Conference on

Higher Education Pedagogy

February 4-6, 2015
The Inn at Virginia Tech and Skelton Conference Center
Virginia Tech, Blacksburg, Virginia

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Letter from the Conference Committee

The 7th 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 seven-year history from a one-day to a three-day event involving 250 participants all from Virginia Tech in 2009, to 1000 participants from 335 institutions, 46 states plus the District of Columbia, and 50 countries in 2015. This growth has been accomplished without a conference fee thanks to our academic sponsors and corporate sponsors.

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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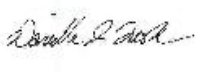

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Opening Keynote Address

Wednesday, February 4, 2015
8:45 – 9:45 am

Terry Doyle
Professor of Reading
Ferris State University

A New Paradigm for Student Learning

Dr. Doyle will address A New Paradigm for Student Learning. Terry Doyle is an author, nationally recognized educational consultant and Professor of Reading at Ferris State University where he has worked for the past 38 years. From 1998 to 2009, he served as the Senior Instructor for Faculty Development and Coordinator of the New to Ferris Faculty Transition Program for the Faculty Center for Teaching and Learning at Ferris State. He is the author of the book *Learner Centered Teaching: Putting the Research on Learning into Practice* which was featured in the Chronicle of Higher Education's Selected New Books in Higher Education in 2012 and the *book Helping Students Learn in a Learner Center Environment: A Guide to Teaching in Higher Education*, published by Stylus in 2008. He is the co-author of the book *New Faculty Transition - An Ideal Program* published in 2004. His newest book published in August 2013, co-authored with Dr. Todd Zakrajsek, is *titled The New Science of Learning: How to Learn in Harmony with Your Brain* and is written for college and high school students. It has been described as breaking new ground in helping students understand how learning happens and suggests a new paradigm for how students should prepare themselves for learning.

Closing Keynote Address

Friday, February 6, 2015
12:30 – 1:30 pm

Paul Hanstedt
Professor of English
Roanoke College

Reconsidering "Whole Person" Education: What Do We Really Want for Our Students—and How Can We Get Them There?

"Whole Person Education" is a tired old workhorse of a cliché, probably more fit for pasture than a conversation among academics intent upon moving their institutions and their students forward in dynamic ways. This talk seeks to revitalize the concept by moving from quantitative to qualitative terms and focusing on the end-game: how can we use this language to capture what it is we're really after for our students? And what does this mean for the kinds of education we provide—at the institutional, course, and even assignment level? And, finally, is it even possible to assess this?

Paul Hanstedt is a professor of English at Roanoke College, where he led a revision of the general education program that resulted in a theme-based core emphasizing writing-, speaking-, and quantitative reasoning-across-the curriculum. He is the recipient of a Fulbright to aid general education reform in Hong Kong, a FIPSE grant for sustainable faculty development, and several teaching awards including a 2013 State Council for Higher Education in Virginia Outstanding Faculty Award, and the 2014 CASE Virginia Professor of the Year Award. His essays regularly appear in the *Chronicle of Higher Education*, *Liberal Education*, and on Virginia Public Radio. He is the author of two books: *General Education Essentials*, a faculty introduction to current trends in liberal education, and *Hong Konged,* a travel memoir about spending a year abroad with three kids under the age of ten.

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Wednesday

February 4, 2015

Session 1

10:00-10:50 AM

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

A Collaborative Approach to Improving First Year Students' Information Literacy Skills

Maria Stack, Kathryne McConnell, Carolyn Meier, and Rebecca Miller
Virginia Tech

Abstract: This study is an example of an institutional-level learning improvement in students' information literacy skills resulting from an innovative collaboration between an assessment office and university librarians supporting a first-year experience (FYE) at a Research I university. The power of the collaboration revealed itself iteratively each year as the team worked together to "close the loop" by implementing changes not only to the programs based upon the assessment data, but also through the systematic improvement of the assessment instrument – a locally developed Information Literacy Test (ILT). The annual revisiting of the results and the methods that generated them has helped advocate for more significant changes to the instructional design of the first-year experience vis-à-vis information literacy, moving from the standard, "surface level" library tour and the one-off library lecture to the authentic embedding of librarians as instructional partners in the FYE classrooms. In short, this paper addresses collaborative process as a necessary component for effecting change in student learning.

Literature Review

Broadly, this study is grounded in the assessment for improvement paradigm (Ewell, 2009), which – in contrast to assessment conducted solely to comply with accreditation or accountability mandates – eschews positioning data in the best possible light in order to reveal gaps or flaws in students' thinking. When asked about incoming first-year students' information literacy skills, faculty often bemoan their students' lack of knowledge, from how to conduct a simple search or identifying peer-reviewed sources to troubles with knowing how and when to cite sources appropriately. Regardless of previous experience, it is fair to say that the library students encounter at a Research I institution is far more complex than any they have been required to use previously. Coupled with faculty's increased expectations of students and institutional efforts designed to engage students in high-impact practices like undergraduate research earlier and more often (Kuh, 2008), it is critical that deficiencies in students' information literacy skills be (1) identified early and (2) corrected and reinforced throughout their undergraduate careers.

The Association of College & Research Libraries (ACRL) defines information literacy as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (as cited in ALA, 2000)." As an organization, the ACRL has shown increased interest in assessment (e.g., creating the Assessment in Action grants), and is currently reviewing and revising these standards. University librarians, the content experts for information literacy, are feeling the pressure to hold themselves accountable to assess student learning. However, "to many librarians, the mandate for information literacy assessment is a crisis; they need to measure information literacy skills but feel unprepared to do so" (Oakleaf, 2008, 234). Collaborating with assessment experts, however, brings together the necessary content and methodological/process skills.

Methodology

The Information Literacy Test (ILT) was given to 1,847 freshman students during the 2013-2014 school year who were enrolled in one of the university's First Year Experience (FYE) courses. The test, which contained 24 multiple-choice questions, was given to students during their first week in the course and then an equivalent test was given as they completed the course at the end of the semester. The post-test ILT also contained seven open-ended questions, of which three focused on research competencies, while the other four focused on academic integrity. For purposes of this study, only two of the open-ended questions related to academic integrity were analyzed.

First, we analyzed the multiple-choice section of the ILT, focusing on the change in students' scores from pre- to post-test. In the next phase, we qualitatively analyzed the open-ended responses on the ILT. We were not looking to assess the correctness of the responses to the open-ended questions alone, but also were interested in revealing any patterns in reasoning revealed by the students, and were particularly interested in identifying whether or not there were shared misconceptions or faulty logic exhibited by the students in their answers.

Results

On the multiple choice portion of the ILT, a paired-samples t-test indicated a significant improvement from the students' pre-test scores to the post-test scores ($t(1,531) = -22.60$, $p < .001$). In looking at the multiple choice questions specifically related to academic integrity, a majority of the students answered the questions correctly on both the pre-test (92.7%) and the post-test (95.9%). On the post-test, students were also asked several open-ended questions relating to academic integrity. (We are still analyzing this data; results reported here are preliminary in nature). For the first question, students were asked to list reasons it is important to cite sources. Almost all of the students were able to correctly articulate at least one reason it is important to cite sources. Many students listed three plausible reasons to cite sources. The most common themes were 1- giving credit to the original author, 2- establishing credibility in your own work, and 3- differentiating your contribution from previous work.

For the second open-ended question, students were asked to read two passages and to choose and explain which one had been correctly paraphrased. 78.13% of students correctly identified which passage was paraphrased. Regardless of whether they chose the paraphrased passage, students' justifications for their answer varied. From their responses, several themes emerged. First, many study were able to articulate that one passage was paraphrased, while the other passage was clearly plagiarized as it followed too closely to the original. Students responding in this manner understood and were able to explain the concept of plagiarism.

Other students, who also chose the correct response, supported their response by focusing on the grammar and sentence structure, rather that the issue of plagiarism. Although the students were able to identify the passage that was correctly paraphrased, they did not appropriately justify their answers. Lastly, for the students who chose the incorrect answer, they reported that this passage was closer to the original idea, while the other student had strayed too far from the original and adding in opinions, as demonstrated here: "Student 1 is correct because the information he pulls out is directly from the passage and not extrapolated. Student 2 makes the assertion that the children are the focus of the book however the passage does not talk about this. Even though the book might be about this, the passage does not explicitly define this."

Discussion/Conclusion

This study holds significance for several reasons. First, it represents a methodologically rigorous assessment process that has facilitated learning improvement within an institutional-level curricular priority, the University's first year experience. Second, the authors assert that this assessment process would not have been successful were it not for the collaborative nature of the effort, one characterized by sustained engagement on the part of both content and assessment/methodological efforts. Finally, the ability to capture evidence of students' reasoning and/or misconceptions associated with the application of information literacy skills may lead to more sophisticated and nuanced instructional interventions that may lead students to "a broader view of information (that)… will serve our students better in the long run than precise expertise in the more mechanical aspects of information literacy" (Scales & Lindsay, 2005, p. 521).

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Faculty Perceptions of Course-Level Assessment in Higher Education

Barbara Howard, Sara Olin Zimmerman, Anthony Jones, & Amy Trawick
Appalachian State University

Abstract: Institutions of higher education have traditionally used assessments for accreditation and for program accountability to show evidence of effectiveness at a campus level. These actions may be reducing assessment discussions to a record of accomplishments and discouraging more in-depth conversations regarding assessment at the class and student levels. For decades research has shown a myriad of successful uses of types of assessment including formative (Sadler, 1998; Hounsell, 2003), journals and portfolios (Woodward, 1998; Dyment & O'Connell, 2010), and constructive alignment (Boud & Falchikov, 2006) as important initiatives that promote student learning in higher education. And yet conversations may not be occurring regarding the commonalities of assessment practices, the focus on course content or student learning, and the use of constructive alignment. To promote conversation among faculty and to gain valuable information for improving practice, a survey was distributed to determine types of assessments typically used, purposes for assessments, scoring methods and the use of technology in assessment. The results of this survey give a glimpse into the perceptions of one campus' faculty on their own assessment practices.

Literature Review

Assessment practices in higher education classrooms may be nebulous at best, capricious at worse. Grading practices that may be poorly defined and implemented often result in hotly debated controversies surrounding grade inflation. Thus far, higher education classrooms have escaped the types of scrutiny currently leveled at k-12 classrooms. Yet, the anvil of accountability is steadily approaching graduate programs, particularly those at state universities where state legislators and general administrations demand evidence of effectiveness. This scrutiny may be warranted in the area of assessment. Clearly higher education relies on end of course assessments even though research on summative assessments has not supported these practices as positively affecting student learning (Eccleston, 1999). What are faculty perceptions of assessment practices? Do faculty have the knowledge base to align the curriculum with appropriate forms of assessment to provide feedback to improve student learning? Is there a common understanding of assessment among faculty? Is the emphasis more on content and less on student learning? Is the paradigm of academic freedom impeding efforts to engage in more meaningful assessment? Do current assessment practices equip students well for a lifetime of learning and future assessment challenges? These are all questions that need to be constantly checked to determine the pulse of assessment practices in higher education.

In the past, studies have not focused exclusively on the alignment between approaches of teaching and different features of assessment (Fanghanel, 2009). Academic disciplines may have different structural practices in teaching and assessment. Traditionally labeled "hard disciplines" such as math, physics, and engineering often use lectures and problem-based learning while "soft disciplines" such as history, philosophy and education use more discussions and debates in their teaching approaches (Trigwell & Prosser, 2014). Therefore it makes sense that different approaches are used with assessment to document learning. This is the concept of signature pedagogies in which unique disciplines use their own teaching methods and therefore their own assessments (Shulman, 2005).

An old concept in education, but a relatively new paradigm in higher education is that of constructive alignment. This is the idea that for teaching to be beneficial there must be an alignment between content, learning outcomes, teaching and assessment (Boud & Falchikov, 2006; Fanghanel, 2009). In this paradigm there are two distinct views of teaching and assessment. One is the view that knowledge is created externally from the student and teaching becomes teacher-centered dissemination of knowledge. In contrast, the other views acquiring knowledge as student-centered and therefore teaching focuses on conceptual change and the development of information. These approaches result in distinctly different approaches to assessment. The teacher-centered approach regards assessment as separate from teaching and the student centered approach views assessment as an integral part of the teaching and learning process (Trigwell & Prosser, 2014).

Methodology

This study, conducted at a mid-sized state university in the Southeastern United States surveyed 901 faculty that teach in more than150 programs of study. The general framework for data analysis was descriptive. Along with demographics, questions were asked regarding types of assessments typically used, purposes for assessments, scoring methods and the use of technology in assessment. This survey was viewed as an impetus for promoting conversation among faculty in the hopes of recognizing research based practices as models and identifying areas of assessment to strengthen with professional development. The survey was digitally disseminated through the university's faculty development center.

Data Analysis and Discussion

Results of the survey will be presented along with a discussion of possible reasons for the responses. A descriptive analysis was completed to analyze results at the content (college) level, the course levels taught, current faculty rank, total years of teaching experience in higher education, and the delivery mode of the courses. The responses were also categorized in terms of a theoretical framework for faculty willingness to engage in assessment: institutional culture of assessment, perceived benefits, perceived time investment and perceptions of assessment as a scholarly activity (Wang & Hurley, 2012).

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Concepts, Connections, and Constructivism: Mind Mapping for Pre-service Teachers

Keonya Booker, *College of Charleston*

Abstract: Constructivist theory asserts that students attach meaning to their learning by way of predicting, organizing, and evaluating information. Instruction in constructivist-based classes should support students as they actively connect new ideas with prior knowledge. Mind mapping allows students to make associations between both abstract and concrete types of information in creative and imaginative ways. This practice session will explore the use of a popular software program to help pre-service teachers understand major theoretical perspectives in a human development course. Particular attention will be paid to student perceptions of both the tool's functionality and benefit to learning.

Literature Review

Brainstorming is a concept that teachers have used for decades. Conventional directions for a brainstorming activity would involve the teacher giving minor prompts to students and leaving them to figure out connections on their own. Research shows that students are more actively engaged and retain information when they make associations with prior knowledge (Davies, 2011). Mind mapping, in more recent times, is a systematic way of organizing images with text in order to facilitate a deeper understanding of information (Johnson, Podjed, & Taasan, 2013). Students can formulate projects, portfolios, and presentations all with the use of a concept map.

Mind maps that are interactive also show great promise. When students collaborate, there seems to be a multiplicative effect whereby they report being better able to process information and elaborate on specific ideas (Naykki & Jarvela, 2008). The editorial nature of mind maps also lets students reflect on their comprehension of particular ideas before committing to a position. If students work together on one mind map, they show a greater shared understanding of task requirements and course objectives (Naykki & Jarvela).

Goals and Objectives

This practice session will begin with a review of major principles of constructivist education and how such an approach reinforces the use of mind maps. We will then turn our attention to how mind mapping supports student learning outcomes in a core class for pre-service teachers. The session will continue with a discussion of Popplet, a web-based application that helps students make visual and text connections between ideas. Collaboration with others is another advantage when using Popplet. At the conclusion of the session participants will have learned how to leverage an easy and straightforward tool to help students build on prior knowledge stores. Implications for learning styles will also be addressed.

Description of Practice

Mind mapping has myriad uses in education and there are several tools instructors can use to support student learning. At the College of Charleston all elementary and secondary pre-service teachers must successfully complete a Human Development course prior to their fieldwork experience. Since lifespan development traditionally takes a survey approach, breadth of information is emphasized, not necessarily depth. Because we want students to have a strong understanding of a particular topical issue prior to their practicum, the cumulative assignment was developed. For the cumulative assignment, each student group is responsible for exploring a developmental theorist (e.g., Piaget) or current educational issue (e.g., Common Core) and then presenting to the rest of the class. Students are required to use Popplet to coordinate their work and show connections between contrasting ideas. Uses for Popplet include editing, organizing, and drafting mind maps which will be demonstrated in the session. Participants will also see examples of student work and hear how students evaluated the use of the tool in terms of functionality and worth to the overall project.

Discussion

Constructivist principles stress not only the product of student learning, but the process as well. Instructors should encourage students to use innovative ways to display their understanding of course concepts. Mind mapping is a useful tool for instructors to employ when introducing complicated or abstract information. Having students collaborate while constructing a mind map shows an additional benefit as ideas and connections must be evaluated, judged, and defended (Fonteyn, 2007). Applications of this approach can be realized in a multitude of disciplines and areas of inquiry.

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Measuring the Promise: Assessing Syllabi Using a Valid & Reliable Rubric

Michael S. Palmer, Dorothe J. Bach, and Adriana C. Streifer, *University of Virginia*

Abstract: This practice session will provide an introduction to and hands-on practice with a newly developed syllabus rubric that assesses the degree to which a syllabus achieves a learning-focused orientation. The rubric provides qualitative descriptions of 16 components and uses a quantitative scoring system that places syllabi on a spectrum from content- to learning-focused. It is nuanced enough to provide summative information to developers using the tool for assessing their course design initiatives and formative feedback to instructors interested in gauging the focus of their syllabi. After a brief introduction of the tool, participants will have a chance to test its functionality and usability by applying it to sample syllabi. At the conclusion of the session, the presenters will briefly describe the results of scoring over 50 pre- and post- syllabi pairs collected from instructors that participated in our week-long Course Design Institute.

Introduction and Review of Prior Literature

Guided by Kreber and Brook's six-component impact model [1], we have developed a series of assessment instruments to systematically investigate the arc of the educational transformation process associated with our week-long course design institute (CDI). In general, CDIs aim to help instructors create rich, active classroom environments grounded in evidence-based practices; expand their pedagogical content knowledge; become reflective practitioners; and foster teaching community and personal growth [2]. In addition to these goals, our own week-long CDI is designed to help participants create what Ken Bain calls a "promising syllabus" [3]: a learning-focused document that communicates clearly and compellingly what students will gain from the course, what they will do to achieve the promise it lays out, how they will know whether they are getting there, and how to best go about studying. We emphasize the syllabus because of its capacity to serve as a framework for designing meaningful learning environments.

In this session, we will introduce—and offer participants a chance to use—one of our assessment tools: a valid and reliable rubric designed to assess the quality and alignment of learning objectives, assessments, activities, schedules, and overall motivational tone in course syllabi (see http://trc.virginia.edu/resources/syllabus-rubric/) [4]. The development of the rubric was guided by the literature on learning-focused course design, teaching, and student motivation and influenced by existing literature on syllabus construction and syllabus components [see, for example, reference 5-7].The rubric accounts for the nuances and variety of shapes of learning-focused syllabi by subdividing the five major criteria into 16 distinct components. Each component is scored based on the strength of supporting evidence: strong, moderate, or low. A multi-directional weighting scheme is applied in order to ensure that the final score reflects the presence and quality of essential components (e.g. learning objectives). The maximum score a syllabus can achieve is 58; content-focused syllabi fall in the range 0-18, transitional 19-40, and learning-focused 41-58.

We have scored over 50 pre- and post-CDI syllabi pairs collected from participants during the seven years we have offered our Institute. Our preliminary results indicate that all instructors move toward the learning-focused end of the scale after participating in our CDI. Instructors who initially had highly content-focused syllabi and scored below 15 on our rubric gain as many as 20-30 points following CDI. Instructors who began with more learning-focused syllabi also improve but exhibit smaller gains.

Goals & Objectives for the Practice Session

This practice session will focus on providing participants, both instructors and educational developers, with a basic understanding of the syllabus rubric and an opportunity to learn to use it as a formative assessment tool.

Upon completion of the session, participants will:

- be able to articulate the basic purposes, functions, and limitations of the syllabus rubric;
- be able to use the syllabus rubric to score a range of syllabi;
- be aware of the basic findings of our ongoing study assessing the impact of our CDI;

- consider how they may use the rubric to create learner-focused syllabi (faculty) and/or assess their course design programming (educational developers).

Session Outline and Materials

After a brief introduction to our overall CDI assessment project and the syllabus scoring system, each participant will receive a copy of the syllabus rubric, the quantitative scoring tool, a user guide and two sample syllabi (10 min). Participants will spend the majority of the time learning to effectively use the rubric and score the sample syllabi, placing each on a spectrum from content- to learning-focused (18 min). Following the individual work with the rubric, participants will debrief as a large group (12 min). The session facilitators will then compare the participants' scores to those given by trained raters and briefly summarize the results of scoring over 50 pre- and post- syllabi pairs collected from instructors that participated in our week-long CDI (5 min). The final portion of the session will be devoted to Q & A and discussing ways that the syllabus rubric could be useful within the participants' unique professional roles and institutional contexts (5 min).

