose of this study was to build on these preliminary studies by examining the influence of a flipped classroom approach on math achievement in a required math course for prospective elementary teachers. This study examined the following question: Is there a difference in the influence of the flipped classroom approach in comparison to a "business as usual approach" on course achievement?

Methodology

This study occurred at a mid-sized public university in the Mid-Atlantic Region. It incorporated two sections of a required mathematics course for elementary education preservice students. The courses met back-to-back twice a week for 75 minutes. There were 28 students in one section and 35 students in the other section. One course was taught using standard practices of instruction which included in-class lecture and collaborative activities when possible (LC). The other course was taught using a flipped classroom approach (FC). Students were required to take notes on teacher-made lecture videos on *YouTube* prior to the class. Time in class was then spent completing practice problems and collaborative, engaging activities. To examine math achievement, the requirements and expectations for each section was kept as similar as possible. Students completed the same homework problems, projects, tests, and final exam. The weighted percentages for each graded category were also the same. In order to examine any influence on math achievement, independent-samples t-tests were conducted to compare the mean

grades for the first assessment, the last assessment, the final exam, and the overall course between the FC and the LC.

Results

No pre-course measure of math achievement was utilized because one of the two foci of the larger study was on math anxiety. Since it was possible that students may enter the course highly anxious, it was determined that a pre-course measure may add to this anxiety and thus skew analysis on that component of the larger study. Instead, independent-samples t-tests were conducted on the grades of the first assessment, last assessment, and final exam to examine any potential change throughout the semester. While no significant difference occurred on the first assessment between the two courses, students in FC significantly outperformed LC students on the final assessment, final exam, and final course grade (Table 1). These analyses suggest that the positive influence of the flipped classroom approach on student achievement may be gradual but significant such that as time spent in a flipped classroom increases, achievement increases as well.

Table 1. Course Achievement in each Class

	Course			
	Standard	Flipped	*t*	*df*
Assessment 1	84.5 (11.5)	87.3 (9.4)	1.05	60
Assessment 4	86.1 (8.9)	76.7 (21.0)	2.39*	60
Final Exam	88.3 (8.8)	81.6 (16.5)	2.04*	60
Course Grade	88.5 (5.29)	80.8 (14.3)	2.93**	60

Note: * $p < 0.05$, ** $p < .01$

Discussion

The purpose of this study was to examine the potential influence of the flipped classroom approach on achievement in a math course. Results suggest that the flipped classroom approach may have the ability to improve overall achievement in math. In addition, this study supports previous research that reveals that increased use of learner-centered practices during class can improve achievement in math (Judson & Sawada, 2001). While these practices were used when possible in the LC, the use of lecture videos naturally allowed for the FC to be taught using such practices for almost the entire class. It is likely that the increase in these teaching methods were the reason for the difference in achievement. While some may argue that the results are only because of the instructional practices, such an argument misses that this is the point of a flipped classroom approach. The opportunity to utilize such research-based practices is greatly enhanced primarily because lectures were not part of the allotted time for class. Without the lecture videos, much of what occurred in the FC would not have been possible.

While the results of this study provide positive preliminary results in improving student achievement, additional research is needed. Such research should include multiple courses and standardized pre/post measures. Also, research should examine long-term influences of students taking multiple flipped math classes on achievement.

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The Perceived Influence of Interaction on Student Satisfaction in an Online Environment

B.J. Burbaugh, T.A. Drape, & D.M. Westfall-Rudd, *Virginia Tech*

Abstract: The purpose of this qualitative study was to explore pedagogical practices that enhance student learning in Web-based courses. A convenience sample of program graduates (n=8) from an online masters degree provided in-depth interviews that were utilized by the researchers to understand effective practices for the delivery of online education. A primary theme that emerged related to student satisfaction was faculty-to-student and student-to-student interaction. Based on the results, recommendations by the researchers include: design courses and educational experiences that engage the learners through the use of multiple instructional modalities and provide opportunities for students to interact in an asynchronous format. This study provided an opportunity to assess satisfaction using student perceptions and experiences. The following information is being utilized to improve an online master's degree and should be taken into account when designing future online courses and degree programs.

Literature Review

It is evident that online learning has become a mainstay in educational institutions (Harasim, 2000) and the trend towards online education is likely to continue (Weller, 2013). Assessing the practices that enhance student satisfaction with online degree programs can help instructors address the unique needs of this group of learners. Student satisfaction in online courses has been implicated in program persistence (Rivera & Rice, 2002), motivation (Bollinger & Wasilik, 2009), and higher levels of learning (Shea, Fredericksen, Pickett, Pelz, & Swan, 2001). The experiences and personal perspectives of online learners can help institutions gain a better understanding of current strengths and challenges of online education (Noel-Levitz, 2011) as well as provide a framework for program and course enhancement (Olmstead, Pasley, Meyer, Stanford, Fincham, & Delevi, 2011). Interaction has been deemed one the most important components in online education (Moore & Kearsly, 1996). In online courses, the ability of an instructor to reduce the social distance between themselves and their students is a positive predictor of student learning and course satisfaction (Arbaugh, 2001). A lack of feeling connected to faculty has been shown in previous research to be a significant variable in the student's sense of potential for completion of the online course (O'Brien & Renner, 2002). Moore (1989) posited three types of interactivity that may affect learning in online courses: interaction with content, interaction with instructors, and student interaction. The researchers will utilize these three types of interaction to frame the results of this study.

Methodology

Case study methodology was employed in an effort to gather meaningful data that helped the researchers understand the in-depth, real-life phenomenon (Yin, 2009). The population of the study was program graduates (n=31). The sample of eight graduates was purposively selected based on their willingness to participate. Open-ended questions served as the primary instrument. An interview guide was used by the researchers to help students recall and reflect on the curriculum, the structure of its delivery, and the technology used to deliver the lessons. The data collected included conversations and comments from a semi-structured interview format that allowed for follow-up questions (Ary, Jacobs, Razavieh, & Sorensen, 2009). The data from the interviews was audio recorded to achieve accuracy and transcribed by the researchers to provide evaluative data. Constant comparison analysis was used to examine the results. Express Scribe© transcription software and Atlas.ti© coding software was used during the transcription and coding of the interviews with participants. Respondents were assigned pseudonyms to ensure anonymity.

Results

Interaction with content: Based on respondent comments, learners preferred to be taught as if they were in a traditional classroom and valued opportunities that promoted interaction. As noted by one respondent, "professors that taught in a way that basically gave you a lecture like they would if you were standing in the same room with them or they were in a room with 100 other people, those were, for me were the most beneficial classes" (Brooke, p. 3). One way to promote content interaction suggested by respondents was to utilize synchronous and asynchronous delivery methods. Courses that incorporated multiple instructional modalities were often considered the most valuable to graduates. For example, professors who augmented course reading with additional insight through

personal stories, current events or additional materials and media improved the educational experience of these online students.

Interaction with instructors: The quality of instructor interaction and feedback influenced the students' satisfaction and perception of the online program. It was found that when communication was lacking students were frustrated as evidenced by one respondent, "a really frustrating thing for me was that the professors never participated in the online forum so I kind of felt like they were just posting the material that they did the past year and just kind of signing out for the rest of the year" (Maggie, p.5). Multiple feedback loops were suggested by the respondents in order to enhance their experience and satisfaction with the program. Additionally, practices that provided feedback were perceived by students to improve their performance.

Interaction with fellow students: Students preferred asynchronous methods to interact with each other. Class blogs, forums, and weekly assignments provided a forum for students to interact as well as receive constructive feedback from their peers. As one respondent noted, "it was good to feel connected to other students through Blackboard© because even though we didn't know each other in the class you could get a sense of how they [other students] were" (Brooke, p. 3). An open line of communication and feedback among students was also an important indicator of satisfaction.

Discussion

The ability of the faculty member to design experiences that promote faculty-to-student and student-to-student engagement heavily influenced the satisfaction of program graduates. It was found that multiple instructional methodologies and feedback loops enhanced the student experience and improved student satisfaction with the program. Additionally, by providing several approaches to teaching and learning instructors were able to provide experiences that benefit multiple learning styles. This study is an initial step toward understanding student satisfaction with an online degree program from the learner's perspective. The relatively small sample size may not be representative of all program graduates, but based on the results of this case study the authors will share practices that could be implemented to improve online education programs and student satisfaction.

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Implementing Course-Based Action Research in Higher Education: Innovations in Participatory Teaching and Learning

Kim L. Niewolny, Rachael E. Kennedy, Lorien MacAuley, & Havva Savran Al-Haik, *Virginia Tech*

Abstract: Action research is a form of critical social science practice that has extensive disciplinary reach across institutions of higher education worldwide. Course-based action research draws upon this larger discourse through the lens of higher education pedagogy centering on reflective, participatory, and action learning principles and methods. In this practice session, we will provide and model key concepts and strategies for designing and implementing an innovative approach to course-based action research through the case of a newly developed graduate course. The session will balance the goals and objectives for instructor, student, and community partner learning outcomes.

Literature Review

The involvement of university and community stakeholders in social science research and practice has emerged in a variety of fields independently with a strong holding in education and community development. Although each field may represent different traditions and utilize different terms, the common thread across disciplines is that innovative paradigms in research methods are combined with an orientation to democratic processes of social and organizational change. This framework in higher education often falls under the umbrella of action research (Greenwood & Levin, 2007), community-based participatory research (Israel, Eng, Schulz, & Parker, 2005), and community-based research (Strand, 2000). Growing at a teeming rate, course-based action research draws upon this ample discourse to address several teaching and learning aims in colleges and universities globally and nationally (Hoffman & Rosing, 2007). Teaching and learning goals and purposes are as varied as the courses in which inform them. However, several common themes provide foundational meaning to this educational orientation. First, professors or lecturers of courses that incorporate action research principles are characteristically engaged in action research or community-based research programming outside of the classroom. This practice-based integration allows for participatory teaching and learning aims to be the methodological vehicle in which student, faculty and community engagement occurs (Ibáñez–Carrasco & Riaño Alcalá, 2009). Second, participatory, service, and reflective learning approaches are essential to develop student skills and knowledge as developing practitioners (Strand, Marullo, Cutforth, Stoecker, & Donohue, 2003; Reardon, 1998). Third, the rationale for course-based action research is foundationally rooted in Dewey's ***pragmatic philosophy to enact critical and social change—in and outside of our*** institutions of higher education ***(***Greenwood & Levin, 2007; Weber, 2011).

Goals and Objectives of Practice Session

Goal: Through this session, participants will gain an understanding of a framework and set of teaching and learning strategies for conducting course-based action research in higher education. We aim to reach this goal by addressing three aims that bring together the perspectives of the professor and students that grounded the activity of our example of course-based action research. These perspectives are rooted in a larger, social science dialogue that explores the roles of action research, participatory teaching/learning, and community engagement in higher education.

Objectives:

1. Participants will develop an understanding of the significance of course-based action research as a means to connect universities with the communities in which they are located for enhancing social change.
2. Participants will gain an understanding of the process of course-based action research with goals and objectives for instructor, student, and community partner learning outcomes.
3. Participants will articulate and apply participatory and reflective teaching approaches that enhance democratic learning through specific examples of course-based action research syllabus design, implementation, and evaluation.

Description of Practice

This practice session will serve as a brief introduction to the theory and practice of course-based action research. Participants will learn epistemological and practical issues that inform participatory teaching and learning strategies that are applicable for a range of higher educational classroom contexts. First, we provide key concepts and literature-informed background that illustrates the current connections between action research and course-based action research in higher education. Second, we will describe the specific case of developing and implementing an educational-based graduate course at a large land-grant university using action research principles. Third, we will explain and demonstrate strategies that were used to engage students in co-creating course aims and assignments, with specific emphasis on conducting "practitioner profile stories" with members of the community as part of an action research project that the course professor co-directs. Finally, in a small-group format, participants will have an opportunity to review and discuss the course syllabus for practical application. Participants will also be encouraged to actively participate throughout the session by offering participatory and reflective teaching and learning strategies they have used to engage students and community partner stakeholders in their own settings.

Discussion

This session is based on an innovative pedagogical framework that was developed to directly engage and empower students to enhance their learning as educational scholars and practitioners through direct and deliberate involvement in course development and implementation (Stand, 2000). Equally paralleling this aim was the goal of engaging the university community with the social and cultural communities in which the university is designed to serve in order to co-facilitate positive and long-lasting social change (Ibáñez –Carrasco & Riaño Alcalá, 2009). To that end, most course-based action research experiences are connected to the community through an on-going project directed or coordinated by the professor or instructor (Hoffman & Rosing, 2007). Our approach is no different. The course that this session will illustrate is directly tied to the Appalachian Foodshed Project (AFP), which is a multi-site action research project that aims to address community food security in West Virginia and the Appalachian regions of North Carolina and Virginia. At the heart of AFP is the development of a regional coalition to guide and implement strategies to enhance community food security—a condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet that maximizes community self-reliance and social justice (Hamm & Bellows, 2003). Given the elaborate, educational dynamics of this and many other action research (or community-based research) projects, the teaching and learning opportunities for faculty, students, and community partners are bountiful, complex, and genuine. The scholarship of course-based action research can therefore create space for faculty, students, and community stakeholders to articulate and embed situations where they can learn through authentic application—in and outside of the classroom walls.

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How to Make Research-Based Instructional Decisions Related to Student Motivation

Brett D. Jones, Virginia Tech

Abstract: Although higher education faculty may have good ideas about how to motivate their students, their knowledge may be based primarily in their own experiences and based less on current motivation research. Because higher education faculty often do not have time to become experts in motivation, one purpose of this session is to summarize the motivation research that is most directly related to teaching in higher education. Another purpose is to help instructors use this knowledge to design more effective and motivating courses. To place the motivation research within the context of higher education, examples of instruction will be analyzed and discussed. Participants will leave this session with (a) an understanding of the major factors that motivate students in learning environments and (b) the ability to analyze whether instructional practices are consistent with motivation research, with the ultimate goal of having the ability to design instruction that motivates students.

Literature Review

A Model of Academic Motivation

The MUSIC Model of Academic Motivation was developed to help instructors design courses that engage students in learning (Jones, 2009, 2010b). The MUSIC model consists of five components that have been researched extensively over many years by many researchers to support student engagement in academic settings: e*M*powerment, *U*sefulness, *S*uccess, *I*nterest, and *C*aring (MUSIC is an acronym that is used to help instructors remember these five components). The 5 key principles of the MUSIC model are that students are more motivated when they perceive that: (1) they are empowered, (2) the content is useful, (3) they can be successful, (4) they are interested, and (5) they feel cared about by the instructor and/or other students. The model components are explained briefly in this section and more fully in Jones (2009) and at www.MotivatingStudents.info.

The *empowerment* component refers to the amount of perceived control that students have over their learning. Instructors can empower students by supporting their autonomy. The *usefulness* component involves the extent to which students believe that the coursework (e.g., assignments, activities, readings) is useful for their short- or long-term goals. One implication is that instructors need to ensure that students understand the connection between the coursework and their goals. The success component is based on the idea that students need to believe that they can succeed if they put forth the appropriate effort. Instructors can foster students' success beliefs in a variety of ways, including making the course expectations clear, challenging students at an appropriate level, and providing students with regular feedback. The interest component includes *situational interest*, which refers to the immediate, short-term enjoyment of instructional activities. Instructors can create situational interest by designing instruction and coursework that incorporates novelty, social interaction, games, humor, surprising information, and/or that engenders emotions (Bergin, 1999). The caring component includes the degree to which students feel that the instructors or other students care about their academic success and well-being. To support caring, instructors can show concerning for students' success and failures, listen to and value students' opinions and ideas, and devote time and energy to helping students (Jones, 2009).

Higher Education Research Related to the MUSIC Model

The MUSIC model has been used in higher education to examine students' motivation and to provide implications for instructors who use a variety of instructional approaches, such as problem-based learning (Jones, Epler, Mokri, Bryant, & Paretti, 2013) and online instruction (Hall, Jones, Amelink, & Hu, 2013; Jones, 2010a; Jones, Watson, Rakes, & Akalin, 2012), as well as instruction that uses mind mapping activities (Jones, Ruff, Snyder, Petrich, & Koonce, 2012) or incorporates specific first-day activities (McGinley & Jones, in press). The results indicate that all five of the MUSIC components are important in educational settings, but that the importance of the components can vary depending upon the age of students, the type of course, and the type of assignments provided. For example, students in an online course perceived that they could succeed and felt empowered, but they did not perceive the course to be overly useful and believed that the course could be more interesting (Jones, Watson, et al., 2012). In

contrast, some students in an engineering capstone course perceived the course to be useful and interesting, but struggled to feel successful when they were given too much empowerment (Jones, Epler, et al., 2013).

Goals and Objectives

Participants who pay attention during the session will leave with:

- an understanding of the major components of the MUSIC Model of Academic Motivation,
- knowledge of some current research related to motivating students in higher education courses, and
- the ability to analyze whether higher education practices are consistent with motivation research and theories, with the ultimate goal of having the ability to design instruction to motivate students.

Description of Practice

The session will be organized in the following order:

- *10 minutes* – I will begin the session with an explanation of the MUSIC model to ensure that participants understand the basic tenets of the model.
- *10 minutes* – I will briefly discuss some key findings from researchers who have studied motivation in higher education courses and use these findings as examples of how the MUSIC model can be used to design and diagnose instruction.
- *25 minutes* – I will show real-world examples from courses and ask participants to work in groups to analyze whether the examples would promote students' motivation based on motivation research and theories.
- *5 minutes* – I will answer final questions from participants.

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Incorporating Trust in the Classroom: How to Validate Academic Integrity in Your Classroom

Emily Wilkinson Stallings & Baker A. Martin, *Virginia Tech*

Abstract: "At the college level, more than half of all students surveyed acknowledge at least one incident of serious cheating in the past academic year, and more than two-thirds admit to one or more "questionable" behaviors -- e.g., collaborating on assignments when specifically asked for individual work. We believe it is significant that the highest levels of cheating are usually found at colleges that have not engaged their students in active dialogue on the issue of academic dishonesty." (Mccabe & Pavela, 2005.) This surprising information leaves instructors of higher education shocked and leads them to ask, what can I do in my classroom to ensure the highest levels of academic integrity. This practice session will discuss incorporating a system of integrity into the classroom where students are engaged and committed to its practice.

To Learn or To Pass?

"The students who make it to us [college] have learned exactly what they have to do to succeed, and sadly, that often has very little to do with becoming educated," said Fishman, Director of Clemson University's International Center for Academic Integrity, "instead, it's almost solely about figuring out what will be asked (in papers, tests, and other assessments), learning that material long enough to produce it when necessary, and then moving on to the next thing." (Fishman, 2012.)

Sadly, many students are coming to college from high school with an attitude of merely getting ahead. "By the time students get to college, they have internalized messages 'mistakenly conveyed to them' by both society and the educational system that the experience [college] 'is simply a means to an end,' said Teddi Fishman (2012). According to Allie Grasgreen (2012) students are learning exactly what they have to do to succeed, and sadly that often has very little to do with becoming educated." "Many students [in the college setting] say cheating is the only they can keep up with their work…it's cheat or be cheated" (Galloway, 2012).

The question is how do we guide our students toward the practice of academic integrity? To understand that academic integrity benefits us all, not only while in school but also once in the "real world". If 1 in 2 students at the university level admit to cheating (McCabe & Pavela, 2005) then we have a serious problem not only at our universities and colleges but also within our country's organizations – big & small.

Getting Ahead or Life-long Learning?

But some students understand the importance of academic integrity. Baker Martin (2013), Chief Justice of the VT Honor System, said "The purpose of our Honor Code is to ensure that academic integrity is upheld across campus in all courses of study thus guaranteeing that all degrees from Virginia Tech maintain their core, inherent values." So how can we assist all students in understanding the importance of academic honesty across our campuses? That integrity will indeed raise the level of respect given to their chosen institution and their diplomas? And, most important, how their own integrity will serve them well throughout life.

First, we as educators must examine: Does my institution have a culture of academic integrity as a core value practiced by all, students and faculty--administration and staff? Second, does my institution have an Honor System/Code that all members must abide? How is this implemented? Are you and your students involved in the discussion of this Honor System/Code? Fishman (2012) states, "Ideally, discussions about integrity should occur in a number of different settings and become part of the culture on campus -- as integral a part of scholarly activity as such things as the scientific method or documentation methods." We believe one place that this discussion must happen is in the classroom and that is the purpose of this practice session. How do we incorporate integrity into our classroom?

1. Do you as a teacher uphold academic integrity?
2. Are your goals for academic integrity clearly outlined in your syllabus?
3. Do you discuss academic integrity in your classes?
4. Do you consistently follow through with sanctions for students who violate the rules of academic integrity?
5. If your university has an Honor System/Code, are you connected?

This practice session will look at each of these questions, with the aim of assisting the session members to include academic integrity as a primary goal in their classrooms – whether that is in connection with their institutional Honor Code/System or within their own system, i.e. some higher education institutes do not have an honor code/system. If your institution has an Honor code/system, do you know what it says, are you involved, do you encourage students to know what the system is about? All members of the academic community must be committed to upholding integrity on campus.

Facilitating Student Success as Life-Long Learners with Integrity

"A number of colleges have found effective ways to reduce cheating and plagiarism. The key to their success seems to be encouraging student involvement in developing community standards on academic dishonesty and ensuring their subsequent acceptance by the larger student community. " (McCabe & Pavela, 2012.) Here at Virginia Tech we have a student run Honor System that upholds our Honor Code. This is one step in beginning to build a culture of academic integrity at the university level. This session will discuss ways the instructor can incorporate the institutional Honor System/Code or her/his own code to maintain integrity in learning, for example asking students: What does academic integrity mean? Why is academic integrity important? There will also be a student perspective on academic integrity. Additionally, we will share the facets of our Honor System/code with the audience and discuss how we strive to incorporate academic integrity into our classrooms and throughout the culture of our institution.

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Capturing Authentic Evidence of Student Learning for Course and Program and Assessment with ePortfolios

Kelly Driscoll, President, *Digication*

In this session, Digication co-founder and president, Kelly Driscoll, will provide a case study of how two different institutions, University of Notre Dame and DePaul University have implemented the Digication ePortfolio and Assessment Management System for course and program assessment. ePortfolio implementation strategies will be shared as well as successful assessment practices. Learn how student work can be archived and assessed at the course level and/or via assessment committees and the amazing amount of data that becomes available for assessment and research for many purposes including curriculum (re)design and accreditation. And most importantly, see how ePortfolios will not only benefit the institution but provide long term value for student learning and alumni career advancement.

Digital Leviathan: Navigating an Institution through Faculty Development in E-Learning

Troy Davis, April Lawrence, Jamison Miller, & Robert Sanchez*, The College of William and Mary*

Abstract: This session will review the complex process of introducing faculty development in e-learning technologies at a small, liberal arts college. Acknowledging a historical, institutional resistance to technology generally and e-learning in particular, the deployment of this project required careful consideration. First, we conceive of the target audience through the lens of andragogy, as adult learners who benefit from learning made highly relevant and delivered in a self-directed format. Second, we ground the e-learning training modules in case studies of other college faculty's trials with e-learning technologies. Third, we conceive of the project as emergent, allowing the final product to be shaped by our collaborations with institution-wide faculty and staff. Through the development of the online learning modules, a goal is to foster a community of practice that will help dissipate fearful resistance to technology and elucidate some of the pedagogical possibilities of e-learning at the college.

Literature Review

This project is situated within the literatures surrounding self-directed adult learning and faculty development, practice and pedagogy grounded in empirical cases, and cross-institutional collaboration and fostering a community of practice. In his pioneering research, Knowles identified several key components to effective andragogy. For Knowles, adult learning is most effective when situated within a relevant context and is made available for learner to acquire at their own pace (Knowles, 1975; 1980; Knowles, Holton, & Swanson, 2005). In effort to achieve a particularly relevant context, scholars have found success in working with narrative cases in delivering faculty development (Anson, Jolliffee, & Shapiro, 1995; Wilkerson & Boehrer, 1992). In this project, we mobilized these approaches while remaining cognizant of Lave and Wegner's (1991) work that posits learning as a social process. For Lave and Wegner (1991), understanding learning within a "community of practice" recognizes that all members of a group mutually constitute knowledge.

Goals and Objectives

This practice session will utilize the story of creating online modules for faculty development to reveal the complexity of institutional culture and to consider some of the pedagogical possibilities of e-learning. The session has the following learning objectives:

- Share the recent history of e-learning within the institutional culture at William & Mary
- Model a collaborative process in facilitating support for teaching and learning in the digital age
- Examine the potentials in developing a community of practice
- Share how faculty are starting to adopt e-learning at William & Mary

Description of the Practice

In this session, we will begin by presenting a short summary overview of the project. First, we will situate the uneasy emergence of e-learning within the cultural framework of a historical college. We will share the collaboration process, specifically how we engaged faculty and staff and solicited their involvement, descriptions of sessions we organized for faculty development, and the one-on-one consulting and support we provided for individual faculty projects.

Next, we will demonstrate one of the modules while explaining the design and implementation process. The demonstration will include sharing several of our faculty narrative case videos that supplement each module. We will also invite participants to experiment with one of the interactive exercises in order to consider the application of e-learning technologies in their own course.

To conclude, the authors will serve as panel and offer insights through an informal question and answer session. The authors represent an array of perspectives from around the college, exemplifying the collaborative emphasis of the project and the intent to develop a "community of practice".

Discussion

Funded by an institutional grant, the production of these faculty development modules in e-learning was intended to address a variety of institutional goals. However, to be effective within the cultural landscape of the college, we felt the modules needed to be grounded in empirics from within that context. While the project proposal included a specific plan including objectives and a timeline, we actively engaged in collaboration with faculty and staff stakeholders during the project's deployment. The intention was to paint a picture of e-learning that could be made specifically relevant to the faculty at the College of William and Mary. By taking this emergent approach, we sought to foster a collaborative environment across campus, and especially with faculty. It is important to frame the adoption of technology as something we will do *with* faculty, not *to* faculty. This is an effort to dismantle the digital leviathan. In fostering a local, specific, as well as collaborative and supportive network, we aim to frame far less intimidating understanding technology.

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Unpacking Transformational Pedagogy to Motivate & Retain Minority Students in STEM Disciplines: A Framework for Formal Conversation about Multicultural Issues

Kristina H. Collins, Christopher O. Johnson, & Tarek C. Grantham, *University of Georgia*

Abstract: The pedagogy involved in communicating the "official knowledge" within any discipline can serve as a motivational (or de-motivational) tool to influence retention of minorities in their chosen field of study, especially in those fields where gaps in diverse representation exist. Considering this, there is a compelling consequence to transform teaching practices in higher education. This transformation process in teaching that Gary Howard (2006) outlines in his work is offered in this presentation in the context of (1) situating it within the literature for implementing culturally responsive education within STEM (Science, Technology, Engineering, Mathematics) disciplines; (2) summarizing effective strategies to transform pedagogy; and (3) providing a framework for collegiate educators to engage in formal conversations (departmental/local workshops, seminars, round table discussions, professional development, etc.) with their colleagues and peers regarding multicultural issues within their own environment. While the research offered in transformational pedagogy focused on improving and building capacity within teacher education programs and is presented here through a STEM lens, it is relevant and beneficial to any university program that seeks to increase its underrepresented undergraduate population.

Literature Review

Science, Technology, Engineering, and Mathematics (STEM) are considered the most notable growth industries in the United States. According to the Bureau of Labor Statistics (2012) computer and mathematical occupations accounted for 3.5 million jobs in 2010 with a projected growth of 778,000 new jobs by 2020. However, there are not enough young professionals to answer the call for this challenge, and minorities are particularly underrepresented. The National Action Council for Minorities, Tapping America's Potential, and other similar organizations have been advocating for initiatives to increase bachelor-level STEM degrees among minorities, "realizing the potential that stands to be lost" (Robinson, 2010). Yet, while 84% of 413 STEM department chairs at leading research universities claim concern for the issues of recruiting and retaining underrepresented undergraduate populations, only 33% have a diversity plan in place that include STEM development (Hughes, 2012). Howard (2006) has attempted to address such issues of diversity and culturally responsive curriculums through the unpacking of transformational teaching; he contends that knowledge is constructed subjectively and often in the hands of the powerful and these groups tie schooling to this "official knowledge" (Howard, 2006).

The concern about gender and racial diversity (especially in STEM discipline) compels us to question what is it that led to such an overwhelming divide when students choose post-secondary paths/careers, and what is it about our educational system that creates (or at best does not help to eliminate) such a divide. The worry is that without some deliberate teacher or external intervention (as end-users of the scholarship on cultural responsive education), this environment will continue to influence the choices that African American students make with regards to aspirations in STEM fields and careers. Consequently, at the heart of the teaching process is communication (Powell & Powell, 2010). Good teachers are effective communicators and one of the challenges of effective communication is an institutional climate that is unprepared to understand the different modes of perception and communication that diversity brings to an institution or organization" (IBHE, 2003). Diversity includes, but is not limited to, race, culture, ethnicity, ability, gender; "moreover … diversity is fluid and multidimensional" (Powell & Powell, 2010).
Kitano et al (1996), in a study that investigated the views of education faculty members regarding best practices in a multicultural classroom, found that despite higher education institutions' efforts to diversify the own students, faculty, curriculum, and instruction in teacher education programs, [college] "faculty do not always have the knowledge and practice base necessary to provide their [pre-service teaching] students with skills for working in classrooms that include a wide range of cultural, linguistic, and economic diversity" (p. 76).

Our culturally diverse students are not being educated, for the most part, by instructors that share the same background and/or experiences that the students bring into the classrooms. There are even fewer college faculty and researchers that commit to studying and/or finding solutions these issues. And when it is studied, the theoretical framework offered does not effectively translate into effective practice by the end users. Considering the sensitivity and controversy that can arise from discussions about race, racism, and social dominance, even the most knowledgeable and enthusiastic faculty member

can find it difficult to discuss such issues in formal or informal settings among peers not to mention advocating for change as a leader or mentor in a formal setting among colleagues. As a result, Kitano et al suggested that more experienced, "expert" faculty members should serve as valuable resources in the roles of presenters, models, and mentors to their own colleagues (Kitano, 1996).