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Enhancing Learning through Interactive Gameplay

Thaddeus Fortney, Joseph Schaub, Kristin Reed, Charmian Lam, Ryan Cales, Jake Khoury, Zach Hilpert
Virginia Commonwealth University

Abstract: Gaming continues to be a widely discussed and practiced aspect of curricula across institutions of education all over the United States and the world. Educators have recognized the ways gaming has improved education by increasing student engagement, providing immediate and quality feedback, and helping students to better understand and process their course materials. Over the past ten years the development of technology has allowed for new modes of digital engagement and game play, but there are still a number of gaming applications that can be applied in the classroom through analog means. Our department has implemented several gaming applications to address issues--from student engagement in the classroom and online, to providing new ways for students to "own" the materials of the course. This has become particularly interesting as our programmatic goal as a department is to help students acquire and develop skills in preparation for their college careers and not necessarily focus on a particular content to be taught. We will discuss our implementation and development of gaming practice and also cover issues that we have encountered in trying to successfully enact gaming in the various classroom settings. Participants will discuss ways to integrate gaming into their own classes and ways to introduce the possibilities of gaming to their own departments or units.

Literature Review

John Hunter's *World Peace Game* set a precedent for gaming in education as early as 1978, but gaming in education still feels untested and new to higher education. For all of the uncertainty about the place of gaming in education, we know from research over the past twenty years that gaming has significant potential for changing our approach to education. Fladen and Blashki (2005) have established that games are a means to improving instruction, particularly in response to the rapid development of technology in our personal and professional lives. Games give students ample opportunity to engage in interactive learning (Ke 2009) where failure is a means to improvement and knowledge (Groff, Howells, & Crammer 2010). Yet, we shouldn't consider gaming only as a way of improving education for students, it can provide instructors extensive and useful feedback at a moment's notice (Dickey 2005), and allow for a more engaging online environment (Dalton 2000). Today, gaming in the classroom is highly diversified (Gaming and Learning 2014), going beyond "edutainment," and opening up a space for debate about what we consider best practice in enhancing student learning (Salter 2014).

Objectives

After this session, participants will be able to:

- Define and recognize "gamification" in higher education
- Explain the benefits of using interactive gameplay as a pedagogical tool.
- Identify basic methods to include gaming in a course.
- Apply common game mechanics to the classroom to enhance learning.

Description of Practice and Discussion

In this session we plan to review current past and practice in our own classrooms, extending our successes and failures into a broader discussion of the potential for gaming to enhance higher education. Our experiences span a wide range of approaches to integrating gameplay into individual classes, multi-week units of a semester-length course, and semester-long learning arcs in an interdisciplinary freshman seminar. Our use of gaming emphasizes intrinsic motivation, increased engagement with learning outcomes, and allowance for failure as part of learning. Collaborative aspects of gaming are also emphasized, beyond the typical view of gaming as competition. To these ends, some "gamified" components in our classes include role-playing scenarios, the use of badges and tokens, and point accumulations for "leveling up" which might not be directly connected to grades. Further, to demonstrate to the rest of our sizeable department the value of gaming, we have implemented a series of "brown-bag" discussions, covering topics from introducing gaming as part of education to more focused applications such as gaming in online courses.

We hope this discussion will provide time for participants to share their own experiences, to explore possibilities for their own practice, and to debate our central questions:

What, fundamentally, is a game?
What role does play have in adult learning?
How can we de-stigmatize failure for grade-oriented students?
How can we increase student collaboration and investment?

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"Flipped Instruction" in Graduate Education: Why, When, and How

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Abstract: The presenters of this practice session will describe an application of "flipped instruction" in graduate education. "Flipped instruction" offers the opportunity to structure student learning as a dynamic progression from discrete pieces of information based on knowledge acquisition as the focus of out-of-class learning to integrated formulations based on synthesis and analysis as the focus of in-class time. Grounded in adult learning pedagogy and constructivist approaches, this model is proving effective with adult learners. Examples from a master's level counseling theories course for first year graduate students will be used to demonstrate how the course is "flipped" and effectiveness based on initial research results. Participants will learn how the course is structured, view samples for out-of-class and in-class learning experiences, 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 by intentionally altering the instructional pedagogy outside of and during class time (Seaman & Gaines, 2013). This new age paradigm draws on constructivist learning strategies that focus on knowledge construction, meaningful application of knowledge, collaborative learning, and teacher as guide (Loyens & Gijbels, 2008). The adult learner in graduate education wants to be actively involved in the learning process and seeks a qualification that fits his/her career goal (Gianakos, 1996). Using an andragogy (Knowles, 1968) model taps into adult learners' motivation to learn, makes sense of what they are learning by relating to previous knowledge and experiences, and helps them overcome barriers to learning (Pew, 2007). Therefore, flipped instruction is proving to be appropriate in content-driven courses where knowledge acquisition is the focus of learning.

There are inherent challenges to flipping a course. It is more than just assigning activities and homework outside of class time and expecting students to be prepared to actively apply the knowledge during class time (Herreid & Schiller, 2013). Although there are examples of flipped instruction (e.g., Khan Academy, Udacity), the literature provides meager guidance on how to flip graduate-level courses. Despite this lack of guidance, there is much to be gained if cognitive complexity is a goal when constructing the adult learning experience.

The concept of cognitive complexity can be described as using alternative frames of reference that need to be explored by the individual to answer the learning question (Van Seggelen-Damen, 2013). For instructors, finding ways for students to develop this cognitive complexity can be challenging. However, flipped instruction affords the opportunity for graduate students to explore the learning question through various lenses of understanding in order to synthesize and create meaning (Krathwohl, 2002). Opportunities for reflecting, processing, and challenging are critical in determining what is taught and how it is taught. This process elicits emotive responses (e.g., anxiety, frustration) from students that create opportunities for academic growth (Lowndes & Hanley, 2010). As a result, instructors must be intentional when planning all aspects of their course to align the coursework with specific learning goals and objectives (Linder, Cooper, McKenzie, Raesch, & Reeve, 2014).

Objectives

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

1. Explain the rationale for "flipped instruction" in graduate education.
2. Describe how "flipped instruction" is appropriate for adult learners.
3. See examples of mapping 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 why "flipped instruction" is appropriate in graduate education. They will observe how the instructor designed the course content, maintained student engagement, transferred course content to application, and evaluated the effectiveness of this approach to teach a master's-level counseling theories course.

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 in graduate education. 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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Using Student Created Electronic Magazines to Promote Integrative and Deep Learning

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Abstract: This practice session will allow participants to brainstorm ways in which integrative and deep learning can occur within the classroom through careful design and implementation of a curriculum which culminates in a student generated electronic magazine. These electronic magazines allow for the development of a variety of skills such as group collaboration, web page design and layout, research writing from multiple perspectives, numerical literacy, conflict resolution and public speaking. Participants will view a number of electronic magazines from a freshman university course in a year-long general education class as well as the learning activities used to help students produce this work. They will then discuss ways to rethink their pedagogy and practice to allow for activities, such as the electronic magazine, which encourage the development of both integrative and deep learning in their students.

Literature Review

Many in higher education have begun to examine what we are doing to prepare college graduates for a world that will require them to frequently adapt and change in their own personal careers as well as be responsible citizens that can exercise empathy, tolerance and understanding towards increasing diverse people and viewpoints. To address these challenges, educators have proposed developing learning situations that promote both integrative and deep learning. Integrative learning is "an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus" (Rhodes, 2010, p. 51). In other words, integrative learning allows students to draw a multitude of connections between a variety of disciplinary fields. In addition to integrative learning, a number in higher education have also noted the importance of deep learning. "Deep learning leads to genuine understanding that promotes long-term retention of the learned material and, just as important, the ability to retrieve it and apply it to new problems in unfamiliar concepts" (Millis, 2010, par. 3). It is not enough that students see the interconnectedness of ideas and concepts but also how those connect and touch their own lives and the decisions they make. When they are able to do this, their learning has become cemented, i.e. deep. More and more higher education recognizes that students need to experience the interconnectedness of knowledge AND how that knowledge connects to their lives and choices.

Goals and Objectives

Participants in the session will examine the changes that have been occurring in the curriculum of higher education to make student learning more meaningful and applicable. This has resulted in such curricular changes as new learning outcomes that focus on critical thinking and inquiry skills, social responsibility and civic engagement and interdisciplinary and culminating studies (Schneider, C.G., 2003) It has also resulted in The Association of American Colleges and Universities stating that this learning needs to occur in an integrative and applied way (Hovland & Schneider, 2011). In other words, higher education realizes that its curriculum needs to change to allow for student examination from a multitude of disciplines through such vehicles as student reflection and personal application. The participants in the session will examine examples of an integrative assignment, a group generated electronic magazine, as well as the multiple assignments which feed into this culminating project. Using this assignment as an example/model, they then will be asked to examine in discussion groups at least one of the courses they teach and how they can make the content more integrative and at the same time encourage permanent deep learning. They will specifically address the questions: What different disciplinary lenses can I use to have students examine the topics of the course and how will these be presented? How will the assignments I choose encourage students to cross over disciplinary lines and synthesize their understanding? How will I allow for student reflection and application so that deep learning is encouraged? At the end of the session, participants will share ways in which they can change their courses to address both of these types of learning.

Description of Practice

I will model how both integrative and deep learning can be developed through the culminating project, a student generated electronic magazine, which I use in one of my courses. I will show multiple examples of electronic

magazines and the types of activities I use to produce integrative and deep learning. Some of these include research skills, student led discussions, academic writing from a stakeholder position, raw numerical data analysis and graphical representation, web design and layout, group collaboration and conflict resolution, personal reflection. In addition, I will share excerpts from my students' reflections that demonstrate that integrative and deep learning was a significant part of the course and project. I will walk participants through the various aspects of the course and project that I developed so they can begin to see how they can develop courses and curriculum that also encourage integrative and deep learning.

Discussion

My academic career has allowed me to be on the cutting edge of curriculum reform in general education courses. Since 1994, I have been part of a four year general education program that has embraced much of the learning innovations proposed by The Association of American Colleges and Universities. It is working in this program which has allowed me to understand integrative and deep learning intimately and how this can be achieved through innovative curricular design. This assignment was developed as the final culminating project for a year-long freshman course entitled Human/Nature. As the course progresses throughout the, students' knowledge accumulates and their skills develop to the point where they are allowed to choose the content of not only the final class but their electronic magazines as well. This course results into a significant and meaningful learning experience as evidenced by one student's comments. "Now, I feel that education should expose one's self to a plethora of ideas in order to discover and develop self-interests while obtaining a broad perspective of the world. This new philosophy, I feel is now a true representation of how I actually feel education should be....There is value in exposing yourself to ideas that you may or may not like or agree with. It allows you to appreciate what other people's dreams are and what they believe. If one does not appreciate the diversity of ideals in the world, how can they peacefully coexist with others in society?" Another student states "I have been allowed to explore my personal experiences and incorporate them into my learning. I have also been able to better understand different perspectives on issues in order to get a better understand that issue."

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Pathways to Engagement: Systems Evaluation Tools to Support Community-Engaged, Interdisciplinary, Undergraduate Project Teams

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Abstract: Scholars and practitioners of higher education pedagogy have become increasingly interested in community-engaged, interdisciplinary, project-based learning opportunities for teams of undergraduate students. Yet because of the complexities involved in such work, there is a persistent need to identify or develop effective tools that can guide such teams through processes of brainstorming and project management. This practice session presents an innovative tool derived from the field of program evaluation—pathway models—that have been used to structure and guide the work of interdisciplinary, community-engaged project-based undergraduate teams.

Literature Review

The need for undergraduate education to involve project-based, interdisciplinary, community-engaged teamwork has steadily gained importance in recent decades. For example, in his influential 1990 report, *Scholarship Reconsidered: Priorities of the Professoriate*, Ernest Boyer makes the case for both a 'scholarship of integration' and a 'scholarship of application.' By 'integration,' Boyer means "making connections across the disciplines, placing the specialties in larger context, illuminating data in a revealing way, often educating nonspecialists, too" (1990, p. 18). His notion of 'application' refers to how "new intellectual understandings can arise out of the very act of application [where] theory and practice vitally interact and renews the other" (Boyer, 1990, p. 21). Integration and application thrive in contexts of interdisciplinary educational initiatives, in which "the community—academics, students and external groups—accept the challenge of uncertainty in constituting new knowledge and shared understanding for social action by moving beyond disciplinary boundaries to interact with other disciplines and their practices in context" (Quinlan, Corkery, & Castle, 2007). In a related fashion, the concepts of integration, application, and interdisciplinary all fit well within community-engaged and service learning endeavors that employ a project-based model (Scharrer & Cooks, 2011).

Derived from recent innovations is systems thinking within the broader field of program evaluation (see Williams & Imam, 2006), the practice of creating 'pathway models' provides a novel pedagogical approach to structuring the initial brainstorming and guiding the subsequent project management among community-engaged, interdisciplinary, undergraduate project teams. Pathway models build on the notion of logic models—which themselves ideally serve as important planning, implementation, evaluation, and improvement devices (Kaplan & Garrett, 2005; W. K. Kellogg Foundation, 2004)—to add a layer of complexity by using arrows to more explicitly represent hypothesized causal linkages among the elements (i.e., activities, outputs, outcomes, and impacts) related to a given program or community issue (Urban & Trochim, 2009). Collaborative, facilitated pathway model building processes can help interdisciplinary undergraduate teams articulate their shared vision and trace key pathways towards meaningful, integrated, and applied community change work.

Goals and Objectives for the Practice Session

In this practice session, we will first present the community-engaged, interdisciplinary, project-based undergraduate experience in which we used pathway model creation as a framework to support student learning and engagement (the Kohl Center Undergraduate Experience, an initiative of the Agricultural and Applied Economics Department at Virginia Tech). Second, we will present the theory underpinning the use of pathway models as a support for this type of innovative pedagogy. Finally, we will facilitate a hands-on session in which participants (working in small groups) will create their own pathway models, thereby experiencing first-hand the ways in which this particular tool could be used in their own contexts.

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

- explain the theory behind the utility of pathway models as important planning, implementation, evaluation, and improvement tools;
- articulate how pathway models are especially well-suited for supporting undergraduate teams engaged in project-based, interdisciplinary, community work;

- create a pathway model for a program, initiative, or issue of their choosing; and
- identify ways in which they could leverage pathway models to support their own pedagogy.

Description of the Practice to be Modeled

The programmatic context in which our presentation of this pathway modeling practice is grounded is the Kohl Centre Experiential Learning Project Team course offered through the Agricultural and Applied Economics Department at Virginia Tech. The purpose of the Kohl Centre course is to answer two fundamental questions: How do we create team environments that foster decision-making under conditions of resource scarcity? and How do we purposefully create team-generated solutions to client problems? To help respond to those questions, a facilitated, collaborative capacity building workshop was offered to Kohl Centre students. Following steps from an established guidebook on systems evaluation (Trochim et al., 2012), and working with faculty leads, the students worked together to create pathway models (see Figure 1) for a programmatic or community initiative or issue that had been pitched by community clients. To create a pathway model, the students used sticky notes and flipchart paper to articulate activities, outputs, and outcomes for their initiative or issue (see Figure 2). The interdisciplinary and collaborative nature of the student teams was harnessed through this structured brainstorming process. The completed models then served as a springboard for subsequent communication and project development for the student teams (see Figure 3). Participants in this session will walk through an abbreviated version of the pathway model development process experienced by the student teams.

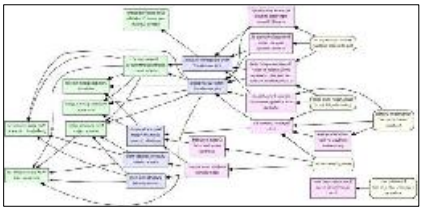

Figure 1. Example of a pathway model

Figure 2. Students creating a model

Figure 3. Students using a model

Discussion

After experiencing the pathway model creation process, session participants will engage in a guided reflective discussion to help connect the theory and practice of pathway modelling with their particular contexts of higher education pedagogy. As a result, session participants may identify ways in which they can use pathway models in their own work, and can contribute to the presenters' ongoing efforts to better understand and leverage the power of pathway modelling as a support for community-engaged, interdisciplinary, undergraduate project teams.

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Conversation: Pedagogies for Mentoring Underrepresented Students in Higher Education

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Abstract: The context of academic culture presents challenges for students as well as faculty for those whose lived experiences are devoid of the cultural capital that informs the aptitudes needed for success in academic environments. Strayhorn (2006) examines the aspects of academic settings that challenge students' sense of belonging in college environments. Here we discuss the approaches adopted by mentor programs designed to complement academic experiences of students, and faculty and facilitate their success in making the transitions to become successful students and academics. We focus on the underrepresented populations in our respective settings: Native Americans and Latinos, and on first generation academics broadly speaking. Drawing from curricular models implemented deliberately for mentoring, including TRIO programs that emerged out of the Civil Rights movement, we discuss pedagogies that faculty need to adopt in these efforts. .Classroom practices and institutional dynamics are often reflective of the external society's hegemonic structures that promote and validate dominant values and attributes, while excluding perspectives of subordinate groups. These notions are discussed in works such as Grande's *Red Pedagogy* (2004) and Darder's *Culture and Power in the Classroom* (2012). Here we share examples of how this has happened to the groups we work with, and we share the strategies and pedagogical approaches that have been adopted to address and overcome these challenges in our academic sites.

Literature Review

Our discussion here will focus on building awareness among ourselves on how our teaching and learning dynamics may reflect a perspective that we have been socialized into and which is assumed to be both superior and the only perspective for succeeding in academia. This awareness should drive us to confront our own internalized biases and to reconstruct our pedagogies to become more inclusive of the perspectives of others. Conceptual theoretical frameworks guiding this conversation include:

- Lev Vygotsky's (1978) Zone of Proximal Development Theory
- Edward Hall's (1989) high context and low context culture categories
- Paulo Freire's (1970) dialogical model for teaching
- Reflective practices (Schon, 1983)
- Research of one's praxis(Kincheloe, 1991)
- Learning community model (Cox, 2003)

Goals and Objectives

As we share our approaches to developing pedagogies of mentoring that are more effective for meeting the needs of underrepresented groups, a handful of models have emerged. We will share some of the characteristics of these models and hope to engage others in building on these. The models discussed will be: Indian Education for all FEM, and METAS undergraduate mentoring programs.

Facilitation Techniques

The session will include three rounds of discussions. An introductory round that will encourage reflection on how we interpret access and sense of belonging in academic settings as students and academics. How do our practices include or exclude the populations that we work with? The second round of our discussion will consider the research and theoretical constructs surrounding this work and whether or not we are aware of these findings and their impact on our practices. The third and final round will involve the sharing of programmatic initiatives that we have been engaged in with opportunities for others to share other initiatives and to allow for questions and feedback from session participants.

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A Conversation: What can be Learned About Breaking Down Silos in Higher Education from the Movement to Promote Interprofessional Education in Healthcare?

Robert Pawloski, *Texas Woman's University*
Gayle Roux, *University of North Dakota*

Abstract: Interdisciplinary Education (IPE) in healthcare has a well-established developmental history over the past few decades. While substantial change in pedagogy appears to be moving slowly, a growing number of efforts can be found that are innovatively attempting to integrate transdisciplinary approaches in healthcare profession education while simultaneously redesigning healthcare delivery systems. Proliferation of such efforts has benefitted from a perfect storm consisting of: national and international collaboratives of professional and educational organizations; conference discussions and emerging policies from organizations such as the Institute of Medicine and the World Health Organization; emerging research towards a knowledge framework based on best practice; support from foundations and governmental agencies; and political impetus as a result of the Affordable Care Act. Breaking down silos is frequently mentioned in the literature as an outright goal of this movement to infuse IPE in healthcare education as well as clinical practice. There are lessons to be learned from the experience of IPE, both from within and from without. This topic is ripe for conversation across a broad range of higher education disciplines with benefit within and beyond healthcare.

Literature Review

In its 2010 Framework for Action on Interprofessional Education & Collaborative practice, the World Health Organization defines IPE as occurring "when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes (*Framework for Action*, 2010, p.13)." Formal approaches to Interprofessional Education (IPE) go back to 1987 with the founding of the Centre for the Advancement of Interprofessional Education in the United Kingdom (http://caipe.org.uk). In 2003, the Institute of Medicine (IOM) issued its landmark report emphasizing the critical need for IPE and collaborative practice (*Health Professions Education,* 2003). During the past few decades, rich resources have emerged to support IPE interventions including: the American Interprofessional Health Collaborative (http://www.aihc-us.org); the Core Competencies for Interprofessional Collaborative Practice sponsored by the Interprofessional Education Collaborative (https://ipecollaborative.org); and the National Center for Interprofessional Practice and Education (https://nexusipe.org). The latter features IPE articles and assessment tools to encourage research on IPE. Additionally, the Josiah Macy Foundation and other funding sources have shown support through grant awards. The Macy Foundation also offered opinion as a catalyst for change in its publication of recommendations from their 2013 conference, observing that a redesign of healthcare delivery still appears to be occurring independently from health professions reform (*Transforming Patient Care*, 2013).