Goals & Objectives

Participants of this presentation will be able to:

1. informally self-assess their own multicultural growth level;
2. understand the multicultural implications for educators as change agents in STEM; and
3. engage in formal conversations surrounding multicultural issues among colleagues and peers.

Description of Practice to be Exemplified

This interactive presentation will serve as a tool for faculty that strive to serve as valuable resources and mentors for multicultural awareness and culturally responsive pedagogy within their own organization and among peers. Modeling best-practices, instructional workshop strategies, seven (7) steps to engage formal conversation surrounding diversity issues are outlined as participants actively explore each. These steps include:

A. Activating Strategy: Making Personal Connections, Developing Common Ground for Discussion
B. Instructional Strategy: Discovery & Engaging New Knowledge, Internalizing New Knowledge, Translating New Knowledge
C. Summarizing Strategy: Fostering a Plan of Action, Acknowledging External Hindrances

Discussion

Essential Question (EQ): How do we prepare a dominantly White teacher population to work effectively with culturally diverse students?

It is the mission of this presentation that participants in the diversity conversations leave the discussion with some personal plan of action. Participants will reflect on this information, customizing these ideas for their personal work. Using Howard's Achievement Triangle: Dimension of Knowing (2006) as a basic building block for transforming pedagogy, participants will understand the relevance of what a transformationist educator should know. Likewise, as a result this knowledge and use of transformational pedagogy, we further claim additional benefits that include 1) *all* students educated by the transformationist educator will leave the classroom no longer novices but equipped as well to serve as presenters, models, and mentors to their own peers and 2) underrepresented co-cultural groups will be retained more in areas of study such as STEM disciplines that no longer discount their culturally driven modes of operation (perception and communication).

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Conversation: Using a Team of Experts to Improve Internship Experiences

Andrean Oliver & Justina O. Osa, *Virginia State University*

Abstract: "Many people I talk to are surprised to learn that jobs by the hundreds of thousands remain vacant. The reason for that is clear: American employers do not have enough applicants with adequate skills (Tillerson, 2013). The ultimate goal of educator preparation is the impact of program completers on P-12 student learning and development (CAEP, 2013). Teacher effectiveness is the single most important factor in student learning. Overwhelming studies offer dramatic evidence regarding the influence of the classroom teacher on student learning (Stronge & Tucker, 2000; Tucker & Stronge, 2005; Wenglinsky, 2002). When compared to students in other developed countries, only seven percent of American students are at the advanced level (Brookings, 2013). Therefore, teacher preparation process must be improved in order to improve American student achievement and preparation for the workforce. The goal of this presentation is to share the creative clinical experience model that involves a team of content and pedagogy experts in the design, implementation, monitoring and assessing of preservice teachers in the internship phase. The focus of this model is to ensure that theory and practice are linked to maintain coherence across clinical and academic components of preparation. The topic to be discussed is the effective team-based internship model that increases P-12 student achievement by providing preservice teachers the opportunity to practice theories learned in real life classroom environment.

After a short PowerPoint presentation to introduce the model, presenters will facilitate the conversation. Questions to guide the conversation will include:

1. What are the merits of a team of content and pedagogical faculty close involvement in preservice teacher lesson plan preparation, pre and post class teaching activities?
2. What are the possible challenges such a model will present to teacher preparation units/departments?
3. What are some feasible solutions to the challenges?

Session presenters will provide opportunity for attendees to (1) share their relevant experiences and (2) actively participate in the conversation without just a few of the attendees dominating the conversation. Guidelines for group interaction and professional conversation will be maintained. Attendees will leave the session with relevant "take-aways" that will facilitate the replication of the model in their institutions.

Literature Review

"Many people I talk to are surprised to learn that jobs by the hundreds of thousands remain vacant. The reason for that is clear: American employers do not have enough applicants with adequate skills (Tillerson, 2013). Teacher preparation programs have come under close scrutiny by the public and governmental agencies, like National Council for Accreditation of Teacher Education NCATE, charged with monitoring teacher quality and the academic achievement of American students. The ultimate goal of educator preparation is the impact of program completers on P-12 student learning and development (CAEP, 2013). Teacher effectiveness is the single most important factor in student learning. Overwhelming studies offer dramatic evidence regarding the influence of the classroom teacher on student learning (Stronge & Tucker, 2000; Tucker & Stronge, 2005; Wenglinsky, 2002). When compared to students in other developed countries, only seven percent of American students are at the advanced level (Brookings, 2013).

NCATE (2010) states in order to prepare effective teachers for 21st century classrooms, teacher education must shift away from a norm which emphasizes academic preparation and course work loosely linked to school-based experiences. Rather, it must move to programs that are fully grounded in clinical practice and interwoven with academic content and professional courses.

Goal and Objective

The primary goal of this conversation session is to seek creative and feasible strategies and initiatives to increase the supply of more effective teachers. The objective of the conversation session is to engage professionals in a

discussion of innovative initiatives that can enhance teacher preparation programs that could result in highly effective teachers who can (1) translate theory into practice, (2) adequately teach their content areas, and (3) increase the number of American students who join the workforce with relevant knowledge, skills, and dispositions.

Description of Idea or Topic to be Discussed

The topic to be discussion is the innovative concept of team-based model of clinical supervision. Preservice teacher internship is often the culminating experience for the aspiring or prospective teacher. It is designed to be an intensive, full-time classroom experience for preservice teachers. Internship allows the preservice teacher to use the theories of teaching and learning, pedagogy, knowledge of the subject area, and professional dispositions acquired in coursework to positively impact P-12 student learning. Preservice teachers work closely with veteran site mentor teachers and university supervisors to become reflective professionals who create classroom environments, organize content knowledge, and select appropriate methodologies that promote student learning. Participants at this conversation session will be presented the innovative concept of team-based model of clinical supervision. The model will consist of the university academic content faculty, the teacher preparation program faculty, an experienced P-12 content area faculty, and the preservice teacher. This model provides comprehensive support to the preservice teacher who receives needed support and assistance with lesson contents and the professional pedagogical activities. The experienced P-12 content area faculty provides the developmental and instruction-embedded support needed by the preservice teacher and serves as the critical link between theory and practice. This model provides the preservice teacher needed professional guidance and support throughout the three critical phases of instruction – pre-instruction, instruction, and post instruction phases.

Facilitation Techniques

The conversation session presenters will begin the session with a brief PowerPoint presentation to conceptualize the topic of team-based model of internship supervision. After the presentation, session participants/attendees will have the opportunity to (1) comment on the presentation and share their relevant experiences and (2) actively participate in the conversation. Session presenters will encourage all attendees to participate in the professional conversation without just a few of them dominating the conversation. Guidelines for group interaction and professional conversation will be maintained. Attendees will leave the session with relevant "take-aways" that will facilitate the replication of the model in their institutions. Participants who are not in the field of education, will have the opportunity to share ideas from their discipline and have contributions from other attendees on how to apply some of the comments of team-based model of internship supervision to their discipline. Everyone will benefit form the conversation because the application of theory in practical engagements and real-live situations are desired in all fields of study.

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Creating a Culture of Excellence in the Classroom: A Conversation About Best Practices

Maria Christian & Kari Chancey, *Oklahoma State University-Institute of Technology*

Abstract: Creating a culture of excellence in the classroom begins by defining "success" in the classroom. Though students play an integral role in the classroom culture, instructors, too, establish a classroom environment. Factors including subject matter expertise, pedagogy, and personality contribute to the culture in a classroom. Identifying how instructors create excellence in the classroom is the forefront of this conversation. An exploration of classroom experiences, good and bad, will ensue after analyzing a powerful quote, and understanding the concept of seeing through their eyes as explained by Bowles (2005) and her connection of teaching excellence through the Wizard of Oz metaphor. Through shared experiences, new perspectives about classroom instruction will develop. Identifiable themes will be recorded, and small group sessions will further contribute to the knowledge of creating positive classroom environments.

Literature Review

Exploring teaching methods and the reflective nature of how instructors create positive classroom environments reiterates the need to share classroom experiences. These experiences may reveal best practices, contributing to creating a culture of excellence in the classroom. Finch (2003) captures the need to explore alternate teaching techniques when he states, "[If] we continue to stick to pedagogically sound, historically ineffective, administratively convenient practices, then it can truly be said that the classroom is a better place without such teacher figures" (par. 16).

Table 1: Investigation of Teaching Techniques

Teaching Technique	Identified Research
Lecture	• Demant & Yates (2003) define lecture as "chalk and talk" and "drill and kill (p. 488) • Morgan, Whorton and Gunsalus (2000) state how speakers can "bias the information, [the] listener attention wanes after approximately fifteen minutes, and long term retention may be limited" (p. 56)
Small Groups	• Scott & Baker (2003) conclude that peer input and small group interaction is mandatory for the acquisition of knowledge • Finch (2003) states that through peer feedback students have increased "motivation, participation, real communication, in-depth understanding, commitment, confidence…and accuracy when students prepare and deliver learning tasks for each other" (par. 15)
Discussion	• Morgan, Whorton and Gunsalus (2000) believe class discussion "involves participation…keeps learners active, promotes development of communication and collaboration, and encourages tolerance for other points of view" (p. 57)

Table 2: Identifying Influences on Instructors' Chosen Teaching Techniques

Teaching Technique Influences	Identified Research
Personal Experiences as Students	• Beegle & Coffee (1991) found instructors were more likely to teach according to how they were taught • Page (1992) believes instructors, who as students had less favorable experiences in science and math classes, projected a negative image on the subject
Learned Techniques	• Scott & Baker (2003) found "as few as 10% of the teachers would transfer new learning into regular classroom use" (p. 69) • Beegle & Coffee (1991) accepted the hypothesis that "professors tend to

	emulate in the classroom the teaching technique that they experienced as students" (par. 5)
Personal Decision Making and Self-Reflection	• Vassallo (2004) claims in "their role of teacher, educators reveal their inner voice to deduce the inner voice from their students" (p. 181) • McIntyre (1997) believes instructors are emotional learners

It is through existing literature that a clearer picture of what makes instructors successful in the classroom emerges. Fostering a positive environment, which contributes to a culture of excellence in the classroom, begins with instructors sharing their teaching knowledge and results. The sharing, the conversations, begin now.

Goals and Objectives

The first goal is to provide participants with an understanding of "excellence" and "success" as it pertains to classroom culture. To satisfy this goal, participants will analyze a quote that identifies how excellence should transpire in teaching, and they will review the "Wizard of Oz" Metaphor as it relates to being excellent in the classroom. The second goal is to provide participants with new perspectives about successful teaching. To satisfy this goal, participants will share individual classroom experiences and identify positive and negative teaching methods. The third goal is to provide participants with information about overcoming difficult classroom situations. To satisfy this goal, participants will use small group discussion to identify negative experiences, exploring how these experiences may be overcome. The final goal is to provide participants with a guidebook of ideas and best practices. To satisfy this goal, participants will identify themes relevant to the creation of excellence in the classroom, through discussion and individual contributions. These themes will be transcribed and made available to all participants.

Description of Idea

This idea is the result of multiple conversations with instructors at Oklahoma State University-Institute of Technology. The repeated theme of forgoing "lecture" presentations for more conversational or "fishbowl" conversations became a clear need. Working together with a variety of instructors, from multiple disciplines, and administrators in online learning and instructional design has created an outline for these conversations. Learning from others fosters shared ownership in the pursuit of creating excellence in the classroom.

Facilitation Techniques

Through the use of quote analysis and question and answer, a conversation about best practices will begin. Identifiable themes from similar stories will assist in small group formation. Small group participants will share their perspectives and best practices, relevant to their discussion topic. Overall group discussion will center the conversation back to an overall understanding of creating excellence in the classroom.

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Thursday

February 6, 2014

Session 10

3:00-3:50 PM

http://www.cider.vt.edu/conference/

The Implications of Modularized Curricula for Pedagogy and Student Experiences

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Abstract: To accelerate student progress through developmental mathematics, many colleges and some states have modularized their curricula into discrete topics allowing students to take only the content they need. Research remains limited regarding the implications of modularization in developmental education for pedagogy, student learning and success. This paper will examine the opportunities and challenges presented in modularized developmental education curriculum for teaching practices and student experiences. Data for this paper stems from a large-scale mixed method study of developmental education instructional reform. Data sources include 60 interviews and focus groups with students enrolled in modularized developmental math courses, 40 interviews with developmental math instructors, and student-level transcript data from a state system. This paper will highlight faculty and student perceptions of the pace of instruction, students' ability to retain and apply knowledge across units, and the decision-making process driving their enrollment behaviors. Analysis of transcript data will examine if students who fail a module immediately reenroll and the percentage of students who enroll in a full semester's worth of modules. The findings presented will offer insights into how instructors can support learning and success in modularized developmental math classes.

Introduction

Nearly 60 percent of incoming community college students are referred to developmental education, but only about one third complete their remedial course requirements within six years (Bailey, Jeong, and & Cho, 2010). In effort to accelerate student progress through developmental courses, colleges are increasingly turning toward modularized curricular models that restructure content into smaller, discrete units. This approach allows students to take only the content they need and potentially enroll in fewer developmental education credit hours. Despite the increasing prevalence of modularized course redesigns, minimal research exists regarding the implications of modularization in developmental education for pedagogy, student learning and success.

This paper presents an analysis from a large-scale mixed method study of developmental education instructional reform in two states. We report on how students experience learning math in a redesigned, modularized course structure by highlighting faculty and student perceptions of the content and performance requirements, and students' self-reported patterns of progression through modules. Findings speak to the opportunities and challenges of modularized developmental curriculum for pedagogy and student experiences. Importantly, the study has implications for a more comprehensive understanding of modularized developmental education course systems and how instructors can change their practice to better support the success of students in modularized courses.

Literature

This study examines student experiences with learning developmental math in a modularized course structure. Advocates of the modularization approach highlight the opportunity for students to demonstrate proficiency in a range of discrete topics (Burke & Carey, 1994). This dimension of modularization builds off the belief that students possess different strengths and areas of interest (Burns, 1971). Yet, critics of modularization question the extent to which students exploring topics separately can develop depth of understanding and higher order thinking and reasoning skills (Jonassen & Kwon, 2001). Researchers suggest that modular instructional designers must work to help students see the connections between seemingly distinct pieces of information (Harden, Gessner, Gunn, Issenberg, Pringle, & Stewart, 2011). As part of our analysis, we consider student perceptions on the scope and pace of content along with issues of progression through developmental math units.

Methods and Data Sources

The paper draws on data collected from a three-year research study that explores the nature, implementation, and early outcomes of reforms to developmental education in two states. Data sources include 60 interviews and focus groups with students enrolled in modularized developmental math courses, 40 interviews with developmental math instructors, and student-level transcript data from a state system. These data were collected at 9 community colleges

purposively selected to create a sample diverse in enrollment size, geographic location, and approaches to delivering the developmental math curriculum. Notes from interviews were uploaded into Atlas.ti for coding and analysis. Using fieldwork memos and reflections, the research team developed a series of initial deductive codes. This coding scheme has been and continues to be revised inductively as new themes surface in the data set. Analysis and interpretation are currently ongoing. In the final paper, we will also draw from transcript records for students enrolled during the 2012-2013 academic year in one of the two states. These data include information on student course-taking within each semester. These data will be cleaned in SAS and analyzed in Stata. Preliminary results are not yet available because data for the 2012-2013 year in will be compiled for analysis August.

Findings

Student interview and focus group data suggest that the content and performance requirements within a modularized developmental mathematics curriculum influence students' ability to learn mathematics. Most noticeably, students discussed the intensity of the shorter modularized courses and the challenges to learning presented by the pace with which they had to cover material. Students described both the short time allotted to cover material and the volume of assignments as barriers to success in the courses. Many students explained that curricula were covered too hastily for them to effectively learn mathematical concepts. Students also explained that even when they did learn the material, the volume of assignments and quizzes made it difficult to complete units on time and/or thoroughly learn concepts underlying mathematical procedures. The final paper will include faculty perspectives on the types of pedagogical practices they used in modularized course structures.

Data also indicate that many students' progression and enrollment patterns were impacted by challenges to learning mathematical concepts and feeling overwhelmed by the pace of developmental math units in modularized course structures. Students who struggled to grasp the course material and older students who had had long lapses in exposure to mathematics found it particularly difficult to finish units within the required four week timeframe. Students also described feeling overwhelmed by the demands of the courses and mentioned that they would not enroll in any other courses while completing their developmental math requirements. Findings from student transcript data will provide additional information about student enrollment and progression patterns in modularized developmental math sequences.

Discussion

Modularized developmental education courses have been introduced in a number of states in an effort to lessen the time needed to complete course requirements, allowing students to only enroll in the modules covering the content they need. Our preliminary findings indicate that modularized developmental education courses can present challenges with regards to learning the content and completing unit tasks within the timeframe required by these modularized curricula. The data presented in this paper can help guide faculty using modularized course systems by offering insight into student experiences learning in this innovative context.

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Teaching through Leading: Developing Leadership Skills throughout the Virginia Military Institute Rat Challenge

Holly Richardson, Mike Krackow, Chad Joyce, Jack Johnson, & Jimmy Coale, *Physical Education, Virginia Military Institute*

Abstract: At Virginia Military Institute (VMI), one core component of its mission is to graduate individuals with strong leadership skills. VMI documents over 200 leadership opportunities for the cadets at the Institute. The Rat Challenge is one program that provides opportunities for the upper-class cadets (Cadre) to assume responsibility for leading and teaching the new cadets (Rats) in activities which have calculated elements of risk. In fall 2012, the Cadre (n=57) were surveyed to determine the value and worth of the Rat Challenge program as it compared to other leadership opportunities available to the cadets at VMI. Results of the survey showed that 58.6% of the respondents stated that the Rat Challenge was their most effective experience for developing leadership skills. 91.4% stated that it was more or most effective in developing leadership skills as compared to other experiences they have had at VMI. In addition, 98.3% stated that the experience was extremely or very valuable, and 62.1% stated that it was extremely valuable. Results of this study suggest that the cadets (cadres) find the leadership opportunities are valuable and very effective in developing the leadership skills that are needed, not only in the military, but in all walks of life.

The Rat Challenge program at VMI was implemented in 1968 with the intent of offering leadership opportunities for the upper-class cadets (Cadre). It is a vigorous outdoor experiential program for the first-year cadets (Rats). This program is conducted every fall, under the supervision of the Physical Education faculty. All of the activities are performed under the guidance of the upper-class cadets (station and company cadre). This setting provides the cadre with an excellent laboratory to develop and apply leadership skills that they will use upon graduation (Physical Education Department, n.d.). In the fall 2012, the Physical Education Department surveyed the company cadre to determine the value and worth of the leadership opportunities provided by participation in the Rat Challenge.

Background

The purpose of the Rat Challenge is mentoring leadership, specifically, to provide opportunities for upperclassmen and women (Cadre) to assume responsibility for leading and teaching new cadets (Bednarczyk, 1999; Physical Education Department, n.d.). It was designed as an alternative to the Rat Line which is an intense program that prepares the Rats for life in the military. Through experiential-learning by doing, the Cadre develop leadership skills that are invaluable in both the military and non-military work environments. Propst and Koesler (1998) found that strong leadership (mentoring) can enhance self-efficacy with both the student (Rat), and teacher (Cadre) in structured outdoor programs, such as the Rat Challenge.

Developing leaders is a principle value at VMI. In its Quality Enhancement Plan (QEP) for it reaffirmation of accreditation through the Southern Association of Colleges and Schools (SACS), the emphasis of the plan was to improve its core curriculum with the "goal of providing each student with the nucleus of effective citizenship and leadership" (Virginia Military Institute, 2006, p.1). In particular, the Institute prides itself in developing leader in a 'hands-on' environment by teaching the cadets to anticipate, respond, and lead (Virginia Military Institute, 2006). At VMI, they believe that leadership is a process that can be developed through both formal education and practical experiences, such as the Rat Challenge (Virginia Military Institute, 2006, p.11).

Four types of leadership positions are available to the cadets at VMI. They are positions of authority, positions of initiative, positions requiring a prerequisite, and positions of respect. Leadership roles within the Rat Challenge fall under positions of initiative where the cadets volunteer their expertise. In addition the cadets' expertise, these positions also require a considerable time and energy commitment (Virginia Military Institute Center for Leadership and Ethics (n.d.).

Methodology

The Cadre (n=57) were surveyed at the completion of program to determine the value and worth of the Rat Challenge program as it compared to other leadership opportunities available to the cadets at VMI. The cadre were asked to rank the effectiveness of the Rat Challenge as a means of developing leadership skills as compared to all the VMI-sponsored leader-development opportunities in which they have participated. They were also surveyed rate how valuable they felt that the Rat Challenge experience met the educational mission of the Institute. Lastly, they were asked to indicate the extent to which their participation in the Rat Challenge contributed to their development of the leadership, decision making, and communication skills, and the ability to help a group develop unity of purpose and spirit.

Data Analysis and Results

1. 58.6% of the respondents stated that the Rat Challenge was their most effective experience for developing leadership skills. 91.4% stated that it was more or most effective in developing leadership skills as compared to other experiences they have had at VMI.

2. 98.3% of the respondents stated that the experience was extremely or very valuable. 62.1% stated that it was extremely valuable.

3. Contribution of the Rat Challenge in the development of the skills, ability, and other characteristics listed below:

   A = a great deal; Q = quite a lot; S = some; N = not at all

n=57	A	Q	S	N
Leadership ability	61.4%	29.8%	8.8%	0.0%
Decision making skills	50.9%	36.8%	12.3%	0.0%
Communication skills	57.9%	33.3%	8.8%	0.0%
Ability to help a group develop unity of purpose & spirit	64.9%	29.8%	3.5%	1.8%

Discussion

The results of the study suggest that the leadership opportunities available through the Rat Challenge are very effective in developing the leadership skills necessary for the cadets when they graduate from the Institute and pursue careers in the military or traditional workforce settings.

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Enriching Student Engagement and Participation Through Online Asynchronous Discussions

Bruce Williams, University of Virginia

Abstract: My presentation demonstrates the use of NowComment, a new software program for asynchronous online class discussion which has been incorporated into Collab, the University Of Virginia's online collaboration and learning environment. I focus on the ways in which NowComment enrich student engagement with class materials in a wide range of classes. My session will include a hands-on opportunity for participants to explore NowComment and discuss possibilities for incorporating it into their own classes.

Literature Review

There is widespread consensus on the many attractive features of written asynchronous online discussion, e.g. freedom from time and geographic constraints, increased student engagement, and uniformly positive correlations between discussion participation and learning outcomes (Baker, 2012). Nevertheless, there remains an obsolete sense of online discussion as a domain "where the communication process is fragile and unfamiliar to both teachers and students (Xin and Feenberg, 2006), despite the [tectonic shift] in contemporary online usage brought about by social media. Instructors are warned that they must be active modelers of proper communications techniques, that small group size is necessary to avoid chaos and freeriding (or both), that discussion must be seeded with discussion questions, that evaluating participation is burdensome, especially if not done promptly (Baker, 2012), that it is suggested to organize students to play assigned roles in the discussion (Rorabaugh, 2012). In almost all cases, it is assumed that the discussion is done with traditional online discussion boards rather than newer, more powerful tools.

Presentation

My presentation will demonstrate some of the ways in which I've used NowComment, a sophisticated cloud app for asynchronous group discussion, annotation, and close reading of multimedia online documents, to facilitate students' engagement with class materials, foster the development of ongoing dialogue among the students, and provide instructors with multidimensional methods for assessing student performance.

Some of the advantages and techniques described will include:

- Extremely scalable (used in classes of 20 and 250); even in very large class, students get a structured opportunity for class participation and ongoing discussion with others in the class.
- Enables instructors to easily monitor student work (both quantitative measures and qualitative assessment), fostering student accountability.
- Provides a convenient and in-depth way to assess a class's overall understanding of assigned readings and identifying specific issues for incorporation into lectures and other in-class exercises.
- Allows instructor to engage with and guide student conversations as desired.
- Improves the educational quality of larger classes by holding students accountable for a broader range of engagement with class materials than is normally practical. Moreover, NowComment achieves this in ways that do not increase the time demands on instructors and TAs.
- Improves the quality of classroom discussion, since students have already done a significant amount of thinking and reacting to the material before they come to class.

Goals and Objectives for the Practice Session

After introducing my approach to pedagogy using NowComment I will briefly show a few sample documents, answer general questions and then conduct a hands-on session with attendees.

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A String in the Labyrinth: A Strategic Approach to Using Technology in Education

Matthew R. Turner, *Radford University*
Scott A. Turner, *UNC Pembroke*

Abstract: New technology is and always has been adopted for instructional use. From the introduction of calculators into the math classroom to the widespread adoption of iPads in recent years, educators have struggled with how and when to adopt technologies, what role in teaching they serve, and how they affect learning outcomes. For the institution, the professor, and the student, the adoption of this technology always comes at a cost, whether it is in money, learning, or time. There is a large body of evidence looking at specific technologies across the various levels of education, which often arrive at conflicting conclusions. This session does not seek to definitively answer questions of whether or not instructors or institutions should adopt specific technologies, but rather outlines a process for deciding whether to adopt a technology after identifying and weighing the various costs of that technology. In some cases, instructors may have little control over what technology is adopted, but still be expected to be capable users of the technology for the classroom. In cases where the instructor has little control over the adoption of the technology, the process also describes formulating a strategic plan for implementing the technology to achieve the best possible outcomes. Participants in this practice session will critically identify the costs and opportunities created by the adoption of a new technology, and follow a process of questions and considerations to help them arrive at purposeful implementation of technology in the classroom. Participants will apply the demonstrated process to a variety of real world technologies in small group discussions that will examine the benefits and costs of technologies such as clickers, iPads, course management systems, online exams, e-mail, etc. with the purpose of arriving at an informed method of how or whether to use these technologies.

Literature Review

The idea that technology can be used in the classroom to improve learning is certainly not a new one; however, it is not necessarily true. Even if the technology does improve learning, the introduction of technology into the classroom comes with costs to the student, the instructor, and the institution that need to be balanced against its use.
There are multiple types of costs to multiple parties that one should consider when using technologies in the classroom. Of course, technology has a financial cost (to the institution, instructor, and/or student) (Waters, 2012), but it can also come with the price of additional time for the instructor (for setup and content creation) or for the student (for learning the technology). For instance, one study looked at student response devices (clickers) and found that, while they were useful, it cost the instructor time outside of class to create the slides necessary for the clickers to work and time inside of class to register each clicker with the course. It also cost the students money in this instance (Evans, 2012). Another study found that online courses cost more than face to face courses in terms of finances, teacher time, and other resources (Koenig, 2011).

Technology may also be the cause of reduced learning if it becomes overwhelming or removes the need for students to put forth any effort (Cutrim Schmid, 2008). While the author found that the interactive white board (i.e. a SmartBoard) was an effective tool in this case, it did cause some problems for some students. In a study involving note taking on the Tablet PC (a precursor of the current iteration of tablet computers), a similar problem was seen, and the authors found that the costs and benefits of the technology were unevenly spread among the participants (Kim, Turner, & Pérez-Quiñones, 2009). Some found that it was easy to use and that it fit their note-taking style, while others struggled because it did not fit their style or because they had trouble with it physically (writing on the screen with the stylus, being able to switch between typing and writing modes, etc.).

While the costs are very important and must be considered with the introduction of new technology, the use of the technology is an even more important topic. This issue essentially revolves around whether the technology is viewed as a solution that will teach the students or a tool that students use to learn. Or, to put it another way, is the technology a teacher-centered method of delivering content or is it a student-centered device to allow more focus on higher-level thinking? The educational community seems to be very strongly in favor of viewing it as a student-centered tool, while there is evidence that institutions and many instructors view it more as a solution (Jacobson et al., 2010; Moursund, 1976; Muir-Herzig, 2004; Thomas, 2001; Waters, 2012). The literature also clearly indicates that the use of technology requires a change in teaching methodology to be effective.

Nearly 40 years ago this idea was brought up as a way to integrate calculators into the classroom (Moursund, 1976). Calculators were seen as a way to promote high-level thinking by removing tedious manual calculations from more

complicated problems. This is the use of a tool. On the other hand, during the decades since, calculators have been used to *teach* arithmetic, graphing, etc. (a solution) and the debate over their use in the classroom continues. Newer technology faces similar problems. It needs to be used in an authentic manner with the focus on the student and the problem, not the technology (Ertmer & Ottenbreit-Leftwich, 2013; Thomas, 2001). With the correct usage, the costs and benefits of the technology can inform the decision of how to best achieve student learning goals.

Goals and Objectives

Upon completing this session, participants will be able to:

- Reflect on their uses of technology in and out of the classroom
- Weigh the costs of technology to make an informed choice about its usage
- Discuss the usage of specific technologies and their effect in the classroom
- Develop their own technology usage plan to address future decisions about adoption of technology

Description of Practice

During the session, participants will discuss their use of technology and its cost to them and their students. A basic rubric for evaluating a technology's value and costs will be presented. Participants will take part in group discussions on specific technologies and present their findings to the group.

Discussion

Discussion among session participants will encourage them to think about how they are and could be using a variety of technologies in their courses. Participants will be encouraged to share their own ideas of the use of technology and how to apply a rubric in the decision-making process to address their specific needs. Participants will be encouraged to share their own ideas and challenges and evaluate how using or modifying their use of various technologies will benefit themselves and their students.

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Becoming Researchers: Experiential Learning and Democratic Practice in a Graduate Research Course

Sharon Reynolds & Michael Edward Hess, *Ohio University*

Abstract: Faculty in higher education can connect teaching and research through experiential and democratic means. We present an experiential model of teaching qualitative research by doing research. In this two-semester graduate level research methods course, students engaged the literature and theory while participating in a year-long group research project alongside faculty. The impact on student learning seems to have been substantial. By any measure of authentic assessment, these students *are becoming* young researchers: during the course they developed, conducted, presented and have submitted research results for publication.