Benefitting from above-mentioned resources and groundwork laid by others, the College of Nursing at Texas Woman's University (TWU) applied for and received a grant award from the HRSA Advanced Nursing Education Program. The intervention focuses on integrating both bioinformatics and interprofessional collaboration among TWU's programs in nursing, physical therapy, occupational therapy, and nutrition science. Existing courses were enhanced and new courses were developed, approved and implemented. One innovation involved interprofessional teams of advanced degree students working on community-based case studies. Initial self-reports on a retrospective-post-then-pre measure showed student knowledge of interprofessional practice increased from a mean of 2.4 to 3.9 on a 5-point scale, and change in the value of interprofessional collaboration increasing from 16.7% to 41.7%. TWU's experience concurs with themes from similar IPE interventions studied by Bridges and others (2001), suggesting that critical elements for program success include: commitment from administration and faculty of collaborating departments and colleges, diverse calendar agreements, curricular mapping, faculty development and training, adequate time and physical space, technology, and a sense of community.

Emotional intelligence (EI) has been found to be another key to successful interprofessional teams. Research has shown that EI enhances the effectiveness of teams when applied by members in addition to professional expertise

(McAllin & Bamford, 2007; Lucca & Tarricone, 2001). Furthermore, EI expert, Daniel Goleman has teamed with Peter Senge from learning organization theory, to suggest three crucial skills that should be part of all levels of education to prepare students for a world that is becoming ever more complex and interdependent. Their *Triple Aim* includes: 1) focusing on ourselves; 2) tuning in to other people; and 3) systems understanding (Goleman & Senge, 2014).

Goals and Objectives

This Conversation Session proposes the following goals and objectives:

- Develop awareness of innovations and developments made in healthcare education to integrate IPE concepts in coursework and clinical instruction.
- Identify other examples in strategies for faculty development and integration of new transdisciplinary pedagogical approaches (e.g. STEM Education).
- Document the salient points that emerge from the conversation and make these accessible beyond the session through electronic media.

Description of Topic to be Discussed

The topic to be discussed will be the sharing of strategies or approaches that have impacted or could impact collaboration across disciplines and professions, ether negatively or positively. If participants have no tangible experience, they will be encouraged to share perceptions of either large or small factors *they* believe *could* impact collaboration across "silos" from the perspective of *their* profession or discipline.

Facilitation Techniques

The session will start with ten minutes of brief sharing of their IPE experiences and conversation instructions from the authors. The participants will then be asked to break into manageable groups (optimally 2-5, depending on session attendance). With typical seating arrangements, groups may be determined by left or right half or row, and if necessary partnering first row turning to second row and so on. Before sharing begins, groups will be asked to select an individual who will be charged with reporting back to the larger group. Participants will be instructed to quickly calculate an appropriate time limit upon individual sharing in order that all who wish to are enabled to provide input. Audible time announcements will be made by facilitators after 4 minutes have elapsed, and the after 8 minutes. 10 minutes will be devoted to the small group session, and no more than 15 minutes for reporting back to large group. The facilitators will record issues and/or best practices on a large display "storyboard," and facilitate open discussion within the larger group during the remainder of the session.

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Wednesday

February 4, 2015

Session 2

11:10-12:00 PM

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

Assessing VMI Engineering Majors' Motivation Perceptions: A Program-Level Investigation

Lee Rakes, *Virginia Military Institute*
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Abstract: The primary purpose of this investigation was to assess the motivation perceptions of VMI cadets majoring in one of three engineering programs at the Institute (n = 421). The MUSIC Model of Academic Motivation Inventory (MMAMI) was adapted and employed as the diagnostic tool for assessing cadets' academic motivation perceptions (Jones, 2009; Jones & Skaggs, 2012). Results indicated that Civil Engineering (CE) majors rated their motivation significantly higher than Mechanical Engineering (ME) majors on all five facets of the MMAMI. CE majors rated only one MUSIC model component, caring, significantly higher than Electrical and Computer Engineering (ECE) majors. There were no statistical differences detected on any scale or items between ECE and ME majors. Implications for assessing and diagnosing potential motivation deficiencies at the program-level are discussed.

Introduction

Learning and academic motivation are inextricably linked (Schunk, Meece, & Pintrich, 2014). The nature of this relationship deems it necessary that instructors not only take seriously the factors that contribute to academic motivation but also understand and be able to assess their students' motivation. The MUSIC Model of Academic Motivation (Jones, 2009) was designed with this purpose in mind: to help instructors understand how to apply current motivation research and theories to instruction.

The MUSIC model is a social-cognitive theory that can be used to guide instructors in their teaching efforts. It combines five theoretical constructs into one useful model: eMpowerment, Usefulness, Success, Interest, and Caring. Empowerment refers to the amount of perceived control that students have over their learning. For example, providing students with meaningful choices with the topics they can study, the materials they can use, the strategies they can implement, and/or the students with whom they can work can promote a sense of empowerment. Usefulness perceptions are concerned with the relevance and value of course materials and tasks. Success perceptions refer to beliefs about whether students can be successful at a particular task. If students believe they can be successful at a task, they are likely to put forth effort into accomplishing that particular task. Interest is a psychological state that consists of an affective component of positive emotion (the liking) and a cognitive component of concentration. The more interested students are in a subject, the more likely they are to engage with its content in meaningful ways. Caring refers to the need for satisfying relationships between students and/or between students and the instructor. For example, instructors who show concern for students' successes and failures and listen to and value students' opinions and ideas are likely to be perceived as caring. Instructors who address all five components in their design of course pedagogy are more likely to be successful at motivating their students (Jones, 2009, 2010).

The MUSIC model and associated inventory were selected for this assessment for three reasons: (a) the MUSIC model has been used successfully with samples of engineering students (Jones, Epler, Mokri, Bryant, & Paretti, 2013; Jones, Osborne, Paretti, & Matusovich, 2012; Jones & Wilkins, 2013), (b) the MUSIC Model Inventory is a validated instrument with acceptable statistical properties (Jones & Skaggs, 2012), and (c) the inventory, unlike other validated instruments, parsimoniously combines five key motivational components into one model, which makes measuring several motivational factors at one time easier to achieve (e.g., there is no need for multiple scales with different anchors).

Methodology

We addressed four research questions in this investigation: (a) Are cadets' scores on the MUSIC Model Inventory scales statistically different between VMI's three engineering programs? (b) Is there a statistical difference between the three programs with how cadets rate their identification as an engineer? (c) Is there a statistical difference between the three programs with how cadets rate their career goals? and (d) Is there a statistical difference between the three programs with how cadets rate their engineering major goals?

A list of current students in each of the three engineering programs at VMI was populated using a Colleague Database query in late spring semester of 2014. Those students (n = 421) received an email invitation to participate in the survey. Cadets were informed of the purpose of the survey in the email and asked to complete the survey approximately two weeks from the invitation date. Four reminder emails were sent approximately one week apart. The response rate was 46%. The investigation received IRB approval.

Analysis

To determine statistical differences between the programs, we conducted ANOVAs, along with Tukey analyses for any necessary post-hoc tests. Additionally, we calculated effect sizes using Cohen's *d* to determine the magnitude of any differences between mean ratings. The larger the effect size, the more substantial the difference is to be considered. Effect sizes of .2 to .4 would be considered small, moderate would be .5 to .7, and large would be .8 and greater. Descriptive statistics and cross-tabulations were reported for the MUSIC Model Inventory scales and the other three scales.

Results and Discussion

Each of the four research questions sought evidence for a statistical difference in response patterns among cadets majoring in VMI's engineering programs. Evidence of such differences was discovered for research question one, but not two, three, or four. Specifically, CE cadets rated each component of the MUSIC model significantly higher than ME cadets, and one component, caring, significantly higher than ECE cadets. Using effect size estimates, the magnitude of those differences was substantial in each case. There were no differences between the programs on the three additional scales. As a result, intervention efforts can be directed solely at MUSIC model components. Furthermore, because this assessment occurred at the program-level, addressing motivational deficiencies across the program curriculum might be more likely to occur. That is, the design of instruction to include motivational pedagogy has a greater chance of being integrated systematically, rather than selectively.

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Summer Bridge: Case Study and Problem-based Approach to Introductory Math

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Abstract: Academic success and retention in STEM fields is a continuing issue in higher education. Stresses of adjusting to college life combined with lower than expected performance on exams during the first year of study often intimidate students to withdraw or change majors before fully exploring their potential in their chosen field. Research in education theory and psychology points to many triggers of this response. One solution, adopted by the authors here, is to fill the mathematical knowledge gap experienced by incoming first-year students in a peer-motivated environment. The most recent cohort showed improvement in mathematical thinking and application, and developed interpersonal relationships that lasted beyond the three-week program. The presentation will discuss the evolution of the current Summer Bridge curriculum with data regarding test performance and student outcomes.

Literature Review

Observations in quantitative courses for freshmen students have indicated that students are not adequately prepared to be successful in chemistry, math, and physics classes during their first year of university courses. Kajander and Lovric suggest a deeper level of thinking regarding math problems is required in a university setting compared to primary and secondary schools (Kajander & Lovric, 2005). Furthermore, studies suggest that the first year of university is often the most stressful with the lowest level of retention (Pancer, Hunsberger, Pratt, & Alisat, 2000; Parker, Hogan, Eastabrook, Oke, & Wood, 2006). The stress of adjusting to a new environment independently from family, building new relationships, and making changes to studies habits appear to influence adjustment to the university (Pancer et al., 2000) and retention rates for continuing to the second year of study (Parker et al., 2006). According to Tinto (1999), community-based learning environments that actively involve students are of high importance when it comes to academic success (Tinto, 1999). The Summer Bridge Program offered for science majors accepted to Virginia Tech was developed as a means to provide community-based support of the transition from the high school to the university learning environment while providing real-world exploration of math concepts applicable across majors.

Methodology

The Summer Bridge Program for College of Science students, which is funded through a retention in STEM grant through the National Science Foundation, was introduced as a means to provide introductory education on math concepts often lacking in first-year students. The program has evolved over the course of four years to the current model of a three-week case study and problem-based learning approaches to guide students through developing the skills necessary for their first-year courses. The latest group of 34 incoming freshmen served as a test group for the concept, which incorporates the SCALE-UP environment (Oliver-Hoyo & Beichner, 2004), abstract thought examples, and interactive group activities. Virginia Tech faculty were polled to determine the concepts required for academic success in the first year. A list of key learning objectives for the summer program was generated from the feedback. Activities were researched, developed, and tailored to address these learning objectives. Activities were used to engage the students while allowing for the exploration of both the theory and application of math skills and concepts relative to conceptual and real-world experiences. The first two weeks of the program focus on this teaching method, while the third week involves small research projects for which students have to use the developed math skills to address relevant issues. Research questions were developed concerning issues on campus such as student safety and the location of a bus terminal on campus. These activities filled the first three hours of each day. The second half of the day included discussion of research-related topics that were directed to help with the small research project. Topics included how to generate a hypothesis, how to find and catalog research literature and resources, and how to keep a scientific notebook. Students were tasked with presenting the findings of their project and writing a short summary for a grade.

Results

The original implementation for this program was a five-week short-course that included math and chemistry classes much like those encountered during the first year of classes. Students did not respond well to this learning environment and self-reported a lack of engagement in the learning objectives. Grades and test scores also showed poor performance. A concept of collaboration and integration was also desired by pairing this program with the College of Engineering summer program. It was realized that the learning objectives for the science and engineering students diverged, which made introducing concepts to satisfy educational requirements difficult. Changes were made to shorten the program and tailor it specifically for students in College of Science majors.

The students responded well to the non-traditional classroom setting. During advising sessions with the program faculty, students indicated enjoyment of the class, gains in their knowledge regarding math concepts, and an interest in applications of the math concepts beyond the academic setting.

Table 1 Average scores from pre- and post-tests were used as performance assessments. Scores for both the math assessments and the chemistry readiness tests are shown (percentages, 10-point scale for letter grades). Standard deviation values are indicated for each average score.

	Math Assessment		**Chemistry Readiness Test**	
	Average	**Standard Deviation**	**Average**	**Standard Deviation**
Pre-test	54.00	14.17	52.50	17.02
Post-test	81.68	13.57	56.62	16.36
Change	27.68	16.63	4.12	-0.66

Discussion

One goal of the program is to improve student scores on the chemistry readiness test administered to in-coming students that is used to determine their first-year courses. Despite the gains seen with our in-house assessment, students did not show improved scores for the chemistry readiness test; scores remained the same, increased by an insignificant margin, or decreased slightly. This trend has been consistent across the previous program cohorts. A closer look at the questions and wording on the test may help to determine why students continue to perform poorly despite instruction that promotes understanding of the broad concepts tested by the readiness exam. The in-house assessment, but not the readiness test, reflect the self-reported greater understanding of the concepts and ability to connect topics between disciplines.

An unexpected but interesting outcome was the effectiveness of the collaborative teaching structure. One postdoctoral fellow and three graduate students worked as a collective to design and lead the instruction portion of the program. Students were able to "pick a favorite" instructor with which to develop a rapport, and reported a fondness for the differences in teaching styles between the instructors.

Some items that were determined to need improvement include:

1. Inclusion of more discipline-specific examples to solidify the take-home message for each concept.
2. Greater emphasis on the debrief portion of the end of the class period.
3. More homework assignments to encourage a greater degree of repetitive practicing of the concepts.
4. Poll the students before or at the beginning of the three weeks to assess research and academic interest that can be incorporated into both the math and research components of the program.

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Engaging Students in your Classroom…Activities that Promote Active Learning!

Barbara Carder, *Franklin University*

Abstract: This practice session will provide participants with both descriptions of and participation in activities that will engage their students in the classroom. Participants will actively engage in completing each activity, and will be given a resource of written materials describing each activity.

Objectives

Upon completion of the session, participants will be able to:
1. Define and describe student engagement
2. Choose and develop active learning strategies to improve the classroom experience for their students
3. Apply strategies learned to a practice scenario

Description

This practice session addresses the issue of how critical it is to actively engage our students in our classrooms. A quote by William Butler Yeats provides the over-arching premise for this session: *Education is not the filling of a pail, but the lighting of a fire.* We as professors in higher education need to light the fire of our students. To do this, we need to engage our students and one way to do this is through active learning techniques.

Four examples of active learning techniques that will be modeled for participants are:

1. Participants will compare Traditional Lectures with Interactive Lectures and then practice interactive lecture delivery techniques.

Traditional Lectures	Interactive Lectures/Delivery
Instructor talks and students listen	Instructor talks with periodic pauses for structured activities
Student-to-student talk is discouraged	Student-to-student talk is encouraged
Students take notes independently	Students often work with partners to review notes

   In this case, the practice activity would be participants reviewing notes with a partner in an activity called *Think – Pair - Share*.

2. *Polleverywhere.com*, which allows a professor to load questions into that polling program and then ask students to respond to those questions during class, will be demonstrated.

3. *QR Codes* will be posted in the classroom and participants will have the opportunity to scan the codes and answer questions, which demonstrates the use of this technology and how it can energize a classroom.

4. The fourth technique example is using a *TeachBack* activity, where learners are actively engaged in a lecture because they know they will have the opportunity to present the information back to their classmates at the end of the lecture.

These are just four of the techniques that will be presented and modeled during this practice session. The last 10 minutes of the session will be used to plan how participants can incorporate these active learning activities into their courses.

Discussion Questions

1. What are the major classroom challenges regarding engaging their students that faculty face?
2. How will participants incorporate knowledge learned into their own classrooms?
3. What other activities have faculty used with success that they can share?

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Rubrics Cubed: A Tripartite Approach to Teaching, Assessing, and Learning with Rubrics

Robert L. Turner III, *University of South Dakota*
Matthew R. Turner, *Radford University*
Scott A. Turner, *UNC Pembroke*

Abstract: In a university environment where measurable outcomes and verifiable grading standards are increasingly important, rubrics provide instructors with the needed tools to provide students a consistent, reliable and repeatable standard which can be used in a variety circumstances. Most instructors are likely familiar with the use of rubrics as part of the evaluation process. However, they may be less conversant with other potential uses for rubrics. There are three types of rubrics which can be described as summative, formative and pedagogical. The goal for the use of these rubrics is to provide a framework in which students can learn the expectations of an assignment, receive feedback as they work towards its completion and learn the norms of evaluation itself. The presenters will discuss the use of these rubrics in a variety of disciplines. Participants in this practice session will discuss the contemporary use of rubrics, debate the merits of various forms of rubrics and consider how to integrate summative, formative, and pedagogical rubrics into their courses. Participants will use small group discussions to form and evaluate a sample rubric that may be used to teach students and to set criteria for evaluation.

Literature Review

Rubrics are a common way to specify requirements and to assess student learning against those requirements. In their basic form, rubrics are a grid composed of criteria (organization, style, grammar, etc.) and ratings (excellent, good, needs improvement, etc.). At the intersection of each criteria and rating is generally some description of what is expected to achieve that rating for that criterion. There are, generally, a small number of criteria and four or five ratings to choose from.

Rubrics provide many potential benefits to the students including clearer, more well-defined goals for their assignments and additional feedback. Instructors may benefit as well. They can be used to focus the material on what is being assessed and may provide for a more consistent evaluation of the work (Andrade, 2005; Stanford & Reeves, 2005).

The purpose of a rubric can be divided into three non-exclusive categories: summative, formative, and pedagogical. The design and use of the rubric can emphasize or diminish the role of each of these categories and their effect on the student.

One of the most common uses (and, perhaps, the least useful) of a rubric is for assessment (summative evaluation). At the end of a project, a student might receive a grade and feedback based on ratings marked for each of the criteria. The rubric can be used in assessment as a way to clearly define why the student received the grade they did and to help maintain consistency across all the students' submissions. Since these may come from the instructor or from peers, much on the literature focuses on the reliability and validity of the grades generated. While many studies show that the ratings are consistent (Hafner & Hafner, 2003; Ngai, Lau, Chan, & Leong, 2009; Reddy & Andrade, 2010), others did not find them to be reliable (or reliable enough) (Stellmack, Konheim-Kalkstein, Manor, Massey, & Schmitz, 2009).

Rubrics can be used to promote learning by using them during a project to provide feedback (formative evaluation) and this could be done by the instructor, a peer, or by the student. This provides the student with a benchmark to compare against and may help reduce anxiety (Panadero & Jonsson, 2013; Yoshina & Harada, 2007). Students can use the feedback as they revise their work and can better evaluate how well they are meeting the assignment requirements.

The third purpose of a rubric, pedagogical, is closely related to the formative evaluation. In this case, the goal is to teach the students how to evaluate and what constitutes a good or poor example of a criteria (Ngai et al., 2009; Ross-Fisher, 2005). This means giving them practice evaluating with support of the rubric and, possibly, allowing them to compare their work against an exemplar, like an instructor's evaluation of the same work. For peer- and self-

evaluations, the literature suggests that this kind of training is necessary (Andrade, 2005; Hafner & Hafner, 2003; Ngai et al., 2009; Yoshina & Harada, 2007).

Rubrics can be versatile pedagogical tools that allow an educator to expand their influence on student learning, evaluate student work, and can be instrumental in streamlining and standardizing any kind of assessment work. When used properly, rubrics provide an effective means of assessing, teaching, and learning.

Goals and Objectives

Upon completing this session, participants will be able to:

- Evaluate the value of various types of rubrics
- Analyze their own use of rubrics in terms of purpose and effectiveness in achieving those purposes
- Plan for the use of summative, formative, and pedagogical rubrics for the classroom

Description of Practice

During the session, participants will discuss their use of rubrics and their role in teaching, assessing, and student learning. Various methods for developing and implementing rubrics will be presented. Participants will take part in group discussions on specific types of rubrics and how they can and should be used, work on developing their own rubric 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 rubrics in their courses. Participants will be encouraged to share their own ideas of the use of rubrics and how they can be used to address their specific needs in teaching, assessing, and student learning. Participants will be encouraged to share their own ideas and challenges and evaluate how their use of rubrics can benefit themselves and their students.

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Developing a 'Higher' Education Through Mindfulness

Leigh Burrows, *Flinders University of South Australia*

Abstract: According to UK professor Ronald Barnett (2007) there should be more emphasis in higher education on students becoming more personally and authentically involved in their students and that their 'being' and 'becoming' needs should therefore be addressed as much as their need for knowledge. According to Korthagen and Verkuyl (2002) however, it is not possible to help others to look more closely at their own inner selves unless we have ourselves embarked on this journey. This work requires us to have a passion for learning and be willing to be open to 'not knowing' or even feelings of confusion to allow new learning in. One way of creating these connections is to incorporate mindfulness into our teaching in higher education. In this presentation I explore my own experience of gradually introducing a flexible approach to mindfulness ideas and practices in my teaching in higher education over the last 3 years and share some of my own and students' reflections on how higher education can be transformed as a result. In addition I will share 'mindful reading assignments' designed to cultivate first person embodied awareness and also facilitate selected 'inner sensing mindfulness' activities that can be incorporated in any higher education context to assist our students and ourselves to develop a stable inner centre of gravity to assist in meeting outer challenges.

I had a dream the other night I had forgotten about but something triggered the images again. I was helping you set up a new contemplative education center at the university! It was a bit of an experiment to see if it would work and it did. It became very popular. It started slow, mainly because the land they gave us was the outskirts of the campus and quite hard to find and access, but we built this amazing multi-layered, open, plan, lush, colorful place that was quite magnetic. People couldn't drive there, they had to walk but they came in spite of the terrain because they could abandon their books and bags and just come as themselves. There were lots of people's bags and books left along the path and when they arrived they were so relieved and happy to be there (personal communication from a post-graduate student, 11/3/2011).