Literature Review

Connecting teaching in higher education with research has been discussed and debated in the literature for decades (Jenkins, Breen, Lindsay, & Brew, 2003). Too often teaching in higher education focuses on acquisition of knowledge, as opposed to learning *in situ* (Brown, Collins, & Duguid, 1989). Students are not often provided with opportunities to learn concepts in context, through authentic activities, engaged with the professionals who use these concepts and tools. Brown, Collins and Duguid (1989) argue that abstract concepts are like tools which can be acquired, but only be fully understood through situated use. Knowledge is gained continuously through experiences (Kolb & Fry, 1975). In order to gain genuine knowledge from an experience, the learner must be actively involved in the experience; reflect on the experience; use analytical skills to conceptualize the experience; and must use decision making and problem-solving skills in order to apply the new ideas gained from the experience. Methods that "try to teach abstract concepts independently of authentic situations, overlook the way understanding is developed through continued, situated use" (Brown, Collins, & Duguid, 1989, p.32). An applied and experiential model of teaching and learning creates an immediate need to understand concepts and practices—what Dewey called "direct, vital appeal" (Dewey, 1938).

Goals and Objectives for the Practice Session

During this practice session participants will:

- Discuss three modes of teaching research in higher education (online, lecture-based and experiential)
- Discuss democratic teaching and experiential learning in higher education
- Review the syllabus of 2-semester immersion course in qualitative research methods
- Consider the student learning and feedback and reflection on the value of the course and the process

Description of Practice to be Exemplified

We will present how we applied experiential learning and democratic practice in a new graduate level research methods course. The two-semester course engaged graduate students from a college of education in research from the development of research questions to data collection and analysis. Students and instructors worked collaboratively to write up and present the findings at a national conference. We will share the syllabus, the products of the course, as well as reflections from the students on the value and challenges associated with this experiential model of learning and doing research.

Discussion

As instructors in a college of education, we have taught graduate level research classes in multiple formats: online, lecture-based (large class size), and small group. We came to this course as researchers, with the germ of a research question that we suspected had strong local relevance. As researchers we were genuinely interested in investigating the phenomenon and as educators we were interested in sharing this learning opportunity with graduate students. Grounded in social constructivist approach to teaching and learning, we proposed a two-semester special topics graduate course in qualitative research methods in rural communities. Five students enrolled in the pilot course and learned the process of qualitative research by engaging with us as researchers. Students read methods and theory and engaged in discussions regarding the readings as they applied to the work of doing research. The impact on student

learning seems to have been substantial. By any measure of authentic assessment, these students *are becoming* researchers: during the course they developed, conducted, presented and published academic research.
As one student stated: "For the first time in my college career (undergraduate or graduate), I had the opportunity to conduct real research in real time that was carried out in a professional and academic manner. What I mean here is that we are helping to actually contribute to the literature and hopefully get published in an academic journal. Our work also has the potential to instruct and inform faculty, staff, students and teacher candidates within the College of Education about the issues surrounding stereotyping and *Othering* that both the students and teachers in the local schools are facing right now. I feel that what we are doing right now in this class is close to, if not, the most useful thing I've done in my college career with respect to research. The practical experience I've gained in how to conduct qualitative research is invaluable. As I mentioned before, while my Research Methods course helped to provide a good theoretical background, this class actually gave me real experience in the research process. It will be very beneficial for me in the future should I decide to pursue another degree or conduct my own research in an academic setting."

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How to Increase Student Engagement in Large Lecture Courses Using Mobile Devices

Perry J. Samson, *University of Michigan*

In the not too distant future (or maybe its already happened) all students who want to will come to class with some sort of Internet-enabled mobile device on their person. While this reality strikes fear in some instructors this presentation illustrates how the deliberate use of these devices can, in fact, create an environment in which student are both more attentive and more engaged.

This interactive presentation simulates a class environment and attendees are encouraged to bring a laptop or other mobile device to participate as students. An overview of LectureTools, which the author developed, will be followed by an interactive session in which participants will be able to pose questions and view answers in a side stream and answer questions posed by the presenter.

Research has shown the use of LectureTools has led to a dramatic increases in the number of students posing questions during class time, with more than half posing at least one question during class over the course of a semester, a percentage far higher than achieved in previous semesters. Moreover, while 50% of men and 80% of women in the science course surveyed claimed to be uncomfortable asking questions in a large lecture setting, 66% of all students (regardless of gender) asked questions when questions and subsequent answers are posted anonymously as in LectureTools.

In addition to increased opportunities to participate afforded the students the instructor also is presented with rich data on student performance that can help identify non-participating students far earlier. This presentation will include a sneak peek at what is possible when student participation data is mined to create study guides for student and early warning systems for instructors and advisors.

Goals and Objectives

The objective of this presentation is to directly debate the pros and cons of the use of mobile devices as a nominal instrument in college-level classes. Many instructors shy away from embracing these technologies and some even ban them altogether. Here we look at evidence-based research that demonstrates the potential for mobile devices to increase student attentiveness rather than diminish it when the technology is designed based on lessons learned in educational research.

Description of Practice

The technology to be demonstrated was developed to enable more instructors to easily move to a more active learning style. Peer instruction and other active learning styles have been shown to improve student learning and engagement. LectureTools aims to embrace the simple understanding that if you give students more opportunities to participate they will and they will report higher level of engagement as a result. The technology helps all students participate but it is still up to the instructor to construct their class experience to invite student involvement. This presentation will discuss both the technology and the pedagogy that must go with it.

Collaboration, Innovation, and Integration: Interdisciplinary Course Modules

Ellen M. Taylor & Robert Rainey, *University of Maine at Augusta*

Abstract: This Practice Session will describe our experiences using integrated course modules. We have successfully linked courses in art, English, American Studies, and history around a common theme, to a select group of college students, and found this an effective pedagogy to form a collaborative academic community, promote academic excellence, and increase retention. We will discuss our experiences, as well as challenges and opportunities for the future. We believe such integrated learning best serves students of the 21st century.

Literature Review

Integrated Course Modules prepare students with collaborative learning, and model creative skills and critical thinking germane our contemporary society and job market. This pedagogy embraces the interconnectivity that permeates much of our culture today, and is ideally suited for multi-cultural material and awareness. Such Teaching and learning provides an academic community for committed students, where knowledge can be created and shared. This pedagogy is associated with developed critical thinking, and increased retention (Moxley, Najor-Durack, and Dumbrigue). Our society is interdisciplinary, and academia can mirror our world by recognizing these linkages (Chandramohan et al). Spilling our silos into one cooperative exchange is a more dynamic way to learn, to work, and to live. Students develop into creative problem solvers, knowledge seekers, and engaged citizens by focusing on commonalities between disciplines, as well as groups of people (Ellis, Petrausch).

As we develop new curricula relevant to our contemporary culture, we need to consider connected learning approaches that accommodate students' needs, and challenge them to think critically about what information and education means (Giroux, Jacoby). We need to reexamine ideas of what unites disciplines, rather than what separates them. Shifting our pedagogy to reflect contemporary times will engage students in academia, democracy, and citizenship.

Goals and Objectives

Participants will learn of our experience integrating our courses around a common theme. They will consider their own solitary teaching practices, and consider ways collaboration may improve their pedagogy. We will share samples of students' work from our modules, and participants can evaluate their success. Nuts and bolts issues such as marketing, working with financial aid, and group dynamics, will also be discussed. At the end of the session, participants will have thought about ways they might collaborate with colleagues and enhance their pedagogy in the process, consider how they might incorporate similar models at their own institutions.

Description of practice to be exemplified

At our college we seek ways for our students to form learning communities and to foster connections between the classroom and the world. One successful model we have designed is what we call "Integrated Course Modules." These are groups of courses taught with a common theme, to a select set of students. We have completed three such modules, and momentum is growing.

Art, Architecture, and Philosophy joined up to teach a nine credit course on *Civic Engagement* in spring of 2010 and worked with a local food pantry to create an art gallery in its dining space. Three professors combined courses in Digital Arts, American Studies, and English in spring of 2011 for nine credit *Prisms on Culture*, which added travel to San Juan de la Concepciòn, in Nicaragua for civic engagement. The spring 2012 integrated course module incorporated the theme of *Revolution,* a 12 credit cluster combining digital art, history, literature, and Latin American language and culture. Student projects and performance was exemplary, and retention, 100 percent. Clearly, students are hungry for this sort of learning.

Discussion

As faculty at a commuter campus, teaching mostly non-traditional students, community and civic engagement are critical themes we incorporate into our courses. Group projects can be challenging when so many of our students

balance multiple roles outside of school. Having a group of students in the same courses allows for more opportunities to work together and exchange ideas in both formal and informal settings. As faculty, teaching together we also model the life-long process of learning and the negotiation necessary for successful team work. We break down the hierarchy of privilege among disciplines, and power relationships between faculty and students. Several outside faculty are brought in for their expertise to model our own need to seek expertise.

Students write papers, give presentations, and produce photography books to visually document their educational journey. Examples of students' final projects include a video installation of US consumption of goods produced in "third-world" factories; a study of indigenous healing methods; and an architectural design for a study center. These projects were presented in our campus theater; faculty, students, family, and staff were invited to attend. The quality and range of the projects demonstrated exemplary learning. Many students commented that the semester was life-changing and irreplaceable. Shouldn't all education be?

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Thinking out of the Box: Using International Service Learning to Facilitate Students' Personal & Academic Growth and Development.

Eniabitobi Kuyinu, *Mercer University*

Abstract: International Service Learning (ISL) programs through carefully designed project, and outcome analysis plan, have been shown to enhance students' understanding of other cultures', their intellectual development, personal and professional growth and critical thinking skills. In addition ISL programs promote stronger sense of cultural competence in students and commitment to being an agent of change abroad and within their communities. From studies there are strong indications of ISL efficacy in achieving both short and long term objectives. Although students sometimes report mixed reactions, the overall outcome has been positive when detail is given to project design and outcome analysis. The practice session will demonstrate to participants how to effectively use ISL programs to enhance academic, personal and professional development of students, while using best practices. Participants will also have the opportunity to assess two international learning programs facilitated by the presenter as case studies.

Literature Review

International Service learning integrates community based services with academic instruction in an international context. The integration allows for participants to increase their global awareness while building intercultural understanding, leadership skills and civic responsiveness, and at the same time serving local communities (Crabtree, 2008; Stemberger et al, 2005; Brown & Roodin, 2001). This is intentionally designed to promote student learning and development (Stemberger et al., 2005). Although international educations were initially developed to enhance international understanding and world peace, they are currently more tailored towards creating global citizenship and concerns for social justice (Crabtree, 2008). ISL have been shown to be more effective when it incorporates critical reflection skills, detailed pre-departure students' preparation and increased community-university partnership in addressing social problems (Sherraden, Lough & Bopp, 2013; Baumberger-Henry et al, 2006; Crabtree, 2008). ISL is particularly useful in the cases of Historically Black Colleges where the international experience can be used to prepare students as practitioners both locally and internationally. African American Students learning and working side by side professionals in Africa can enhance their world view of self and others through the experience and may lead to a cathartic change for others. Although a few studies show some mixed experiences of participation in international service learning, positive outcomes can be enhanced when detail is given to project design, partnership development and outcome analysis.

Goals and Objectives

As a result of this session, participants will be able to conceptualize how to plan and implement an international service learning program with special emphasis on program design, international partners' selection and partnership, pre-departure training, and outcome assessments. Participant will also discuss information on accessing funding for ISL; identifying international service learning opportunities and partners with good fit, and how to initiate a multidiscipline service learning overseas program.

Description of the practice to be Modeled

Participants who attend this session will learn how planning International Service Learning (ISL) programs, can benefit from a more theoretical underpinning as best practice, to ensure best outcome for participating students and host community/partners. Participants will also discuss components of effective pre-departure plan and factors that foster a greater problem-solving and critical thinking on the part of students, to generate long term project outcome. Since financial constraint can be a detractor to international service learning programs, the session will also engage participants in learning about appropriating funding for the program. Two case studies will be presented based on previous ISL programs facilitated by the presenter, and participants will be asked to evaluate the projects presented in the studies based on what has been learnt during the session.

Discussion

This presentation draws strongly from the Ubuntu proverb, "I am because you are, and you are because I am," in presenting a more global learning opportunity for students. Through ISL programs, students experience the world through a different paradigm and are able to see how they are able to impact and effect change in their lives and in the lives of others. ISL is particularly enriching for students in the mental health field who by the nature of the profession are regularly exposed to clients from different cultures and world view. Service learning in a different culture enhances the capacity of student to embrace the client as an expert in the content of their lives and move therapy towards a more collaborative experience. ISL must be rooted in increased community/partner partnership which creates a mutually beneficial experience for the participating student and the community/partner. Students and community members are both simultaneously teachers and learners and everyone changes in the process. In addition, students from multidiscipline can also collaborate by addressing real-life problems over an academic semester, while working with host country/partner/community. They then travel to deliver the project and receive academic credit for the whole learning experience.

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Conversation: Modes and Means of Civic Engagement as High Impact Practice

Samantha Blevins, Frank Napolitano, Michele Ren, Melinda Wagner, & Erin Webster-Garrett, *Radford University*

Abstract: In recent years, academics like Andrew Delbanco and organizations such as AAC&U have called for a restoration of the centrality of civic learning to the mission of public colleges and universities. As members of a university community that is currently championing a "scholar-citizen initiative," facilitators have designed activities and assignments that encourage students to engage with both on and off-campus communities. Facilitators will publish some of these examples on the conference web page. The session itself will address applications of civic engagement and pedagogy in traditional and nontraditional ways.

Literature Review

"To avoid a constant crisis mode, we'd do well to be as intentional as we can in our political engagement, asking what we want to accomplish at any given point. That doesn't mean getting caught in some impossible perfect standard, but rather thinking through our opportunities, challenges, and approaches, whatever the situation" (Loeb, 2010, p. 290).

Radford University (RU) has identified Scholar-Citizen: Create. Connect. Contribute. as the topic of our Quality Enhancement Plan (QEP). RU Scholar-Citizenship is defined as active and scholarly participation in the complex and multicultural world by connecting and applying academic skills and disciplinary knowledge to the challenges facing our local, national, and global communities. The focus of the Scholar-Citizen initiative is to promote a teaching and learning culture that fosters our sense of how we can live our lives in ways that best contribute to the world around us.

We recognize that RU is poised to answer the American Association of Colleges and Universities' (AAC&U) call to action to make civic learning a key goal across higher education (Steinberg and Norris, 2011). Service to the community forms a core value of RU at all institutional levels and is reflected in both the University's mission statement, as well as in the mission statements of the seven colleges that comprise our community. We also recognize our responsibility as an institution of higher education to "enable students to acquire the abilities and understanding they will need for the 21st century" and "that will turn out the kinds of resourceful, engaged workers and citizens that America now requires" (Edgerton, 2001, p. 23). Our QEP is aspirational and focuses on a holistic view of student learning wherein student identity, curricular experiences, and co-curricular experiences are addressed as integrated dimensions of an RU Scholar-Citizen.

Goals and Objectives

Session participants will emerge from the conversation with:

- A clearer picture of what civic engagement looks like in practice at both their university as well as others.
- A variety of ways of defining, designing, and implementing civic engagement across disciplines, settings, and institutions.
- Knowledge that they belong to a supportive network of educators and practitioners.

Description of Topic to be Discussed

Conversation during this session will be geared toward the successful implementation of civic engagement with courses and programs, including:

- Best practices for assuring faculty confidence and support, including: resources, professional development opportunities, rewards/incentives, and leadership.
- New ideas of how to engage students in civic engagement, including examples of course and project activities.
- Strategies for building sustainable partnerships among faculty, staff, and students.

Facilitation Techniques

The session will open with the facilitators leading participants in a "quick-write" and posting the prompt for reference as participants enter the session. The quick-write will ask about the participants' goals for the session, questions and insights about experience(s) of civic engagement pedagogy, and a discussion of institutional challenges and resources needed for successful implementation. Panelists will then briefly introduce themselves, describe their involvement with civic engagement projects, and then utilize a "go around" technique where the facilitators would gather a sense of the participants' varying levels of exposure to civic engagement pedagogies, the institutions represented, and their goals for the session. A summary of key ideas from the conversation will be captured throughout the session, and participants will be encouraged to share learning activities, as they are developed, with the facilitators, who will upload the materials to the session page at a later date.

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Conversation: Designing Classroom Learning Through a Situative Approach

Marcia A. Docherty, Canadian National Institute of Health & Fielding Graduate University

Abstract: The value of higher education can be measured in a number of ways. Currently, the desire of our students to participate in meaningful and lucrative employment after graduation has currency. A situated approach has been used both explicitly and implicitly in many professional and technical programs to teach procedural and psychomotor skills. Teaching cognitive processes is more challenging because, unlike technical skills, these processes cannot be observed. In this session, we will explore through a community conversation, how we can change the traditional adult learning environment in order to bridge the cognitive processes of higher education with those found in the workplace using a situated approach.

Literature Review

Situated cognition involves three central theses: (1) learning occurs not only in the brain but also in the body, (2) learning incorporates the socio-cultural context, and (3) the boundaries of learning extend beyond the individual (Robbins & Aydede, 2009). This holistic approach acknowledges that human cognition involves a number of complex systems that include the brain, the body, the interpersonal, the physical space, and so on that are situated in time and space (Clancey, 2009; Gallagher, 2009). Learning is therefore not located within the individual mind but is located within unique and complex participation frameworks. Through this perspective, Lave and Wenger (1991) rethink higher education to suggest that we, as educators, are teaching our students "to participate fully in the socio-culture of the learning environment and not necessarily the community with which they wish to obtain mastery" (p. 41). The epistemologies of scholarship and practice reside along a value chain, with practice residing at the bottom, or end, of the value chain (Wasserman & Kram, 2009). Teaching through the situated approach could bridge the gaps between higher education and practice.

Goals and Objectives

Participants in this session will start a conversation on how higher education and the workplace can be bridged using situated cognition. This session's focus will not be on whether situated cognition should be used but how it could be used. Schön (1983) argues that curriculum should evolve towards themes that actually lead to real, measured learning and this evolution can only happen if the assumptions, techniques, values, and purposes are surfaced. We will reflect on our biases when designing curriculum and teaching strategies in the context of situativity and learning. We will build on the group's reflections and expertise to explore methodologies that could be incorporated into our educational practice that supports legitimate peripheral participation. Finally, we will locate the situated approach within our educational and organizational context in order to identify opportunities and obstacles.

Description of Topic to be Discussed

As an educator in a technology-based program, I am comfortable with the situated perspective as it pertains to the acquisition of entry-level skills. I am able to articulate theoretically how our curriculum bridges higher education and practice. I am not able to reconcile why the classroom-based lecture continues to be the predominate method of instruction alongside labs and work-based placements. As I study the situated approach, I wonder whether cognitive development within the classroom can be redesigned to better align with the cognitive structures used in the workplace while maintaining a rigorous, higher educational approach. Could then the classroom and labs replace the need for work-based placements to achieve workplace relevant skills? Could this approach help remediate those students who are able to master the required cognitive skills but are unable to apply them into their practice (and vice versa)? How do we create legitimate peripheral participation in community of practice when we are unclear as to what that community of practice will be?

In this session, I hope to engage in a thoughtful dialogue on what we are and are not teaching our students. I want to bring together those educators who want to or are already implementing situated approaches into their classrooms, whether intentionally or not, in order to share their experiences and expertise.

Facilitation Techniques

The session will begin with a story by me about a learning experience that was situated. One or 2 participants will then be asked to share their own situated learning experience. We will identify the systems outside of the mind that resulted in learning. Pair or small groups will then be organized around the discussion points of:

1. What is/are the communities of practice that your students wish to gain mastery? Are their goals different from yours/your institution?
2. What interventions and methods can/do you employ to design a learning environment that prepares students for the community?

Finally, during the last 15 minutes, the large group will be engaged to discuss the ideas, opportunities, and obstacles of using a situated perspective in higher education. An annotated bibliography on the situated approach will be provided to participants.

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Thursday

February 6, 2014

Session 11

4:10-5:00 PM

http://www.cider.vt.edu/conference/

Simulation As An Effective Tool For Gender Education in Construction

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Abstract: This paper briefly reports on the results of a project-based learning tool in construction education at the Durham School of Architectural Engineering and Construction at the University of Nebraska. The results point to some interesting findings regarding different perceptions of learning gains between male and female participants. This module, called Virtual Interactive Construction Education (VICE)-Bridge, is the first and simplest one among six proposed educational modules that aims to offer an alternate model in construction education using simulation and serious games concept. The objective of VICE is to deliver the traditional subject-based topics in a project-based curriculum using cyberinfrastructure. The quantitative and qualitative methods are used in this research study to measure the perception of construction knowledge gained. A retrospective pre and post survey of six main areas of construction knowledge was used in the first pilot test with 40 high school students with no prior experience in construction. The results show there is a significant difference between the perception of participants in pre- and post-test for all of six construction areas. Moreover, the difference between pre and post scores for female participants is higher than those of their male counterparts. The research results indicate that this simulation is an effective tool for construction education and all participants feel their construction knowledge improved as a result of the intervention.

Literature Review

Gender issues in engineering education have been controversial issue in academia over the last few decades. Ohland, et. al. (2011) believes that unfavorable social comparisons to prominent people such as professors, professional, and talented colleagues chase women out of engineering programs. Other research, Amelink and Meszaros (2009), shows that the amount of time required for engineering coursework, competition in engineering courses and grades are discouraging factors regardingthe educational experience based on students' opinion. It takes two years to make a connection between the content students learn in classes and the real world. One way to overcome the obstacles in engineering education is using simulation and serious games. Based on deFreitas (2006) definition, the main goal of serious game is education. Although serious games have a high potential to be utilized for education, Harz (2009) believes that the number of available effective games is limited. Simulations in some areas, like the medical field, have been widely used and have shown significant advantages (Kneebone, 2003; Issenberg & Scalese, 2008). AbouRizk (2010) believes that special purpose simulations, rather than general purpose tools, should be considered, designed and utilized in construction management.

Methodology

VICE-Bridge measures the effectiveness of research central hypothesis which is: *VICE Bridge, a virtual project-based learning tool, provides an effective learning environment for undergraduate construction education,* by qualitative and quantitative methods. VICE-Bridge is a serious game including animation, real videos, texts, educational modules and audio instructions (Goedert, Rokooei & Pawloski, 2012). It puts the players in a virtual construction environment and directs them from the beginning of a bridge construction project to the end. It guides the participants through a number of construction management using multimedia tools. Each decision the players make regarding resource selection has an immediate effect on project cost and duration, the criteria of project success. The performance of the participant responding to educational models is another type of data collected during play for each player. The data is then retrieved and converted to analyzable information that is associated with their demographic profile. After the completion of game, VICE directs the players to a retrospective pre- and post-survey measuring the players' perception of knowledge gained. In addition the participants indicate their level of engagement. The construction content knowledge is defined in six major areas; construction methods, equipment, estimating, planning, cost analysis and safety. Forty high school students participated in a pilot test and provided their retrospective pre- and post-perception of knowledge gained for each of the six areas on a five point Likert scale. The data was analyzed using a t-tests to determine if there was a statistical difference between male and female participants.

Results

The results of the pilot test show that VICE Bridge is an effective construction education simulation for both male and female participants without previous experience in construction. Table 1 shows the difference between 22 male and 18 female

students in each of the six construction knowledge areas. The results indicate that there is a statistically significant difference between the retrospective pre and post perception of construction knowledge gained in all six areas for male and female high school students.

Gender	Area	Methods		Equipment		Estimating		Planning		Cost Analysis		Safety	
		Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre
Female	Mean (μ)	2.94	1.41	2.65	1.12	3.47	1.94	3.06	1.94	3.00	2.00	2.65	1.88
	Stand. Dev. (σ)	0.75	0.62	0.79	0.33	0.87	0.75	0.97	0.97	0.94	1.23	1.16	1.11
	t-test ($p<0.05$)	Different		Different		Different		Different		Different		Different	
Male	Mean (μ)	3.09	2.09	2.83	1.65	3.30	2.35	3.00	2.22	2.83	2.04	2.13	1.78
	Stand. Dev. (σ)	0.79	0.73	1.03	0.71	1.16	0.65	0.80	0.85	0.94	0.77	1.10	0.95
	t-test ($p<0.05$)	Different		Different		Different		Different		Different		Different	

Table 1: Results Retrospection Pre/Post Survey Question for Female & Male Participants

Table 2 shows the percentage increase of the retrospective pre and post responses for male and female participants. This perception of change is higher in all six areas for the female participants than indicated by their male counterparts.

	Area	Methods	Equipment	Estimating	Planning	Cost	Safety
Increase from Pre to Post	Female	108.51	136.61	78.87	65.96	57.73	40.96
	Male	64.29	102.7	60.37	40.09	43.5	27.59
Female / Male		1.69	1.33	1.31	1.65	1.33	1.49

Table 2: Percentage Increase of Pre/Post Survey Question for Female and Male Participants

Discussion

The results of this investigation show perceived construction content knowledge gain as a result of the VICE Bridge intervention. In addition, it showed that the female participants felt they gained much more knowledge than their male counterparts. The positive results of this investigation indicate the other VICE modules should be created to provide a new comprehensive simulation for construction education. Although more research is needed, this investigation indicates that females felt they gain more construction knowledge as a result of this simulation indicating that this could be a more successful alternate for female students in construction education.

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Understanding the Role of Childhood Poverty in Doctoral Motivation and Persistence

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Abstract: A systematic grounded theory study was conducted to explain how individuals (N = 12) from backgrounds of poverty persist through to doctoral candidacy. Findings extended the theoretical foundations of self-determination theory (SDT; Deci & Ryan, 2008), Tinto's (1993) integration model of graduate persistence, and the framework of resilience (Clauss-Ehlers, 2008) by explaining how significant losses in childhood are transformed into resilience mechanisms and subsequently influence doctoral motivation and persistence. This study generated two new constructs related to doctoral persistence: *altruistic motivation* and *familial integration*. Based on this research, implications are discussed for universities desiring to support the persistence of candidates who come from backgrounds of poverty.

Literature Review

While graduate education has traditionally been accessed by students from middle and upper-classes, students from all socio-economic backgrounds are increasingly accessing higher education (Allen & Seaman, 2010). Research investigating educational persistence in individuals from backgrounds of poverty has proliferated (see Butner et al., 2001; Evans & Schamberg, 2009); however, the focus has primarily been on supporting students enrolled in community colleges or undergraduate studies. Little research addresses how childhood poverty influences doctoral persistence, a construct that is important to examine given alarmingly high attrition rates (i.e., 40% - 60%) in doctoral programs (Council of Graduate Schools Ph.D. Completion Project, 2008). This inquiry explaining how individuals from backgrounds of poverty persist through to successful admittance to doctoral candidacy addresses the complex relationships between childhood poverty, academic motivation, persistence, and resilience. While SDT (Deci & Ryan, 2008), Tinto's (1993) integration model of graduate persistence, and the framework of resilience (Clauss-Ehlers, 2008) all address components related to doctoral persistence, each theory falls short in explaining doctoral persistence. SDT is useful for understanding doctoral student motivation for beginning doctoral studies. Tinto's (1993) integration theory for explaining student persistence has been well investigated with regard to doctoral persistence (see Spaulding & Szapkiw, 2012); however, the extension of his theory to address economic integration (Wao & Onwuegbuzie, 2011) is limited. With high attrition rates and the doctoral process characterized as negative, stressful, competitive, and unsupportive (Lovitts, 2001), individuals who persist clearly demonstrate resilience. With resilience characterized as the interaction between the individual and resources and stressors in the larger sociocultural context (see Clauss-Ehlers, 2008), the purpose of this study was to examine the sociocultural context of childhood poverty, with a specific focus on understanding the complex relationship between poverty and the self-determination to begin doctoral studies, and subsequently, the resilience mechanisms associated with doctoral persistence.

Methodology

A qualitative systematic grounded theory design (Strauss & Corbin, 1990) was employed to understand how individuals from backgrounds of poverty persist to doctoral candidacy. The sample was drawn from a hybrid, nationally accredited Doctor of Education (Ed.D.) program at a private, liberal arts university in the eastern United States. Theoretical sampling was used to select individuals who met the following criteria: (a) successfully completed course work and passed the comprehensive exam, (b) current enrollment in dissertation coursework, (c) experienced childhood poverty. Childhood poverty was defined multi-dimensionally and included participant assessments (via an online questionnaire) of parental education level, employment status, and parental income indicators related to living accommodations and neighborhood. From a pool of 119 doctoral candidates who completed the questionnaire and were willing to participate, participants were purposefully selected for standardized, open-ended interviews. The interviews were transcribed verbatim and formally analyzed using the systematic grounded theory procedures of open coding, axial coding, and selective coding (Strauss & Corbin, 1990). Using the constant comparative method of analysis accompanied by researcher memoing, participants were added until theoretical saturation was achieved. The final sample consisted of 12 participants (7 female, 5 male; 10 Caucasian, 1 African-American, 1 Hispanic).

Data Analysis and Results

The data sources and analysis procedures described above revealed two salient themes in participant narratives regarding their childhoods: (a) material loss and (b) relational loss. Material loss included loss of furniture, utilities (electricity, water), daily essentials (food, clothing), and home. Participants experienced and internalized negative stigma associated with relying on public assistance in the form of food stamps, free/reduced lunch at school, or "commodities." While material needs and material loss

had significant effects on each participant's developmental, personal, and professional motivations in life, 83% (n = 10) of the participants were deeply and profoundly affected by relational deficits in childhood. Relational losses derived from divorce, parental absence, abandonment, death, and exposure to drug, alcohol, and physical abuse. These losses resulted in significant disruption to their family unit and premature entrance into adulthood. While stressors associated with losses would typically be considered risk factors, they served as resilience mechanisms for the study participants as they used them as catalysts for personal transformation and the conscious discontinuation of modeled patterns from childhood. They also identified coping mechanisms of self-reliance, faith, and seeing education as "the way out" of poverty. When reflecting on their motivations to pursue doctoral studies, both intrinsic and extrinsic factors, consistent with SDT, motivated participants to enter the doctoral program; however, altruism was uncovered as a key motivator. *Altruist motivation* is the desire to do something selfless to advance others' means, opportunities and social, emotional and cognitive well being. Participants entered their doctoral programs with the goal of helping others through their profession, often to help children like themselves discover a "way out" of poverty. In contrast to material and relational *loss* surfacing as themes in childhood, material and relational *provision* were central themes in participant discourses on motivation to earn and persist in a doctorate. Participants were motivated to earn the degree to provide financially for their families, but they were simultaneously focused on prioritizing familial needs (i.e., discontinuing patterns of absence and neglect) throughout the process, making sacrifices (sleep, a social life) to lessen the effect on their children, even to the point of postponing doctoral studies until children were older and their parental responsibilities fewer. While the importance of a supportive family has been identified as central to doctoral persistence, this idea of maintaining familial relationships and relatedness and insuring "fit" between the degree and family values and the altruistic motive to see offspring overcome the generational effect of poverty is unique to this population and termed *familial integration*.

Discussion/Conclusion

Understanding the unique phenomena of familial integration and altruistic motivation assists universities in identifying marketing strategies and support services for the population under study. As serving others, especially those in poverty, is a key motivator for pursuing a doctoral degree, marketing initiatives may focus upon how earning the degree can be used to serve others. As familial integration is central to persistence, providing services that include the family from the beginning of the process to the end is important, including familial orientations to outline realistic expectation about the doctoral process, sponsoring family events through the program, and offering flexible class options that enable the student to participate in family events.

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Supporting Disciplinary Literacy: Reading Strategies for College Students

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Abstract: The literacy crisis in K-12 schools is ubiquitous in educational research and government reports. Too many students leave high school lacking literacy skills needed for college or career readiness and success. Students who do go on to college often need literacy support and many enroll in remedial courses; however, students who do seek remedial support are less likely to eventually earn their degree or certificate. College classrooms have become increasingly diverse environments, and students' academic success depends on their understanding of content; however, reading assignments can represent academic barriers for students who might otherwise be engaged and motivated to do well. Instructors can incorporate reading strategies into their instruction to meet the needs of all students. This session will provide instructors with pre-reading strategies to motivate readers and elicit prior knowledge, during-reading strategies to support readers with organizational strategies to strengthen connections and build on conceptual knowledge, and post-reading strategies to allow for reflection and meaning making. Participants will engage in hands-on practice and collaborate with colleagues to discuss meaningful ways for incorporating these strategies into their courses.

Literature Review

Defining literacy is a tricky task, and reading instruction is often a misunderstood practice. With the focus on basic reading instruction in the primary grades, educators are often misled to believe that students in secondary and post-secondary settings have "already learned to read." However, students learn many basic skills in elementary school, but learning addition, subtraction, multiplication, and division does not a mathematician make. Rather, those basic math skills are needed to understand more complicated algebraic concepts in the discipline as students advance through a conceptually-evolving and building sequence of math courses. This analogy holds true for other disciplines, such as science, social studies – and *reading.* Basic decoding skills prepare students with an understanding of how words and language work but *reading* is an evolving skill (Shanahan & Shanahan, 2008), requiring practice and strategic development as conceptual knowledge, text complexity, vocabulary, and the high stakes attached to comprehension increase (Alvermann et al., 2013).

Goals and Objectives

This session will provide participants with effective reading strategies designed to meet the needs of diverse learners, empower and engage students, and equip instructors with skills needed to teach for individual differences. Presenters will provide demonstrations and practice opportunities for participants to learn instructional routines designed to develop content literacy (Fisher et al., 2011) in their college courses. These routines include pre-reading strategies to motivate readers and elicit prior knowledge, during-reading strategies to support readers with organizational strategies to strengthen connections and build on conceptual knowledge, and post-reading strategies to allow for reflection and meaning making. Participants will engage in hands-on practice and collaborate with colleagues to discuss meaningful ways for incorporating these strategies into their courses.

Discussion

While weak adolescent literacy skills and assessment data have driven much of the discourse on disciplinary literacy, these needed skills continue when students pursue postsecondary degrees. Colleges and universities have become increasingly diverse as the global economy necessitates a more diversified workforce with postsecondary training. College instructors can incorporate reading strategies into their instruction to meet the needs of all students in their courses. Assigning reading or expecting students to be able to comprehend texts simply because they are in college no longer serves as a fitting or equitable rationale to meet the needs of all students. Many students lack adequate academic preparation, social capital, cognitive endurance, attention, or ongoing support to meet the reading demands of undergraduate or graduate coursework. Moreover, reading tasks are often "assigned" and completed in a vacuum outside of class, becoming invisible to instructors and silent for students. Yet, teaching and learning – or, more typically, assessments – are dependent on students' understanding of that material.

The notion of "every teacher a teacher of reading" or even the "writing across the curriculum" movement disgruntled many content area teachers leading educators to ask: Whose job is it to teach reading and writing? If all literacy tasks were generalizable then perhaps housing this instruction in English classrooms at all levels of education would make sense; however, disciplinary literacy requires specialized skills. For example, a mathematician reads and interprets symbols and makes meaning of texts in unique ways and differently from that of a chemist or linguist (Shanahan & Shanahan, 2008). Disciplinary experts and instructors must teach the specific literacy skills (conceptual knowledge, vocabulary, etc.) needed within a discipline (Alvermann et al., 2013). This session will provide specific strategies to help support instructors as they teach disciplinary literacy.

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Leadership for Sustainability: Pedagogical Practices that Empower Learners to Become Leaders

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Abstract: Higher education is recognizing the need to prepare leaders who can take action to address complex and pressing sustainability challenges. Increasingly, this need is being addressed through the addition of sustainability programs and courses. However, academic courses often focus on sustainability content or issues and don't necessarily foster the practices, ways of being, and skills needed to be an effective sustainability leader. According to a recent action research study of sustainability leadership development at Portland State University, sustainability leadership identity and skills can be developed through a combination of reflective practice, community building, and experiential learning. This session will provide opportunities to interactively learn about sustainability leadership and to participate in activities that can be used in classes to promote sustainability leadership development.

Literature review

Sustainability can be understood as the process of making change toward eliminating the exploitation of people and earth, finding creative solutions to complex ecological and social issues, and creating equitable distribution of power and resources (Orr, 2011; Hawken, 2007; Sterling, 2002; Santone, 2004). Sustainability education aims to help learners to understand their interconnectedness with all life, to become creative problem solvers and active citizens, to engage in the tensions created by the interconnectedness of systems, and to seek solutions to the problems in their own communities. (Nolet, 2009; Weissman, 2012). Leadership is a vital ingredient for sustainability work (Parkin, 2010). Since higher education clearly plays a role in leadership development (Eich, 2008), it must also play a larger role in developing sustainability leaders. Sustainability leadership differs from traditional leadership, which typically focuses on the traits, behaviors and situations of individual leaders. Sustainability leadership is grounded in a postindustrial paradigm rooted in complexity science and reflects a world that is constantly changing, uncertain and unpredictable, nonlinear, emergent, and exists as interconnected webs of relationships (Capra, 2002; Wheatley, 2006; Ferdig, 2007). Sustainability leadership models the characteristics of living systems (Barlow & Stone, 2011) including resiliency, adaptivity, awareness, creativity, and relationships (Wheatley, 2006). Sustainability leadership is a collaborative and emergent process that transforms the power dynamics of traditional leadership to leading with rather than over others, to make sustainable changes in organizations and communities (Ferdig, 2007). This relational model of leadership calls for an orientation toward process, empowerment and inclusiveness (Komives et al, 1998). Sustainability pedagogy is thus well suited to support sustainability leadership development in higher education because it is a transformative, participatory, experiential, critically questioning, thematic, and place-based pedagogy (Sipos et al, 2008; Cotton and Winter, 2010; Burns, 2011).

Goals and objectives

In this session, participants will:

- Collaboratively construct an understanding of sustainability leadership and how it may connect to a variety of disciplines and courses
- Participate in activities that promote sustainability leadership development in the classroom
- Discuss and experience the importance of reflection, community-building and experiential learning to sustainability leadership development

Description of the practice to be exemplified

This session will be fully interactive. The session will begin with a participatory activity that introduces the topic of sustainability leadership. This activity will lead into a co-constructive discussion about the meaning of sustainability leadership and examples. The group will participate in a short interactive circle activity and a reflective writing activity, then will discuss how experiential learning can be effectively included in courses for sustainability leadership development. I will share how I have used each of the various activities to develop sustainability leadership and connect this to the results of my action research study of sustainability leadership development.

Discussion

Sustainability leadership development is an ongoing process, but one that can be supported in courses through the inclusion of intentional pedagogical design and strategies such as community building activities, reflective practice and experiential learning. These activities support learners in gaining the relational skills, knowledge of self, and the experience of practicing leadership needed to be effective sustainability leaders who can collaboratively and creatively make change.

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Online Developmental Education: Strategies to Maximize Student Success

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Abstract: Much research highlights the lower completion rates of students enrolled in online developmental education courses. However, I have had great success with my online developmental writing students by using traditional student-centered practices. Many of my online students are in online classes because that is the only way they are able to take classes; some are working during traditional class times, some are distant from campus locations, some have disabilities or other considerations that make online a better solution for them, others simply choose online because of the flexibility it offers students. No matter the reason they enrolled in online courses, these students deserve the best opportunity to improve their skills and achieve their college and career goals. The technology I use re-creates what has been proven to work in the past - including one-on-one conferences and peer review within a close-knit online community that encourages each student's success. Today's technology allows people to connect with others within the classroom environment making physical location irrelevant.

Literature Review

This presentation will discuss why online developmental education is typically viewed as ineffective while exploring the flip side; best practices for online education and developmental education that work together to create an effective online community that helps its individuals achieve their goals. Online education is no longer "distance education," and many students find they have more interactions with professors and peers in the online classroom than they did in the face to face classroom. When faculty design a highly-interactive course with clear expectations for participation within which "Students articulate their own needs and desires for behavior in a class, as well as rationales for those expectations, they take ownership and feel responsible for sticking to and even helping uphold the rules" (Costello, Wachtel, & Wachtel, 2010). Furthermore, having students work together on projects (whether officially paired or grouped or discussing and reviewing each other's ideas and writing to hone them in a discussion board, students are building upon their learning in a meaningful way while abolishing the idea that students have to work individually and compete with one another; "instead it emphasizes the value of cooperation and inclusiveness," both of which are highly valued in the workforce (Osterholt & Barratt, 2012).

Most studies demonstrate higher withdrawal rates and lower persistence rates in online courses, but not the causes. New research, however, is being compiled to show, "the typical student has some difficulty adapting to online courses, but that some students adapt relatively well while others adapt very poorly. To improve student performance in online courses, colleges could take at least four distinct approaches: screening, scaffolding, early warning, and wholesale improvement" (Jaggars, 2011). Course organization, support, and planning are often underestimated by both students and faculty. As Warnock says of his Weekly Plan: "this simple, yet elegant solution to course organization allows me to provide my students each week with a complete set of the activities they must accomplish, broken down into specific (and thus easily completed) tasks" (2009). In addition to the weekly schedule, I have implemented checklists which have further increased student completion rates on activities and assignments.

Goals and Objectives

Upon completion of the session, participants will be able to:

1. Identify best practices in student-centered developmental education
2. Evaluate technology for its return on investment to the institution/class and its students
3. Develop strategies to use technology to achieve best practices in developmental education
4. Apply knowledge within their own blended or online course to increase student interaction, retention, and success

Description of Practice

After summarizing what research, studies, and theory have shown to be most effective, many of which involve teaching how to be successful online students, I will present technology I use and how it helps online faculty and developmental students achieve success by building community and facilitating student growth and knowledge. Creating a community that supports each person's success takes planning, but it allows developmental students gain the support and value from trusted faculty and classmates to succeed. Students learn in different ways, and online students are no different. Providing content and feedback

in a variety of ways (text, audio, video, conferences, and interactive exercises) increases student comprehension, application, and attitude. Additionally, developmental students often have gaps in their learning or lack confidence in their success; our job as online educators is to help them fill those gaps and to coach them into well-prepared, self-confident individuals.

Discussion

Much of what is done in the face to face classroom can be re-created in an online environment, but should it be? We will discuss what works better face to face, what works better online, and the reasons for this. Relationships and connections need to be nurtured in the online classroom because initially people tend to keep their distance instead of willingly connect; however, those connections create meaningful interaction that boosts the interest in the subject and the students' performance in the class. In a developmental classroom, teaching students how to learn and how to use the support tools available to them are critical to student success. Integrating this information within the course from the first exposure provides students with the support they need to succeed.

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In Search of a New Formula: Why Instructor Expertise Plus Engaging Instruction Does NOT Always Equal Student Learning

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Jason Fair, Farristown Middle School

Abstract: While higher education faculty are increasingly engaged in scholarship and instructional practices that prioritize pedagogy, many still have concerns about the lack of student success. This is due, in part, to a continued emphasis on the *Instruction* paradigm as opposed to the *Learning* paradigm. Recently in Kentucky, the *Unbridled Learning* bill mandated that institutions of higher education work closely with K-12 schools to better prepare their (and our!) students for college and career readiness. Part of this partnership revealed a lack of awareness in practices related to alignment, assessment, and critical thinking at the university. This session will highlight those three components of a *learning* centered classroom.

Literature Review

As early as 1995, Barr and Tagg indicated a need for a paradigm shift from instruction-centered to student-centered classrooms in higher education:

> A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning. This shift changes everything. It is both needed and wanted (p. 13, as quoted by Fear et al., 2003, p. 152).

Nevertheless, faculty in higher education struggle with the manifestation of this idea. How, exactly, does a student-centered classroom work? What practices are in place in such a classroom? Fear et. al (2003) recognize that the shift to the *Learning Paradigm* is a process, one that occurs over time as faculty reflect on the scholarship of learning and on the value of students' deep thinking. This process is complex, individual, and guided by the context of a faculty member's discipline and learning outcomes (Conrad, Johnston, & Gupta, 2007).

While higher education instructors grapple with the applications of such lofty ideas, teachers in K-12 education have had extensive training in this pedagogical perspective. In the areas of alignment, assessment, and critical thinking, specifically, K-12 teachers could share some applicable insights. Curriculum alignment, defined as an "overt alignment between the course content, learning activities, teaching strategies and assessment of a subject which are in place to achieve the intended learning outcomes" (Harvey & Baumann, 2012), allows stakeholders to review content, assessment, and instruction in such a way as to directly impact and facilitate student success (Roach, Niebling, & Kurz, 2008) and to support deep learning. Assessment, and more specifically, *formative* assessment, has a statistically significant impact on students' learning, the effect size of which is larger than most found with educational interventions (Black & Wiliam, 1998). And though development of critical thinking has received consistent and substantive attention among higher education scholars (Elder & Paul, 2013; Flores, Matkin, Burbach, Quinn, & Harding, 2012; Mulnix, 2012; Paul & Elder, 2006), educators still struggle with how to get their students to engage in critical and creative thinking… where students extend, corroborate, or challenge the course content instead of just restating or summarizing the content.

Students in higher education classrooms may be different from K-12 students in many relevant and dramatic ways; pedagogical practices, however, that have been well established and researched at the K-12 level may have powerful impact on higher education classrooms. Lessons learned from a symbiotic relationship with higher education and K-12 partners, therefore, facilitate the transition from higher education *Instruction* classrooms to *Learning* classrooms.

Objectives

Upon completion of the session, participants will be able to:

1. Identify components of classroom practice that impact student learning.
2. Differentiate between a *Learning Paradigm* and an *Instruction Paradigm.*

3. Discuss alignment of student learning outcomes, assessment, and instruction.
4. Review assessment practices that demonstrate student learning.
5. Distinguish types of critical thinking, including higher order thinking, metacognition, and strategic thinking.
6. Apply interactive discussion to explore a shifting focus from teacher to learner.

Description of practice to be modeled

After an initial whole group brainstorming session on components that influence student success, the presenters will distinguish between the two paradigms: the *instruction* paradigm and the *learning* paradigm. The presenters will present the research on alignment, assessment, and critical thinking, drawing on the research base that is prevalent in K-12 education. For the last half of the session, the presenters will utilize classroom scenarios to facilitate progressive discussions (first with partner, then small group, then whole group) related to classroom practices with alignment, assessment, and critical thinking.

Discussion

Whole group brainstorming will initially engage the attendees in establishing a rationale for sharing the subsequent research. For the classroom scenario segment, participant pairs will be given 3-5 scenarios (depending upon time) and asked to evaluate the scenario in regard to alignment, assessment, and critical thinking. At least one of those components will be incomplete or ineffective. Once peers discuss the scenario, they will partner with another peer set to compare notes. A full group discussion of the components – as applied to these scenarios – will follow, with recommendations about how to modify or strengthen the classroom instruction in each scenario.

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Supporting Student Learning via Lecture Capture Technology

Jovan F. Groen, Centre for University Teaching, University of Ottawa

Abstract: As lecture capture technology becomes more mainstream in University classrooms, research regarding its use is only beginning to emerge. This session examines the recent results of a study at a large Canadian University regarding the integration and use of this technology across its campus, how its use is correlated with academic performance and student satisfaction, how instructors perceive the impact of this technology and lastly, how its integration can be enhanced. Using the study results as a catalyst, participants in this session will explore the following questions via guided discussion and small group brainstorming activities: What is the pedagogical value of lecture capture technology? In what ways can it effectively support student learning? What innovative practices are currently being developed and implemented in higher education?

Literature Review

While the recording of lectures for the purposes of student review, accommodation and distance education has existed for well over a decade, institutions in higher education have only begun to invest in comprehensive lecture capture systems and make them available across their campuses. As highlighted by Gosper et al. (2008), colleges and universities are making significant investments in the development of infrastructures that provide flexible educational options to support the needs of a diversity of learners. However, the focus of these investments has rested primarily on the installation and operational considerations of the technology, not on the pedagogical implications and support necessary for instructors and students to effectively integrate this technology into their teaching and learning.

Description

As an extension of a few emerging studies (Brent L. et al. 2011; Gosper M. et al. 2008; Owston, R., Vajoczki, D., & Wideman, H. 2011; Vajoczki, S. et al. 2011), the University of Ottawa is completing (Fall 2013) an examination of how lecture capture technology is being used across its campus. Results respond to three main research questions:

1- To what extent might the integration of lecture capture technology, using traditional and flipped classroom formats, affect student study habits, achievement and satisfaction?
2- How do course instructors perceive the impact of the integration of this technology?
3- In what ways do deep and surface learners use lecture capture?

In the context of this study data was collected in two phases. The first consisted of responses (n=1067) to an online questionnaire relating to student reported use of lecture capture, their satisfaction with the technology and statements regarding their study habits. The second phase consisted of student focus groups (n=20) and instructor interviews (n=15) to further explore the educational implications of the use of lecture capture.

Session Outcomes

Largely structured as a forum for discussion, this session will be a balance between the presentation of results from a recently completed study and small group brainstorming and reporting. By the end of this session participants will be able to:

- Describe the principal components of lecture capture technology;
- Explain how this technology is currently supporting student learning at a large Canadian University; and
- Evaluate different ways of integrating this technology into post-secondary teaching.

Should participants choose to use, or enhance the use of lecture capture technology in their teaching; a series of resources and guides will be shared.

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Creating Cultural Connections in the Classroom

Michele C. Deramo, *Virginia Tech*

In order to make effective cultural connections that advance learning for all students, it is important to recognize the varieties of ways that people engage with and produce knowledge. This session invites participants to reflect on the culture they bring to the classroom both as individuals and as representatives of the academy. We will examine the cultural norms of the academy that privileges certain modes of learning and communication over others, as well as discover strategies that promote safe and inclusive learning environments for all students.

A Conversation on Integrating Meaningful Reflective Activities Using a Typology Approach

Bradley J. Burbaugh, Rachael E. Kennedy, & D. Adam Cletzer, *Virginia Tech*

Abstract: Reflection, as a pedagogical practice, has received widespread attention in educational literature (Dewey, 1933; Habermas, 1971; Kolb, 1994; Schön, 1983; Vaiyavutjamai et al., 2012). Yet there remains confusion surrounding the implementation of reflective activities that are truly transformative for learners (Abou Baker El-Dib, 2007). By presenting a three-tiered typology (descriptive, comparative and critical reflection) for discussion, presenters will demystify strategies that can create an environment conducive to reflective learning (Jay & Johnson, 2002). Presenters will further ground the theory in practice by sharing successes and challenges from when they used these concepts in application. The session will focus on engaging participants in small group conversation, allowing sharing of their current use of reflective activities, as well as aspirations of greater future use. Based on this input, and within the context of the three-part typology, this community of scholars will explore the benefits and limitations of each level of reflection. Finally, a compendium of quality reflective practices will be compiled based on the group's conversation and later distributed to participants.

Literature Review

Despite the multiple theoretical explanations and approaches to reflection as pedagogical practice, there is little doubt that reflection offers benefits to learners (Vaiyavutjamai et al., 2012). Stafford (2012) explains that "reflection enables learners to use intentional, deliberate and assimilative inquiry to navigate changes in worldview that are more transformative than learning facts and figures" (p. 1). Additionally, reflection can contribute to new ways of seeing and understanding experiences and constructing knowledge (Mezirow, 1990). There are multiple approaches to understanding the role and process of reflection in educational settings (Dewey, 1933; Habermas, 1971; Schön, 1983; Kolb, 1994; Vaiyavutjamai, et al., 2012). Moon (2001) suggests that these "differences in approach are accounted for largely by different focuses" (p. 4). One structural approach to reflection pedagogy, defined by Jay and Johnson (2002), is a typology with three categories: descriptive, comparative, and critical. Descriptive reflection involves constructing the issue for reflection; comparative reflection involves the utilization of multiple perspectives in which to view the issue; and critical reflection involves the result obtained after carefully considering the issue from multiple perspectives (Jay & Johnson, 2002). The outcome associated with high level reflection are "individuals who are more inclusive in their perceptions of their world, able to differentiate increasingly its various aspects, open to other points of view, and able to integrate differing dimensions of their experiences into meaningful and holistic relationships" (Dirkx, 1998, p. 4). It is important for educators to be involved in discourse regarding the praxis of reflection in order to better utilize critical reflective practices in the classroom and provide transformative opportunities for student reflection (Jay & Johnson, 2002; Loughran, 2002).

Goals and Objectives

Goal: As a result of this session, participants will demystify different categories of reflective learning and be able to confidently apply reflection as a transformative pedagogy.

Objectives:

1. Explicate the praxis of student and instructor reflection as a pedagogical practice.
2. Discuss and delineate the three categories of reflection.
3. Articulate a variety of reflective activities useful for teaching and learning.

Description of Topic to be Discussed

Reflection, as a pedagogical practice, has received widespread attention in educational literature (Dewey, 1933; Habermas, 1971; Kolb, 1994; Schön, 1983; Vaiyavutjamai et al., 2012). Despite its widespread use, there is still much confusion regarding the effective utilization of reflective activities in learning environments (Jay & Johnson, 2002; Loughran, 2002). The goal of this session is to demystify reflective practices by utilizing the descriptive, comparative, and critical reflection categories, as elucidated in Jay and Johnson's (2002) framework, in group discussion. The presenters will begin the session by explicating the praxis of reflection as pedagogy and explaining

the framework. Presenters will also ground the theory in practice by showcasing the practical application in their teaching strategy. Participants will be engaged in active small group conversation, allowing them to share their current practices and aspirations of future use. Based on this input, and within the context of the three-part typology, the community of scholars will explore the benefits and limitations of each level of reflection. Finally, a compendium of quality reflective practices will be compiled based on the group's conversation and later distributed to participants.

Facilitation Techniques

After presenters frame the topic, group discussion will follow in three phases. First, participants will self-select into small groups to engage in conversation regarding their praxis. During this phase, participants will move to a section of the room that represents the reflection style they most often use or which they believe would be most applicable to their work. Second, participants will move to a section of the room that represents a style they have not used, or which might be challenging to them. Here, they will view what the previous group left behind (visuals) and engage in discussion. Finally, all participants reconvene and reflect on what was shared; benefits and limitations of each category will be explored. The resulting list of quality reflective activities will be compiled by the presenters and shared via electronic mail.

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Successful Model for Professional Development: A Conversation About Creating and Sustaining an Inclusive Faculty Learning Community

Ann M. Stevens, Sandra Daniel, Stephen Melville, David Popham, Birgit Scharf, Florian Schubot, Richard Seyler Jr., & Zhaomin Yang, *Virginia Tech*
Gili Marbach-Ad & Ann C. Smith, *University of Maryland*

Abstract: Learning communities are one of the more promising and effective ways to provide individuals with professional development opportunities in the area of teaching and learning. They serve as a means to engage faculty that might otherwise be reluctant to participate in pedagogical activities by providing them with a supportive environment to explore and experiment with teaching approaches. The Host Pathogen Interaction Teaching Community at the University of Maryland has a successful working model for developing such a learning community. The process for developing an effective community has now been successfully transposed to the Microbiology Group at Virginia Tech and the steps that were taken will be shared during this session, including challenges faced and solutions found. Work at both institutions focuses on using a concept inventory as an assessment tool to engage faculty in discussions about student learning, especially commonly held student misconceptions that are a barrier to instruction. These efforts afford the opportunity to improve instruction not only in individual courses, but across the curriculum.

Literature Review

There is abundant evidence that the establishment of a teaching learning community is an effective way to promote a cultural change in the manner that permits individuals within the group to reflect about their teaching and ways to improve it (Cox, 2004; Silverthorn et al, 2006; Wenger, 1998). Learning communities are an important factor in promoting professional development in new areas, where individuals may not have received sufficient training during their traditional career path (Austin, 2011). However, there are many challenges to developing and maintaining a successful learning community that is sustainable. The Host Pathogen Interaction (HPI) teaching team at the University of Maryland-College Park has a successful model for a teaching learning community. The group has centered their activities on group assessment of student understanding using a concept inventory that they created and validated themselves (Marbach-Ad et al, 2009; Marbach-Ad et al, 2010). Individuals within the group that have formal pedagogical training facilitated this process. A second teaching learning community has now formed at Virginia Tech due to outreach efforts from the HPI group at Maryland, who was seeking out a peer-learning community to enable cross-institutional analysis of data gathered through their assessment tool.

Goals and Objectives

The overall goal of the session is to provide participants with a basic understanding of the process of creating and managing a teaching learning community. This will be achieved by fostering a group discussion of the challenges that may be faced when undertaking this endeavor and of plausible solutions to those challenges. The take-home message will be that although there are obstacles to the development of a teaching learning community, the benefits derived from using a communal approach to discuss teaching and learning have important value across disciplines.

Description of Topic to be Discussed

During this session, the initial 15-minute presentation will describe the steps that were taken at Virginia Tech to develop a teaching learning community, including the assistance that was provided from the HPI group at Maryland. Two individuals that represent the diversity of the Virginia Tech group, a research-active professor and an instructor, will first discuss the challenges that were faced, including faculty/instructor motivation, identification and training of a leader, acquisition of an appropriate assessment tool, and balancing activities with departmental expectations. Solutions that were found to overcome these obstacles will also be presented. Next, the audience will be led through the process of effectively using an assessment tool to foster group discussion of student learning. The process of data acquisition from a two-tiered concept inventory (e.g., creating of a code book of student learning misconceptions, conversion of qualitative data to quantitative data and applying this knowledge to the design of courses and the curriculum) will be briefly outlined, with sufficient explanation

provided so as to make the activity useful across disciplines (Figure 1). This brief overview will set the stage for the following discussion of the topic by all participants.

7. Can both gram-positive bacteria and gram-negative bacteria use the same mechanism of resistance to an antibiotic that affects protein synthesis?

1. Yes, because they both have similar mechanisms of protein synthesis. **(Correct Answer)**
2. Yes, because they both have similar cell wall structures.
3. No, because most antibiotics are bacterial species specific.
4. No, because gram-positive bacteria are intrinsically more resistant to antibiotics than gram-negative bacteria.
5. I do no know that answer to this question.

Code	Student Count	Misconception
0	43	None; Correct answer
1	17	All antibiotics are species-specific
2	0	Antibiotics don't impact protein synthesis
3	19	Membrane or capsule is different in G+ and G-
4	58	Wall thickness or structure affects entry of antibiotic
5	5	Protein synthesis mechanism is different in G+ and G-
6	11	G+ have PG and G- do not
7	10	Physiology is different in G+ and G-
P	8	Knowledge from previous class (incorrectly applied)
C	199	No clue
G	66	Educated guess – eliminated some or all
NR	49	Student answer is nonresponsive
NS	21	Student answer is nonsensical
M	1	Misunderstood the question
T	1	Terminology of cell wall vs. cell envelope created confusion

Figure 1. Example of a misconception codebook relevant to the topic of antibiotic resistance, detailing student understanding of the topic prior to any formal instruction. Student open-ended responses to a two-tiered concept inventory were used to promote group discussions.

Facilitation Techniques

During the discussion phase of the session, the audience will be asked to share what challenges they face or image that they might face in trying to develop a teaching learning community at their institution. A list of known challenges from the Maryland and Virginia Tech experiences or others found in the literature will be prepared ahead of time to help guide the discussion should their be limited audience participation. Other members of the Virginia Tech teaching learning community will be present at the workshop to serve as a panel to share their experience and provide feedback to the session participants. This will provide multiple perspectives on what motivates different individuals to participate in a teaching learning community. Further, it is likely that some audience members may already be involved in a teaching learning community at their home institution and these individuals will provide additional cross-disciplinary perspective on the process.