Literature Review and Session Outline

Much of our learning in 'higher' education is focused on knowledge dissemination and training. Yet as the cognitive psychologist Eleanor Rosch has observed: '… people do not need to acquire more information, more logic, more ego, and more skills to make them wise. What they need is to unlearn what they have accumulated that veils them from that wisdom' (2007, p 136).

I suggest we need an alternative mode of sensing, knowing and feeling if we are to assist our students to tap into their own self-knowledge and inner wisdom to. There is clearly a need to go beyond talking and writing *about* transformative approaches earning to include more holistic and experiential ways of knowing in higher education that directly involve the body, feelings and intuition as well as cognition (Ferrer, Romero & Albareda, 2005).

I have found through my own practice, phenomenological research and exploration of the literature (Burrows, 2014; 2011) that mindfulness is a valuable methodology for learning and research since it can create an open space into which creative epiphanies can arise. For me mindfulness in higher education is grounded in our developing ability to use our own centre of gravity to pause and hold a space for our students (and ourselves) to experiment and learn. As higher education professor Judith Simmer Brown puts it: '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 somehow' (in Simmer Brown & Grace, 2011, p43). Jiddu Krishnamurti has described this process as one in which we realize that 'the observer and the observed are one' (1970, p 97).

Ideally mindfulness practice is indeed oriented towards a different and deeper way of seeing to complement, extend and deepen learning in higher education (Pillay, 2007) rather than a more narrow focus on stress reduction or increased coping or communication skills although these can certainly be beneficial. Mindfulness is far from being a simple technique for Rosch (2007) whose sees it as an entire mode of knowing and of being in the world which allows us to be aware of and enter into both our inner and outer worlds at the same time. 'The teacher, teachings and

the community are all part of this tapestry' for Rosch (2007).

It is against this full and rich background that we will consider the place of mindfulness in higher education in this session. The aims of this session are to give participants an opportunity to experience mindfulness, consider how mindfulness can be incorporated into higher education and gain an appreciation of the benefits of doing so. Embodied 'inner sensing' mindfulness activities designed to create a space for deep and grounded learning and the arising of wisdom and awareness in ourselves and our students will be shared, experienced and discussed. Mindfulness ideas, resources, assignments and personal and student reflections to inform, guide and support the introduction and integration of mindfulness pedagogies into higher education will also be shared.

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Innovating Traditional Engineering Curricula in Higher Education with e-Learning Tools

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Abstract: The innovations in instructional technologies offer a wide variety of possibilities to teachers in the classroom. Nowadays, terms such as connected learning or e-learning are a fundamental part of the curricula of many courses in academic institutions around the world. On the other hand, lack of reform or innovations in certain programs in terms of technology integration creates a problem for students who need to develop skills to be competitive in the 21st century. In the case of some engineering courses, the content continues to be strong, but the lack of technology integration does not offer the best learning experience to students. The adoption of new e-learning tools is a current challenge for engineering teachers, since there should be an alignment between the use of technology and the content. How do teachers can integrate new e-learning tools into their existing course, keeping the essence of their content, but also offering a better learning experience to students? This paper focuses on a set of recommendations to existing engineering courses, using innovative e-learning tools. Through a mixed method approach of surveys and interviews, a group of experts were asked about current trends in e-learning and engineering to foster positive shifts in technology integration in these classrooms. The paper includes suggestions on how to use specific tools in certain courses, as well as how to develop assessments that take into account changes brought up by technology.

Literature Review

The adoption of instructional technologies and e-learning tools is a reality in many fields, including engineering education (Banday, Ahmed, & Jan, 2014). However, this adoption brings also challenges in terms of implementation. Some studies have shown that there is a need to allocate specific resources before considering a technology; therefore, this represents a limitation for certain academic institutions (Shah & Gadge, 2011). In addition, there is the challenge of alignment between content, pedagogy, and technology (Mishra & Koehler, 2006). Addressing these challenges, there are universities taking steps to face the challenges of these innovations that promise to prepare competitive learners with 21st century skills (Ivana, 2012; Benchicou, Aichouni, & Nehari, 2010). Furthermore, the use of these e-learning tools also has had an impact on the assessment of students, which also is one of the goals of innovative education (Tabakov, 2005). In addition, the use of these innovative e-learning tools has also contributed to the globalization of engineering education and the expansion of knowledge in the field across nations (Benchicou, Aichouni, & Nehari, 2010). Even though all these steps have been taken to improve engineering education and adopt e-learning, there are still not a lot of significant case studies about technology integration in engineering.

Objectives

Upon completion of this presentation, participants should be able to:

1. Describe the most relevant e-learning tools for engineering courses
2. Critique the most relevant features of e-learning tools and their integration into traditional courses
3. Evaluate how specific types of subject matters can be aligned with certain e-learning tools
4. Adopt new e-learning tools that align with their courses
5. Develop assessments that are consistent with the integration of these new tools

Methodology

For this study, a mixed method research design was developed. Data from interviews and surveys was collected with faculty in engineering departments from two universities in the United States. A mixed method approach was use, like in similar studies, to obtain quantitative data, as well as qualitative data that could offer deeper descriptions of the findings (Johnson, Onwuegbuzie, Turner (2007). Participants of the studies are faculty with expertise in the

integration of e-learning tools into traditional engineering courses. The two main research questions guiding the study are:

1. How does the use of new e-learning tools can be used to teach traditional engineering courses?
2. How do assessments change with the use of innovative e-learning tools?

Description of the Session

The session will start with a brief, but detailed literature review about the current state of best practices of e-learning in engineering education. Also, findings from surveys and interviews will be presented, as well as the limitations of the study. Next, a list of suggestions for approximately 10 engineering courses will be provided. These suggestions will include a current description of the course and the assessments and how through the adoption of specific e-learning tools –e.g. simulations, games, and learning management systems- the courses proved to be more effective to students. These recommendations also will reflect how assessments needed to be adjusted to comply with the new learning objectives after technology integration took place. The session will allow ample time for questions and answers and discussion with faculty interested in replicating these practices.

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Using Flipped Classrooms in Health Science Education:
Strategies to Achieve Outcomes and Avoid the Flops

Christine Fitzgerald and Salvador Bondoc, *Quinnipiac University*

Abstract: Educators in the health sciences are balancing the time in class devoted to transmission of content with time that would allow for deeper learning, problem-solving and critical thinking. Flipping the classroom is an inverted class, whereby the order of activities are reversed so that student view short videos or webcasts before class followed by in-class exercises, where the instructor is a guide, versus the sage on the stage. Through this presentation we will share the results of a group of university instructors who attended a workshop and then applied the flipped classroom to their class. Best practices, will be discussed along with the barriers, road-blocks that instructors met.

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Literature Review

We have seen pedagogies and the culture of learning in higher education transform dramatically with the change in student demographics and the expansion of technology into the classrooms. In the past, a fact-laden lecture to transmit knowledge from the sage-on-the-stage to the student, with little instructor-to-student or student-to-student interaction, was commonplace (King, 1993). It is no longer enough to simply present materials using audiovisual approaches such as PowerPoint or Prezi, and vodcasts or podcasts, in order to keep the students' attention. Faculty must find creative ways to promote critical thinking skills while ensuring that domain content is covered and imparted in manner that engages students in learning.

In health science education in particular, knowledge in the health sciences and professions is ever expanding. Faculty members grapple with balancing the amount of time devoted to student mastering of content, because of external pressures (e.g., accreditation), with taking the necessary time to facilitating deeper learning where students are challenged to problem solve, applying what they have learned. The flipped classroom is proposed to offer a promising solution to this dilemma.

In a flipped classroom, what is typically done in the classroom (e.g., lectures, discussions) is "flipped" with assignments that were meant to apply and integrate content information (Educase, 2012). An example of flipping the classroom involves reversing the order of activities with students viewing of short videos or webcast of lectures followed by in-class exercises. Other instructional media may also be used to complement the flip through the use of blogs or wikis to promote discussions and collaborations. The use of flipped classroom is gaining traction in health professions education (Critz & Knight, 2013; Pierce & Fox, 2012; Prober & Khan, 2013).

For faculty considering the flipped classroom, extra time is required to prep, but the pay-off is improved quality and efficiency of teaching. During the reflection and careful planning required while recording lectures, teachers improve their ability to communicate content. Lectures may be delivered in half the time via video, and since students' may review lectures repeatedly, the repeat of content required class after class decreases, opening up more class time for engaging students (Brunsell, 2013)

Goals and Objectives

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

- Reflect on the reasoning behind the emergence of the flipped classroom as a pedagogical tool in higher education.
- Appreciate the wide variety of classroom management techniques that are being utilized in the desire to adopt the flipped classroom.
- Debate the effectiveness of certain techniques, after discussing several cases and class outcomes.
- Describe several methods for accomplishing the flipped classroom including Camtasia Relay, a screen capture tool, and Blackboard collaboration tools, such as blogs, wikis, discussion boards, and groups.
- Explain best practices for flipping the classroom, according to research.

- Recognize common barriers and roadblocks to flipping a classroom.

Description of Practice

In 2012, at our university, we offered a workshop to train faculty about the concept and practices of flipping the classroom. A group of faculty from various departments completed the two-day workshop including nursing, biology, law, physical therapy, business, political science. The interest in such a wide variety of departments across our campus demonstrated that flipping the classroom was something more and more educators were aware of and interested in. The following year, in 2013, several members of the workshop presented to the bigger community the results of their efforts in flipping their classes. In 2014, the authors followed up with the members of this workshop to see how their flipped classrooms were progressing at this time. In this presentation we will share our findings from these other faculty in other departments, plus our experiences as we applied the flipped classroom to our occupational therapy, health care and pathophysiology classes with the goal of improving student learning outcomes and satisfaction with the flipped classroom.

Discussion

This presentation will focus on how lectures and coursework can be done outside of class, via many different techniques, in a variety of health science subjects. We will demonstrate how using this pedagogy provides more time for in-class activities that foster collaboration and enhance student engagement. In the course of this presentation of real cases of instructors and courses that succeeded and those that failed, participants will share their observations and conclusions about the best practices of the flipped classroom.

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Integrating Self-Regulated Learning Activities into Your Course or Curriculum

Rachel McCord, *The University of Tennessee*

Abstract: Self-regulated learning is an important skill set that allows learners to regulate their cognitive, behavioral, and motivational processes in their learning environments. While these skills are important, many students do not possess these skills when entering an undergraduate institution because they have not had the opportunity or have not needed the skills in previous learning environments. This session will demonstrate a number of techniques that can be integrated in existing courses to help develop and support self-regulated learning skills in undergraduate students.

Literature Review

Self-regulated learning (SRL) is the process that a learner goes through to enact and sustain cognitive functioning, behaviors, and metacognitive functioning to reach a set goal or goals (Corno, 2012). SRL is a complex process that includes the learner's beliefs about their own learning, motivations, pre-exisiting knowledge, and cognitive and metacognitive skills. It is a commonly held belief in education that the most effective students in a learning environment are the students who have a high level of awareness about their own knowledge level and take control of their own learning processes (Butler & Winne, 1995); these students are referred to as self-regulated learners. Though there are many different perspectives that provide different views of SRL, in general SRL theorists "view students as metacognitively, motivationally, and behaviorally active participants in their own learning process" (Zimmerman, 1986). While self-regulated learning is an important skill set for learners, many students do not possess the skills necessary to self-regulate their learning. In this session, we will focus on reviewing a number of short activities that can be integrated into existing courses to help develop and support self-regulated learning skills.

Goals and Objectives

Participants of this session will engage in several short self-regulated learning activities that can be implemented into any undergraduate course or course series. Learning activity demonstrations will be conducted that focus on self-regulation at the beginning of a course, throughout the semester, preparing for an exam, reflecting after an exam, and at the end of a course. By the end of this session, participants will be able to describe several self-regulated learning skills and how these skills can help their undergraduate students. Participants will also be able to implement several activities into their own courses in order to develop and support self-regulated learning skills.

Description of Practice

In this session, we will review activities that can be distributed throughout a course to develop self-regulated learning skills. These activities were originally discussed in Linda Nilson's book *Creating Self-Regulated Learners: Strategies to Strengthen Students' Self-Awareness and Learning Skills.* The learning activities discussed can be implemented in a wide variety of course sizes, types, and disciplines (Nilson, 2013).

Beginning of a Course

While many students have a goal of making an A in a course, very few students take the time to reflect on what strategies they will need to engage in to reach the goal of making an A. In order to have students 'begin with the end in mind,' a learning activity that can be used at the beginning of any course is to ask students to write an essay entitled *How I Made an A in This Class.* In this activity, students must be forward thinking about the types of strategies they will need to engage in in order to be successful in this course.

Throughout a Course

Commonly cited issues that students have throughout the semester include time management and difficulty with organization of information. We will review several strategies for helping students with time management and information organization. Activities that will be demonstrated include scheduling activities and different note taking methods.

Exam Preparation

There are a number of strategies for helping students prepare for exams while engaging them in monitoring and evaluation techniques. For this session, we will focus on having students create study guides and exam questions for exam preparation.

Exam Reflection

While exam scores are an indicator of how well students have mastered certain concepts, exams can also be used as an assessment of how successful certain learning strategies are for different students. In this session, we will discuss how to use exam wrappers to engage students in reflection about their exam performance and how to make changes and improvements after an exam.

Finishing a Course

A final reflection at the end of a course can help students solidify what they have learned in your course and transfer that learning to their next course. To finish our session, we will discuss an activity to wrap up the semester where students will write a *Letter to the Next Cohort.* In this letter, students will discuss all of the survival tips that students need to know in order to be successful in this course.

Discussion Questions

1. Whose responsibility is it to teach students how to learn?
2. How do we model learning process for our students?
3. How do we integrate self-regulated learning activities into a curriculum that is already ‘too full’?

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Conversation: High Impact Learning for Student Success: Faculty-Student Research Collaborations

Tod W. Burke & Stephen S. Owen, *Radford University*

Abstract: The purpose of this presentation is to examine and discuss research collaborations between faculty and undergraduate and graduate students. Conversation will include how this high impact partnership can be integrated into programs and disciplines, with particular attention devoted to structuring research collaborations and their impacts on student engagement and student success.

Literature Review

While student success is often difficult to measure, research indicates that faculty-student research collaborations enrich student learning and enhance student engagement, when compared to outcomes for non-participating student peers. National Survey of Student Engagement (NSSE) data indicate that students who participate in collaborative research with faculty report higher levels of the following NSSE indicators: Quantitative reasoning, collaborative learning, student-faculty interaction, higher-order learning, reflective and integrative learning, discussions with diverse others, and feeling a supportive college environment, among others (National Survey of Student Engagement, 2013). Furthermore, faculty-student research collaborations are associated with personal and practical gains, as well as deep learning in a subject area (Kuh, 2008). In fact, "students who do research with a faculty member spend a fair amount of time with that faculty; as a result, students learn firsthand how a faculty member thinks and deals with the inevitable challenges that crop up in the course of an investigation. Students who do research with faculty also are more likely to persist, gain more intellectually and personally, and choose a research-related field as a career… This high impact practice places students in the company of mentors and advisers…who share intellectual interests and are committed to seeing that students succeed." (Kuh, 2008, pp. 24-25; see also Kuh, Kinzie, Buckely, Bridges, & Hyek, 2007).

Eble (1990) observed that "a lifetime of teaching might not seem fully rewarding" (p. 110) if a mentoring relationship did not exist between faculty and students. Erickson and Strommer (1991) stressed the importance of successful role models for students and that college instructors can enrich that experience through research collaborative efforts. Faculty-student collaborative research enhances student success by facilitating motivation, as well as a shared understanding of the material (McKeachie, 2002). Rather than working on a research project simply to meet tenure and/or promotion requirements, a faculty member mentoring a student may find the experience to be a "true labor of love" (Hersh & Merrow, 2005, pp. 142-143), making a difference in the life of the student, as well as within the discipline.

Collaborations most certainly improve the research and writing skills of the participating student. "It turns out that many of the students who improved their writing had one specific type of experience in common. They had all worked in a one-to-one, mentored research project with a faculty supervisor" (Light, 2001, p. 94). The cumulative value of faculty-student research collaboration is noteworthy. A report prepared for the Association of American Colleges and Universities found that the five areas which employers most frequently reported should receive greater emphasis in college education included critical thinking and reasoning, problem solving, oral communication, written communication, and practical application of knowledge and skills (Hart Research Associates, 2013). Each of these areas is developed through faculty-student research.

The high-impact practice of faculty-student research collaboration has a proven record for success. As such, it is one which needs to be further cultivated and implemented into the curriculum.

Goals and Objectives

The first goal of the presentation is to highlight the significance of faculty-student collaborative research as a means of enhancing student engagement. Objectives include consideration of prior research regarding high-impact learning through collaborative research activities and a discussion of the strengths and limitations of faculty-student collaborations. The second goal of the presentation is to describe the process through which faculty-student research may be structured. Objectives include providing guidelines on how to initiate the process; perspectives on mentoring

students through the process; and selecting appropriate topics and venues for the research collaborations. The authors will also share their experiences, having co-authored more than 50 published articles with students.

Topics to Be Discussed

Conversation will focus on, but will not be limited to: (1) pitching the research to students; (2) examining the benefits and limitations for participating students, faculty, programs, and the institution; (3) presenting evidence and examples of what has successfully been done through collaborative faculty-student research by the presenters; (4) presenting a model for an effective process for conducting faculty-student collaborative research in a variety of settings (e.g., independent collaborations separate from class; honors projects and theses; independent studies; and projects associated with a particular class); and (5) discussing the variety of venue types when publishing or presenting a paper with a student.

Bok (2006) stated that "the most frequent complaint is that professors are so preoccupied with research…that they neglect their teaching and ignore their students" (p. 31). High-impact practices through faculty-student research collaboration are a means to better engage the student in the learning process, both within and outside the classroom, while allowing students and faculty to share in discovery. In this way, research becomes teaching. Kuh (2008) stressed the importance of coherent, academically challenging opportunities for students, and conversation will include how these opportunities can be accomplished through faculty-student research.

Facilitation Techniques

Discussion will begin with a brief presentation by the authors, reviewing prior literature, and presenting the process described above for effective high-impact student engagement for faculty-student collaborative research projects. Then, a dialogue will be encouraged among participants to consider questions such as: Have the participants ever engaged in faculty-student collaborative research (either as a student or faculty member)? If so, was it successful? Why or why not? What are the advantages and challenges (actual or perceived) to faculty-student collaborations? What advice can the participants provide to others who may wish to incorporate faculty-student research into their courses, program, discipline, or curriculum? Will faculty-student research be hindered or enhanced by online/ distance teaching? In addition, through small group discussion, participants will be encouraged to develop and discuss how faculty-student collaborative research may be integrated into their courses, program, discipline, or curriculum, and to share ideas with one another and with the group as a whole.

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Conversation: Can Instructors Help Students be Productive and Happy Team Members in Undergraduate Group Projects?

Susan D. Day and P. Eric Wiseman, *Virginia Tech*

Abstract: The group project is now a staple of higher education, due in part to the increasing complexity and interdisciplinary nature of real world problems and the resulting demands of curriculum accrediting organizations and employers. The group project can facilitate students tackling authentic and engaging problems that can increase learning and higher order cognition. However, students are not always adept at working in teams and the occasional student will exploit the efforts of other group members for their own gain. Inequality of effort, poor communication skills, lack of accountability, and conflicting schedules plague undergraduate group project teams and frequently result in a collective classroom groan when the project is introduced. In this conversation we seek to generate a lively exchange of strategies for facilitating team work in undergraduate courses. We propose two interlinking facets to this conversation: 1) classroom discussion, readings, and activities to help students build team rapport and understand the responsibilities and rewards of working on a team; and 2) project structure and assessment strategies for supporting collaborative work.

Literature Review

Group projects are a common component of undergraduate coursework in a variety of disciplines. By assembling a team, students are often able to tackle more complex questions than they could individually. Furthermore, group work lends itself to working on authentic and interesting questions that may engage expertise from multiple disciplines or subdisciplines. However group work is fraught with difficulties ranging from unfamiliarity with collaboration technology (Tabatabaei & Lam, 2013), the ubiquity of social-loafers also known as free-riders or slackers (Aggarwal & O'Brien, 2008; Hall & Buzwell, 2012), and lack of grade accountability. Students perceptions of group work are often grim (Colbeck, Campbell, & Bjorklund, 2000) and may vary by gender, race, age, or other factors (Payne & Monk-Turner, 2006). Recent research suggests that both teacher-level and institutional-level approaches to structuring and mentoring group projects can affect student perceptions and learning outcomes (Bacon, Stewart, & Silver, 1999; Hillyard, Gillespie, & Littig, 2010).