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Friday

February 7, 2014

Presentation Sessions

http://www.cider.vt.edu/conference/

Friday

February 7, 2014

Session 12

9:00-9:50 AM

http://www.cider.vt.edu/conference/

Addressing Veterans' Needs through Interprofessional Simulation

Susan Jones, Milena Staykova, George Steer, Chase Poulsen, Patricia Airey, & Sara Nicely, *Jefferson College of Health Sciences*
David Trinkle & Bruce Johnson, *Virginia Tech Carilion School of Medicine*

Abstract: This research study aims to evaluate interprofessional simulation as learning and teaching strategies to prepare students to care for Military and Veteran patients. Of the 23.8 million military veterans only about 25% of veterans receive health care through the U.S. Department of Veterans Affairs (VA). For these reasons, it's imperative for healthcare providers to understand the impact that military service has on veterans' health and their families. Academic institutions are challenged to prepare competent providers addressing the needs of this population. Two colleges and eleven disciplines represented by 280 students and faculty collaborated in an interprofessional (IP) stimulation activity to increase the confidence level of students in caring for veterans by utilizing an Interprofessional Simulation Model. A validated instrument measured the students' perceived confidence levels. Two new questions addressed the perceived students' confidence level in care for the veterans. Pre-survey means (μ *7.16*, *SD* 1.8) were compared to post-survey means (μ 8.53, *SD* 1.5). A 1.37 difference in the value of the means indicated that the confidence level increased after the simulation activity. The *t*-test=0.0007 suggested that there is a statistically significant difference between the pre-and post-survey means; the increased confidence level is due to the intervention (interprofessional activity). A Chonbach's alpha of the new questions was calculated, reliability was established by the value of 0.909. The IP simulation is an andragogical strategy leading to increased students' perceived confidence in caring for veterans. Educators can use simulation to engage students from multiple healthcare disciplines when addressing the needs of the veterans.

Literature Review

In 2011, the White House Joining Forces' initiative was designed to address the needs of the past and present military service members and their families (Harmer & Huffman, 2012). "Of the 23.8 million military veterans living in the United States, approximately 3 million have served in Operation Enduring Freedom or Operation Iraqi Freedom. According to Quinlan et al, 2010, "the injuries and illnesses that affect veterans returning from combat are predictable" (p. 43). However, only 25% of veterans seek care at VA facilities. To address the needs of this population, it is important that non-VA health care providers are prepared to provide quality care for veterans. Quinlan, et al. (2010) strongly advised the physicians to take active role in the treatment of the American military members in short or long-term care facilities. Healthcare providers need to recognize common medical and psychological issues experienced by the returning service members and their families, and provide needed community resources. Providers should screen patients who are returning from combat for depression, PTSD, and suicidal ideation (Quinlan, et al., 2010, p. 43). The education of the healthcare professionals must include objectives addressing the healthcare issues that the returning from combat veterans face. Johnson et al., (2013) emphasized that "The warrior ethos includes a promise never to leave a fallen comrade. In that spirit, every clinician can ensure that no veteran is "left behind" without adequate health care" (p. 39). The military and veterans are valuable members of the society therefore their care requires the attention and commitment of the healthcare force. The Institute of Medicine in the Quality of Health Care in America Report emphasized the need of the healthcare professionals to work in IP teams to improve the quality and safety of patient care. Simulation activities serve as a safe environment for the students to learn and develop competencies necessary for future employment and for quality patient care (Rourke, Schmidt, & Garga, 2010). Students' clinical skills, self-confidence (Harder, 2010), and patient safety have demonstrated significant improvement after simulation activities (Ironside, Jeffries, & Martin, 2009). According to Anthony et al., 2012, "a high-fidelity clinical simulation experience can help prepare nurses to meet the unique health care needs of veterans" (p. 145). Research studies have demonstrated the significance of the IP simulation on competence development (Harder, 2010; Ironside et al., 2009). The purpose of this study is to evaluate the students perceived confidence level of identifying the special needs and resources for veterans during IP simulation activity.

Methodology

An IP simulation model was implemented. A validated tool measured the students' perceived level of confidence to care for veterans during the IP simulation activity. The instrument "The Self–Efficacy Measure of Interprofessional Practice Competencies for Students," with a confidence rating scale from 0 (low) to 10 (high) was adapted with permission of the

author, Mann et al. (2012) and was administered pre-and post-simulation activity. This mixed method study included a sample of 240 students from 12 programs and over 40 faculty members from 13 healthcare disciplines. Students from two colleges participated: Virginia Tech Carilion School of Medicine (VTC) and Jefferson College of Health Science (JCHS). The following JCHS's programs participated: Emergency Medical Service (EMS), Medical Laboratory Sciences (MLS), Master of Science in Nursing (MSN), Nursing (NSG), Pharmacy, Physical Therapy Assistant (PTA), Physician Assistant (PA), Public Health (PH), Occupational Therapy Assistant (OTA), Masters of Occupational Therapy (MSOT), and Respiratory Therapy (RT) participated in a simulated bombing mass causality interprofessional activity. Eighteen simulation scenarios were developed and utilized. The cases included scenarios that addressed common conditions such as PTSD, Traumatic Brain Injury, Spinal Cord Injury, Sexual Assault, Emergency Delivery, Burns, Amputation, Suicide Attempt, Poly-trauma, and more. The students were divided into IP teams. The faculty presented the trauma scenario and the IP teams collaborated in the implementation an IP plan of care. Peer and patient education were required components of the activity. Simulated patients represented different: ages (birth to the elderly), disabilities and cultures. After the teams worked in the trauma bay for one hour, they participated in the debriefing session. Each team presented their case, treatment, and patient outcomes. The teams discussed evidence-based practices utilized in the care of their patient and evaluated their team's collaborative skills.

Results

Pre-survey means (μ 7.16, *SD* 1.8) were compared to post-survey means (μ 8.53, *SD* 1.5). A 1.37 difference in the value of the means indicated that the confidence level increased after the simulation activity. The *t*-test=0.0007 suggested that there is a statistically significant difference between the pre-and post-survey means; the increased confidence level is due to the intervention (IP activity). A Chonbach's alpha of the new questions was calculated, reliability was established by the value of 0.909. The data demonstrated an increase in the IP confidence level for all students post IP Simulation Activity. Comparison on means and standard deviations (SD) for the different disciplines, pharmacy students showed the highest pre-and-post survey means and lowest SD followed by the PH students. The post-survey means for all programs increased whereas the SD decreased for most of the programs except for the MLS and PA. The Nursing students experienced the highest change in confidence followed by RT and VTC students. The t-test was significant for 55%, 6/5 programs' confidence levels increased due to the activity. These programs were RN, RT, VTC, EMS, PTA, and MSOT. For the other five programs the confidence level may have increased due to other factors such as required IP courses. The thematic analysis of the open-ended questions was congruent with the quantitative aspect of the study.

Discussion

The interprofessional simulation is an andragogical-strategy leading to increased students' perceived confidence in identifying the special needs and resource for the veterans. Educators can use simulation to engage students from multiple healthcare disciplines when addressing the needs of the veterans. The study results supported the conclusion that in order to increase the students' confidence in providing care to veterans, veterans' education should be integrated into the objectives of the interdisciplinary education.

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Hybridization of Peer to Peer Learning and Interprofessional Education to Facilitate Human Anatomy & Physiology II Laboratories: A Pilot Project with Student Perspectives

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Michael L. Slaughter, Kimberly A. Whiter, Chase R. Poulsen, Elliot D. Carhart, & Susan Jones, *Jefferson College of Health Sciences*

Abstract: Student attrition in Anatomy and Physiology (A&P), a "gateway" science course, is of particular concern to health professions programs. Peer assisted learning (PAL) has been used to facilitate learning in an effort to improve student success in A&P. Without proper tutor preparation, student peers present risks to the effectiveness of the peer:student interaction. The Institute of Medicine recommends that health professionals work in interprofessional teams to improve the quality of care and promote patient safety. We developed and piloted a novel pedagogical method, which combines cross level peer to peer tutoring and interprofessional learning experiences to facilitate A&P II laboratory exercises. We used upper level health professions students as content matter experts to perform as cross level peer tutors. Our overarching goals were to promote student learning, expose the student to the clinical application of the laboratory exercise that is being used to learn physiological principles and introduce the student to the various professions that perform these procedures. The intervention group reported that the lab exercise was beneficial to their understanding of the material and that they received an appropriate amount of individualized attention to learn the material during the laboratory activity. Although only approaching significance, the intervention group also reported recognition of the profession that performs the procedure and the exercises' application to their future clinical practice.

Literature Review

Student attrition in the basic sciences ranges from 40-70% (Tenney & Houck, 2003). Peer Assisted Learning (PAL) has been integrated into curricula to improve performance (Crouch & Mazur, 2001). All three types of PAL; a) same-level equal status, b) same-level unequal status and, c) cross-level peers, require significant faculty time for tutor preparation (Falchikov, 2001). Concerns with PAL in undergraduate anatomy and physiology (A&P) are tutor performance, miscommunication and delivery of erroneous information (Bently & Hill, 2009; Krych et al., 2005; Hughes, 2011). The Institute of Medicine (IOM) recognizes, in the Quality of Health Care in America Report (2001), the need for health care practitioners to work in interprofessional teams (Institute of Medicine, 2001). Collaboration among team members is essential to the development of an effective team and a regional health professions college and school of medicine is a leader in incorporating interprofessional education into the curriculum via clinical simulations (Jones et.al, 2012). This study evaluates the pilot use of a novel hybrid PAL activity where cross level peers from health professional programs facilitate exercises and act as peer tutors in A&P II laboratories. These upper level discipline specific students have displayed their competency in the cognitive, psychomotor and clinical domains, within their respective programs, and therefore do not require significant faculty time to prepare them for the respective activities. This pedagogical method seeks to; a) decrease student to faculty ratio, b) promote the understanding of the physiology of the laboratory exercise, c) have student recognition of the laboratory exercises as clinically utilized procedures and, d) introduce interprofessional awareness at the earliest stage of academic development.

Methodology

An allied heath professor and 5 student tutors from the respective professional programs delivered discipline-specific information during four standard laboratory exercises; Emergency Services for ECG & BP, Medical Laboratory Science for blood typing and urinalysis and Respiratory Therapy for lung volumes and flows. Four sections participated in the study; a control group (n_1= 96), with a professor to student ratio of 1 to 12-20 received standard content delivery and an intervention group, PAL (n_2 = 62) with a 1:4 tutor to student ratio and 2 faculty members. After each lab session, students from both groups voluntarily completed a seven question survey (6 pt Likert), to assess the students' perception of the laboratories' effectiveness. Group responses were combined for statistical analysis.

Results

Independent-sample *t*-tests revealed a significant difference between groups on Survey Questions (SQ) 1, 2, and 7: (1) "This lab exercise was beneficial to my understanding of the material", (2) "I received an appropriate amount of individualized attention to learn the material during this lab exercise" and, (7) "Rate the pre-laboratory assignments with respect to the usefulness for understanding the material". Fig 1. Displays the comparison of mean scores between groups. Students approached a significant difference in recognizing which profession performed the procedure (p=.071) and the exercises' application to their future clinical practice (p=.095).

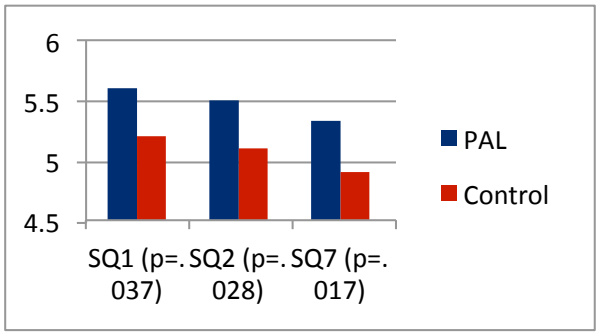

Figure 1. Comparison of mean scores of significantly different survey questions between control and intervention (PAL) groups.

Discussion

We developed and assessed a novel cross-discipline (interprofessional), cross-level PAL, for A&P II lab exercises. These exercises indentify the profession and clinical application of the activity, introduce interprofessionalism, and upgrade 2 sessions from lecture to active learning; lung volumes and ECG. Discipline specific tutors reduce the student to instructor ratio and may improve overall comprehension while minimizing miscommunication and delivery of erroneous information. The associated pre-laboratory assignments may enhance learning. Limitations include the population and class size. Assumptions made for group comparisons are; equality of professors, students and delivered content.

This data is *in print* in the journal Respiratory Care November 2013 Titled: Peer Assisted Learning in Anatomy and Physiology II Laboratory: an Ultra Hybrid design Using Health Professions Students

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Multiple Choice Questions: Do Yours Make the Cut?

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Abstract: With the increase of class sizes at most universities the most effective method for determining students' mastery of content is through Multiple Choice Question (MCQ) exams. Many of the MCQs developed by un-trained faculty contain technical flaws. This presentation examines the construction, common flaws, and solutions for writing effective MCQs. Participants from all disciplines will engage in determining common flaws of MCQs that may threaten the validity of an exam score. By learning how to design test items that minimize the effects of examinees' cued guessing (testwiseness) item developers may increase the degree to which exam scores are representative of an examinee's true knowledge.

Literature Review

For over 35 years multiple-choice questions (MCQs) have been used in assessments in medical schools and other health professional institutes in the United States, Europe, and Australia (Azer, 2003). As the frequency of testing increases it is important for all test item writers to be aware of the principles of item construction. Though our students are also assessed by other methods, the MCQ continues to be preferred due to the ease of administration and scoring, especially as class size increases. Many credentialing organizations, such as the one for physicians, The United States Medical Licensure Examinations (USMLE), depend on MCQs for assessing their future workforce. Therefore, it is important for students to be familiar with the types of questions found on these kinds of licensure exams (Jozefowicz, Koeppen, Case, et al., 2002). We suspect that other programs in higher education, not just in medicine, also rely heavily on the use of MCQ assessments for evaluating student learning and promotion.

Due to the fact that the majority of faculty are not trained in methods of test item or exam development many exam items do not meet the recommended item criteria that have been established by those such as Case and Swanson (2001), and Haladyna, and Downing (2002, 2005). To accurately measure whether or not examinees' have mastered material sound exam items are required. Items that contain technical flaws may contaminate examinee scores with error that interferes with the interpretation of exam results (Downing, 2005).

Goals and Objectives

Upon completion of the session, participants will be able to:

1. Define the parts of a multiple choice question.
2. Recognize common technical flaws in multiple choice questions.
3. Develop strategies to write effective questions.
4. Write an effective multiple choice question

Description of Session

This presentation addresses the most common flaws that exist within a majority of Multiple Choice Questions (MCQs). In order to move towards a better understanding of an effective MCQ the presentation will break down the key parts of a well-constructed multiple-choice item. This closer look at the working parts of a MCQ item will allow us to move towards recognizing potential flaws that often derail the overall effectiveness of MCQs in an exam setting; thus ensuring that MCQs are truly measuring the intended objective.

The presentation will focus on developing strategies for writing effective MCQ's in an effort to provide a better overall measure of learning. The presenters will lead participants through example questions that demonstrate common flaws related to testwiseness including grammatical or logical clues, absolute terms, and longest correct answer. Participants will evaluate example MCQs to determine flaws and reconstruct questions to improve effectiveness.

Discussion Question

1. Does identifying flawed MCQ items help to improve faculty's ability to construct more sound MCQ items?
2. How may one systematically review MCQs?

Application

To study the quality of MCQs found on typical first and second year exams used to assess basic science/pre-clinical content at our medical school exams were reviewed and scored using an instrument adapted from Haladyna, Downing, and Rodriguez (2002). Each exam was scored by two independent raters, each of whom who have been trained in item development. Items were classified as containing a flaw or as meeting item writing standards. Flawed items were identified as having one of the eight principles of sound item development (Haladyna, et al., 2002) ignored. The presenters will illustrate how use of an exam review instrument (Hauge, unpublished 2002) can aid item developers in writing more effective items mostly by increasing faculty's awareness of basic item writing principles. These guidelines are generalizable to other disciplines that assess student learning outcomes through the use of MCQs.

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Digital Storytelling: Introducing Multimedia Web-Based Assignments to Your Teaching

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Abstract: Digital storytelling is the use of computer technology to create personal narratives; this program explores the use of digital storytelling in higher education teaching and learning. In 2013, College of William and Mary faculty from the Chinese Program, the Confucius Institute, and the School of Education developed a number of projects implementing the use of digital learning and new media for cross-cultural pedagogy. This program will focus on one project involving digital storytelling and a study abroad component in China. The faculty member will share practical experiences using multimedia web-based assignments in place of conventional research papers and exams; participants will review examples of these assignments, see sample project guidelines, and discuss applications of digital storytelling in a variety of higher education settings (coursework, capstone experiences, study abroad, residence life, etc.).

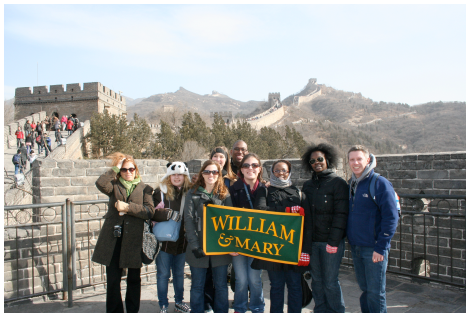
Literature Review

Digital storytelling is "the practice of using computer-based tools to tell stories…combining the art of telling stories with a variety of multimedia, including graphics, audio, video, and Web publishing" (University of Houston, 2013, ¶1). Although the technological tools available to educators and students today (e.g., mobile video cameras, media editing software, web publishing) are well-suited to digital storytelling, the method is not entirely new. Emerging from the grassroots arts and cultural movements of the 1970s and 1980s, The Center for Digital Storytelling was founded in the late 1990s in Berkeley, California as a nonprofit community organization to promote the creation and sharing of personal narratives (Center for Digital Storytelling, 2013; Robin, 2008).

The method has been demonstrated to have strong educational benefits. Yang and Wu (2012) found that high school students using digital storytelling techniques in a language course had significant improvement in content mastery, motivation, and critical thinking skills. Benmayor (2008) described digital storytelling as "a signature pedagogy for the new humanities," and asserts that it "constructs a safe and empowering space for cross-cultural collaboration and learning" (p. 188). Likewise, the ways in which digital storytelling allows college students to build on their prior knowledge, explore new perspectives, and synthesize new information and experiences lends itself well to promoting integration of learning across contexts (Barber, 2012). Rodríguez (2010) documented the specific application of digital storytelling to study abroad experiences, illustrating how the technique aids students in considering multiple perspectives, thinking critically, and creating a multisensory representation of their learning.

Goals and Objectives for the Practice Session

Participants in this session will learn how to implement digital storytelling techniques into their educational practice, in contexts both inside and outside of the traditional classroom. The session will focus on defining digital storytelling, sharing examples of course assignments and assessment methods, and discussing best practices for implementing digital storytelling in a variety of educational environments.



The session will review the implementation of digital storytelling methods in a specific course in Spring 2013. The actual assignments and student work developed in this course will be available online; participants who have a laptop or mobile device can access the materials during the program. The course blog will be available as a resource to participants even after the conference concludes.

Preliminary Outline for Session (50 minutes)
Introduction to digital storytelling concept (7 minutes/7)
Review of literature on teaching, learning, and digital storytelling (8 minutes/15)
Applying digital storytelling concepts to curriculum development; review sample assignments (15 minutes/30)
Discussion and implications – participants share best practices with digital storytelling (10 minutes/40)
Questions and conclusion (10 minutes/50)

Description of the Practice to be Exemplified

The College of William and Mary's School of Education offered a 12-day program in China in Spring 2013. Students enrolled in a 3-credit graduate level course (EDUC 500: Global Studies) that explored teaching and learning in China, with opportunities to focus in Higher Education Administration or Counseling and Psychotherapy. The program visited three cities: Beijing, Xi'an, and Shanghai, and included site visits to higher education institutions and clinical sites in each city. Using new media as a foundation for our course, we studied the teaching and learning experiences of people in China, and contrasted those with personal experiences in American contexts. Through digital storytelling, students documented their own teaching and learning experiences related to a variety of topics relevant to educators, including internationalization, digital learning, and cross-cultural pedagogy.

The backbone of the course and travel program was the creation of a course blog to house the digital stories, an easily editable website that allowed multiple users to create pages that link content to any number of internal or external sources. The flexibility of the blog format made it an ideal tool for facilitating collaboration, promoting integration of learning, and sharing this work with a larger audience. As the focus of the course was teaching and learning, one element of inquiry was the comparison of teaching and learning environments in the U.S. with those in China. Students used handheld video cameras to capture examples of teaching and learning in United States and China, including classroom visits and interviews with Chinese professionals and students. These recordings were incorporated into the project blog, becoming the basis for future analyses and presentations upon return to the U.S.

Discussion

The introduction of digital storytelling to this course had a number of benefits from my perspective as the instructor. The multimedia format allowed students to demonstrate their learning in a novel and dynamic ways. Using photographs, audio, video, and the written word, participants in the class created rich illustrations of what they had learned; most importantly, students were able to carefully reflect and synthesize knowledge meaningfully through the storytelling process. The format also allowed students to easily share their work with peers in the U.S., as well as colleagues they met in China (with some restrictions, i.e., blocked access to social media sites such as YouTube in China). On our campus, the project blog was shared across other courses at William and Mary with ties to the Chinese Program and Confucius Institute; it has also been incorporated into other courses, including a graduate level seminar on International Comparative Higher Education.

In developing the course syllabus and designing the main assignments using digital storytelling as the primary method, I was inspired with a sense of creativity to go beyond the traditional research paper format and explore different ways of documenting student learning. At the same time, I was challenged by students to provide a framework for how their work would be assessed given the unconventional approach. I experimented with a number of rubrics and will share lessons learned in regard to assessing and evaluating student learning in this course.

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Process for Student Led Course Redesign - Research Assignment

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Almetia Strother, *Virginia State University*

Abstract: This presentation is a reflective analysis of incorporating a research assignment into an established course. A traditional course was redesigned by students to reflect interests, focus, contemporary business topics, writing across the curriculum, critical thinking and integration of multiple disciplines. The undergraduate students developed a research study, a final research paper and published a student-authored journal during each semester. Strategies for sustaining student interaction, engagement and excellence in performance will be presented for discussion. Undergirding business education pedagogy is the Self-Fulfilling Prophecy Cycle or the Pygmalion Effect. The article examines the processes and class change strategies for course redesign and techniques for garnering student engagement and excitement for research projects. The goal is a solid foundation and appreciation for systematic research inquiry. .

Literature Review

Organizations find it difficult, at times, to motivate employees, which often equates to lowered productivity levels. University professors share the same dilemma. Looking through the lens of the Self Fulfilling Prophecy or the Pygmalion Effect, student classroom performance was studied over a six-year period. High performance expectations from professors resulted in higher performance levels from students. The classroom assignments (redesigned by students) were significantly more difficult, infused technology into task accomplishments, fostered greater collaboration and resulted in a greater sense of personal achievement. The assignment was the development and publication of a student-authored journal, *The Collegiate Journal of Organizational Behavior*.

How do we help students fall in love with research? Answer – involve them in their own research. During the past twenty years, leading the way is Project-based Learning (PBL) starting in the 1990's (Thomas, 2000). Project-based learning is a model that organizes learning around projects. According to most authors, projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, investigative activities, provides the opportunity to work relatively autonomously over extended periods of time, and culminate in realistic products or presentations (Jones, Rasmussen & Moffitt, 1997). Other features include authentic content, teacher facilitation but not direction, and explicit educational goals (Moursund, 1999).

Research methodology is becoming increasingly a part of the mainstream curriculum for degree requirements. Limited attention however, to the inherent challenges in running these courses which are often thought of as difficult to teach and resource (Crooks, Castleden & Meerveld, 2010). Research methods courses are challenging classes to teach because the technical complexity of the course material is quite high while student interest in this material can be quite low (Ball & Pelco, 2006). The challenge addressed in this research study was how to incorporate research methodology into an Organizational Behavior course without the result being another methods class.

The research component of this course is taught in five distinct phases all involving maximum student participation and interaction. Traditionally taught lecture courses offer wider coverage of material but the group-project approach ensures a deeper understanding of the research process. Learning to do research and critically evaluate research practices are better facilitated by problem solving than by memorizing research terms and definitions (Ball & Pelco, 2006)

Goals and Objectives for the Practice Session

Session participants will be involved in a "how to" discussion of incorporating a research requirement into an undergraduate OB course. Students have varying degrees of proficiency and familiarity with research methodology. As part of the course requirements, students author The Collegiate Journal of Organizational Behavior and sponsor a Business Research Forum. These processes will be shared with the session participants. Lessons learned will engage participants in sharing instructional tips that facilitate teaching a research course requirement. At the

conclusion of the session, participants will understand how to implement the five-stage model of research development into a course.

Description of the Practice to be Modeled

A step-by-step guideline for setting the stage for student engagement in the research process begins on day one of the first day of class for the new semester. Demonstration of course introduction, research topic selection, identification of an editorial board, timeline for task completion, incorporation of "corporate/business" terminology, formal presentation of research study and other teaching strategies will be presented. The session will include syllabi discussion, pitfalls to avoid and joy to behold at how well undergraduate students perform research.

Discussion

Organizational Behavior is a required course for all business major and offered at the senior level. The course includes (third course in three-course research sequence) a comprehensive research study, presentation of research for critical review and submission for publication. Students report a high degree of satisfaction with the course content and the utility for on the job performance. The course is a preparation for graduate level research. Incorporating a research agenda into an existing course is time consuming and often requires one-on-one sessions between the professor and student. The results are rewarding as student creativity and discipline spring forth.

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Rewriting, Rethinking and Revising: Integrating Writing Intensive Pedagogies into the College Classroom

Donna Hancock Hoskins, *Bridgewater College*

Abstract: In this practice session, participants will learn pedagogies involved in creating a writing intensive course focused on guiding students through the writing process. Teaching writing in the classroom has different focuses. For example, writing is often used in the college classroom as a way of thinking, learning a process, or used as a way to organize thoughts. To effectively create a writing intensive course, student centered classrooms to facilitate the writing process need to be developed. A writing intensive course gives students the opportunity to learn how to write and think better. Understanding differences in local and global concerns in student writing can be done by editing and revising. Identifying different types of feedback on student writing can guide the instructor as they provide feedback on student work to support students' work as writers. This session will offer examples of an annual writing pedagogy project in a Family and Consumer Science college classroom wherein student-centered learning strategies were developed. The practice session will be a hands-on-learning experience for participants to understand a writing-intensive pedagogy developed by Joseph Harris, former director of Duke University's Thompson Writing Program.

Literature Review

Intellectual writing is a fluid activity where rewriting, rethinking, and revising are important elements (Elbow, 1998). The process of teaching writing in the college classroom involves designing a course where feedback on student writing is provided while students are working on drafts of assignments (Harris, 2006). Students often need assistance from teachers and peers to help them as they decide what they are doing as writers. Moreover, writing is a process in which students need to revise their writing.

Rewriting is a process where students engage with, add to or extend what has already been said in existing texts (Harris, 2006). The rewriting process helps students rethink and reread their work-in-progress while forming their own voice as an intellectual. Based on the work of Harris (2006), to be an effective writer, students need to be taught to think about rewriting as building upon the work of others. Further, rewriting often requires the student to engage in intellectual discourse where the writer rethinks or qualifies existing work.

Drafting, revising and editing serve as ways for students to step outside of their own thinking and to look at the text as another reader might. The aim of revising is to rethink the ideas and examples that drive an individual's thinking in an essay (Murray, 2003). In other words, revising requires the writer to question and rework their own writing. Moreover, the revision process is part of writing-in-progress which allows students to expand their work. The central aim of drafting, revising, and editing is to improve the flow and design of a document (Lanham, 1999). Drafts, revisions, notes, plans, responses to readings, comments on other student's work are all ways for students to work with texts to improve their writing. As Harris (2006) indicates, revising not only includes reworking the form of sentences and paragraphs but focuses on how to develop and revise a line of thinking over a series of drafts.

Goals and Objectives

- Learn how to teach your discipline through writing and make it a part of a course
- Teach students how to work together to improve their writing when using feedback from peers
- Understand the importance of writing seminars and workshops inside and outside of the classroom to make their work visible
- Learn how to set up an in-class writing workshop in class so students can learn how to assess their own work
- Develop an understanding of local and global editing practices
- Learn how to assist students with reflecting on the writing process
- Learn how to help students create writing revision plans
- Effective ways to grade drafts of student work
- Learn how to design a syllabus that incorporates writing workshops and seminars

Description of Topic to be Discussed

Various modes of interaction with texts will be discussed. Further, differences in seminar and workshops will be illustrated in the practice session. Ideas for helping students become more engaged in the writing process, such as small groups, conference with individual students and class discussions will be examined. Incorporating writing on exams and quizzes will also be discussed. Participants will learn about tools that can be used for the revision process includes outlines, and revision memos. Understanding local and global concerns with writing will assist teachers by enhancing feedback provided to students about their writing.

Local Concerns with Writing	Global Concerns with Writing
Word Choice	Organizing Argument
Transitions	Line of thought
Lack of attention to details	Paragraph development
Citation/formatting	Supporting evidence
Lack of concise writing	Transitions
	Focus

Facilitation Techniques

In the practice session, participants will engage in an interactive session while reviewing examples of student writing to learn about conducting writing seminars and workshops in college classrooms. Participants will engage in "fast writing" exercises to learn about ways to incorporate additional writing into the classroom. In addition, participants will share their own experience with assisting students with the writing process.

Discussion

Writing intensive pedagogies teach students how to represent other texts accurately. Students can come to terms with a text by translating its word and ideas into their own language (Harris, 2006). Students need to learn to situate what they have to say in relation to the views of others. When teaching writing in any discipline, students in the class need to share and discuss the work that they are all doing as writers. In addition, creating a plan of revision will help students map the changes they make and will also aid students in reflecting on their aims and strategies of revising.

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Lesson Structure and Student Engagement: Bringing Classroom Activities to Life

Laura Treanor & David Hultgren, *Baker College of Clinton Township*

Abstract: Effective learner-centered approaches that engage students require more structure, or at least a different kind of structure, than teacher-centered approaches. Based on numerous classroom observations, years of teaching, and supporting research, this session will focus on fundamental considerations in planning classroom activities to maximize student engagement, and then executing those activities through effective facilitation in introducing, monitoring, and debriefing. Participants will receive and use a planning and facilitation template designed to help them more effectively plan and execute activities to engage their students.

Literature Review

Colleges and universities are challenged to change their instructional practices to provide greater accountability, academic rigor, transparency, student engagement, and relevance to the lives of their students (Harris and Cullen, 2010). There is an increasing call for more learner-centered approaches to be used in the college classroom (Blumberg, 2009; Nilson, 2010; Doyle, 2008). These approaches often require more thorough advance planning than teacher-centered approaches, because of the time needed to think through effective ways to have students engage in and learn the content, rather than just efficient ways to cover the content (Blumberg, 2009). At the same time, many institutions of higher education use an increasing number of adjunct faculty and other subject matter experts who have not been trained in classroom planning and facilitation techniques other than lecture. Building on sound learner-centered practices advocated in the literature as well as solid techniques used by good educators over time, this session will focus on specific practices in effectively planning, conducting, and debriefing activities in the college classroom.