Many faculty, however, struggle with managing groups. Some have questions or concerns about the risks, rewards, and effectiveness of certain group mentoring strategies while others simply feel uncomfortable or hesitant to employ some of these methods (Burdett, 2007). Consequently a cross-disciplinary conversational venue to air these questions and hear the experiences of faculty and students could be valuable to fostering innovative and effective strategies for mentoring student group projects.

Goals and Objectives

Our goal in this conversation is to promote an open and lively exchange of ideas concerning *strategies to improve success of undergraduate group projects*. Our objectives are to 1) solicit the audience to share experiences, frustrations, and successes; 2) ground the discussion in current pedagogical and organizational research; and 3) compile 2-3 take-home concepts for the audience by the end of the conversation.

Description of Topic to be Discussed

The conversation will focus on strategies to improve success of substantial, relatively long-term group projects such as typical final projects in a semester long course or capstone projects, rather than short-term group interactions that might occur in class or over the course of a week or two. Successful strategies will be considered in terms of 1) improved student satisfaction with and perceptions of group projects; 2) improved teamwork skills; and 3) improved learning outcomes. For this conversation, the emphasis will be primarily on strategies that improve students' teamwork skills and their satisfaction with group work. We intend to focus on two primary areas where teachers can influence teamwork dynamics: 1) classroom discussion, readings, and activities to help students build team rapport

and understand the responsibilities and rewards of working on a team; and 2) project structure and assessment strategies for supporting collaborative work.

We plan to present a context for the discussion including:

- Real-life examples of extreme group dysfunction and group success (1 minute)
- A synopsis of problem areas: unequal effort and grading inequity; poor communication skills and teamwork management; demographic issues (race, gender, age, personality type); ineffective collaboration that leads to lower quality outcomes. (1.5 minutes)
- Frame the conversation with some fundamental principles/concepts of group work (1.5 minutes)
- An introduction of possible solutions : grading structure; providing instruction on teaming skills; team formation; team evaluation; motivating teams; team agreements; reassigning team members. (6 minutes)

Facilitation Techniques

Both authors are experienced facilitators and have used group projects extensively in their course offerings at all university class levels. We recognize that in a 50-minute session all topics related to facilitating group projects cannot be discussed in depth. Our intention is to focus the conversation based on the interests of the audience with the aim of completing our objective of 2-3 take-home concepts or ideas to put into practice at the end of the session, rather than trying to exhaustively cover all topics. Facilitation techniques may include:

- Soliciting questions, comments, and strategies on index cards from the audience
- Bringing two to three undergraduate students to the conference to join the conversation
- Posing situations or strategies and asking the audience to vote on whether they would feel comfortable employing such a strategy
- Asking the audience if they have devalued or simplified group projects because of teamwork difficulties
- Asking the audience to reflect on their own personal experiences in group projects either during their education or in their professional lives
- Providing the audience with a brief annotated bibliography organized by possible strategies to serve as both a resource and a question generator

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Wednesday

February 4, 2015

Poster Session A

12:00-1:30 PM

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

A Medium to Interact: Social Website and Its Role in Graduates

Vaishali Nandy & Lisa K. Burns, *Virginia Tech*

Interaction and communication can take different forms for students, who take classes from various geographic locations. Many studies have shown the crucial role communication plays in today's engineering graduates (Trevelyan & Tilli, 2007; Vest, 2008). Integrated learning or online learning developed in order to provide access to those who would otherwise not be able to participate in face-to-face courses (Beldarrain, 2006). Communicating through some social website has gradually become an integral part of people's life. Compared to general people, students are the prominent users of social websites (Kirschner & Karpinski, 2010). Social websites are the easiest communication channel that provides graduates students who are taking classes from dispersed locations, to interact with other students (Karpinski, Kirschner, Ozer, Mellott, & Ochwo, 2013).The purpose of this study was to guide the development of a website based on an inclusive review of literature that can be easily implemented for the engineering graduate students to interact and collaborate irrespective of their time and location.

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A Self-Directed Approach to Evaluating Procedural Skills Competency During the First Two Years of Osteopathic Medical Education

Christopher Martin, Todd Zusmer, Watson Edwards, Linda Frasca, Carolyn Lucas, Jennifer Januchowski, Janella Looney, & Fred Rawlins, *Edward Via College of Osteopathic Medicine*

Self-assessment is a mainstay of medical education and lifetime learning. Often this task focuses on learners' ability to measure their aptitude in a certain domain based on subjective grading analyses. Because of this, self-assessment has come under scrutiny due to the inherent biases contained within self-reflection and self-instruction. This research looks at student self-assessment of clinical skill aptitude using an objective quantitative grading method in the osteopathic medical school curriculum. Part of the established curriculum for osteopathic medical students involves students learning about and demonstrating their ability to complete a patient care procedure in a controlled environment. Following an educational lab session, students demonstrate these skills on a partial-task trainer, a device designed specifically for practice and evaluation of a skill. Cognitive knowledge is demonstrated by equipment identification, and verbalization of the indications, contraindications, relative contraindications, and complications related to that procedure. Psychomotor knowledge is demonstrated through the student's actual ability to complete the procedure. This session is digitally recorded and the student uses a checklist to self-evaluate the cognitive and psychomotor domains for a final grade. The paired t-test results between the student's self-evaluation total score (M=98.34 SD=3.39) of their video and an expert evaluator's total score (M= 97.97 SD=3.41) of the same video for the cognitive and psychomotor domains demonstrated no statistically significant difference t=(76), -1.19, p=0.24. This lack of significant difference shows that this course format is an effective way for instructors to measure competency at the formative level through self-evaluation using a quantitative and objective grading tool.

Furthermore, the lack of a statistical difference between the student's self-evaluation score and the expert evaluator's score in the cognitive and psychomotor domains of clinical procedural skills lends to the idea that a tool is a credible way for instructors to measure formative competency through the student's eyes.

A Study on Gender Disproportionality in the Field of Teacher Education of Pakistan

Samia Rehman Dogar, *Federal College of Education, Islamabad*

The study was designed to investigate the reasons and factors affecting on males students to join the discipline of teacher education. It was designed to motivate the potential individuals (especially males) to join the teaching learning process of the country. The population of the study is comprised all students of Islamabad Capital Territory, who have passed their higher secondary school certificate and completed their Bachelor degree in 2014 and now they are going to University.25% of the total population will be selected as sample of study. The data will be analyzed from Frequencies and percentages. The hypotheses will be tested statistically by using correlation ANOVA (analysis of variance) and T-test through statistical package for social sciences (SPSS).

Abstract Concepts Made Simple: Providing a Contextual Framework for More Impactful Learning

Lance McClure & Brian Yates, *Liberty University*
Keith Harkins, *Virginia Technical Institute*

Scientific concepts such as those provided through electrical theory are often viewed as abstract and can be confusing to students. Ideas such as Kirchhoff's Laws, Ohm's Law, and electrical circuits present a number of challenges for students focused on disciplines outside the sciences. Addressing the poor attainment of the required knowledge resulted in discussions with faculty from the School of Engineering and a reflection on constructivist principles as they relate to teaching. Application of this reflection resulted in a study grounded in the idea that students, when faced with unfamiliar subject matter containing formulas and equations used to determine outcomes in practical settings, lack an intellectual "container" to place the knowledge being delivered by the instructor. Placing a hands on lab application at the beginning of a module of instruction creates the "container" for the students. This change in order of instruction gives the student a practical, as well as visual image to use when working with formulas and equations needed for whatever theory is being taught. Evidence and results for these ideas was gathered through an Electrical 101 course offered to university students. A study was then organized around a reversal of content introduction as described. Results over two semesters of data collection are overwhelmingly positive with content knowledge increases of nearly fifteen percent in the semester immediately following implementation. The increase was maintained in a subsequent semester when data was again collected. The results have caused a review of the instructional practices of other courses with abstract scientific concepts.

Alumni Perspectives on Their Undergraduate Capstone Experience: Impacts on Learning and Career Development

Molly R. Hall, Rebecca K. Splan, & Cynthia M. Wood, *Virginia Tech*

Capstone experiences are widely recognized as high-impact educational practices that require students to apply and integrate what they have learned during their undergraduate years. In 2011, the Department of Animal and Poultry Sciences (APSC) at Virginia Tech initiated a curricular requirement for an undergraduate capstone experience that aimed to enhance students' critical thinking, analysis, ethical decision-making, leadership, collaboration, and communication skills in addition to fostering creativity. In 2014, the APSC department partnered with the Office of

Assessment and Evaluation at Virginia Tech to assess the APSC capstone requirement's impacts on student learning and career preparation and inform curricular decisions for the department. A web-based survey was administered in late summer 2014 to all Virginia Tech alumni and current students who had successfully completed an APSC capstone experience. Of the 385 alumni and current students who were invited to participate in the survey, 92 (88 alumni and 4 current students) submitted completed surveys for a response rate of 23.9%. The vast majority of participants reported that the APSC capstone experience helped prepare them for their career goals. More specifically, most respondents indicated that they were able to accomplish the APSC department's seven capstone objectives while completing their capstone experience. These objectives include the ability to solve "real-world" problems in "real-world" situations; to analyze, interpret, and synthesize information from a variety of sources; and to practice critical thinking skills. A key theme that emerged from the open-ended survey responses is that the amount participants gained from completing the APSC capstone requirement appeared to be related to the amount of energy they put into the experience. Implications for teaching, learning, and career preparation, including the importance of students taking responsibility for their learning, will be discussed.

An Investigation into Disciplinary Literacies through Text Characteristics: A Literature Review

Helen Hendaria Kamandhari, *Virginia Tech*

This literature review discusses the importance of disciplinary literacy through textual characteristics for K-12 and higher education settings. Disciplinary literacy has been a prevalent theme in K-12 education setting in the United States in the last few years, especially with the focus on textbook and academic journal readings. A lot of research works have centered on Science, Mathematics, and History/Social Science textbooks' discourse characteristics. However, very few research works have been conducted beyond K-12 and from L2 learners' viewpoints at higher education level. Shanahan (2009) and Fang (2012) confirmed that disciplinary discourse is indeed different from academic discourse, and understanding disciplinary discourse is one of the keys to academic success. It is often assumed that mastering academic discourse equals mastering disciplinary discourse. However, such is not the case. Academic discourse functions as a bridge to or outer layer of how academicians communicate in formal or academic settings without specifically relating to any disciplines. Within each discipline, experts communicate within their own familiar texts and pictures which remain unknown to the non-experts or the outsiders of a discipline. Knowing the disciplinary written discourse and its semiotics paves the way for learners to better comprehend their academic journals in higher education for both L1 and L2 learners' viewpoints.

Assessment of Academic Quality and Viability

Eric G. Lovik, *College of The Albemarle*

Evaluation and review of academic programs, assessment of student learning outcomes, and monitoring of financial resources are essential to measuring institutional effectiveness in higher education. There are a variety of measures, benchmarks, and indicators that are useful to conducting programmatic reviews (Alfred, Shults, & Seybert, 2007; Muffo, 2001; Walvoord, 2010). The purpose of this study is to describe the process used at one college to measure the quality and viability of academic programs. This presentation is based on 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. Nearly 40 programs are available in arts and sciences, business and computer technologies, health sciences, industrial technologies, and public service. Over the period of one year, the academic leadership collaborated with institutional researchers to identify, measure, and assess the quality of all academic programs and to determine their financial viability. Data were gathered to measure performance in the following categories: student enrollment, student progress, student completion, revenues generated, expenses, faculty credentials, course completion, and student employment. Data were sorted, ranked, and placed into standard deviation ranges. Any program whose data fell beyond one standard deviation below the mean for any measure were flagged as an area of concern. Overall, the programs that were flagged multiple times then

emerged as programs needing further analysis and discussion. The results indicated that 13 academic programs exhibited measures of low quality and/or low financial viability. Senior administrators used the results of this process to decide which of the following action to take on each low performing program: add resources for strengthening, merge with stronger programs, repackage the curriculum into a new contemporary program, or to discontinue the program.

Bollywood Summer: Teaching About Gender Through Film during the Intensive Term

Meeta Mehrotra, *Roanoke College*

Several institutions offer short-term courses as electives or as required courses for traditional students. Research indicates that such courses often call for alternative teaching and evaluation strategies to facilitate continued student engagement. Cinema can be an effective tool to engage students, and cinema from other cultures has the added advantage of providing students with a cultural immersion experience without having to leave campus. This presentation is a reflection on the experience of using Indian cinema during the intensive (three-week) term. The topic of the course was gender in Indian cinema, and the course was taught twice: in May 2008 and May 2014. The course was cross-listed as a sociology course but attracted upper level students from across disciplines, and required no prior knowledge of either India or Indian cinema. Students attended lectures, watched ten films over three weeks, wrote reflection papers, and engaged in intense discussions. The advantages of using cinema included the creation of a community of learners and continued student engagement outside the classroom. One of the major challenges was providing the students with sufficient background information, especially at the beginning of the term, to help them contextualize what they were watching. End-of-the-term comments on student evaluations indicate students continue to be interested in course material after the end of the term.

Building Mastery in First-Year Writing, One Skill at a Time: Rethinking Assignments in the Western Civilization Survey

Anca Glont, *Hampden-Sydney College*

This poster will offer a pedagogical technique for teaching writing at the first-year college level in the Western Civilization survey. For underprepared students who are taking first-year writing courses in parallel, even "short" 750-1250 word formal papers may be intimidating. How can writing be effectively used in first-year survey courses, when many students are concurrently developing college-level writing skills in first-year writing courses? The approach I outline is a way to help students build confidence and structure writing assignments as productive challenges (Gabriel, 2008). The poster's focus is on a specific assignment and assessment strategy: "breaking up" a paper into parts. Each assignment consists of multiple, separate sections which each emphasize key skills in analytical writing. This structure allows direct, targeted feedback by which students can gauge their mastery of each skill, since the assignment clearly delineates different skills in each section. It allows the instructor to assess prior knowledge and experience with the relevant skills. Finally, it allows the instructor to tailor assignments to class skills levels in response to demonstrated proficiency. The course used as an example now uses a series of four "workshop" assignments that encourage the mastery of key techniques (summarizing, paraphrasing, crafting a thesis, applying ideas from a text to a new argument, etc.) separately. As the semester progresses, the assignments shifts to higher levels of Bloom's Taxonomy. The results suggest greater student engagement, allow underprepared students to feel confident and to engage the assignment more strongly. The poster will both explain the technique and provide multiple examples of its use in courses taught.

Concept Mapping for Critical Thinking: Efficacy, Timing, & Type

Charles M. Harris & Shenghua Zha, *James Madison University*

Many college students are not progressing in the development of critical thinking skills (Arum & Roksa, 2011). Concept mapping (Novak & Canas, 2008) is a technique for facilitating validation of one's critical thinking (Harris & Zha, 2013). Concept mapping is based on the premise that pictures and line drawings are often more easily comprehended than the words that represent abstract concepts (Terry, (2003). Each phase of our three-phase study involved approximately 240 students enrolled in four sections of an introductory psychology course. Selected students were required to use Cacoo, a free online resource, to construct concept maps of specified complex concepts. The initial study focused on the efficacy of concept mapping for facilitating critical thinking. Students in the two sections, in which the construction of concept maps was required, scored significantly higher on unit tests, $F(3, 240) = 4.17$, $p = .007$, $p < .01$, 95% CI, 0.047 ES. The second study focused on the timing of when students construct their concept maps. Students, who constructed concept maps during preparation for unit tests, performed significantly better on unit tests, $F(3, 240) = 8.89$, $p = 0.000$, 95% CI, than students who constructed concept maps immediately following the lecture in which the specified complex concepts were presented. The third study focused on the types of concept maps being constructed but found no significant differences between hierarchical and systems maps for facilitating critical thinking, $F(3, 192) = 0.975$, $p = 0.406$, 95% CI, ES = 0.015. Reflecting on our three studies, we conclude that validating one's critical thinking during preparation for academic performance by the construction of concept maps, regardless of type, will tend to facilitate successful performance. Additionally, we submit that graphic depiction, regardless of type, will facilitate comprehension of complex, abstract concepts within all disciplines.

Conveying Difficult Heat Transfer Concepts with Hands-On Workshops

Christopher F. Cirenza, Thomas E. Diller, & Christopher Williams, *Virginia Tech*

This study examines the effectiveness of hands-on workshops to help junior level heat transfer students grasp the difficult and underlying concepts of heat and temperature. Unlike disciplines such as mechanics where the concepts being taught can be easily seen in the movement of objects in everyday life, heat transfer lacks a visual element making it difficult to understand its key concepts simply through observation. Furthermore, understanding underlying concepts of a topic is vital to knowledge of the topic as a whole and helps build a foundation from which to work and advance one's thinking. As a way of overcoming this obstacle, hand-on, challenge-based workshops were created and given to a junior level heat transfer class at Virginia Tech. The workshops allowed the students to feel heat transfer and watch real time plots of physical tests. Each workshop allowed the students to use both heat flux and temperature sensors to help better convey the differences between heat and temperature. The conceptual knowledge of the students was assessed through a concept inventory test given at both the beginning and the end of the course. These results were compared to those of a control group of students who took the traditional lecture class without the workshops. A significant difference between the two groups (experimental and control) was observed on the concept inventory at the end of the course but certain concepts yielded more improvement than others. Future work entails figuring out which concepts are most important for the students to grasp, how to evaluate their knowledge of those concepts, and how to restructure the workshops to best convey the concepts in a manner easily understood by someone with little or no experience in the field of heat transfer.

Creating a Class in Leadership for Agriculture and Rural Communities

Joseph W. Guthrie, Samuel Doak, Rachel Kohl, Thomas Martin, James McKenna, Brandon Monk, Pavli Mykerezi, Megan Seibel, & Tiffany Shoop, *Virginia Tech*

The faculty of Virginia Tech's Agricultural Technology Program developed a leadership course specifically for an Associate's Program in agriculture. Faculty identified the class as a need prior to Fall 2013 Semester. With funding from the Virginia Tech Center for Instructional Development and Educational Research (CIDER), they formed a Faculty Study Group with faculty from CIDER and Agricultural and Extension Education. The group began discussion, planning, and implementation of the course to begin Spring 2014. The group believed the course needed to be specific to agriculture and maintain Ag Tech's commitment to highly applied learning with real-world skills. The group also believed the course should enable and encourage students to take up leadership roles in their home rural communities. The Leadership in Agriculture and Rural Communities class was formed as a Special Study for Spring 2014 with 11 2nd Year students enrolled. It emphasizes increasing students' abilities and willingness to serve in leadership roles in three areas: business, government, and community and industry organizations. The course began with helping students assess their leadership qualities through StrengthsQuest and KAI. The class also featured on guest speakers who are leaders in agriculture and rural communities. In addition, the students traveled to a conference where they met with many leaders in business, government, and industry organizations. The students were then guest speakers in another Ag Tech class and shared what they learned at the conference. The faculty plan to continue to offer the course and evaluate and improve it for future students.

Design, Development, and Implementation of a Multi-Campus Online Graduate Elective for Health Professionals

Patricia Baia & Aimee Strang, *Albany College of Pharmacy and Health Sciences*

This poster will showcase the design, development and implementation of a new online graduate elective (Trends in Academic Health, EDU602), offered to health professionals and students at two universities in Albany, NY (Albany College of Pharmacy and Health Sciences, ACPHS and University at Albany, UAlbany). EDU602 explores the academic health profession, research, and general understanding of needs within this cohort. Students examine pedagogical advances and struggles across health professions (pharmacy, medicine, nursing, hospital health educators, dental, public health, etc.) with a focus on trends. The course is targeted as a requirement for a future proposal for an advanced online teaching certificate program for health professionals (TLHP). However, its independent development now and value as a course to existing health professionals extends opportunities and existing views toward the teaching profession. This is a new course and does not have an existing teaching approach, but will be designed asynchronously with much faculty, social and cognitive presence (Community of Inquiry Model). Students will be able to move through the online content on their own schedule, but weekly mile markers will be set to keep learners on task and discussion board conversations active and relevant. This successful design model has already been implemented in courses, professional development program for pharmacy educators, and residency programs at ACPHS. In addition, it will use Technological Pedagogical Content Knowledge, Multi-Model and Universal Design, and Active Learning approaches in curriculum and instructional design. Students who take EDU602 will be one step closer to closing the gap in their training and position themselves for teaching success. Additionally, the poster will outline rational for this type of course, as academic health professionals as subject matter experts in their field, but not necessarily proficient in teaching and learning. This essential gap is increasing as health professions change their expectations of proficient professionals.

Do Baccalaureate Nursing Students from an Evangelical Christian University Perceive Themselves as Prepared to Deliver Spiritual Care as New Graduate Nurses?

Kimberly B. Robinette, Heather M. Humphreys, Elizabeth G. Whorley, Jerry Harvey, Jennifer Hutchinson, & Dianne C. Bridge, *Liberty University*

The purpose of this study was to ask - do baccalaureate nursing students from an evangelical Christian University perceive themselves as prepared to deliver spiritual care as new graduate nurses? The concept of spiritual care is found in the scholarly literature as it pertains to the application of the art and science of nursing. Much of the literature, however, is written from a non-Christian worldview perspective. As the largest Christian university in the world, the Department of Nursing believes it is our duty to not only to prepare our student nurses for Christian service to the world, but also to assess and measure their perceptions of how they have been prepared to deliver spiritual care in their professional practice. Senior nursing students preparing to graduate were invited to participate in an oral exit interview process (a qualitative approach). Following the Exit interview, students received an email containing a Qualtrics link to complete the Spirituality and Spiritual Care Rating Scale (SSCRS) (a quantitative approach) McSherry granted permission to utilize the tool. Ninety-two students were eligible to participate. N=34. Ninety-four percent of the participants were female and ninety-four percent were between the ages 21-29. Findings indicated that the majority of participants perceived themselves as capable of providing spiritual care to patients as a new graduate nurse. Additionally, a majority of participants reported that spiritual care applied to all persons, not just patients who reported belief in a specific faith.

Do Easier Classes Make for Happier Students?

Amanda Watson, *Murray State University*

Grade inflation has been of concern in higher education since the 1970s (Joula, 1976), and with this comes the concern that instructors will feel pressure to inflate grades in order to improve student evaluations of teaching. Eiszler (2002) found support for this fear and reports that the percentage of students expecting an A or A- grade in a course increased by 10% during the 1990s, during which time teaching evaluations also increased by .1 points. The purpose of this investigation was to determine if the association between high grades and high teaching evaluations still exists. Anonymous, end-of-semester, teaching evaluations were collected of 156 students in 6 sections of 3 unique courses in the Psychology department of a large Southeastern University between 2011 and 2014. Students were asked to report on various aspects of their learning experience, including their instructor's effectiveness, the level of mutual respect in the classroom, and their expected grade in the course, among other variables. Student evaluation of teaching effectiveness positively related to their evaluation of all individual aspects of the instructor's effectiveness (e.g., "The instructor was well-prepared"; "The instructor presented subject matter clearly"; all r's> .433; all p's < .001). However student evaluations of instructor effectiveness showed no association with their expected grade in the course (r = .133, p = .101) nor with the number of writing assignments or exams given by the instructor (all r's< .138; all p's > .088). Results imply that instructors need not feel pressure to reduce course demands in order to improve student evaluations, and results will be discussed in terms of the perception of this pressure.

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East African Digital Inter-University Quiz Tournament:

Namuganga Sarah & Ntende Edward Kato, *East African Inter University Organisation*
Nakintu Regina, *IT Personal*

Most interactive sports (quiz) organized at the East African inter university tournaments exhibit low technological development levels; a major manifestation of poor results (mobilization, attendance, presentations) and limited area coverage. Audience, Media and area coverage are the main determinants of the severity of the technological development levels in tournaments. Digital technology for organizing and executing interactive sports does not exist for the East African Inter University sports. Our objective is to introduce and develop a new digitalized technology for interactive sports technological development levels by organizing our recent discovery of *Televised Inter-University Quiz Tournament* to the East African Universities. Our other objective is, the after – program will assist and empower thousands of students and hundreds of universities in improving their network coverage access, credibility and performance by ten times/ far as demonstrated on digitalized higher education standards administered after participating in the Inter-University Quiz Tournament. As a model, we will use Digital Satellite Television (DSTV) channels, internet, quiz, universities and well trained selected universities representatives. We will capture, attract and mobilize large students' attention. We will open new great opportunities to universities. This will result into capture of large audience attention. It will expand, capacity build and empower the higher education sector of the East African community. Specifically, we will televise the Inter-University Quiz Tournament by broadcasting it on television air. Our televised inter-university quiz tournament will provide great insights into the technology considerations when organizing and executing interactive activities in the East African region.

Engaged Learning Experience in an Undergraduate Honors Biology Course

Frank C. Church, Kathryn W. Smith, Johanna H. Foster, & Kurt O. Gilliland, *University of North Carolina School of Medicine*

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 remains a challenging issue. The present proposal describes the 3rd year "experience" for an undergraduate Biology course taught at UNC-Chapel Hill (enrollment was 28 students, all Seniors focused on pre-Healthcare careers) entitled "Biology of Blood Diseases" (BIOL 426H). Engaged/Active Learning was done in almost every class session 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; (9) Short lecture with student-generated "thought-notecards"; (10) Poll Everywhere; (11) Clinical case-driven Q&A discussions; and Piazza Blog postings. Engaged/Active 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 (4-5 students/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 10% of the total class grade: 5% from submitted Sakai "Individual" quizzes, and 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/Active Learning experience will be presented. Lessons learned about Engaged/Active Learning in the past 3 years: (1) Students respect and value their own small groups; (2) Role Play, Medical Jeopardy, Thought-Notecards and Clinical Application questions were the favorite activities; (3) Instructor should focus on 'teaching' Biology not the 'technique' of Active Learning; and (4) Engaged/Active activities strengthen team-based skills of collaboration, conversation, cooperation, and collegiality.

Engaging in Innovative Interdisciplinary Academic Partnerships by Threading Knowledge Gathering, Management, and Dissemination Skills Development into Higher Education Professional Education

Elizabeth Friberg, *University of Virginia School of Nursing*
Dan Wilson, *University of Virginia Claude Moore Health Sciences Library*

Higher education demands the creation of new interdisciplinary academic partnerships to develop, promote, sustain and instill scholarly 'habits of the mind' that ensure student learning success in a rapidly changing and expanding knowledge environment. In professional school, access to credible knowledge (evidence) is crucial to practice and high quality outcomes. Excellent search, retrieval, utilization and dissemination of knowledge, information management and professional scholarship skill sets require more than the traditional introduction/orientation to the library, the librarian, and library resources. An innovative academic partnership between the professional nursing school and the health sciences library created opportunities to level professional scholarship, student learning objectives, enhance team-teaching models within the program of study and enhance student integration of practice with scholarship in professional role formation.

Evaluating Information-thematic Competence of Future Translators

Svitlana Amelina & Rostyslav Tarasenko, *National University of Life and Environmental Sciences of Ukraine*

This paper deals with the problem of testing information-thematic competence of future translators for the agrarian sector. The complex testing system is developed. The testing of terminology training achievement of students based on thematic networks, identifying stages of testing are proposed. It is shown that this system ensures accuracy of determining formed level of information-thematic competence of future translators for the agrarian sector. Four testing stages are considered: current, thematic, modular, and final (semester). It is discovered that creating a complex testing system must be based on the following methodological principles taking into account such features: from the simple to the complex; from concrete to abstract; from general scientific to narrow branch orientation.

Expectations of Entering Freshmen at a Research-extensive University: Implications for Teaching and Learning

Molly R. Hall & Steven M. Culver, *Virginia Tech*

Students' expectations for their college experiences shape their success in the first year of college and beyond (Feldman, 1981; Kuh, Gonyea, & Williams, 2005; Olsen et al., 1998). Given the important role that student expectations play, this poster presents results from a 54-item web-based survey administered in early summer 2013 to all incoming first-time, first-year students at Virginia Tech. This survey was designed and administered by the university's Office of Assessment & Evaluation in consultation with a group of faculty members experienced in working with undergraduate students. The purpose of the survey was to provide information regarding incoming students' previous learning experiences and perceptions of their future collegiate learning and engagement in order to facilitate student learning and engagement at Virginia Tech. Of the 5,516 incoming students invited to participate in the survey, 2,658 responded, resulting in a response rate of 48.2%. Of those responding, 51.9% were male; 74.2% identified as White (non-Hispanic) and 10.5% as Asian/Pacific Islander. Results presented include (a) what students hope to gain by pursuing an undergraduate degree; (b) students' openness to challenge and change; and (c) the skills and abilities students most want to improve upon in order to be successful. Areas in which there were significant gender differences are discussed in addition to implications for teaching and learning in undergraduate education. Survey results may be particularly relevant to research universities.

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Experiences in Peer Led Education as an Independent Study

Maggie B. Bump, *Virginia Tech*

Undergraduate students can improve their understanding of course material, pursue specific areas of interest, and gain communication skills while serving as valuable resources for their peers by doing an independent study in chemical education. Twelve undergraduate students have collaborated with me over three years, receiving college credits for doing independent studies. While they have all had a teaching component, each student has tailored their experience to their interests. These students self-selected for the position, approaching me while taking my Organic Chemistry course. We designed their independent study based on what they wished to gain. Their work has included weekly reviews for students, assisting in my large lecture class with guided learning exercises, developing activities for elementary students, developing in-class demonstrations, creating videos as review materials for students, holding office hours, and developing questions for in-class response systems.

Facilitating Self and Peer Learning the TED Way

Rajeshree Gokhale

The education system in India is undergoing a lot of transformation and academicians should strive to innovate more and more learning methodologies for the students. It is necessary to realize that technology has a lot of potential and must be exploited in the best possible manner for the betterment of student learning. The youth today are digital consumers and this can be capitalized by the academic fraternity to promote self learning and peer learning. This paper is experimentation among undergraduate students in a business school in the use of a particular website [TED.COM] in fostering learning among students and developing certain soft skills and most importantly sowing the seeds of innovation and creativity in them. From a mere 8% of the student population who were aware of the website, it resulted in 100% awareness of the same and moreover a 65% who explored it still further. The results were encouraging as the students did not restrict themselves to viewing one or the selected talks related the business curriculum but explored several disciplines. They also shared what they found most interesting with the peers. A little initiative on part of the educator can go a long way in creating learning beyond classroom.

Factors Influencing Skill Development in Knowledge Acquisition and Application, Critical Thinking, and Team Performance Required for Clinical Practice

Peggy M. Mohr, Thomas M. Mohr, David Relling, & Mark Romanick, *University of North Dakota*

The purpose of this study was to investigate factors promoting students' ability to: acquire knowledge, apply course concepts, and perform as team members in a manner reflective of professional clinical practice. A team-based learning (TBL) approach was applied to a traditional lecture course to provide practice opportunities in critical thinking, application of concepts, and team process. Select lecture presentations were also provided. Methodology: Fifty-two students were assigned to 5 – 6 member teams. Pre-class reading assignments were provided and accountability was established through individual readiness assurance exams at the beginning of each class. Students also completed team readiness assurance exams. Immediate feedback was provided for team exams using "scratch-off" answer keys. Application activities required teams to reach a consensus regarding patient cases and defend their decisions during intra-team discussions. Graded "in-class" team assignments added complexity to cases. Accountability for team performance was achieved through peer reviews which determined the percentage of the total team score individuals earned. Students indicated effectiveness of course components on a 1 (least effective) to 5 (most effective) point scale. Results: The highest percentages of "most effective" responses regarding TBL components included: (a) individual preparation/accountability facilitated function on team (74.5%) (b) team discussion promoted critical thinking (78.4%), (c) peer teaching enhanced learning (78.4%), (e) immediate feedback enhanced understanding (80.4%), (f) application assignments provided practice in critical thinking (64.7%) and clinical decision-making (66.7%), and team participation enhanced interpersonal/team, and critical thinking skills (70.5%-74.5%). The highest percentages of "most effective" responses regarding lecture presentations included: (a) reinforced individual preparation (40%), and provided valuable content for application activities (35.3%). While the effectiveness of lecture presentations was ranked lower, students expressed having lecture presentations increased their confidence in their ability to be successful in the course. Conclusion: The results indicated a high satisfaction with the TBL style of pedagogy.

Faculty in Mentoring Programs: How to Recruit, Retain, and Graduate Underrepresented Students

Jioanna Carjuzaa, *Montana State University*
Xaé Alicia Reyes, *University of Connecticut*

When students fail to complete their educational programs, the individual students, their families, and their communities are affected. Along with strong ties to their culture, successful minority students must develop a network of support to help them cope with the unfamiliarity of the formal academic setting. Academic advisors, registrars, financial aid counselors, and faculty are key resources for minority students just starting out and/or struggling in college. If educators are not tuned into specific cultural needs, the students may be more likely to quit school or not start at all. University faculty must strengthen their understanding of the factors that affect student departure, as well as the factors that contribute to students' educational persistence. Developing discipline-specific and transitional mentoring programs and preparing faculty to: act as liaisons with existing social and health services during times of crisis, seek to enlist, develop, and structure the ability of family members to support student efforts, and engage family members in the life of the college community by enlisting them as partners and involving them in cultural and social activities, minority, first-generation college, underrepresented students succeed. The relationship between cultural awareness, programming and American Indian, Latino/a, and other minority student success is well documented. In this poster session we will highlight how faculty involvement in two mentoring programs which include participants of different races/ethnicities, different levels of experience, and from different institutional and organization types supports student success. We will share best practices designed to heighten faculty members' cultural sensitivity/humility, increase their cultural competency and build relationality. Of the two successful mentoring programs shared here, one was designed to support American Indian students majoring in Education and

the other program was created to guide Latino/a students while they make the transition from high school to college; both rely heavily on relationality.

Faculty Resource Center Intranet: Information Architecture and Design Considerations Necessary to Develop an Effective Faculty Resource

David A. McGeehan, *Duquesne University*

This presentation covers all of the salient considerations in designing an online resource to support adjunct faculty. The volume of online courses is every-growing. Many of these courses are taught by adjunct faculty that are not within driving distance of the host university and must therefore be supported remotely. It is critical that the cyber-support services offered to these remote faculty are of the highest caliber design to effectively meet their information needs. This poster presentation provides a comprehensive plan to design, develop, and deploy a faculty support Intranet website. Examples of the documents necessary to design such a system will be presented. Specifically the following documents will be explained; data gathering surveys and instruments, information architecture hierarchical diagrams, and user interface design schematics. Collectively, these documents provide the blue-print to develop a cyber-resource that is comprehensive, user-centric, efficient, and media-rich to support multiple learning modality preferences and end-device portability considerations. Our faculty resource center has been in existence for three years and is now the hub of all faculty support activities. Surveys and anecdotal data was collected and analyzed to define system improvements and enhancements. The presentation facilitates faculty critical thinking about their information needs and consumption preferences and how administrators and technologist may best design these systems with these faculty needs in mind.

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Flipping the Classroom: Student Perspectives and Learning Styles

Pamela Eddy & Michael Kelley, *The College of William and Mary*

Flipping the Classroom refers to placing content for students online for review prior to a face-to-face class meeting. The intention is to provide more time for active learning during valuable class time. This session will review research on a flipped class in applied science that enrolled both undergraduate and graduate students; the former are from a liberal arts university and the latter from a Historically Black University. Participants were interviewed at the beginning and end of the semester to uncover their perceptions regarding accessing material in a flipped classroom and how this approach influenced their learning. As well, the Kolb Learning Styles Inventory was given to each student to determine their preferred learning style. Finally, online course data provided information on how often, when, and for how long students accessed the online materials. Emerging findings highlight that students are accessing materials beyond that provided in the class to supplement their learning; that students come from a range

of learning styles even though all are in the sciences; and that the online availability of materials was especially useful for students requiring extra coverage or for whom English was a second language. Participants will be asked to share examples from their own practice on their use of technology to flipping the classroom.

From Private Relationship to Shared Knowledge: Faculty Development at a SLAC

Holly Middleton & Kathy Shields, *High Point University*

Small liberal arts colleges (SLACS) tend to build reputations for good teaching. However, while campus culture and promotional materials often emphasize small classes and mentoring, or the relationships between students and faculty, this emphasis can privatize teaching and undermine possibilities for faculty collaboration. We will discuss our efforts to disrupt this dynamic and seed a Center for Teaching and Learning through a grant-funded effort called the Digital Pedagogy Initiative (DPI). Through the DPI, we (a faculty member and a librarian) coordinated a variety of faculty development opportunities including teaching demos, workshops, panels, working groups, and an end-of-year exhibition of teaching. This session will also be relevant to sites where a consumer-driven orientation to students inhibits faculty innovation or outweighs resources available to faculty.

Games, Simulations, Exercises and Experiments for Millennial Students of Economics

Forrest E. Stegelin, *University of Georgia*

Successfully using games, simulations, exercises and experiments in teaching undergraduate economics, marketing and management classes to today's millennial students requires a bit of magic by including entertainment, business savvy, and some luck. Inclusion of these activities is to complement the lecture and textbook presentations, not replace, as well as to encourage students to make decisions and interact so as to increase interest and decrease skepticism about economic theory. An 'Ah? Ha!' teachable moment is no longer achieved one student at a time, but in mass or in groups, requiring physical participation to find solutions that can't be done using smart phones, computers, or social media at one's desk. The instructor should create a competition for learning using team building exercises to reach consensus ('we-we-we') decisions rather than individual ('me-me-me') decisions. The teacher must establish a teachable moment, an objective or expected learning outcome for each game, simulation, or exercise, and rewards (other than grades) are enumerated prior to the event. Emphasis should be on the 'why' story (not just facts), creating an emotional connection that leads to discovery. Example outcomes for various activities include trading decisions, market demand and demand elasticities, efficient allocations, or diminishing marginal returns.

Grade School Student Changes in STEM Self-efficacy Following Participation in Undergraduate-Designed Laboratory Activities

L. H. Krometis, T. Thompson, Tiffany Blair, E. Kaufman, C. Hession, *Virginia Tech*

Although effective communication of scientific results to the general public is an essential professional skill, aspiring scientists and engineers have limited formal opportunities during their undergraduate careers to gain experience presenting to non-peer groups. If undergraduates seek experience in scientific communication, e.g. through participation in extracurricular clubs, the effectiveness of their presentation in terms of audience engagement or knowledge gains is rarely evaluated. This study assessed gains in awareness, content knowledge, interest in science, self-efficacy, and career knowledge by middle school students participating in hands-on

laboratory exercises led by undergraduate students. The undergraduate teachers developed the exercises in groups as part of the Virginia Tech StREAM Research Experience for Undergraduates (REU) program, and the activities were intended to parallel their own summer undergraduate research on water sustainability and urban streams. The 60-minute exercises were offered to groups of 20-25 students. The middle school students completed these exercises as part of a larger campus-sponsored summer camp program design to encourage interest in future STEM careers. Six separate camp activities were offered over three summers (three/summer) to over 120 middle school participants. To assess participant gains in knowledge and self-efficacy due to the activity, students completed a retrospective post-then-pre survey, administered following the workshops. Example statements included "Science is fun." and "I could be a good scientist." Results indicate participants' positive attitudes increased related to awareness, content knowledge, interest in science, self-efficacy, and career knowledge. The greatest change occurred in the awareness construct. Implementation of the survey was simple and straightforward, requiring only 5-10 minutes. Further use of this, or similar survey instruments, is encouraged to understand and quantify the benefits of similar outreach experiences amongst grade school students, and to demonstrate to young scientists the opportunities associated with presentations to general audiences.

Health and Environment Risk Assessment to Design Public Health Education in Selected Caribbean Underserved Community

Dean Sutphin, Susan Meacham, Brian Hill, Adam Kachelman, & Maria Garcia, *Edward Via College of Osteopathic Medicine*

Medically underserved communities in the Dominican Republic, El Salvador and Honduras receive public health and clinical services provided by Via College of Osteopathic Medicine (VCOM) medical student missions and permanent medical clinics. Health disparities are often due to underlying environmental factors; malnutrition, unsafe water, inadequate sanitation, substance abuse and personal behaviors. The study objective was to develop an assessment instrument to determine perception of youth regarding health risks and practices in underserved communities. VCOM post-baccalaureate students and staff completed human subjects training. Community partners recruited local children (30 – 60 per day, ages 5-18 years) to complete the VCOM Youth Survey in Health and Environment in Spanish with translator assistance. Questions pertained to transportation, homes, education, health, hygiene, oral health, diet, substance abuse, violence, water quality, trash, animals, and community leadership. Selected preliminary findings in a Dominican Republic community determined distribution of nationality as either Dominican (87%) or Haitian (10%) and (3%, no response). Most participating children were 5 to 10 years (42%) and 11 to 15 (33%) years of age. The highest grades reported included 1st grade (14%), 7th grade (17%) and no response (28%). Regarding personal health, 42% said their health status was good. Most reported quality of life as excellent (19%) or good (53%). Most brush their teeth at least twice a day (72%), eat breakfast (69%) and eat vegetables (58%) every day. Most failed to respond to questions on tobacco, marijuana and alcohol use. The VCOM Youth Survey in Health and Environment provided insights into community health needs that can form the basis for a longitudinal study and guide future clinic and education programs and inform agency and government policy. Future public health educational programs and policies should be designed to meet needs followed by quantitative assessment of outcomes and continuous monitoring of progress in reduction of health risks.

Homeschooled Students in Higher Education: Ready for College?