Goals and Objectives

Upon completion of the session, participants will be able to:

1. Identify instructor classroom engagement mistakes when planning and conducting learning activities.
2. Explain how lesson structure contributes to student engagement.
3. Use specific steps to plan for, introduce, monitor, and debrief classroom learning activities.

Description of the Practice

The session will begin with a brainstorming activity to identify common instructor mistakes in planning and implementing college classroom learning activities. The presenters will then share a brief "Tale of Two Lessons" pointing out the impact of the inclusion and exclusion of key instructor practices. They will then review a planning and facilitation template to assist faculty members in avoiding many of these common mistakes, based on their experience as instructors and classroom observers as well as on the research on effective teaching. Participants will have an opportunity to apply elements of the template to one of their own lessons. The session will close with sharing of participant examples (as time allows) and questions and answers. Participants will receive a packet including the planning and facilitation template.

Discussion

In our roles as Vice President of Academics and as Instructional Effectiveness Specialist, we have conducted numerous observations of college instructors in a host of departments and programs as they attempt to integrate more learner-centered approaches in their classrooms—with varying degrees of success. One area of concern that consistently arises in our post-observation conferences with faculty members has been fundamental activity planning and facilitation skills. With learner-centered approaches, these skills become as important as, if not more important than, content presentation skills. However, few instructors, especially adjunct instructors, are well-versed in the skills of planning, introducing, conducting, and debriefing specific activities within a lesson. This session and the supporting materials were created to addresses this concern and are based on professional development now being provided to all our new faculty members at the college.

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Conversation: Teaching for Transformative Learning Across the Undergraduate Experience

Jeff King, Sunshine Cowan, & Rachel Winters, *University of Central Oklahoma*

Abstract: Yes, we teach chemistry or sociology or rhetoric or Spanish, but more importantly, we teach students. It is student growth and development during the undergraduate experience that makes college more than the sum of content knowledge acquired in general education and disciplinary classes. In a time when some advocate for college as merely job preparation in order to minimize the cost of a bachelor's degree, we must be clear that we prepare graduates for their careers both in terms of what they must know and be able to do within their employment fields *and* in terms of what they know, can do, and value that makes them competent problem-solvers, creative and critical thinkers, culturally and globally competent, actively engaged citizens, life-long learners, and ethical human beings. One successful means of achieving such extra-curricular goals is Transformative Learning. To paraphrase Cranton (2002), Transformative Learning occurs when ". . . a [student] becomes aware of holding a limiting or distorted view. If the [student] critically examines this view, opens herself to alternatives, and consequently changes the way she sees things, she has transformed some part of how she makes meaning out of the world" (p. 64). However, the process of students becoming aware of their own limiting or distorted perspectives must not be left to chance! It must be mindfully and intentionally designed into students' college experiences both in and outside of the classroom. Just as service-learning is a pedagogy, so is Transformative Learning. But faculty have not been taught how to design courses or how to teach to prompt student transformative experiences, nor has the typical college operation focused on producing them. In this conversation session, you will learn about one university's tools and processes to do this, and you will consider whether something similar could serve your institution's mission and goals.

Literature Review

Transformative Learning as a construct is generally credited to Mezirow's foundational thinking about disorienting dilemmas faced by adults and their process of resolving those dilemmas. (See, for example, Dirkx, 1998, and Kitchenham, 2008.) In a process that creates discomfort for a learner because new information or circumstances challenge her beliefs about herself and/or her relationship to others and the world, the discomfort is ultimately resolved because she changes and/or expands her perspectives and beliefs.

Expanding student perspectives has been an implicit part of the college curriculum for decades, but it has often been left to chance. While we all probably can identify college experiences that had deep and lasting impact on us, those experiences usually didn't show up as syllabus outcomes in our classes. However, calls for such intentionality have existed for years (Astin, 1977, 1997; Chickering, 1969; AAC&U, 2008). Too, employers of recent college graduates clamor for skills and abilities directly or indirectly derived from Transformative Learning experiences (Murphy, 2006). The necessity for producing college graduates who possess these kinds of knowledge, skills, and values is outlined in a major initiative from the Association of American Colleges and Universities (2011).

Goals and Objectives

Participants in this session will become familiar with the concept of Transformative Learning (TL), leaving with an ability to define TL and to describe its purposes and benefits. By reviewing the history (including successes and failures) of one university's process of operationalizing TL, attendees will be able to compare and contrast that process with conditions and history at their own institutions that might impede or support a similar initiative. Based upon a description of the components, training needs, infrastructure and technology requirements, and other considerations taken into account as the university in question determined how best to design and launch an assessable TL initiative, participants will have the opportunity to vet in conversation the practicality of TL as a higher education pedagogy. Finally, conversants will devise convincer strategies — either for or against — a similar approach for their own campus and community constituencies as they evaluate the feasibility of a TL-based approach as one means for meeting the needs of 21st-century college graduates.

Description of the Topic to Be Discussed

The University of Central Oklahoma formally instituted its version of Transformative Learning in 2007, basing it on six Central Tenets which align in many ways with Kuh's (2008) high-impact practices. As UCO struggled to find best practices in bringing the approach to the classroom and broader college experience, it has moved from lofty goal-setting to rocky implementation, to refinement of process, and ultimately to creation of tools and training to bring the vision to fruition. Applying for Title III grant funding which would accelerate the institution's timeline for achieving project outcomes brought a sense of urgency to finish designing and developing the infrastructure, technology, processes, and training required to succeed in the venture.

The initiative, termed the "Official Transformative Learning Record" (OTLR), required revamping general education and core curriculum outcomes along with the cornerstone student experience (freshman seminar) as well as the capstone experience so that all aligned with the goals of a TL education. Because OTLR seeks to make a difference in college education *outcomes* (as opposed to *outputs*, which are measures of things like graduation rates, student debt, employment upon graduation, etc.), the institution has been mindful of how to assess the project's success in terms of demonstrable activity that indicates transformative learning has occurred; the tool to capture this is the eportfolio, but integrated in a way that automatically collects TL artifacts and accompanying assessments and the rubrics used in the process.

A very close collaboration with the Learning Management System vendor has been necessary, and a strong, collaborative process across the entire university — academic affairs, student affairs, enrollment management, information technology, others — has also been required. Along the way, unique ideas to enhance the effectiveness of the initiative, such as badging as students work toward TL achievement in the Central Tenets and designing and building a student app to enable selection of Tenet-based curricular and co-curricular choices, have been developed.

Facilitation Techniques

The first part of the session shares the development, characteristics, and usage of OTLR via graphics and a hypothetical student case story. Then, as discussants parse through the various components and processes of this version of "doing" Transformative Learning and assessing its success, the facilitator will lead the group through a brief nominative-sort activity which will then guide a group-think approach toward a higher education convincer strategy about Transformative Learning and OTLR as applicable (or not) for various kinds of institutions.

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Ways to Improve Effectiveness of Student Teams as an Instructional Modality: A Conversation About Techniques to Mitigate Typical Difficulties in Practice

Eric Rice, *Johns Hopkins University*
Richard Parsons, *Virginia Tech*

Abstract: Students must acquire effective teamwork skills to succeed as professionals in most modern work environments. Therefore, many undergraduate disciplines and courses, especially those in engineering and business, include collaborative projects as a means of instruction, both to gain content specific knowledge and to master skills associated with working on and leading teams. Yet research indicates that a variety of team-management and team participation difficulties arise when using student teams that result in uneven learning outcomes, unsatisfying collaborative experiences and fitful facilitation headaches for the instructor. The aim of this conversation is to generate useful techniques, matched to specific difficulties, to facilitate management of student teams and maximize learning outcomes while minimizing instructional hassle. The conversation is grounded in published research on the topic, the experience of the facilitators and the practice of the participants.

Literature Review

Although student work teams are widely used in postsecondary education, difficulties and issues with their effectiveness remain; students and teachers often are less satisfied with the modality than other teaching modalities (Shah & Meisenberg, 2012). Students and teachers recognize that individual and team-based difficulties affect success. For example, Buckenmeyer (2000) and Stein (2005-2006) suggest that individual issues such as "social loafing" (an individual shirking work and riding the coattails of other group members), differing expectations about the desired or expected grade and inability to manage conflict between members often disrupt student groups, create management problems and lead to student dissatisfaction and diminished learning outcomes.

Other researchers have documented that team issues also may lead to ineffectiveness and management difficulties. For example, Caspersz, Skene, and Wu (2005) argue that factors such as managing multiple projects each competing for time and attention, the infrequent and sporadic nature of student work group meetings, the lack of clearly assigned roles, and the lack of knowledge of individual skill/knowledge strengths and limitations all contribute to team ineffectiveness.

Michaelsen (n.d.) argues that the success of student teams [and conversely, lack thereof sometimes] is due to high levels of group cohesion. Moreover, he argues, "the greatest inhibitors to the development of group cohesiveness are either a previously established relationship between a subset of group members . . . or background factors such as nationality, culture or language" (p. 2).

An informal survey about difficulties of team projects conducted by Rice (2013) with two classes of Hopkins students support these and other similar findings. For example, over 80 percent of students indicated that the greatest issue with team projects was disagreement over priorities and plans for action. Other problems they found frequent and vexing included uneven distribution of workload and scheduling difficulties.

Goals and Objectives

Objectives for the session include the following:

- Identify the reasons for and value of using student teams for instructional purposes.
- Generate a list of difficulties/issues associated with using student teams for instructional purposes and group the identified difficulties/issues into conceptual categories.
- Generate techniques (and examples) useful as strategies to mitigate at least some of the critical issues.
- Suggest ideas for continuing research into the topic.

Description of Idea or Topic

The topic is uncovering techniques for overcoming the pedagogical difficulties of employing student teams for instructional purposes, especially when used on projects such as design projects, problem-based learning situations, community service projects and case studies. The key purpose is to generate and share techniques for managing

inevitable difficulties that arise in team-based approaches. Each participant should leave with several new ideas about how to deploy and manage teams more effectively. We expect to deal with topics such as evaluation/grading, student workloads, conflict management and the like.

Facilitation Techniques

The plan for the session, including expected interaction patterns follows:

- Conceptualize the issues in terms of potential value, prevalence and issues/difficulties of using teams for instructional purposes, especially in business and engineering. (10 min presentation)
- Introduce sample(s) of ways presenters have used teams, the technique(s) used to address and mitigate various difficulties, and the outcomes of efforts. (2 min)
- Collect examples using guided discussion of difficulties participants have experienced in their teaching practice and group ideas into categories. For example, there should be difficulties associated with at least operational aspects of using teams such as timing and deadlines; teaching aspects such as evaluation and grading, cultural diversity and inequitable distribution of workload; and student aspects such as individual commitment and dealing with conflict. (10 min)
- Divide participants into work groups around each of the major categories of difficulties and generate techniques that have/might work to mitigate specific issues assigned to that group. (10 min)
- Reconvene and harvest ideas from each group for techniques to deal with specific issues. (18 min)
- Invite participants to express samples of team activity from their classes (as time allows).

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Friday

February 7, 2014

Session 13

10:10-11:00 AM

http://www.cider.vt.edu/conference/

Student Satisfaction with Blended Education: A Case Study at the University of Central Oklahoma

Bucky J. Dodd & Len A. Bogner, *University of Central Oklahoma*

Abstract: This proposed research session presentation is a continuation of the research sessions that was presented at the 2013 Conference on Higher Education. This session will report out on the data collected on Students Satisfaction with the Blended Education format at the University of Central Oklahoma (UCO). Blended Education unifies courses and programs in ways that enhance the "humanness" of distance learning experiences. The dynamic growth of online learning and disruptive nature of Massive Open Online Courses (MOOCs) has prompted higher education leaders to re-examine the foundations of how higher education meets the needs of its stakeholders. Blended Education is a human-centered innovation that produces a more flexible learning experience to online or classroom course and represents a sustainable response to the pressing decisions faced by today's higher education leaders. This SoTL research focused on Student Satisfaction with Blended Education at UCO. The data was collected using an online instrument and was administer to 7 courses using Blended Education during the 2012-2013 school year.

Literature Review

Blended learning is a well-discussed topic in current higher education contexts. Just as online education has found its place in the mainstream of many higher education institutions, the science and art of blending online with classroom instruction is also providing an important trend that merits critical discussion. There are conferences, journals, and countless newsletters touting blended learning as the next big major trend to reshape how students learn.

While many of these publications provide unique and insightful contributions to the body of knowledge, the topics of discussion, in large part, are quite simple and are primarily focused on the instructional design strategies involved with combining online elements with classroom interactions. The goal of blended learning is to leverage the strengths of multiple instructional approaches. Online is typically used to deliver content, while the classroom is used as a forum for discussion and critical analysis.

Blended learning is a positive move toward better learning and, to some degree flexibility; however, researchers and practitioners in this domain often fail to acknowledge the complexities that exist in the broader learning context. For example, a faculty who blends an online component with a classroom component leverages the benefits of efficiency and effectiveness in the learning environment; however, neglects to consider the connections that exist on micro-learning events, program-level, and institutional level contexts. Often, as in this example, blended learning is an isolated approach to learning and rarely represents systematic strategies aimed at building a cohesive learning experience across individual and group learning experiences.

This research makes a critical contribution to the body of literature by placing emphasis on *what* and *how* connections are built into the design of learning experiences so students have the most flexible learning experiences possible while still maintaining a high degree of "humanness" and exemplary learning results. The emphasis on choice and flexibility in blended education are important drivers for adult learners and represent key strategic positions of higher education institutions in the coming years.

Blended education is a broader concept than blended learning because it acknowledges the considerable complexity involved in learning across institutional and diverse landscapes. This approach promotes the construction of knowledge by intentionally connecting how learners access educational opportunities with principles of instructional design, adult education, and strategic management. On a conceptual level, blended education is intended to support the most flexible forms of learning possible while improving student learning outcomes based on alignment of delivery method with learning and instructional intent.

Methodology

A quantitative, survey-based research design was used for this study. The investigators used Action Research approaches to examine student experiences and satisfaction in courses using blended education methods. A

purposive sampling methodology was used to recruit participants based on their enrollment in courses using blended education methods. The instrument created was based on evidence of a literature review.

Results

Data were collected over a one-year period with the goal to better understand experiences of students enrolled in courses using Blended Education methods ($N = 65$). Most students were non-traditional, degree-seeking students. Some of the interesting findings of the research include:

- 69 miles was the average miles a student lived from campus. 207 miles was the range from campus.
- 92% of students reported being hopeful or curious at the end of the blended education experience
- 80% of students agreed or strongly agreed that blended education was a similar learning experience to face-to-face courses
- 85% of students agreed or strongly agreed the experience gave them the opportunity to apply what they learned
- Students responded: "I chose this method of delivery because I live so far from the campus. It was very convenient for me with my busy work schedule and kids, I am very grateful to have had this option." "The course was very flexible and worked with my schedule very well. I liked this method of learning." "The format of the online course is easy to follow, allows students to work at their own pace, and provides live video of instructor and other students, as well as recorded lecture from instructor and previous classes to review at any time. I'm not sure how an online class could be presented better. I have taken online courses in the past, and none of them catered to the student like this one."

Discussion

The discussion will focus on how Bended Education has been defined at UCO and the results of the SoTL research. Blended Education is the concept of combining teaching, instructional, and delivery methods in ways that enhance "humanness" in the learning process. Humanness is the collective sum of knowledge, skills, attitudes and transformative experiences that are represented of authentic human communicative behaviors and learning. Showing how the positive findings from the research indicate that Blended Education should be considered in Higher Education.

Descriptive Use of Synchronous Virtual Classrooms in Higher Education

Florence Martin & Michele A. Parker, *University of North Carolina, Wilmington*

Abstract: Virtual classrooms allow students and instructors to communicate synchronously using features such as audio, video, text chat, interactive whiteboard, application sharing, instant polling, emoticons, breakout rooms. In the Fall of 2011 and Spring of 2013, an electronic survey was administered via listervs asking instructors to describe their experience adopting and using synchronous virtual classroom. Of the 79 respondents, most were from Education and Health and Applied Human Sciences and a majority of the respondents used Wimba or WebEx as the virtual classroom platform. Institutional resource availability, increasing social presence, enhancing student learning, and the availability of technology were prevalent responses for what influenced adoption and use of the virtual classroom. The features that most influenced adoption of the virtual classroom and were used most frequently were archiving the session, viewing the webcam, and text chat. The open-ended survey responses revealed that instructors used the virtual classroom to promote interactivity, develop community, and reach students at different locations. There were trends among the demographic characteristics of faculty who use the virtual classroom. The findings of this study provide meaningful information for instructors considering synchronous components in their online teaching and for administrators interested in promoting technology enhanced learning on their campuses.

Literature Review

Synchronous Virtual Classrooms or web conferencing systems are becoming a mainstream in higher education (Rockinson-Szapkiw & Walker, 2009). Virtual classrooms allow students and instructors to communicate synchronously using features such as audio, video, text chat, interactive whiteboard, application sharing, instant polling, emoticons, breakout rooms. The features available in the synchronous virtual classroom play an important role in maintaining interaction. LaPointe, Greysen and Barrett (2004) found that audio and visual components in synchronous systems bridge cultural differences and create community. Reushle, Shirley, Loch, and Birgit (2008) concluded from their research that web conferencing software enabled instructors and students to engage actively from various locations. It also supported a student-centered approach and offered more flexibility for student participation. One of the innovative ways that Spann (2012) recommends is combining on-campus and online students. Research on virtual classrooms improves their effective use continues offering new opportunities to learners.

Purpose of this Study

The purpose of the study was to identify why instructors adopt synchronous virtual classroom and how they use it after its adoption. The research questions answered in this study were

1. Why are instructors adopting and using virtual classrooms?
2. Which features are used frequently in the virtual classroom?
3. How are instructors using the Virtual Classroom features?
4. Is there an association between demographic characteristics of faculty (e.g., gender, age, rank/position) and adoption of virtual classrooms?

Methodology

We surveyed instructors who use a synchronous virtual classroom system. An email with a hyperlink to the survey and a brief message about its purpose was sent to two listservs and two LinkedIn groups. The online survey was administered using SelectSurvey©. Faculty were informed that their participation was voluntary and anonymous. Data was collected Fall 2011 and Spring 2013. Seventy nine faculty members completed the survey. Due to space constraints a detailed description of the survey and reliability and validity information for the factors influencing adoption and use will be shared during the presentation.

Results

Faculty reported that a combination of factors influenced their adoption and use of synchronous virtual classrooms. Institutional support (M=3.46) and institutional resource availability (M=3.59) had the highest mean among the

organization factors. Promotes social presence among students (M=3.44) and promotes sense of community (M=3.28) were most highly rated among the social factors. Improving teaching (M=3.58) and enhancing student learning (M=3.72) had the highest average among personal factors. The availability of technology (M=3.84) and ease of use (M=3.72) had the highest means when considering technological factors. The availability of the synchronous virtual classroom was the most influential (M=3.84) aspect in faculty deciding to adopt this technology among all the items, irrespective of categorization (e.g., organizational, social, personal and technological.). Reward availability (M=2.32), reducing number of face to face lessons (M=2.28) and peer pressure (M=2.04) were least influential in the adoption and use of the virtual classroom. Fifty-six of the 79 faculty (70.9%) indicated that the features of the virtual classroom influenced their adoption of the technology. Of the 79, a majority said that archiving the session (59.5%), audio chat (54.4%) and text chat (48.1%) were the features that most influenced adoption. Emoticons (16.5%) was reported as having the least influence on faculty adoption of virtual classrooms. Archiving the session is the most frequently used feature (M=3.41), followed by viewing the webcam (M=3.30), and audio chat (M=3.13) Listening to the audio via phone (M=2.16), guest access (M=2.16), and downloading the archive (M=2.09) were the least used features unanimously. The virtual classroom was used for instructional purposes such as the delivery of course content and conducting office hours. There were statistically significant differences in terms of demographic characteristics and adoption of the virtual classroom. Additional results will be shared during the presentation.

Discussion

For this proposal, we highlight the implications and recommendations for practice. Based on the results faculty can use synchronous virtual classrooms in the following ways:

- To discuss, and debate the concepts presented in asynchronous course work
- Use it to teach or bring consultant and guest speakers from different locations
- Use it to facilitate to dialogue just not for content delivery
- Conduct online office hours and online lab sessions
- Archive virtual sessions for future viewing by students, and for self-review
- Use breakout rooms to enhance interaction and build a sense of community among students
- Use it for students to present virtually; provide professional development; as a tool for online collaboration

Instructors can begin using the virtual classroom for office hours, then optional labs, and eventually for 1-2 required synchronous class sessions. Virtual classrooms have multiple uses such as the ability to be accessed simultaneously from different locations, a tool for collaboration and video phone calls, and a platform to deliver and retrieve online lectures. Virtual classroom archives also provides professional development opportunity both in terms of live virtual training and for self-review by viewing the archives of the previous sessions. Synchronous systems can also be integrated in blended courses. Adding two or three virtual sessions, enriches the asynchronous course and provides opportunities for the students to communicate in real time with their instructor and other classmates. Encouraging instructors to talk to peers about the use of the virtual classroom exposes fellow instructors to know how the technology may benefit them and enhance instruction.

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Increasing Student Out-of-Class Preparation and In-Class Collaboration using Team-Based Learning

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Abstract: Have you ever posed discussion questions only to be met with blank stares or furious paging through the text, obvious that most people have not read or, more optimistically, have not understood or retained the reading? Or have you designed a brilliant class exercise only to be stymied by the realization that the students do not understand the basic concepts? Do you have large classes and are looking for new ways to engage students? Never fear, Team-Based Learning (TBL) is here! Using TBL in the classroom means students take individual and group readiness assessments designed to demonstrate their out of class preparation and encourage collaboration. The Immediate Feedback Assessment Technique (IF-AT) allows you to respond immediately to the needs of the students through mini-lectures, and prepares them for working together to respond to real world activities. This session requires active involvement as participants form teams, prepare for and complete individual and group assessments, and engage in a real world activity designed to provide you with the basics of using TBL as an instructional strategy.

Literature Review

Team-Based Learning (TBL) is an instructional strategy that uses out-of class preparation and small group interaction to move students from basic understanding of concepts to real world application. It has been used in a wide-variety of disciplines and professional programs, including medical education (e.g., Haidet & Fecile, 2006; Moye, Metzger, & Matesic, 2012; Parmelee & Michaelsen, 2010), communications (Thomas, 2012), social work (Gillespie, 2012), business (e.g., Hernandez, 2002), and dozens of others (Sisk, 2011). TBL begins with good course design, especially identifying exactly what you expect students to learn, and uses instructor assigned teams (Parmalee & Michaelsen, 2010). This strategy requires students to read, watch online lectures and videos, and other assigned preparation outside of class in order to participate in in-class readiness assessments as individuals and as part of their team (Gillespie, 2010; Parmelee & Michalsen, 2010). Groups receive immediate feedback on each assessment question and the instructor can respond using "mini-lectures" geared towards the areas where students are having the most difficulty (Sibley & Parmelee, 2008). The assessments help assure students have an understanding of basic concepts, theories, and ideas that can be applied in teams to real world activities, often problem-based (Gillespie, 2010; Parmelee & Michalsen, 2010). The peer assessment is an important part of TBL to enhance student accountability and allow students to improve their preparation and collaboration skills (Gillespie, 2010). Many of the outcome studies have found positive results, though a meta-analysis found the scope of the studies to be narrow and more focused on satisfaction than learning outcomes (Sisk, 2011). However, learning outcomes studies have been conducted with favorable results (e.g, Moye, Metzger, & Matesic, 2012).

Goals and Objectives

After completing this session, participants will be able to:

- Describe Team-Based Learning (TBL), including what it is and evidence of its efficacy.
- Use three approaches to forming Teams and describe why instructor-based team formation is important.
- Administer readiness assessments using the Immediate Feedback Assessment Technique (IF-AT).
- Describe the importance of real-world application techniques used in the TBL classroom.
- Understand the importance of peer-evaluation to TBL and how to conduct peer-evaluations.

Description of Practice

This will be a highly interactive session allowing the attendees to participate in the key components of implementing team based learning: team formation; readiness assessments; real world application; and peer review. Forming teams is the responsibility of the instructor and considers students characteristics such as leadership abilities, personality, and previous educational experiences. Following a brief overview of TBL, attendees will be placed into teams using an interactive "quick-sort" method; additionally, other approaches to team formation will be demonstrated. Just as students will experience in a TBL formatted class, attendees will have a reading and will take a brief assessment using the Immediate Feedback Assessment Technique (IF-AT). Attendees will work in their teams to respond to a

real world application exercise. Finally, the participants will engage in a brief peer assessment, and other peer assessment techniques will be demonstrated. At each stage, the presenters will provide resources, best practices, and a description of why the stage is important.

Discussion

TBL is an effective way for engaging students and helping them reach higher levels of thinking, as they move from learning basic concepts to applying them to problems they may face after graduation. TBL requires a different approach to course than more traditional lecture based models, because mini-lectures are responsive to demonstrated student needs; in other words, rather than prepare 35 slides, instructors may become pretty familiar with dry erase markers and white boards as they respond on the fly to deficits evident in the readiness assessments. Only after points are clarified, questions are answered, new resources are offered, and discussion designed to elicit higher level thinking has taken place, are students ready to engage in real world activities.

Adequate class preparation is evident in class, as students are not only responsible for individual assessments but are required to participate on the team. It has been the experience of one of the presenters that student discussions are lively and interactive (music to an instructor's ears!) and peer reviews are honest assessments reflecting student preparation (or lack thereof) and participation (or lack thereof) on the team. TBL has been well received by many students, even those that sometimes balk at out of class group work.

The team requirement for this approach requires a "we are in this together" approach to coursework. Professional programs, in particular, have been making strides toward preparing students to work in interprofessional teams to solve problems in the workplace, and TBL provides the foundation for this work. Instructor assigned teams, designed to be as diverse as possible, mean students sometimes collaborate with peers they may not otherwise engage, just as in the workplace.

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Video Storytelling as an Engaging Alternative to the Traditional Paper

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Abstract: In this project, we replaced a traditional paper assignment with a digital storytelling assignment in an attempt to more fully engage students and to enhance student learning outcomes. Based on survey responses, students valued the project and recognized that deep learning was required. Instructor ratings of content, delivery, and script/writing suggest students mastered the intended skills. In this session, participants will discuss the pros and cons of digital storytelling, evaluate a video using the provided assessment tool, and create their own video assignment.

Literature Review

Twenty-five years of research shows that intrinsic motivation is important for deep learning (Sullivan, 2011). When creating course assignments, instructors should consider whether students will be motivated to work hard on the project. Research indicates that using creative and engaging projects fosters motivation (Vallerand & Bisonnette, 1992). Because many students have an aversion to writing (Sullivan, 2011), we wanted to develop a project that required the same skills (application, synthesis, reflection) but would not receive the typical negative response associated with a traditional term paper. To that end, we explored digital storytelling.

Digital storytelling has expanded with the ease and accessibility of video technology. Recommendations for effective digital storytelling include everything from storyboarding and scripting to production design and editing (Matthews-DeNatale, 2008; McLellan, 2007; Orech, 2007; Sandars, Murray, & Pellow, 2008). For our class assignment, we focused on the content and delivery of the story rather than on the video shooting and editing. Our students watched a video on storytelling (Aaker, 2013) and reviewed suggested resources (e.g., Lemmon, 2012; Wharton, 2007). Our project still required writing, but the students displayed their work orally in a video shown to the entire class. We believe the project was effective because the content was relevant to their lives (Finney & Pyke, 2008) and because they had to display their work publically (Adkins & Lyon, 2012).

Goals and Objectives

In this session, we describe a video assignment that we created to replace a paper assignment. We evaluated student motivation through an anonymous survey and assessed the videos through instructor and student ratings. Upon completion of this session, participants will be able to 1) identify strengths and weaknesses of assigning a video project, 2) determine resources needed to effectively implement a video assignment in class, and 3) articulate how they could transform one of their writing assignments into a video assignment.

Description of Practice to be Exemplified

We will open the session by polling participants to determine the range of audience experience with video projects, openness to trying a video project, and general feelings toward a video project. We will then explain the why (learning outcomes, student motivation) and how (assignment structure) of our video assignment. We will share clips from student videos and invite participants to rate them using our assessment tool. Participants will then engage in a think-pair-share where they will identify a current assignment that could be transformed into a video project or brainstorm a video project that could be developed to meet their pedagogical goals. After round-robin sharing, we will present our data assessing student motivation, learning outcomes, and general assignment effectiveness (see Table 1 and 2). Participants will then work in small groups to brainstorm the pros, cons, concerns, and resources needed for such an assignment. A final poll will assess the likelihood participants will try a video project in the future.

Table 1. Student Report of Motivation and Required Skills

	M	SD
Motivation / Value (α = .899)	3.383	.950
Perceived Skill Development (α = .837)	3.278	.620

The more motivation/value students reported, the more likely they were to be proud of their project ($r(28) = .555$, $p=.001$). Interestingly, perceived skill development was not correlated with how challenging students felt the project was ($r(28) = .270$, $p=.149$) or how long they reportedly worked on the project ($r(28) = .228$, $p=.226$).

Table 2. Assessment of Student Videos by Professors

	M	SD
Content	4.277	.473
Script / Writing	4.442	.458
Delivery	4.283	.432

Instructor ratings of the videos indicated students mastered the intended skills. Only 10% of the class performed below average, while over 1/3 of the class were scored as excellent or above average. Additionally, unlike traditional end-of-term presentations, students were highly attentive to their peers' videos.

Qualitative assessment of student reactions to the video project was conducted. Overall, responses showed critical reflection and positive perceptions of the project. Several students reported, unsolicited, in their final course evaluation that watching the videos was one of their favorite course experiences. One student shared the following in her final reflection paper:

> "The video project was a little harder for me. Everyone was forced to put their raw self out there sharing your life story for people to judge you. This horrified me to begin with, but I did enjoy learning about everyone else's background. When it came to my video, I just had to suck it up and share myself with the class."