Eric G. Lovik, *College of The Albemarle*

The North Carolina Department of Nonpublic Education recently provided data indicating that there were more homeschooled students in the state than there were students enrolled in private schools during the 2013-14 school year (NCDNPE, 2014). Nationwide, the number of homeschools and the number of homeschooled students has also been steadily rising. Consequently, there is a growing population of college students who were previously educated at home. Prior research indicates that homeschoolers perform well academically in higher education (Cogan, 2010;

Duggan, 2009; Snyder, 2013). College administrators, admissions recruiters, faculty, and institutional researchers can benefit by learning more about the backgrounds and academic performance of homeschooled students in higher education. The purpose of this study is to explore homeschool student performance at a public college. This presentation is based on a case study 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. This descriptive report examines several factors related to student success in higher education: personal background and characteristics, family support, academic preparation, personal goals, college progress, and completion. The results indicated that homeschooled students generally come from families whose parents completed at least a college degree and earned at least $10,000 more in annual income than the families of non-homeschooled students. A higher percentage of homeschoolers enrolled full-time, bypassed developmental education courses, earned higher semester and cumulative grade point averages, and were more likely to intend to transfer to a four-year institution than their traditionally schooled peers. Caution should be exercised in interpreting the results, however, because of the relatively small number of homeschoolers at this institution.

Implementing High Impact Practices in First Year Experiences: Short-Term, Service-Learning Study Abroad Programs

C. M. Wood, A. O. Abaye, M. Eick, *&* R. Selberg-Eaton, *Virginia Tech*

High impact practices, such as small classes, service learning, freshman seminars, and study abroad programs, are those which increase rates of student retention and student engagement. Virginia Tech has emphasized inclusion of high impact practices in its First Year Experiences Program. In response, the College of Agriculture and Life Sciences developed "Service Learning in Senegal", a three-credit study abroad program for first year students that took them to Senegal for two weeks over winter break 2014. A total of 13 undergraduates (6 freshmen, 7 upperclassmen) and 4 instructors participated in 8 weekly pre-departure meetings during Fall semester, then spent 14 days in Senegal during Virginia Tech's inaugural Winter Session. In addition to experiencing first-hand the culture and agriculture of Senegal, as well as environmental and natural resource challenges facing the West Africa country, students participated in several service-learning opportunities. These opportunities arose from projects undertaken by USAID in partnership with Virginia Tech and several higher education institutes in Senegal. Virginia Tech students joined with Senegal students to accomplish several projects: planting a vegetable garden at an elementary school, planting trees around a community center, demonstrating several prototypes of silage-making equipment, and introducing village children to 4-H activities. At the conclusion of the course, the Virginia Tech students prepared and presented posters and slide shows illustrating their activities and accomplishments at the Deans Roundtable Forum in March. Qualitative analysis of journals kept by the students revealed that while they came into the program with some pre-conceived ideas they were very open to information that could change their perceptions. The upperclassmen tended to dig deeper into areas that interested them (politics, gender roles, international development) but the freshmen made greater advances in their understanding of the similarities and differences among people. All 13 students agreed the experience was life-changing.

Improving Item Development Through Analysis

Mari-Wells Hedgpeth & Kathryn W. Smith, *University of North Carolina at Chapel Hill*

During the first two years of medical school students are frequently tested on pre-clinical content and judgments about their progress in the curriculum are made based upon the results of these exams. Many faculty members assemble their own multiple choice exam items without ever having been afforded the opportunity to be instructed on how to properly do so (Jozefowicz, Koeppen, Case, et al., 2002). To study the quality of multiple choice items found on typical first and second year medical school exams an exam review instrument, adapted from Haladyna and Downing (2002) and developed by Hauge (2002), was used. Each administered pre-clinical exam from two consecutive academic years (2011-12 and 2012-13) was reviewed by two independent raters who have been trained

in item development. A total of 2,661 items were carefully read and classified as meeting recommended item writing guidelines or containing one of eight technical flaws. For each exam analyzed a percentage of items that met guidelines was calculated by dividing the number of identified flawed items by the total number of items on the exam. This information was then provided to faculty members. The preliminary results of this study suggest that the quality of our in-house exams often times do not meet the accepted, evidence-based principles of sound item development. The mean percent of items meeting recommended standards from the 2011-12 year was 73.72 % (SD = 18.46), compared to 78.37% (SD = 15.99) from the 2012-13 year. Based upon initial analysis it appears that faculty members have used this information to improve items by eliminating questions that include flaws such as: the use of negatives, none of the above/all of the above, and unfocused stems. This strategy of conducting technical exam item analyses can help faculty rid their questions of the most commonly occurring construction errors.

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Incorporating Diversity: Practical Exercises for the Social Science Classroom

Mary E. Shuttlesworth, *Mount Aloysius College*
Kate F. Shannon, *University of Maryland, Baltimore County*
Megan B. Michalak*, Idaho State University*

As student populations in higher education become more diverse, addressing diversity in the classroom appears increasingly important. Using constructivist theory, this session will impart experiential learning exercises to teach diversity in the classroom. Constructivism states that students learn best when they actively create knowledge through experience, as opposed to passively consuming information (Wink, 2005). Based on this paradigm, experiential learning activities provide the most effective space for students to actively interact with sensitive topics such as diversity. Session attendees will have the opportunity to practice specific in-class activities directed at including diversity in the classroom. Following engagement in specific activities, session participants will have the opportunity to discuss their experience and means to incorporate such exercises in their own classrooms. Practices appropriate for including diversity across disciplines in the social sciences will be covered.

Interprofessional Education: How Unconventional Methodology Can Develop Interprofessionalism in Undergraduate and Graduate Students

John P. McNamara, *Jefferson College of Health Sciences/Virginia Tech Carilion School of Medicine*
Stuart Tousman, *Jefferson College of Health Sciences*

This practice session will provide the audience with an understanding of interprofessional education (IPE). The goals of IPE will be discussed and examples of attaining those goals using traditional pedagogical methods noted. In addition, a case study will be presented which demonstrates meeting IPE goals using unconventional methodology in courses in undergraduate and graduate gross anatomy at three institutions of higher education.

Know Your Students: Three Areas of Inquiry for Successful Course Redesign

Sadé A. Walker & Laura Ariovich, *Prince George's Community College*

The first effective teaching principle proposed by the Eberly Center recommends "acquiring relevant knowledge about students and using that knowledge to inform our course design and teaching."[1] This is consistent with the literature on student voices, which stresses the importance of incorporating the student perspective in educational reform.[2] Following this approach, we have engaged in efforts to capture students' perceptions, orientations, and expectations about teaching and learning as a fundamental piece in the assessment of different initiatives in course redesign. Our research has focused on three areas of inquiry: students' perceptions about the value of the course, learning activities, and assessments; students' orientations towards faculty and student roles; and students' expectations about the class workload and level of challenge. This study focuses on a suburban two-year institution with a large minority student population. Our findings are based on more than 30 focus groups with students in developmental and entry-level college courses conducted over three semesters. Focus groups were transcribed and analyzed using NVivo qualitative research software. Findings revealed that students' needs are not uniform or fixed, but vary depending on the courses' level of challenge and the extent to which students are expected to assume an active role in the learning process. As the level of challenge increases and as students are expected to assume more active roles in their own learning, there is also a greater need for faculty guidance and support. This has consequences for attempts to replace so-called traditional instruction with alternative approaches that rely more heavily on technology or peer-to-peer instruction. Such changes require not the withdrawal of the instructor or the dismissal of instructor's acquired pedagogical knowledge, but a more involved and intentional instructor, who uses his or her experience to guide and support students as they themselves transition into new roles.

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Learning through Study Abroad: the Graduate Student's Perspective

Tracy M. Walker & Wafa Hozien, *Virginia State University*

Historically, research on study abroad programs has focused on long-term participation: semester and year-long programs. This research focuses on developing an understanding of the implications of a short-term study abroad program for promoting self-efficacy, creating a greater global awareness, and allowing for cultural immersion. This qualitative examination of the experiences of graduate students in a short-term study abroad program to Ireland in Summer 2014 sought to identify how they perceived their immersion experience through the use of photo narrative techniques. An examination of the narratives provided by participants describing their photographs suggested experiences directly related to the constructs of self-efficacy and global-mindedness. Further review of photographs submitted to depict the participants' overall experience during the cultural immersion focused mainly on historical or cultural sites, with four of six participants submitting photographs with themselves as the focus. These findings will be further used as part of a larger mixed methods analysis of students' experience in the short term study abroad program.

Leveraging Instructional Technology: Popplets & myHistro

Hilary Viets, Jessica Farthing, Samantha Shires, Brandon Radford, Greg Callas, Jonathan Watkins, David Hicks, *Virginia Tech*

Popplet allows students to create concept maps easily, fostering the integration of knowledge necessary for deep learning. myHistro is a social memory-bank that combines maps and timelines with content knowledge to foster the representation of knowledge in multiple formats, an essential element of deep learning.

Librarians @ Lunchtime: Evaluating a Library Workshop Series

Jamie B. Price, *Jefferson College of Health Sciences*

The Jefferson College of Health Sciences Library started a new series of workshops targeted towards health sciences students, faculty, and staff. The theme will rotate to cover various topics and our first theme was technology. Seven workshops were offered over the 15-week spring 2014 semester. Topics included mobile apps, presentation software, using cloud-based storage, and others. All students and faculty who attended one or more workshops and completed the questionnaire for at least one workshop were included. A questionnaire was distributed to workshop participants at the beginning of each workshop and collected at the end. The survey consisted of four Likert-style items about the quality of the workshop's educational content, four dichotomous questions about the presenter, and one open-ended question prompting participants to share what they learned from the workshop and to provide additional topics of interest. The seven workshops had 82 participants in total recorded attendance, with some participants attending multiple workshops. Of the 65 returned evaluations, 69% reported the content was excellent and met expectations. Nearly all respondents (99%) reported they would recommend the workshops to others in the future. The workshop series was successful and will be continued. New themes will be unveiled to reach more participants and to encourage increased attendance. Also, it is believed that a variation of themes in future semesters will increase participant expectations and satisfaction. At the start of the academic year, an email survey will be distributed to students to gauge potential topics for future workshop themes and sessions.

Low Stakes for a High Stakes Research Methods Course: Creating a Safe Environment to Learn Complex Material

Robyn Otty, *Maryville University*

Creating a safe learning environment to cultivate student confidence within a research methods course design will be explored in this poster session. Based on Doyle's (2011) Learner-Center Teaching model, purposeful 'no' to 'low" stakes assignments were created within a challenging graduate-level research methods course. Each developed assignment served as a formative assessment to either communicate student understanding of reading materials or ensure continued learning beyond the class period (Rich, et al, 2014). One benefit to the instructor with this course design, included minimal time spent grading. For example, each assignment was specified to be worth zero or one to two points. Therefore, rather than endure the task of developing and using rubrics to distribute points and in-turn assign a grade, students were given individual feedback and automatic receipt of predetermined point(s). Feedback consisted of prompts to encourage higher-order thinking and statements to foster student self-confidence while managing complex course material. Finally, authentic learning experiences were infused throughout the course to enhance individual student meaning and provide opportunities for co-discovery of published research literature.

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Mapping a Curriculum: Visualization as a Tool for Evaluation and Communication

April D. Lawrence, Pamela L. Eddy, & Jamison R. Miller*, The College of William and Mary*

Although uses of visual methods ala dual coding (Paivio, 1990) and nonlinguistic representations (Marzano, Pickering, & Pollock, 2001) have a long history in K-12 contexts, these practices are underutilized yet highly promising in higher education. By incorporating backward design (Wiggins & McTighe, 1998) to practice careful curriculum evaluation (Lattuca & Stark, 2009), visual curriculum mapping can be a powerful tool in improving program efficacy. Further, curriculum mapping can facilitate collaboration and collegiality among participating faculty (Uchiyama & Radin, 2009). In this poster, we present the process undertaken to evaluate the curriculum of a new College Teaching Certificate (CTC) program at our university. The goal was to ensure that program objectives are being met by the curricular design. First, a matrix was drawn on a large whiteboard, with course outcomes on one axis and program objectives on other. Next, we marked where course outcomes supported program objectives to expose how the courses and program interact. The resulting visualization provided an excellent means for evaluation of how program objectives were being met and further, proved to be highly effective communication tool in describing to other faculty how their courses fit into the overall CTC. The process has led to a series of guiding questions that will be presented to prompt others to consider how they might use this process in their own work.

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Measuring the Quality of Student Experiences

Brock Mutcheson & Steve Culver, *Virginia Tech*

On an annual basis, the descriptive results of the Virginia Tech Office of Assessment and Evaluation Senior Survey (VTSS) have been summarized for faculty, staff, and administrators to use for continuous improvement of University, program, and department initiatives. Approximately 1500 undergraduate students intending to graduate in December 2013, May 2014 or summer 2014 completed a Qualtrics survey providing insights into aspects related to the quality of their experiences at Virginia Tech. The instrument included polytomously scaled items relating to both process dimensions of their educational experiences (e.g.; advising and engagement) and product dimensions (e.g.; academic skills and overall satisfaction). After completing a preliminary summary of the basic descriptive statistics of individual items, presenters completed an item analysis using jMetric to determine the quality of test items and the statistical properties of the instrument. The relationships between the items and the instrument, correlations, and the overall reliability (Cronbach's Alpha) of the instrument were investigated. Exploratory factor analysis was also used to examine the internal structure of VTSS and determine whether a simple structure could be supported by the empirical relationships between items. More generally, presenters sought to reduce the large number of variables into a smaller number of components to account for as much of the variance as possible. Based on the results of the factor analysis, composite measures were developed and used in the description of the overall VTSS results. The degree of validity of VTSS scores were discussed in the context of an argument-based validation framework (Kane, 2006) with the intention of informing revisions for subsequent administrations of the instrument. Strengths of the instrument were highlighted and recommendations were made to improve future investigations into the quality of higher education student experiences at Virginia Tech.

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Medical Students' Self-ratings of Interprofessionalism Knowledge & Performance Before & After Simulation-Based Education

David B. Trinkle, Tracey Criss, David W. Musick, Misty Flinchum, Sara Kagarise, Ashley M. Bossard, & Julie Morris, *Virginia Tech Carilion School of Medicine and Carilion Clinic*

The purpose of our study was to analyze the impact of simulation-based education (SBE) in augmenting medical students' education about interprofessional, team-oriented patient care. Across four academic years, 166 second year medical students participated in an SBE workshop and self-assessed their knowledge and skills regarding teamwork and interprofessionalism in two separate but related patient care scenarios: trauma care and skilled nursing home care. In both exercises, students were observed by faculty members from Medicine and Nursing, and by their peer colleagues as they rotated between the two learning scenario stations approximately every 45 minutes until all students completed both 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 5 items. Data analyses were performed using ANOVA and Pearson Correlation procedures ($p \leq .05$). Self-reported confidence in all 5 measures increased and achieved statistical significance. The majority of students reported that the SBE experiences were valuable (91%), met the learning objectives (86%) and served as an

important supplement to their educational experiences in patient care. A key finding from student feedback was that medical students reported feeling more empowered to "speak up" as a member of the clinical care team. This study describes successful integration of SBE into an early-in-the-curriculum patient care experience and also supports an innovative method of allowing students to demonstrate skills while working with practicing healthcare professionals. Limitations to the study include the relatively small sample size, lack of long-term follow up on educational gains by students and lack of more objective measures of student knowledge & skills. Further research is needed to examine retention and application of the knowledge gained in the SBE setting when student enter real-time clinical care settings.

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Meet Team-based Learning: A Compelling Instructional Strategy in Higher Education

Matt Barclay, *Franklin University*

Team-Based Learning (TBL) is a powerful instructional strategy. TBL has been around for over 30 years and yet has received relatively little attention in the instructional design or higher education literature. It is often confused with the generic idea of simply learning with other people in any way, including in ad hoc groups. However, TBL is based on specific instructional principles and processes critical to its success (Michaelsen et al., 2004). With proper implementation, TBL can be instrumental in facilitating student motivation, understanding, and application that surpass the well-worn approaches to pedagogy in the university setting (see Barclay, 2011). The purpose of this presentation is to showcase Team-Based Learning—to give educators a broadened understanding of how this instructional strategy could enhance their arsenal of pedagogical tools. The presentation will feature TBL's structure and stipulations. It will also highlight TBL in the literature, provide a comparison to Problem-based learning, and suggest how TBL can be used in a flipped classroom approach.

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Microcultures in Higher Education – Local Teaching Traditions and their Role for Development of Academic Teaching

Torgny Roxå*, Lund University Faculty of Engineering*

This paper is concerned with the development of academic teaching. It acknowledges the individual academic teacher as an important agent. But it also suggests a socio cultural perspective on academic teaching and teachers. Traditions, recurrent practices, and implicit beliefs, it is argued, are part of local cultures in higher education organizations. These microcultures can both constrain and support the individual teacher. It is argued that local workplaces, here called microcultures, hold an important key for those who try to understand academic teaching.

Millennial Students: Recognizing and Addressing Conflict Resolution Styles

Terah L. Davis & Mercianna R. Oliver, *Mercer University*

Educators in the higher education setting are facing an influx of millennials, or those born between 1980-2000. Studies have shown that generation and conflict resolution styles are correlated (Mukundan, Dhanya, & Saraswathyamma, 2013). Considering the many factors that may influence conflict resolution in the age of technology, educators should be informed of millennial trends in terms of conflict resolution. Conflict among students, and even between students and teachers, is often an unavoidable occurrence in a post-secondary classroom setting. As a teacher, it is imperative to be able to effectively handle conflict, which includes also being knowledgeable about different conflict styles. Through the utilization of a poster presentation and handouts, the presenters will explain the five types of conflict resolution styles presented in the Conflict Resolution Instrument (Purhoit, 2010), and provide insight as to how educators can recognize and address the styles with millennial students.

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Motivation of Pre-Service Teachers: A Study of Teacher Experiences in Inclusionary English Language Learner Classrooms

Tinesha Woods-Wells, Brent Beeson, Toni Marie Kaui, Christina Hey, Vanessa L. Ruccolo, & Penny Burge, *Virginia Tech*

According to the 2010 U.S. Census the fastest-growing segment of the U.S. student population is English Language Learners (ELL), those students who speak a language other than English at home. Schools in the U.S. must be prepared to meet the teaching and learning needs of this growing population. The different programs within Virginia Tech's School of Education are collaborating to generate an experience for pre-service teachers that fosters the inclusion of ELLs in the mainstream classroom. One such program serves pre-service science teachers and is designed to help them develop the disposition and proficiency required to create and facilitate effective instructional experiences for science classrooms that include ELLs. Appropriately, the purpose of this phenomenological study was to identify emergent themes in the motivation of pre-service science teachers' experiences after having observed, prepared, and facilitated lessons in an inclusive classroom with ELLs. A criterion sampling of five pre-service science teachers from the ELL/Science collaboration project at Virginia Tech was chosen. Self-determination theory (SDT) served as the study framework and one-on-one interviews were conducted with each participant. Findings suggest that in addition to spanning the SDT motivation continuum, previous experiences with ELL and culturally diverse students proved relevant. The participants expressed both positive and negative perspectives of the ELL inclusionary classroom experience. Further, participants shared similar pedagogical vocabularies and idealistic expectations about future teaching assignments. Overall, all participants experienced the need for more support in differentiating their curriculum for ELL instruction.

Open Technologies and Problem-Based Learning

Randall Dunn, *Liberty University*

This poster reviews instructional practices employing open technologies seeking student engagement and motivation. Specifically, students in higher education environments (both undergraduate and graduate level) engage open document technologies (such as provided in Google Drive) to explore content, conceptual understandings and review understandings. Further, these same tools encourage effective use of formative review practices in face-to-face and distance learning contexts. The session reviews foundational concepts of collaboration and social learning, audience participation technologies in learning contexts, engagement and motivation, assessment practices (informal) and authentic assessment. The session provides real life examples for demonstration and discussion.

Out of the Box: A Jack of All Trades Approach to Embedded Librarianship

Courtney N. Miller, *Jefferson College of Health Sciences*

This poster demonstrates how a dynamic and highly customized approach to embedded librarianship, referred to as the "jack of all trades approach", has fostered continued and expanded collaboration between the library and faculty in an academic setting. The author's approach to embedded librarianship comes from the belief that being available to faculty in a variety of capacities is essential to creating a successful program. The "jack of all trades" approach encourages the librarian to expand the definition of embedded librarianship to include less traditional assistance, such as multimedia enhancement of lessons, re-evaluation of course structure and assignments, and being open and innovative when meeting new needs and challenges. This poster describes the challenges and successes of implementing this type of embedded librarianship. Through personal observation and faculty feedback, this poster will: examine three cases that demonstrate the various types and levels of service, describe student and faculty reactions to the embedding process, and explore the new types of collaboration that have grown from the relationship established through embedding. Overall response to embedded librarianship has been positive, resulting in growth of the project, increased collaboration outside of the classroom, and higher student success. Increased collaborative opportunities also indicate that the "Jack of all trades" approach is one with a promising future that can be adapted to many library settings. These observations are encouraging and provide a strong framework for the growth and development of this approach to embedded librarianship.