Discussion

This session pairs a "show and tell" of our video project and how it worked with reflective time for audience members to consider whether and how a video project could work in their classes. The student videos created in our class far exceeded our expectations. The viewing session where the entire class watched each of the 30 student-created videos served as a powerful and valuable conclusion to our course. One student wrote in her final reflective paper: "I not only felt the benefits from this course in my own personal life, but I have witnessed the other 30 young women in class learn and grow from this experience."

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Using a Scenario-Based Exercise for Active Learning, Formative Assessment, and Reflective Teaching

Jacob Grohs & Gary Kirk, *Virginia Tech*

Abstract: This session is rooted in the belief that today's graduates need to develop problem setting/solving competencies relevant for an increasingly interconnected and complex world. An scenario primarily used to measure systems thinking for community problem solving, has been adapted as a tool for active learning, formative assessment, and reflective teaching in two undergraduate courses in different disciplines. The session will discuss the universality of problem setting/solving competencies and will offer reflections learned through the implementation of this scenario and how its use informed altered teaching and learning practice.

Literature Review

It has been argued that higher education institutions have a collective social contract that compels them to cultivate a cadre of leaders for the future. This future has been depicted as an "interconnected planet of uncertainty and volatility" where changes in one area can dramatically and surprisingly impact changes in other areas (Wheatley, 2007). One need only look at examples such as the role of social media in the Arab Spring revolutions (Aday, Farrell, Lynch, Sides, & Freelon, 2012; Howard & Hussain, 2013) to be convinced of increasing global integration and the failure of linear thought processes to explain postmodern phenomena. Wheatley observes that "chaos can't be controlled; the unpredictable can't be predicted. Instead we are being called to encounter life as it is: uncontrollable, unpredictable, messy, surprising, erratic" (2007, p. 114,125).

Scholars, practitioners, and administrators in leadership development, service-learning, and community engagement have long been focused on cultivating future leaders and more committed citizens; yet, it remains unclear what competencies might prepare students for the responsibilities of life in a rapidly changing future. Often, educators turn to essential civic or social outcomes, such as engaged citizenship or multicultural competence, as possible preparation for postmodern life. Proponents of service-learning as a pedagogy have argued that the integration of experiential practice and community engagement in curricular and co-curricular settings may be a means to achieve better prepared graduates (Eyler & Giles, 1999; Jones, Rowan-Kenyon, Ireland, Niehaus, & Skendall 2012); however, even as many uphold these competencies as inseparably linked to education, they can be often be diminished, dismissed, or even vilified. In a thorough analysis of service-learning philosophy and practice, Dan Butin frames the criticisms of these outcomes by referencing the writing of Stanley Fish:

> Higher education, claims Fish, should not be in the business of enhancing or expanding students' moral, civic, or social characters; nor to inveigh on current social, cultural, and political issues such as war, poverty or racism; nor to revitalize, transform, or collaborate with local and regional communities (Butin, 2010, p. 127-128).

While Fish's criticism is extreme, perhaps, it calls into question many of the motives behind the plethora of programs designed to develop social, ethical, and civic competencies. Reframing these practices to include more universally palatable dimensions may be a necessary requirement in the polar political environment in which higher education institutions operate.

This notion motivates us to identify a set of competencies that might be useful for college graduates entering communities as engaged citizens. One competency is the focus of the scenario discussed in this proposal, "community systems thinking" which is characterized by the flexibility in thought and action required for solving complex problems. This competency is one that could transcend political and disciplinary boundaries and improve effectiveness of graduates in many post-college settings.

After reviewing literature in the critical thinking, systems thinking, public policy, and leadership education fields, a framework for conceptualizing community systems thinking was developed that included the following key elements: problem definition, problem solving process, context awareness, stakeholder identification, and reflexive/iterative approach (Grohs & Kirk, unpublished). These elements closely match the efforts of several other scholars who have written about critical thinking and systemic approaches to problem solving (e.g., Paul, 1993; Schön & Rein).

From this framework, a scenario-based assessment exercise was derived that provides college student participants with an intentionally vague vignette that requires no pre-existing knowledge of theory or advanced concepts. Students are asked to work through a series of individual exercises, responding to prompts that correspond to the key elements. Responses are collected and serve as data for raters to evaluate different levels of mastery on each of the key elements using an evaluation rubric. Though this scenario has been designed primarily as an assessment tool for specific programs, it also has utility as a tool for active learning and formative assessment in the classroom.

Goals and Objectives

As the result of participation in this session, attendees should be able to:

- Understand universal applicability of problem setting/solving competencies
- Discuss the opportunities and challenges of using a problem based scenario as a tool for engaged learning and formative assessment
- Understand the importance of formative assessments and student feedback for teacher reflection and continuous improvement

Description of Practice

The presenters have utilized the scenario-based assessment tool described in the literature review as an in-class exercise in two separate classes – LDRS 1015: Exploring Citizen Leadership (Grohs) and UAP 1024: Urban Public Issues (Kirk). There were three primary purposes for the use of the scenario activity: (1) as an active learning exercise where students individually problem solve and then socially process the results; (2) as a formative assessment to learn what areas students are strongest in and which areas need additional focus; and (3) as a source for teacher reflection and continuous improvement.

Discussion

In the practice session, attendees will hear both instructor perspectives on how students responded to the activity, how it helped shape future content coverage and pedagogical strategies, and how our own understandings of teaching and learning practices were shaped. Though this proposal has focused on practices surrounding a particular scenario used in two courses by different instructors, we hope to foster general conversation on (1) the use of scenario-based exercises for active learning and teacher reflection and (2) the universality of problem-setting/solving competencies across disciplines.

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Creating Passionate Student Researchers: Ten Project Information Literacy Findings That Can Make a Difference

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Abstract: When it comes to student research, faculty and academic librarians express similar desired outcomes for college students. Both want students to be passionate about research, to move from surface to deep research and analysis and to utilize resources appropriate for college-level scholarship. However, for faculty, the term "information literacy" may be off putting as it seems like one more institutional requirement. If we can move beyond the terminology and focus on shared outcomes, the research produced by Project Information Literacy (PIL) can support faculty efforts to create passionate student researchers. Since 2008 PIL, originating at the University of Washington, has shared findings from multiple types of studies focusing on student research and faculty research assignments. This practice session will share ten findings from PIL's studies that can help faculty to facilitate better student research skills and habits. When faculty are better informed about student research behavior it can lead to collaboration with their library colleagues that promotes quality student research.

Literature Review

Information literacy initiatives are structured to integrate the resources of the academic library into the teaching and learning process so that students are both learning about college-level scholarship and applying high quality academic content in their analysis and writing. Despite these efforts, at last count, only 13 percent of a sample of test–takers made up of high school seniors and college students could be considered information literate. (Head, 2011) Librarians work to promote the merits of information literacy instruction to faculty, understanding information literacy skills to be essential to students' academic development during their years of study and beyond. While information literacy and the Association of College and Research Library's (ACRL) standards are increasingly being valued at an institutional level, librarians still report that course instructors can be resistant to "give up" class time to librarians (Badke, 2005; Given and Julien, 2005;Julien, 2000). Chiste et al. (2000) speak to this particular challenge by suggesting that librarians must use special "tactics" and "maneuvers" to "infiltrate" a professor's classroom. (Hanz, et.al., 2013) Project Information Literacy can provide a new strategy by offering research that documents student research behaviors. It's initial report, issued in 2009, was hailed as a "landmark study that confirms and expands" on what we know about student research behavior. (Weiner, 2010). The current literature is inadequate in identifying ways in which practitioners can use the Project Information Literacy findings to help faculty better integrate into their pedagogy methods to improve student research skills.

Goals and Objectives

After an initial overview of the current challenges in raising the quality of student research, participants in this session will be introduced to the existing six reports produced by PIL. The presenter will summarize both the research and methodology of each research study and then present a set of ten recommendations for faculty who want to integrate new strategies for advancing student research based on the PIL research findings. At the conclusion of this session faculty will be prepared to revise their syllabus and assignments, along with in-class activity, to improve student research.

- Review the current challenges of information literacy initiatives in order to understand why they currently may fail to reach faculty or convince them of the value of research instruction;
- Introduce the existing six Project Information Literacy reports in order to create awareness about the scope of the project and its impact on what we know about student research behavior;
- Identify the key findings of each Project Information Literacy report in order to differentiate the approaches that may be taken to improve student research;
- Establish where the Project Information Literacy research points to current practices that leave students confused about collegiate-level research in order to identify ways in which faculty-librarian collaboration could help bring clarity to research assignments;
- Conduct multiple polls about faculty research assignment practices in order to integrate interactivity into the presentation and have attendees learn about the practices of their colleagues;

- Provide a set of ten strategies that faculty can use in order to modify existing or implement new strategies for creating passionate student researchers.

Description of Practice

This practice session is based on a workshop conducted at Temple University by the library staff as well as others conducted by the presenter, both online and at another institution. In these sessions faculty and librarians are engaged in the exploration of the PIL research. The experience from these previous workshops makes for a strong case that faculty have much to learn from a review of the PIL studies and the appropriate findings. It is almost always the case that faculty will self-discover that some of their own practices that may creating barriers to creating passionate student researchers. Using the PIL research as a bridge between faculty and librarians fosters better research between the two that leads to practices that can help students get engaged with higher-level research skills. The end result is that faculty see students using more quality information resources, fewer popular sources, engaging more regularly with librarians and producing better scholarship.

Discussion

My own library at Temple University is a good example on one in which we make reasonably good progress in establishing an information literacy initiative. It is integrated into the General Education Program, and all First-Year Writing students receive library instruction. Librarians conduct outreach to integration instruction elsewhere in the curriculum, and work with many capstone courses. Yet there is hardly widespread acceptance by faculty that information literacy instruction is a critical part of their courses, and some view it as another bureaucratic intrusion on their teaching practice. When faculty and librarians communicate openly about their research goals for students, there is shared desire to see students emerge from the institution as passionate researchers in the discipline. The advantage of introducing faculty to PIL is that it allows for the development of some new pedagogical practices, designed to improve student research that is based not solely on librarians' anecdotal evidence but methodologically sound research issued in a series of reports. The reports range from helping students put their research into the context of broader course content to their skill in evaluating web content to their level of preparation for workplace research responsibilities. This practice session will deliver practical techniques that most faculty can readily integrate into their existing course content. The goal is to shift the faculty perception of information literacy skills from an awkward appendage to disciplinary learning to a core pedagogical practice.

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A Transformational Twist on Learner-Centered Teaching: Experience and Existential Phenomenology

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Abstract: This session will focus on practices derived from an in-depth study of one instructor's deeply informed beliefs in existential phenomenology—a philosophy that emphasizes the perception of personal experience. These beliefs enrich a learner-centered approach and can be used in teaching throughout higher education. Our research team collected extensive data regarding the experiences of students and this instructor in two sections of a graduate level seminar. We established the importance of (1) first person experiences shared by students and the instructor in relation to course content, (2) the instructor's emphasis on description rather than explanation of course content as well as providing sensory and affective experiences, and (3) the collaborative, caring environment in which students felt safe and comfortable in struggling with difficult concepts and were deeply aware of and sensitive to their peers. Subsequent utilization of practices informed by these findings in other courses at undergraduate and graduate levels resulted in highly positive experiences as described by students and their instructors. During the session, participants will analyze examples of practices we derived from our research, discuss ways to incorporate these practices in their own teaching, and learn skills needed to successfully use these practices.

Literature Review

An APA task force (1997) developed a list of principles of learner-centered teaching derived from a huge body of literature related to effective teaching at various levels of learning. In recent years, literature on effective teaching in higher education often refers to these principles, resulting in increased student engagement and interactive activities (Blumberg, 2009, Fink, 2003, Learner-centered Principles Work Group of the APA Board of Educational Affairs, 1997, O'Brien, J.G., Millis, B.J., & Cohen, M.W., 2008, and Weimer, M. 2002). These principles include (1) cognitive and metacognitive factors about the nature and goals of the learning process, construction of knowledge, strategic thinking, thinking about thinking and the context of learning; (2) developmental influence on learning; (3) emotional/affective and social factors; (4) diversity and individual differences in learning; (5) motivational factors; and (6) assessment of learning and performance. This literature in general does not account for the philosophical foundations of a learner-centered approach—especially that of existential phenomenology (Merleau-Ponty, 2002). While a number of authorities have written about a phenomenological approach to teaching and learning especially in k-12 education, their work is neglected in literature on learner-centered practices in general. For example, Selvi (2008) reviewed much of this literature on phenomenological pedagogy. In Franklin's (2013) extensive review of phenomenological principles, she observed, "A phenomenological approach to education, in contrast, asserts the primacy of individual experiences, thinking, knowing and being. Freedom, personal vision, self-discovery and conscious awareness are its characteristic qualities" (p. 34). Our research describes the experiences of those engaged in a phenomenological approach to learning and their relation to learner-centered principles derived from other forms of research on teaching and learning.

Goals and Objectives

The session will be led by one or two of our research team members although others will be available to join the discussion. Participants in this session will review basic ideas regarding existential phenomenology underlying our learner-centered approach to teaching in higher education, how these ideas were applied by the instructor in our case study, and how their application enriches a learner-centered approach. They will then analyze scenarios from transcripts of seminar sessions that were the focus of our research. Next, participants will explore insights we derived from our research and how members of our research team have used practices based on these insights in additional courses. Finally, participants will explore how they might adapt these practices to their own teaching. At the conclusion of the session, the participants will understand how existential phenomenological ideas can lead to (1) fine tuning of their instructional approaches, (2) enhancement of the depth of students' experiences, and (3) cultivation of skills needed to utilize these practices.

Description of Practices

Our research demonstrates that planning for instruction using these practices is predicated on decisions about how to "launch the world of my students" (Pollio as quoted by Franklin, 2013). It centers on asking questions: What is the lived experience of the students? How do we get it? What do we do with it? These practices include determining how to (1) develop classroom activities that emphasize course content through the lens of students' and instructors' personal experiences, (2) emphasize description rather than explanation of course content, (3) facilitate student engagement in exploring their own and others' perceptions in a safe and caring environment, and (4) gather information about students' perceptions to inform teaching and learning throughout the course.

Discussion

Our research team members who teach educational psychology courses emphasize the understanding of learner-centered principles as applied to effective teaching and model these practices in their courses. We solicited the involvement of other team members who focus on the philosophy of existential phenomenology and related research, and one professor emeritus that is well known for the transformational experience graduate students report as a result of his seminar. Our case study of two sections of the seminar involved analysis of five types of data: (1) transcripts of planning sessions of the instructor and an assistant prior to each class session, (2) the reflections of the instructor and assistant after each class session, (3) excerpts from transcripts of class sessions, (5) student open-ended, written reflections at the conclusion of each session, (6) focus group interviews at the conclusion of the course, and (7) individual student interviews at the conclusion of the course. Our results from this extensive data collection and its analysis indicate that the students report a personal transformation in their lives based on understanding of the importance of perceptions and experience, immediate application of course content to their professional and personal lives, and a consistent and important focus on the learning community they developed with the instructor and, particularly with other students. Our work establishes that respect for the philosophy of existential phenomenology enriches an instructor's ability to apply learner-centered principles in a uniquely effective manner.

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Conversation: Utilizing Service-Learning TAs in the Classroom

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Abstract: Virginia Commonwealth University has long been a hub of innovation and discovery. A crucial part of VCUs multi-tiered strategic plan, the VCU Quest for Distinction, directs administrators and faculty to take learning beyond the walls of the classroom to help develop students' leadership capabilities, promote civil discourse, and to reinforce bonds between the individual and the greater community. In the case of VCU, located in the heart of a thriving, populous city, its service-learning component of the Division for Community Engagement currently serves over 3,000 students who in turn work in tandem with hundreds of community partners. As the service component of these classes is invaluable to university, greater community, and city, and as the student population and the body of faculty grows, the service component must be accessible to administrators, faculty, and students alike, as well as to the organizations served. An integral part of VCU's service-learning program is the innovative and unique system it employs in utilizing undergraduate and graduate service-learning teaching assistants. The model allows students to work with a professor in an individual service-learning course while also taking part in a practicum with other students serving as TAs for other service-learning instructors in a variety of disciplines. The teaching assistants provide valuable assistance to the classrooms they serve, but they also explore the pedagogy of service-learning while building community with other experienced and engaged students. This conversation session will explore that model as well as specific examples of how faculty utilize teaching assistants and what the students have gained from their experience. An administrator, faculty members, and teaching assistants will facilitate.

Literature Review

In service-learning classes, students engage in organized community-based service activities that meet community-identified needs and participate in guided reflection that helps them connect their service with academic learning. Studies have shown that students engaged in service-learning courses demonstrate higher academic achievement, increased cognitive development, and higher levels of civic engagement (Cress et al., 2010). Service-learning involvement has also been linked to increased retention, particularly amongst students who are at-risk for not completing college (Astin & Sax, 1998). Although service-learning courses may help students grasp the course content better and become more engaged in the learning process (Eyler, et. al., 2001), some instructors are hesitant to use service-learning pedagogy because of the increased workload that teaching a high-quality service-learning course can entail (Bringle & Hatcher, 1996).

Implementing an undergraduate teaching assistant model to support student learning outcomes in service-learning provides the student TAs with opportunities to develop leadership skills while giving their peers access to collaborative mentoring that encourages collaboration and inquiry (Chandler, 2005). TAs also provide the instructor with much needed additional instructional assistance to support quality service-learning. Service-learning Teaching Assistants (SLTAs) at Virginia Commonwealth University have proven to be a quality and cost-effective resource for instructors and administrators committed to making service-learning meet the needs of both the community and students.

Goals and Objectives

The facilitators' goals will include participants leaving the conversation with a clear understanding of:

- one successful model for utilizing service-learning TAs;
- ways TAs can benefit instructors in the service-learning classroom;
- the benefits to the students serving as TAs, the students enrolled in the class, and community partners; and
- examples of other uses, benefits, and models from the audience.

Description of Topic to be Discussed

The topic is the utilization and benefits of including TAs in the service-learning classroom. An overview of VCU's model for the service-learning TA program will be included with an emphasis on the diversity and flexibility of the

types of activities the TAs complete. An administrator will explain an overview of the program, two faculty members will discuss their unique experiences with incorporating TAs into their service-learning courses, and two teaching assistants will review their perspective on the program and the experience.

Facilitation Techniques

After brief introductory comments from each facilitator, the audience will be asked to share any experiences they have with service learning TAs so attendees can get a broad overview of the possibilities. The facilitators (administrator, faculty members, teaching assistants) will have a prepared list of questions for the audience to keep the conversation moving should it stall. A portion of the allotted time will be set aside for a Q&A session with current service-learning teaching assistants.

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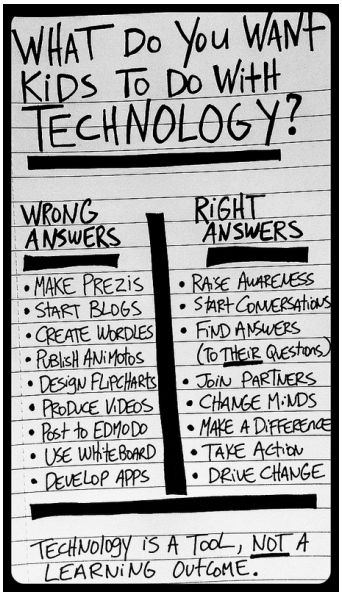
Conversation: Active Technologies for Engaged Learning

Marc Zaldivar & Teggin Summers, *Virginia Tech*

Abstract: This conversation delves into the notion of "active technologies" and how they might be approached to promote engaged learning.

Literature Review



In July 2013, an image in Flickr went viral. It was viewed over 4,000 times and retweeted over 500 times on Twitter. The image that caused such a flurry of interest strongly argues that "Technology is a tool, not a learning outcome" (teachingquality). This sentiment echoes what many pedagogues have said for decades and resonates with the philosophy of electronic portfolios. (Cambridge, Chen, & Ketcheson, 2004; Wagner & Lamoureux, 2006; Yagelski, 1997). As the popular images shows, people often approach technologies as if they were learning outcomes. For example, saying, "I want my students to blog," as opposed to encouraging students to systematically and cyclically reflect and collaborate with one another, using a blogging system as a platform for these activities. From this perspective, when one focuses on the goals for learning and the learning outcomes, one can then map appropriate technologies in ways that promote the achievement of such learning outcomes. This is applicable to the field of electronic portfolios, as educational scholars in the discipline have consistently placed an emphasis on the learning processes associated with electronic portfolios.

ePortfolios are deeply connected with what Helen Chen calls folio thinking, which embraces a process of learning: reflection; self-assessment of growth over time; integration and synthesis of learning; and self-identify as a learner (Chen & Mazlow, 2002). When one is focused on reflection, self-assessment, integration, and synthesis, it is often the case that ePortfolios provide a useful medium for engaging in such activities. Additionally, it is becoming increasingly clear that there are many technologies that support and promote active learning.

Goals and Objectives

The goal of the session is to have a dynamic and lively conversation surrounding the concept of active technologies for engaged learning. The facilitators are eager to share thoughts, ideas, and questions. More importantly, we are eager to hear participants' thoughts, ideas, and questions. By the end of the conversation, we hope that all attendees will come away with

- a clearer sense of what an active technology might look like,
- a stronger idea of what engaged learning means to them,
- a broader perspective on the role of academic technologies and learning,
- resources they may refer to as they continue their thinking on such a prescient topic,
- ideas as to how they might active technologies within their own learning environments.

Description of Topic to be Discussed

The recent ECAR Study of Undergraduate Students and Information Technology report states, "students expect their instructors to use technology to engage them in the learning process" (2012, pg. 9). We are currently living in a knowledge society and communication economy, and while we can all agree that technology is not a learning outcome, it is equally important that we do embrace active technologies for engaged learning.

Facilitation Techniques

This conversation will be facilitated using dynamic and interactive approaches. Facilitators will open the conversation by briefly providing context for the discussion, which will include multiple media, such as videos and

audio/visual presentations. We will also plan time for community and trust building, in order to encourage open participation from all members of the conversation. We will provide questions for discussion but also include flexibility to pursue participants' interests in the topic. Finally, resources will be provided for future reference and, if appropriate, we will collect participants' contributions and include in an open, web-based location so that all members of the higher education community might benefit from the discussion.

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Friday

February 7, 2014

Session 14

11:20-12:10 PM

http://www.cider.vt.edu/conference/

Professors Learning Together: Using Faculty Learning Groups to Implement Change

Shannon M. Chance, *Hampton University*
Gavin Duffy & Brian Bowe, *Dublin Institute of Technology*

Abstract: This session describes a research project completed by a cross-disciplinary group of researchers at the Dublin Institute of Technology (DIT) in Ireland. The team used interpretive, hermeneutic phenomenology to analyze experiences engineering teachers had as part of a peer-learning group seeking to implement changes in the classroom. The group met monthly for a year to discuss how to facilitate group work among students in their classes. The study sought to distill the essence of being part of this group. The research team interviewed members of the group, analyzed transcripts, identified statements about experiences they had, created summative structural and textural descriptions, and synthesized these into one structural-textural composite. They also created a graphic model that can be used by others who seek to implement change in their own programs. The detailed manuscript reporting this study is under final review with the *Journal of Engineering Education* (Chance, Duffy, & Bowe, in press). Major findings will be presented in this session, and the graphic model will be disseminated and explained.

This study investigates a shift from traditional, teacher-centered pedagogies to student-centered learning evident over the past six years at DIT. The transformation involved implementing group-based project-driven activities across the electrical engineering program. In interviewing faculty members, we uncovered a change mechanism that we have defined as a "learning group". In this case, a small collection of teachers met each month in a comfortable, informal setting. They discussed challenges and ideas related to student group work. Topics included how to grade fairly and provide timely feedback. Discussion spilled over into social settings and administrative program meetings. The presence of a formalized group helped encourage, implement, and sustain change that is now recognized across the institution as an exemplar.

Literature Review

Today, many teachers at DIT use group-based student-centered pedagogies (including problem- and project-based learning) in place of traditional pedagogical approaches (i.e., lectures, laboratories, and standard tutorials). These new approaches derive support from theory and empirical research. Change is desired in engineering education, but has been difficult to achieve (McKenna *et al*., 2011). Deficits in engineering education have been noted by the Boyer Commission (1998), the National Science Board (2007), and in multiple books (Eastman, McCracken, & Newstetter, 2001; Sheppard, *et al*., 2009), journal articles (Rugarcia *et al*., 2000; Walkington, 2010), and conference papers (Shurman *et al*., 2002). Moreover, the existing literature suggests that changing teachers' perceptions of how learning occurs helps them move from teacher-centered lectures to more student-centered conceptions of teaching (Barrie, 2007). This can transform the learning experience of students: where enough teachers implement change at the level of a course or module, students' overall experience in a program can be transformed (Chase & Rowland, 2005). For instance, Duffy and Bowe (2010) believe that sustained delivery of student-focused teaching—which facilitates students' progressive development of technical as well as generic skills—can equip students as self-directed, lifelong learners (Miflin, Campbell, & Price, 2000). Creating such a shift in the classroom requires changing teachers' concepts about learning. Ho, Watkins, and Kelly (2001) studied 12 teachers over two years and found that "*without a change in conceptions, no change in practice is likely*" (p. 164). A shift in conceptualization is something that traditional workshops rarely achieve (Trigwell, Prosser, & Taylor, 1994).

Methodology

The research question guiding our analysis was: *What is it like to experience membership of a learning group in a school where tangible change towards student-centered learning is occurring?* To understand how the people who made this happen experienced and achieved change, out team conducted in-depth semi-structured interviews with eight individual faculty members. We followed a phenomenological approach—using the highly structured format developed by Moustakas (1994) and recommended by Creswell (2007)—to analyze interview transcripts. We identified non-repetitive meanings of the experiences and used these to develop a composite textural-structural description of features that were essential to the phenomenon of the learning group.

Results

Our final report describes overarching experiences of 'learning group' members during the period of transformative change in the program. The manuscript identifies factors that influenced the group's success with changing their teaching practices program-wide. It explains what affects group participation had on them and on the transformation. It identifies characteristics that made the change stick.

Discussion

Our analysis of experiential data identified elements that faculty members perceived as key to the change that had happened in this electrical engineering program. All members of the learning group described having (1) an active champion, (2) an experienced and informed advisor, (3) various forms of institutional support, and (4) a group of colleagues interested in implementing new pedagogies and discussing teaching practice. Our findings are contributing new perspectives to the literature on change management related to engineering education.

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Talking About Diversity: What Students Say

Susan Swayze & Rick Jakeman, *The George Washington University*

Abstract: Diversity is a vital part of university strategic plans from faculty and administrator recruitment, to student enrollment, to classroom experiences. This study reveals how graduate students at one university perceive diversity and inclusion in their classroom environment. Seventeen minority (non-White and LGBT) students participated in individual interviews. In general, students defined diversity numerically while inclusion was defined as an action – a process. Non-White students described diversity as something that can be observed whereas LGBT students described diversity as having a voice. This study highlights students' definitions of diversity – how they are similar and how they differ – as well as their perceptions of diversity and inclusion in their classroom environments.

Literature Review

Most students rely on past experiences to form their views of diversity (Hurtado, 2007). These experiences may result in positive interactions on campus and in classrooms are negatives ones such as chilly campus climates and marginalization of minority students. Institutions have responded by offering courses, workshops, and events aimed at diversity as well as faculty and staff trainings (Case, 2007). Pitt and Packard (2012) found that White and African American students contributed differently to course discussions with White students contributing more to classroom discussions than their African American counterparts. While numerous studies focused on racial minorities, this study is unique in that we interviewed two minority groups – non-White students and LGBT students. This study utilized Gurin, Dey, Hurtado, and Gurin's (2002) theory of diversity and learning as an interpretive lens. The theory posits, "the actual experience students have with diversity consistently and meaningfully affects important learning …" (Gurin et al., 2002, p. 358). Thus, the theory suggests that diversity affects learning.

Methodology

Given the complex nature of diverse learning environments, basic interpretive qualitative research design (Merriam, 2002) was utilized. Data was collected in the Spring 2013 semester using one-time, audio-taped, semi-structured interviews with 17 graduate students. Interviews followed an interview protocol that was developed based on literature and pilot testing. The semi-structured interview protocol consisted of 20 questions, and interviews lasted from 40-60 minutes. The interviews were transcribed verbatim and the qualitative data was analyzed using Saldana's first and second cycle coding method. The data was analyzed collectively as well as in categories of 1) non-White student perceptions and 2) LGBT student perceptions. This process allowed for the development of open codes to identify and trace ideas and constructs, as well as theoretical codes to track and link constructs found in the data (Saldana, 2009). Two cycles of coding allowed for patterns in the data to be recognized, reflected upon, and re-integrated as a part of the data analysis process. All categories of data (collective, non-White, and LGBT) were analyzed using thematic analysis techniques and the theory of diversity and learning as an interpretive lens. The qualitative data software, *ATLAS.ti v6*, was used to store all student interviews. There were 17 graduate students included in the study. Participants were enrolled in higher education administration graduate programs at a large urban private university in the Mid-Atlantic. Students were enrolled in at least 6 credit hours during the Spring 2013 semester and self-identified as non-White and/or LGBT. The sample consisted of 13 non-White students, 6 LGBT students, and 2 students who identified as both non-White and LGBT. 10 students identified as female, 7 male; 6 students were pursuing a masters degree, 11 students a doctoral degree.

Results

Findings suggest that non-White and LGBT students described diversity as number-oriented, while inclusion was process-oriented. Diversity was described as a specific number or percentage of representation. Inclusion was described as a process, requiring action on behalf of the university. The second finding suggests that non-White students perceive diverse and inclusive campus learning environments differently than LGBT students. Non-White students described diverse and inclusive classroom environments as having a welcoming feeling with visible signs of diverse individuals and groups. LGBT students described diverse and inclusive classroom environments that gave voice to all members, supported divergent views and experiences of diversity and inclusion.

Students described diversity as number-oriented. However, in order to create an environment that supported the needs of diverse students, universities needed to commit resources to achieve campus inclusion. For example, Ann, a non-White student, stated that diversity is a goal but should be extended to ensuring inclusion on campus, "I think that a diverse university would have those key populations and the admissions office would be super pleased because they could say that we have this much percentage of these people. … But other than just having a critical mass, nothing has been done beyond that. It's like the university says, 'Oh yes, we have the critical massive numbers and we are completely diverse,' but then that is the end of the story. Where as an inclusive university might … put resources into having heritage months, or having a center for LGBT issues, or having a multi-cultural center, or having counseling services. I think most universities definitely have these resources … I think that realizing that the work is not done is a key part."

When describing a diverse and inclusive campus environment, non-White students described a welcoming feeling with visible signs of diversity. LGBT students described campus environments that gave voice to all students. Sarah, a non-White student, described visible aspects of a diverse and inclusive environment – "… for the university to be inclusive, there has to be a core fundamentally recognized value in the top echelons of the university coming from the president, the cabinet, and the deans. It is symbolic to me - like if there was an African-American dean, if there was a Hispanic dean or different individuals that are from different ethnicities that are non-White to be in a high position because I feel that is symbolic for an individual like myself." Meg, another non-White student, stated that a welcoming environment reflected a diverse learning environment, "A university that has the different diverse groups and they help you to feel welcome. They have clubs and organizations. So, not only do they get [minority students] in the door … but they want you to feel welcome and engaged. … To me, a university that has inclusion, not only do they get minority students there, they help you feel welcome."

LGBT students described diverse campus environments differently – they described the need for campus members to be able to express their voice as Tyler, an LGBT student, stated "Everyone has a voice, everyone feels they have a voice in the room and that what they have to say matters. People in the room may not agree with what they have to say but they respect the fact that they have an opinion and that they have ideas to share. … If I feel that I am in an inclusive environment, I feel that I can share my feelings, my opinions without having to filter those, that there is a climate of respect in the room." These findings lead to a greater understanding of how students perceive diversity.

Discussion

This study suggests that there are differences in minority (non-White and LGBT) graduate students' perceptions of diversity. The lack of a common definition of diverse learning environments presents concerns for how students interact with each other and attempt to understand other students' perspectives. Hurtado's (2007) assertion that student background and prior experiences can undermine the educational benefits that come from campus diversity as suggested by Gurin et al. (2002). Awareness of the differing views regarding diversity can aid in contributing to and expanding the diverse learning environment. Implications for practice will be discussed.

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What We are Learning About "Flipped Instruction" in Graduate Education

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Abstract: The presenters of this practice session will describe how "flipped instruction" is being utilized in a master's level counseling theories course for first year graduate students. "Flipped instruction" offers the opportunity to structure student learning as a dynamic progression from discrete pieces of information to theoretical case formulations using out-of-class time as reinforcement of knowledge and in-class time as synthesis and analysis. Grounded in adult learning pedagogy and constructivist approaches, the "flipped" classroom combines benchmarks for knowledge acquisition outside of class so that in-class time can be spent engaging in discussion, application, and critical analysis of the respective counseling theory. Participants will learn how the course was structured, view sample lesson content, and engage in discussion on the challenges and successes of "flipped instruction" in graduate education.

Literature Review

"Flipped instruction" derives its name from "flipping" the classroom/homework paradigm that has been the earmark of modern education. It is an intentional altering of instructional pedagogy during and outside of class time (Seaman & Gaines, 2013). Most high profile examples (e.g., Khan Academy) use teacher-made videos for the direct instruction (i.e., lectures) so that students can monitor their own knowledge acquisition; they can rewind the video as many times as necessary or fast forward through what they understand (Fulton, 2012). Benchmarks are used to hold students accountable for what needs to be "learned" so that the focus of class time is to apply, analyze, reflect, and evaluate their "new" knowledge (Tucker, 2012). This new age paradigm draws on constructivist learning strategies that focus on teacher as guide, knowledge construction, collaborative learning, reflection, and real-world application of knowledge acquisition. Although promising, "flipped instruction" is not without its challenges. Specifically, these include initial student reluctance and unpreparedness for active learning in class and obtaining relevant and quality videos for outside of class learning (Herreid & Schiller, 2013).

A further sophistication comes as one moves from a pedagogy (i.e., teacher-driven instruction) to an andragogy (i.e., learner-driven instruction) model. The andragogy (Knowles, 1968) model is transformative because it taps into adult learners' motivation in wanting to know and understanding why it is important to know, by showing how to learn and relating to previous knowledge and experiences, and to assure learners and help them overcome barriers to learning (Pew, 2007).

Counselor education is about significant learning; it is about the attitudes; knowledge, skills, and practice; and the complexity of professional work (Council for Accreditation of Counseling and Related Educational Programs, 2009; McAuliffe & Eriksen, 2011). Teaching counseling theories presents a dilemma in that students need to learn a range of theories from which to conceptualize human beings and their problems and yet need to develop an integrated, meaning-making system that can be applied in the real world context of counseling. The authors of a recently published text, *Teaching in Counselor Education: Engaging Students in Learning* (West, Bubenzer, Cox, & McGlothlin, 2013), provide a number of suggestions in how to use experiential education, out-of-class learning activities, and technology. This framework is being adapted to "flipped instruction" in a graduate counselor education program to teach counseling theories.

Objectives

As a result of this session, participants will be able to:

1. Describe how "flipped instruction" is appropriate for adult learners.
2. Explain the rationale for "flipped instruction" in a graduate counselor education program.
3. See examples of course content, design, and evaluative methods used in a "flipped" counseling theories course.
4. Engage in a critical analysis of the challenges and successes using "flipped instruction" in graduate education.

Description and Discussion

Participants will learn how "flipped instruction" is being utilized within a counselor education graduate classroom setting. They will observe how the instructor designed the course content, maintained student engagement, transferred course content to counselor application, and provided evaluation using this approach to teach counseling theories.

Participants in this session will be asked to examine the information presented for the expressed purpose of helping to evaluate the validity of the "flipped instruction" approach to teach counseling theories. Participants will be co-constructors of the challenges and successes review so that the presenters can more critically appraise this andragogical-constructivist framework for significant learning in graduate education.

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Creating Community and Engaging Learners through Peer Tutoring

Angie Woods & Teresa Roig-Torres, *University of Cincinnati, Blue Ash College*

Abstract: In this practice session, participants will learn about integrating peer tutoring into second-year, non-major courses. Peer tutoring helps engage students in learning, helps create community amongst students outside of the classroom, and helps fulfill the tutoring needs of first-year students. Participants will discuss challenges and successes of teaching second-year, non-major courses and will develop ideas to integrate peer tutoring into their own courses.

Literature Review

Peer tutoring, which is when more experienced students tutor less experienced students in a collaborative environment (Beasley, 1997), has been shown to increase motivation for learning (Miller & MacGilchrist, 1996; Wentzel & Caldwell, 1997) by providing a social interactional context for learning (Goodlad, 1998; Topping, 1996; Topping & Ehly, 1998). Thus, peer tutoring supports Vygotsky's theory of the zone of proximal development (Mynard & Almarzouqi, 2006). The zone of proximal development is "the distance between the actual developmental level, as determined by independent problem solving, and the level of potential development, as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). In addition to being beneficial for the tutee, peer tutoring is also beneficial to the tutor (Beasley, 1997; Colvin, 2007). Peer tutors often confirm that the best way for students to demonstrate understanding of a concept is to teach it to someone else (Beasley, 1997).

Goals and Objectives

In the beginning of the session, participants will discuss the challenges that they have experienced when teaching second-year, non-major courses. They will then learn about integrating peer tutoring as a way to mitigate these challenges. Next, participants will brainstorm ways to implement peer tutoring into their own courses. Finally, participants will discuss the potential effects that peer tutoring could have on students.

At the conclusion of the session, participants will be able to:

- identify challenges teaching second-year, non-major courses;
- indicate how peer tutoring can lessen the difficulties of teaching second-year, non-major courses;
- begin to formulate specific approaches to implementing peer tutoring in their courses; and
- describe the benefits of peer tutoring.

Description of the Practice

In this session, we will model how to integrate a peer tutoring, service-learning component in a course. We will start by having a large-group discussion about the difficulties of teaching second-year, non-major courses. Then we will explain the reasons that led us to include a peer tutoring component in our courses. Next, we will explain, step by step, the process of how the component was developed and implemented. Through guided discussion, participants will work on identifying possible ways in which peer tutoring could work in their courses and institutions. We will share and explain sample assignments, such as tutoring logs and reflection prompts, as well as student observations on how peer tutoring benefitted them.

Discussion

As professors of second-year, non-major courses, we, at times, have had difficulty keeping students engaged and interested in the course content. Additionally, many of our students express a lack of confidence in their abilities. As both of us have witnessed the positive effects of service-learning on students, we often discussed how service-learning could have an impact on our second-year students. While traditional service-learning courses require that students fulfill a community need in the community-at-large, we realized that we had a community much closer that was in need, our first-year students. We began to develop the idea of an internal service-learning project, where second-year students tutored first-year students. While there are many benefits to peer tutoring, there are lessons that

we learned after incorporating it as a service-learning component in a course. For example, we learned about the importance of working together as a team; we learned that it is essential to prepare both the tutors and the tutees; but perhaps most importantly, we learned that the impact that peer tutoring had on the students reached beyond their academic success.

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Limited Only by Imagination: Standardized Patient Methodology Used in Non-medical Curriculum

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Abstract: Principles used to help medical students learn to assess and manage their patients may be integrated into leadership programs and educational curriculum offered in many disciplines. Application of a successful model of simulation based interaction to clinical and leadership development programs will be described in this presentation. Participants will engage in guided discussion assessing the scope and practical application of this methodology and explore opportunities for application. Participants will examine faculty and learner roles in small group experiential learning settings as well as assessment techniques using both formative and summative feedback.

Literature Review

Live learner simulations give participants a true experiential learning opportunity in a classroom without risk of harming real consumers of service. A realistic practice scenario allows learners to practice and receive valuable feedback from other learners, faculty and standardized clients or employees (Kenyon, 2001).

This method uses scenarios derived from real case examples that are structured to provide common challenges. It uses trained simulators to portray clients or employees and gives live and immediate feedback to learners.

Often preparation programs are challenged to assess student learning outcomes using a more authentic assessment methodology (Buckner et al. 2007) The effectiveness of the medical community use of Standardized Patients (SPs) or clients, has led to their use in other fields as well (Larson and Tobin 2000) However the use of standardized clients outside the medical school environment is still limited. Often in nonmedical training, instructors request that former students play the role of the standardized clients (Hodgsen, 2007). Role play is used frequently and while experiential, the true character of the client is well known to others in simulation experience (Kenyon, 2001; Hodgsen, 2007, Bosek et. al, 2007).

Simulation may be used in scenarios that range from using individual consumers, couples, families, and groups. The settings for scenarios may be in leadership situations, therapy, health education settings, and teacher education. The application of this methodology is limited only by the user's imagination.

Goals and Objectives of the Practice Session

Upon completion of the session, participants will be able to:

1. Define and describe human simulation (known as standardized patients in medical education)
2. Recognize reasons for the use of simulation in the classroom
3. Recognize areas for application of simulation in the classroom beyond medical education
4. Develop strategies to apply standardized patient methodology to teaching and assessment in non-medical education curriculum

Description of Practice to be Modeled

The presenters will synthesize scholarly literature on the use of simulation in a variety of applications beyond medical school curriculum, including principal leadership programs, marriage and family therapy, social work, and interprofessional training. The presentation will include a description of how human simulation may be used in small group teaching sessions and performance-based assessment.

The session facilitator will lead discussion on potential applications in a non-medical school setting using the following discussion questions.

Discussion Questions

1. What experiences does the audience have with simulation in the classroom?
2. How can this methodology be used in your institution?
3. What are the prohibiting factors in your institution? How may they be overcome?
4. What more do we need to address to apply this methodology at your institution?

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Practices to Support Students as Disciplinary Writers

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Abstract: Supporting students' efforts to write for their discipline can be difficult for those who mentor student writers. This practice session introduces participants to writing strategies proven to increase student writers' confidence, motivation, and productivity. The session also details the challenges student writers commonly encounter as they write for conference presentation and publication.

Literature Review

Despite its importance within education research and beyond, the pedagogy of disciplinary writing for publication is relatively understudied (Aitchison & Lee, 2006). This is perhaps because most who learn to write for publication do so under the tutelage of their faculty advisor, considered by many as a private pedagogical space (Manathunga, 2005). However, most advisors receive no formal training in the pedagogy of disciplinary writing either as a student or subsequently, as an advisor. Some advisors may struggle to make transparent the often tacit disciplinary norms and practices that underlie writing and publication (Paré, 2011). Few colleges and universities provide meaningful training to support disciplinary writing development (Maher, Timmerman, Feldon, & Strickland, 2013). Additionally, honest dialogue around the difficulties many faculty and their students experience while writing for publication is often scarce or nonexistent (Gassman, Maher, & Timmerman, in press).

This practice session addresses these educational concerns by showcasing writing strategies to increase student writers' confidence, motivation, and productivity. The session will also detail the challenges student writers commonly encounter as they write for conference presentation and publication (Maher, Feldon, Timmerman, & Chao, accepted) and will discuss how faculty advisors and others can best support their students' efforts to write for their discipline.

Practice Session Goals and Objectives

By attending this session, participants will:

- Learn how to identify and address challenges that student writers commonly encounter as they learn to write for publication;
- Learn how to support their student writers' development of writing habits that promote disciplinary writing productivity;
- Actively participate in writing strategies designed to increase student writers' confidence, motivation, and productivity.

Description of Practices to be Modeled

Identifying a Journal Home for Your Manuscript

Almost 600 higher education journals are in active publication; finding the right one for your students' manuscripts is essential. The impact factor, average amount of time a manuscript is under review, and acceptance rate are all points for consideration in selecting a journal home for your manuscript. Participants will be directed to review a listing of education journals, such as is available at http://www.cideronline.org/jihe/view1.cfm. They will identify three or four journals that may be appropriate for their students' writing topic and timetable. I will briefly discuss important points offered in most journals' 'directions to contributors' that are important for students to consider before they submit their manuscript.

One-Page Outline

Perhaps the hardest part of writing a manuscript is simply starting. Many student writers can feel overwhelmed as they begin to put words to paper, and envisioning the creation of an entire manuscript can be daunting. To address these concerns, I will model the development of a one-page outline. The outline is constrained to a single page and prompts writers to briefly describe their manuscript's literature base, research questions, methods and data sources, and anticipated results. The outline also prompts writers to create a provisional manuscript title and identify

journals to which to submit their manuscript. In identifying and discussing these components in concert, student writers will be more likely to consider the cohesion of the text they produced. In addition, they will feel more confident about the viability of their manuscript because they will have articulated their thoughts on each of the major manuscript sections, instead of, for example, fixating on the introduction or the methods while avoiding sections perceived as more difficult. One-page outlines can be shared with others to receive valuable feedback early in the writing process.

Concept Maps

A publishable manuscript demonstrates that the writer has a good grasp of the relevant literature and can articulate how his or her work meaningfully contributes to this literature. Creating a concept map, a visual schematic representation of relationships between concepts, can be particularly useful to a novice in this regard. As a writer reviews others' work, he or she gathers a wealth of new knowledge. The novice writer, however, may have trouble consolidating and integrating this knowledge in a way that allows him or her to see both the 'big picture' of the area of inquiry and the gaps in the existing knowledge base. Constructing a concept map can help student writers do both. Additionally, constructing a concept map can provide students with a sense of order over and deeper insight into connections between what at first seems like a group of disconnected articles. I will model the creation of a concept map and encourage participants to consider how to use these maps with their student writers.

Writing Goal Accountability, Writing Partners, Writing Groups

Novice disciplinary writers (like many writers) can struggle to make consistent writing progress for a myriad of reasons. Good intentions to write can be sidetracked by competing obligations and pressing deadlines. In response, novice writers may succumb to the unhealthy habit of 'binge writing,' mistakenly believing that they will be more creative and productive if they write sporadically in bursts that lead to exhaustion. A simple way to create effective writing habits and ensure steady progress is to set writing goals and find others to hold you accountable. Research on goal-setting has repeatedly confirmed that goals that are specific, measureable, and observable (e.g., 'write one page a day') produce higher performance than ambiguous goals (e.g., 'do your best'). Further, as anyone who has tried to break a bad habit or ingrain a new habit can attest, telling others about your goal makes you much more likely to keep it. I will invite participants to consider how they can create writing accountability and support writing groups at their home institution for their student writers and I will invite them to share their experiences with accountability and support writing structures.

Discussion

Supporting students' development as disciplinary writers can be challenging. This practice session introduces proven strategies that can scaffold writing development and boost writer confidence. It is appropriate for faculty advisors or other writing mentors from any disciplinary affiliation.

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Building Job Marketability Through Your Learning Environment

Michael Szapkiw & Amanda J. Rockinson-Szapkiw, *Liberty University*

Abstract: Graduating students enter the job market hoping to find the perfect job they have been training for throughout their course of study. Unfortunately, graduating students often find that there are hundreds of others competing for that same job. So what will help them stand out in the crowd? And how can educators help? One solution is to create a learning environment with the potential to meet course objectives and equip students with a practical tool to find distinction in an often crowded job market. The solution discussed is eportfolios created throughout coursework with the software WordPress.

Literature Review

Electronic portfolios (eportfolios) have been considered a relevant topic for discussion and investigation for well over a decade. While eportfolios can serve a number of purposes within the higher education environment; they have been primarily used to support licensure and accreditation (Britten *et al.*, 2003; Deneen & Shroff, 2010; Wilkerson & Lang, 2003). Typically, university programs adopt a software or system that imposes uniformity on the portfolio, and students are required to construct a portfolio within this system that has little relevance and usability outside of the university system. While this is effective in meeting the increasing demands for accountability, it does not support students in becoming employable in a global marketplace. Further, students often express frustration with these portfolio systems (Fielder & Baumbach, 2005) and fail to recognize how an eportfolio is an opportunity not only to enhance their learning, to increase self-development, and to consolidate their learning artifacts, but also to display tangible proof of their skills and abilities to a prospective employer (Cohn & Hibbitts, 2004; Chen & Light, 2010; Hallam, Harper & McAallister, 2012). ePortfolios are essential in getting hired for desired jobs in fields ranging from educational technology to teaching to business administration (Yancey, 2009). Unfortunately, many students remain unfamiliar with the importance of an ePortfolio and the tools available to them outside the university environment for creating professional ePortfolios. As such, this discussion focuses upon how universities can encourage students to use websites, blogs, and wikis to create eportfolios during their degree programs that can be used for both assessment and employment opportunities. Specifically, the use of WordPress to create ePortfolios is discussed.

Goals and Objectives

Participants will be able to: (a) Identify the process for assisting students' use of websites, blogs, and wikis for academic and career portfolios, (b) Setup a personal WordPress website and create a live webpage, (c) Identify the process for evaluating student portfolios built via websites, blogs, and wikis for assessment, (d) Demonstrate how students can transition an academic portfolio into a career portfolio, (e)Discuss the organization/artifacts to place in a career portfolio so relevant info – accomplishments, skills, etc., are optimally highlighted.

Description of Practice/Strategies

The free, open-source WordPress software is no longer just for blogging. WordPress can be, and is, used to establish full-fledged websites to include news sites, company sites, magazines, social networks, and eportfolios. In March 2012, it was reported that WordPress was on 72.4 million different websites around the world making it the most widely used and most popular content management system (CMS) in existence. With this wide acceptance, the large support community, and the low barrier to entrance (free), WordPress has quickly become a standard in website building and, thus, will be the focus of the demonstration.

Participants will learn:

1. A solid process for assigning eportolio creation to students in an academic program and evaluating their progress in building eportfolios, and the key elements students should include in their eportfolios.
2. How to setup WordPress websites/eportfolios with unique domain names step-by-step through a live demonstration. They will also have the opportunity to follow along during the presentation to setup their own websites.
3. Where to find helpful resources for learning WordPress and receiving ongoing training to maximize the effectiveness of their eportfolios.

Discussion

- What makes WordPress an ideal solution for eportfolios?
- How does one create an eportfolio with WordPress and what are the basic elements students should include in an eportfolio?
- How can eportfolios help students get an edge in the job market?
- What strategies can faculty implement to transition students' academic portfolios into career portfolios?

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Effectively Integrating Information Literacy: A Conversation About Threshold Concepts and Collaborations

Sara M. Crickenberger & Rebecca K. Miller, *Virginia Tech*

Abstract: This conversation session uses threshold concepts as a lens for examining instructional content and on-campus collaborations that can promote learners' understanding of critical information literacy concepts. Session participants will engage in discussion and debate with each other and the presenters, an English instructor and a librarian, who will use their past collaborations as an example to initiate the discussion. Participants will have the opportunity to discuss each of the seven threshold concepts for information literacy and offer thoughts, suggestions, and ideas for using these threshold concepts to develop course content, assignments, and on-campus relationships that can strengthen the use of threshold concepts in different types of classrooms. Participants will leave this conversation session with ideas for enhancing student information literacy skills that they will be able to implement immediately.

Literature Review

Jan Meyer and Ray Land (2003) introduced the idea of "threshold concepts" just over ten years ago, in 2003. Since then, many disciplines have come to embrace Meyer and Land's framework for thinking about how learners progress through a particular discipline or knowledge landscape. Meyer and Land (2003) define threshold concepts as "troublesome knowledge," or knowledge that feels "alien, or counter-intuitive, or even intellectually absurd at face value" (p. 4). Furthermore, Meyer and Land (2003) identify five characteristics of threshold concepts; threshold concepts are: (1) transformative, (2) integrative, (3) irreversible, (4) troublesome, and (5) bounded (p. 4-5). Simple examples of threshold concepts include: heat transfer in physics, complex numbers in mathematics, and evolution in biology. Overall, Meyer and Land (2006) indicate that threshold concepts have the power to transform the way students think, and this framework has made its way into the information literacy world.

Lori Townsend, Korey Brunetti, and Amy Hofer (2011) identify threshold concepts as a possible strategy for integrating information literacy into different disciplines. Most librarians and other information literacy educators use standards, such as the Association of College & Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education, to drive and develop their instructional content (2000). However, Townsend, Brunetti, and Hofer (2011) underscore the three typical problems usually associated with using standards to develop instruction: (1) too much content for too little time, (2) standards are too big or too small, and (3) standards are too vague (p. 859). Threshold concepts, on the other hand, allow educators to focus content and instruction on specific ideas that may promote learner understanding in a new way. After conducting research on what could be considered unique threshold concepts for information literacy, Hofer, Townsend, and Brunetti (2012) propose seven threshold concepts for information literacy: (1) metadata = findability, (2) good searches use database structure, (3) format is a process, (4) authority is constructed and contextual, (5) "primary source" is an exact and conditional category, (6) information is a commodity, and (7) research solves problems.

Goals and Objectives

The goal of this conversation session is to examine research assignment and instructional content development through the lens of threshold concepts. After this session, participants will be able to define threshold concepts and identify threshold concepts specifically related to information literacy in order to incorporate them into their own classrooms. Participants will be able to apply threshold concepts to their own course and assignment design, and furthermore, be able to identify on-campus partners and collaborators who may be able to help them use threshold concepts in their classroom to enhance student learning and understanding.

Description of Topic to be Discussed

After reviewing research related to threshold concepts and identifying threshold concepts specific to information literacy, the presenters, an English instructor and a librarian who developed an in-depth collaboration in order to transform student research skills, will provide examples from their own experiences about how these threshold concepts can be applied in actual classroom environments. These examples will focus on the following threshold concepts for information literacy:

- Good searches use database structure
- Format is a process
- Authority is constructed and contextual
- "Primary source" is an exact and conditional category
- Research solves problems

Although the presenters will focus their examples on these five threshold concepts, participants will have the opportunity to discuss all seven threshold concepts for information literacy during the conversation component of the session.

Facilitation Techniques

Since we anticipate that the participants in this particular conversation session will come from many different disciplinary backgrounds, we intend to focus the conversation around threshold concepts specifically related to information literacy, since all higher education classes, regardless of discipline, are concerned with improving the information and inquiry skills of their students. After we present background information related to threshold concepts and the way that we, the presenters, have integrated them into classroom practice, we intend to examine each of the seven proposed threshold concepts for information literacy through discussion.

We intend to promote discussion by creating seven different small groups among the session participants. Each group will be given one of the seven threshold concepts for information literacy, including an in-depth definition of that particular concept, and, after having had time to discuss it, will be responsible for sharing with the large group their questions about that particular concept and how they think it could be integrated into course content and assignments. Each group will also identify on-campus partners for using that particular concept in class. Presenters will document the discussions led by each small group in order to be able to follow up the session with an email to each of the participants containing a summary of the group discussion.

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Conversation: Discussing the Opportunities and Challenges of Teaching Large Classes

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Abstract: Most faculty members do not feel that they can provide the same quality learning experience in a large class that they can achieve in smaller classes. However, many large class instructors are effectively engaging their students in meaningful learning experience through innovative teaching strategies. The focus of this Conversation Session is to help large class instructors develop a learning experience that emulates the small classroom as much as possible, while leveraging the opportunities unique to the large class environment. Specifically, the session will focus on best practices in large class pedagogy through (1) a brief introductory presentation that highlights innovative and scholarly approaches to teaching large classes and the need for a discussion among large class instructors, and (2) a guided conversation, which will serve as a starting point for individuals to investigate possibilities in large class instruction by interacting with instructors who have experience in the large classes as well as listening to the concerns of those not so experienced. The main purpose is to provide a comfortable, supportive atmosphere for interaction among instructors that will build confidence in trying new approaches in the classroom that will fit individual teaching styles. Each participant, having come prepared with ideas and concerns to share, should come away from this discussion with new ideas to implement in their own classes and a network of other large instructors for continued idea sharing.

Literature Review

In many colleges and university, large classes have become institutionalized and a significant part of the higher education experience, both for students and instructors alike. Particularly given the recent economic climate, increasingly larger class sizes are a reality for many instructors (Heppner, 2007). In the words of Carbone (1998), "Although it might be ideal to be able to change all of the large classes into small ones, that's just not going to happen" (p. ix). According to Stanley and Porter (2002), however, "It is a rare instructor who remains undaunted when standing before his or her first class of 100, 200, or even 500 students" (p. xxii). To add to the complexity of the large class environment, large classes often get a bad rap, particularly compared to their small class counterparts (Bartlett, 2003). Notwithstanding, Bartlett (2003) contended, "While there are lots of big classes that deserve their bad reputations, there are also others . . . at colleges across the country – huge classes, in a variety of subjects, that win high marks from hundreds of students year after year" (para. 4). When it comes to best practices for teaching large classes, one might be tempted to seek the one "best way" to engage students. However, the best way to teach in the large class environment depends on unique characteristics of the large class itself, such as instructor preferences, course objectives, and student attributes (Ives, 2000). As contended by Heppner (2007), "Good teaching techniques cannot make a big class into a small class, but they can make it a much better class" (p. x).

Goals and Objectives

Most faculty members do not feel that they can provide the same quality learning experience in a large class that they can achieve in smaller classes. However, many large class instructors are effectively engaging their students in meaningful learning experience through innovative teaching strategies. The focus of this Conversation Session is to help large class instructors develop a learning experience that emulates the small classroom as much as possible, while leveraging the opportunities unique to the large class environment. In large classes, it is desirable to create an atmosphere that feels personal and not anonymous, to provide a reasonable amount of feedback, to develop a sense of rapport between students and instructor. There are a variety of methods that can be utilized ranging from regular lecture to the latest technology. The purpose of this session is to help instructors explore these methods and to start them on the road to developing their own approach to better teaching. Everyone has an individual personality and their teaching method must fit their personality. Hopefully this session would be the starting point for individuals to investigate the possibilities by interacting with instructors who have experience in the large classes as well as listening to the concerns of those not so experienced. The main purpose is to provide comfortable, supportive atmosphere for interaction among instructors that will build confidence in trying new approaches in the classroom that will fit individual teaching styles.

Description of Topic to Be Discussed

The topic of this Conversation Session is large class pedagogy. Specifically, the conversation will focus on best practices in large class pedagogy through a 15-minute introductory presentation that highlights innovative and scholarly approaches to teaching large classes and the need for a discussion among large class instructors about what is (and is not) working in the large class environment. This will be followed by a period of idea sharing, which will be guided by the discussion points below:

- What are the unique challenges and opportunities presented in large classes?
- What are some strategies for "managing" classes with a hundred or more students?
- How can large class instructors get to know their students?
- How can large class instructors give regular and meaningful feedback on assignments?
- How can large class instructors incorporate active learning in the classroom?
- How can large class instructors encourage discussion among their students?
- What is the role of technology in the large class?
- What are some strategies to deal with cheating in the large class environment?

Facilitation Techniques

Two facilitators will lead this Conversation Session, each with different experiences in large class pedagogy. The first facilitator is a faculty development professional, who is currently spearheading an initiative to support large class pedagogy at a large, public institution. The second facilitator is a faculty member at the same institution, who has significant experience teaching larges classes. As previously stated, one of the goals of this Conversation Session is to allow instructors of large classes to share both their successes and struggles with engaging students in the large course environment. To this end, the 15-minute presentation will set the stage for the conversation by highlighting innovative and scholarly literature about large class pedagogy and by sharing how a perceived need for an open discussion about large class pedagogy sparked the idea for this conversation session. After the 15-minute presentation, the session will be opened up for discussion. The session leaders will facilitate the conversation with prepared questions and incorporate a Think-Pair-Share technique to model a discussion strategy that can be utilized to encourage discussion in a large class setting. While the session leaders will prepare a "map" for the conversation, they will be prepared to be flexible depending on the course of the conversation. The discussion will be concluded with a review of the "lessons learned" throughout the conversation. This is, perhaps, the most significant take away message of this Conversation Session – that large class instructors can learn much about what works (and what does not work) in large classes by engaging in teaching and learning scholarship and in dialog with other instructors. Each participant, having come prepared with ideas and concerns to share, should come away from this discussion with new ideas to implement in their own classes and a network of other large instructors for continued idea sharing.

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