Patterns in Transformative Pedagogy: Ethological Perspective

Neil Greenberg, Deepa Deshpande, Kathy Greenberg, Karen Franklin, Brenda Murphy, Kristina Plaas, Howard Pollio, Brian Sohn, & Sandra Thomas, *The University of Tennessee, Knoxville*

Transformative learning, in which students experience a paradigm shift from merely *knowing* course content to *realizing* its relevance in their personal and professional lives, is the recent focus of The University of Tennessee's Phenomenology in Education Research Team (PERT). A tenet of the phenomenological approach is that course content is most easily mastered when allied with a student's personal views, thus harnessing their intrinsic motivational and affective qualities. To more deeply explore this pedagogical approach, we identified a specific course as exemplary in evoking transformative learning by means of post-class written reflections, individual audiotaped interviews, and focus groups conducted at end of the semester. ETHOLOGY identifies and describes the many specific "units of behavior" that can be configured and manifest in countless patterns of behavior seen in closely observed research participants. These units, rendered as objectively as possible to avoid misleading assumptions about their function, provide a reliable basis for our exploration of the causes and consequences of

specific patterns that are associated with outcomes of interest. A graduate course was identified, and class sessions of two sections were recorded. Units of behavior were extracted from the transcripts, enabling us to determine their frequency, circumstances of expression, and patterns. Patterns were then analyzed to determine specific actions and transactions that might reasonably be considered components of the student experience. For example, preliminary analysis reveals that a specific pattern of real world student experiences elicited by the instructor and questions asked of students is reliably associated with spontaneous recognition of the application of course content to their personal and professional lives. This study will provide clues about how phenomenologically-informed pedagogy works to enhance student experience. After comparable analysis of other classes necessary and sufficient elements and patterns revealed will indicate which patterns might be intentionally facilitated to evoke an enduring student experience.

Peer-driven Learning Experiences in Small Living-learning Communities

Matt Grimes & Callie Verderosa, *Virginia Tech*

Scholarship about the impact of living-learning experiences on the lives of college students is clear: Learning happens outside of the classroom and living-learning communities (LLCs) help to facilitate those experiences (Kuh, 1995). Whether they are structured as academic-focused, interest-driven, or themed communities, LLCs offer students a more intimate community within their campus, important to the sense of belonging that contributes to a more fulfilling college experience (Strayhorn, 2012). A hallmark of successful LLCs is encouraging the continued involvement of students as peer leaders in both the curricular and co-curricular aspects of the experience. The social and communal activities led by these students are full of teaching and learning opportunities for their peers. According to Vygotsky (1978), learning and development happens as a result of interaction "under adult guidance or in collaboration with more capable peers" (p. 86). Bandura (1977) explains that learning is social in nature and occurs through identification; that is, the learner adopts their values, behaviors, etc. from observation of others, including their peers. The Students Experiencing and Responding through Volunteer Experiences (SERVE) and Thrive LLCs are small communities (less than 40 participants) that embrace the importance of peer leadership in student learning experiences. In SERVE, second-year students return to live on the hall and commit to providing co-curricular learning through a variety of communal experiences. In addition, returning students remain active in the service immersion, community building, and overall college engagement that is offered through the LLC. In Thrive, returning students provide both curricular (in-class peer educators) and co-curricular learning experiences for student new to the community each year. These intimate, more family-like living experiences create a bond among students that results in a wide variety of stories that illustrate the impact of peers on the learning and engagement of students.

Perception from Research, in Teacher Education

Carlos M. Rodríguez*, Universidad Latina de Costa Rica*

This research analyzes, from empirical evidence, the perception of research among college students in levels Bachelors, Licencetiate, Masters and Doctorate in Education Science. Inferential analysis of the self-perception of their research competencies were performed using a questionnaire. Also the view of student about the research was determined using semantic analysis on the results of focus groups. It was determined that competency Critical Analysis is key in explaining the behavior of students, and that there is a significant break in visions between the levels studied. These results allow making decisions in curriculum design in order to refine the research skills of college graduates.

Promoting Ownership of Program Assessment Initiatives

Enoch Hale & Andrew Marx, *Virginia Commonwealth University*

This practice session will demonstrate methods for forming and facilitating communities of practice for the purpose of developing rubrics for academic program assessment. A program rubric can advance the further objective of outlining learning outcomes for courses and assignments within a program. Since such rubrics are meant to represent a set of shared program-wide learning outcomes, communities of practice enable deliberation, input and buy-in on the part of faculty. This enhances the legitimacy of shared curricula. Participants will learn about the process of development and implementation of a core curriculum program rubric focused on ethical and civil responsibility as a competency in interdisciplinary general education courses. They will explore how multiple stakeholders, representing a variety of disciplinary perspectives, can collaborate to develop versatile learning objectives and accompanying assessment instruments.

Queer Like Me: An Exploration of the Impact of Gay & Lesbian Representation in Popular Television on LGBTQ Young Adults

Divonna M. Stebick, *Gettysburg College*
Sean Robinson, *Morgan State University*

Young adults in the 21st century are living in a media saturated world. The media system, like the educational system, is "one of society's key set of institutions, industries, and cultural practices" (Masterman, 2001, p.6). The media is often invoked to mean not only the mediums of communication, such as the radio, internet, film, print, music, and television, but also the products of these mediums—newspaper and magazine articles, film and television productions, websites, social media, and even video games. In this study we, as action researchers interested in the implications of media literacy within teacher preparation programs, reflect on our experiences introducing queer theory through the lens of media literacy within the context of a young adult literature and media course. We examined the outcomes of this process, focusing on the evolution of the process/product and perspectives of media literacy and queer theory within the framework of curriculum for young adults. We examined how media literacy impacts how young adults interpret what they are seeing, using queer theory as a lens.

Reducing Financial Aid Fraud Liability: eLearning Identity Authentication

Jessica Mathieu, Partnership Representative, *ProctorU*

Between 2009 and 2012, federal financial aid fraud grew 82 percent, with more than 85,000 people potentially participating in fraud rings, accounting for $874 million during this disbursement period (U.S. Department of Education, 2013). The presentation will outline technology tools and procedural methods to combat the growing fraud in distance education programs. Faculty and administrators will be educated with an analysis of the rising financial aid fraud crisis and predatory lending. Attendees will also learn how to limit institutional liability to safeguard Title IV funding.

Research Methods: An Examination of Students' Attitudes, Skills, and Job Seeking

Allison K. Wisecup, *Radford University*

During the 13-14 academic year undergraduate students participated in a study regarding their attitudes toward research methods and their likelihood of applying for research-related positions. Students were categorized based on whether or not they had completed a research methods course, either in sociology or another program. The purpose of the study is an empirical examination of students' attitudes toward research methods prior to and after completing a research methods course. Further, the study explores whether the completing of a research methods course impacts students' self-reported likelihood of applying for research-related positions. The results suggest almost no differences in students' attitudes toward research methods. However, the results do indicate a significant, positive relationship between aspects of students' attitudes (affect and confidence) and applying for research-related positions after graduation.

Scholarship of Teaching and Learning: Building a Research Line of Inquiry from Your Class

Pamela Eddy, *The College of William and Mary*

The Scholarship of Teaching and Learning (SoTL) blends facets of faculty work. Boyer (1990) initially argued for an expansion of what defines research, ultimately creating four domains: the Scholarship of Discovery, the Scholarship of Application, Scholarship of Integration, and the Scholarship of Teaching. SoTL involves research to improve teaching practices. The current emphasis on student outcomes, most often associated with increased completion rates, places the Scholarship of Teaching and Learning squarely into the center of conversations. How can we improve student retention? What works in developmental coursework? How does authentic learning in the classroom contribute to increased outcomes? How do Flipped Classrooms or online teaching outcomes compare with traditional forms of classroom teaching? All of these questions can be addressed when faculty become introspective and focus on what is going on in their own classrooms. Improved teaching occurs when faculty members use formative and summative assessment tools to determine what is working in their classes, what isn't working, and ultimately changing to improve student learning. Yet, most faculty are not trained in teaching strategies and most often see research as comprised of one of the other domains of scholarship (Boyer, 1990), most notably directed to original research in their discipline. Because teaching is often less valued in tenure and promotion decisions (Fairweather, 1996), faculty typically spend less time working on improving their practice. Yet, a focus on the SoTL can provide a means to not only improve teaching in the classroom, but also to meet requirements of research when faculty publish what they've learned in their own practice. This poster poses several reflective questions for faculty to consider as they work to create their SoTL, identifies publication venues for completed research, and reviews research design approaches to help start a line of inquiry focused on teaching and learning research.

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Scieneering: Learning, Discovery and Engagement at the Intersection of Science, Engineering and Law

Keri Swaby, Jill Sible, Bevlee Watford, Kristi DeCourcy, Richard Walker, & Anna-Marion Bieri, *Virginia Tech*

Participation in research is recognized as a high-impact outcome, even being labeled "the pedagogy of the 21st Century" (CUR, 2014). At the undergraduate level, research "engages multiple dimensions of a student's cognitive, behavioral, and attitudinal skills" (Lopatto, 2010) as they investigate, create, and solve problems, resulting in enhanced learning and personal development, and increased retention and persistence to graduate school. But today's most pervasive and complex societal problems require skills and knowledge that go beyond single disciplines and instead demand an interdisciplinary approach (Abeolela et al, 2007; Porter, et al, 2006). Funded through a Howard Hughes Medical Institute Science Education grant, the Scieneering program at Virginia Tech was created in 2011 to provide science and engineering undergraduate students with interdisciplinary academic and research experiences at the intersection of science, engineering, and law. Students complete an interdisciplinary minor in Interdisciplinary Engineering and Science or Science, Engineering and Law, and conduct complementary research in a lab outside their major discipline, lending relevance as students apply learned knowledge to tackle real world problems. Now embarking on its fifth year, the program has fostered over 150 Scieneers, with a 74% retention rate and graduated a total of 35 students since Spring 2013. Students cite individualized attention, research gains, exposure, networking, and career clarification as key benefits of being in the program (Sible, 2014). 72% of graduating Scieneers have gone on to graduate or professional school in STEM areas, with others pursuing STEM careers immediately. Over 200 volunteer faculty mentors have offered research projects from more than 30 different academic departments. Mentors indicate that the gain of having motivated student experts in their labs is productive and rewarding (Culver et al, 2012). This presentation will discuss challenges, successes, lessons learned, and best practices for introducing an interdisciplinary academic and research program at the tertiary level.

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Serving Veterans: Reviewing the Needs and Concerns of Veteran Students

Bridget E. Hamill, Karen E. Sanders, & Barbara M. Weimerskirch, *Virginia Tech*

For the past three years, Virginia Tech has been recognized as a Military Friendly and recommended college for veterans and military students. Currently at Virginia Tech, veterans find academic support within the Student Success Center, educational benefits documentation and VA liaison assistance through The Office of Veterans Services, and peer support offered by Vets@VT, a student veteran's organization. Surveys were used to collect information concerning the needs (transition, educational, social) of current student veterans, while also reviewing the design and usage of existing Veterans programming and resources, and making suggestions for future programming and resource allocation. Results suggest that while students are pleased with existing programming and support, more can be done. The survey also lends a voice to veterans' experiences at Virginia Tech; within the

classroom, the campus, and the greater community. The communication of their lived experiences help guide future discussions and decisions the campus makes on behalf of its veterans population.

Student Motivation and Mobile App Acceptance in a Higher Education Setting

Eun Jin Hwang, Dolores Brzycki, & Michael Powers, *Indiana University of Pennsylvania*

The theoretical purpose of this study is to empirically validate a modified unified theory of acceptance and use of technology (UTAUT) model as applied to the implementation of a mobile application at Indiana University of Pennsylvania (IUP). The practical aims are to find out whether the new mobile app encourages potential students to enroll, helps current students find campus information, and needs improvements. Students expect to use mobile apps to navigate campus resources, so many universities have activated them. What will encourage their use? UTAUT explains user intentions, usage behavior, the likelihood of technology success and drivers of acceptance. A survey was conducted to explore the effects of performance expectancy, effort expectancy, social influence, and facilitating conditions on usage and perceptions of IUP.

Student Perceptions of STEM Instruction

Rebecca Splan & Matt Spindler, *Virginia Tech*
Rebecca Bott, *South Dakota State University*

The purpose of the current study was to assess student perceptions of their current and past STEM related course taking experiences and in particular, the extent to which their experiences reflect the types of STEM learning called for by current policies, researchers, and practitioners. Students in agriculturally related STEM majors agreed more strongly than non-agricultural majors that within their programs of study utilization of problem solving creates: a) interactive learning experiences; b) learning experiences that facilitate cooperation between students; c) opportunities to learn from real world challenges; d) direct career development opportunities; and e) understandings of concepts and processes as components of complex whole systems. It is recommended that observational research be enacted to assess the type of learning students experience in STEM related courses of study.

Student Perceptions of Their Undergraduate Experience: A Qualitative Review

Ryan Cook, Brock Mutcheson, & Steven Culver, *Virginia Tech*

How students perceive their educational environment contributes to their persistence and success in that environment. At Virginia Tech, the Office of Assessment and Evaluation, through the annual web-based graduating senior survey, asks seniors about their perceptions of their university experience. Many of the items on the survey are closed-ended Likert-type items that ask students for their level of agreement or satisfaction as it relates to aspects of their major, activities at the university, interactions with faculty and other students, and their future plans. At the end of the survey, students are asked the open-ended question: "Is there any other information you would like to provide about your experience specifically related to your major or to your overall university experience? If you could do it all over again, what might you do differently?" A total of 1497 of 4416 students returned completed surveys, resulting in a response rate of 34%. Of those, 439 (30%) responded to this open-ended question. This sample was 53% female; the breakdown of race/ethnicity was 80.2% White (non-Hispanic), 5.2% Asian/ Pacific Islander, 4.1% Hispanic/ Latino, 3.4% Multiracial, 2.5% African American, and 1.1% did not identify with any of the previously listed categories. To analyze the data, the presenters completed open-ended coding of all student responses. Student perceptions of experiences in higher education were categorized into seven themes: 1. Overall

Experience at Virginia Tech, 2. Teaching/Learning, 3. Advising, 4. Student Engagement, 5. Transfer Student Feedback, 6. University Climate, 7. Feedback about Facilities. These specific comments from students provided meaningful observations on many aspects of their collegiate experience and point to particular areas were this sample of students perceived Virginia Tech to be excellent or in need of enhancement. This information can be used to highlight successes and facilitate change; ultimately benefiting future students' learning, development, and preparedness.

Student Self Grading: Perception vs. Reality

Tara L. Crowell, *The Richard Stockton College of New Jersey*

The purpose of student self-grading is explored to discover not only students' perception of grades but their experience with self-grading in college. Before student self-grading may be deemed a valid practice of accessing student learning, it is important for researchers to define how students perceive letter grades. Data was collected via a brief email survey from 144 undergraduate Public Health majors at a mid-size liberal arts college. Results indicate that students used three major categories in defining their perceptions of what each letter grade represent – Knowledge, Effort and Assignment, along with three minor categories – Learning, Critical Thinking and Success. Results also indicate that only about a third of participants actually engaged in self-grading in college and out of those who, do about 70% indicate that they graded themselves harder than their professors. These findings have implications for the discrepancies that may exist between professors vs. students' perception of grade representation and ultimately the effectiveness of student self-grading in the classroom.

Evaluating the Preparation-Guide as a Tool for Increasing Students' Accountability for Reading the Textbook

Etty Vandsburger, Debora Schneller, & Rana Duncan-Daston, *Radford University*

A successful lecture that includes meaningful class discussions requires students to be familiar with the topics covered in the assigned reading. However, because college students frequently do not complete the reading prior to class, instructors are faced with the challenge of finding methods that would encourage students to do so. The purpose of this study was to evaluate one method, a preparation-guide, of holding students accountable for the reading. Forty-one students in two social work courses participated in this qualitative research. Students overall had a positive response to the preparation-guide assignment and reported that it was helpful tool to increase their reading of the textbook throughout the semester.

Teaching Pragmatic Psychodynamic Psychotherapy to Graduate Students

Debora Schneller & Rana Duncan-Daston, *Radford University*

Psychodynamic psychotherapy provides a firm basis for clinical assessment and intervention. Evolving developments in the theory have strengthened it as an evidence-based approach, and have made it concordant with the profession's strengths-based, multicultural perspective. Teaching this complex theory to graduate students in a user-friendly practical way can be a challenging endeavor. An elective focused on teaching fundamental concepts of psychodynamic psychotherapy was developed for concentration year graduate social work students. Drawing on Kolb's theory of experiential learning, the course integrated theory and practice. Students learned the pragmatic psychodynamic psychotherapy model and applied theoretical constructs through multiple components, including developing a case study for a role-play; critiquing segments form the television series "In Treatment", conducting videotaped role-plays of assessments and interventions, and journaling about how they were applying course concepts to their ongoing work. The structuring of the course, beginning with creating a case study that led to developing a psychodynamic role play, supported students' scaffolding of their learning. Quantitative data was collected to determine how students rated themselves on self-efficacy with specific competencies in psychodynamic psychotherapy in the first class, at mid-term, and in the final class; in the final class a qualitative component was added to explore students' perceptions of their competence in these areas. The outcomes were positive and data was used to make specific suggestions to strengthen course outcomes.

Team-Based Learning In An Online, Compressed Class: It Can Be Done

Candice Benjes-Small, *Radford University*

Team-based Learning (TBL) stresses group work and peer teaching, balanced with individual accountability. Students are placed in permanent teams early in the semester, then take individual and team quizzes on class content which they then apply in team. I've used TBL successfully with face-to-face, semester long classes, but translating it to the online environment is tricky. The existing literature discusses the use of TBL in semester-long, asynchronous virtual classes (Hosier, 2013; Palsole & Awalt, 2008). Using the lessons from these practitioner-oriented articles, I decided to use TBL in my online, shortened semester summer course. Because the curriculum requires that students in this course give group presentations, I could in good faith require a synchronous component. The synchronous element allowed me to mimic a face-to-face TBL course more closely than those described in the other articles. In both my face-to-face and online classes, students take the individual quizzes through Desire2Learn; the grade is suppressed until after the group meeting. Next is the team quiz and activities; online, we used group meeting rooms in Adobe Connect so that members could gather and complete the requirements. Even though the groups only met four times because of the compressed timeline, many formed quick bonds and rated their team meetings as highly effective. Their final projects were among the best I've ever received. While my initial reason for trying TBL with the online class was to increase individual accountability, student evaluations revealed that they felt they learned a lot from their team members, which is the primary goal of TBL.

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Technology for Teaching: Teaching Channel & History Explorer

Cam Akers, Eric Ames, Brian Boyle, Elizabeth Richardson, Sara Skubal, David Hicks, Josh Vaden

Leveraging technology for the purpose of fostering student learning involves aligning students' cognition, behavioral, social, and affective processing with the desired student outcomes. This processing may then be enhanced through these of digital technologies such as the Teaching Channel and the Smithsonian's History Explorer.

The Changing Face of Horticulture: Adapting Curriculum to Student Interests

Holly L. Scoggins, Alex X. Niemiera, & Barbara H. Leshyn, *Virginia Tech*

What's hot with millennials? Locally-grown produce, organic gardening, native plants, community gardens, viticulture, green roofs, urban greenhouses, and more. What is rarely mentioned in the buzz is that all of these topics fall under the umbrella of Horticulture. What used to be simply the "art and science of growing and using fruits, vegetables, and ornamental plants" can be expanded to include environmental issues and awareness as well as social responsibility. College students want specific coursework related to these new areas of interest. Our curriculum has emphasized landscape and ornamental plant-related courses (greenhouse and nursery), and courses to train students for jobs in these areas, collectively known as the Green Industry. However, only a minority of students enter Horticulture based on interest in these areas. To build undergraduate numbers, updates to the curriculum are critical, fostered by new partners, faculty, and courses as well as renovation of existing classes. An example of such updating is a unique partnership with VT Dining Services that has helped fund an instructor and a facility to teach Organic Vegetable Production as well as a hands-on field practicum. Another course offers a cross-state field experience to connect students with local food systems. The Greenhouse Management course previously had a floriculture focus; the instructors have added much more information on alternative growing systems such as hydroponics for vegetables and herbs, biocontrols for pests, etc. The Civic Agriculture minor, though housed in ALS, draws on faculty and courses from Horticulture. Most recently, a cross-disciplinary Viticulture minor, housed in Horticulture, was created to help meet the needs of the rapidly-growing wine grape industry in Virginia.

The Effect of a Video Training Module on Students' Beliefs About Academically Dishonest Actions

Susan Polich, *Jefferson College of Health Sciences*

Our program has seen a multi-fold increase in the number of students brought forward for violations of the Honor Code. Our experience is consistent with what is being seen nationally in our discipline. There are several recommendations in the literature to help prevent or dissuade academic dishonesty (AD). The faculty followed these recommendations but cases of AD continued to rise, so we created an online video regarding AD and the consequences of violating our Honor Code (HC). This video was viewed by each student in their final year of study. Assessment plan: Students were given a pre-survey, watched the video, and then took a post-survey. The surveys asked students to report which of nineteen actions was a violation of the HC and how right/wrong was the action. Just prior to graduation, they were asked to report what types of AD they witnessed during their program of study. Results: 34 students viewed the video and took the pre/post surveys. Pre-video, 67% of students accurately reported actions as violations of the HC; 85% accurately reported post-video. Pre-video, 88% of students identified academically dishonest actions as wrong; post-video, 85% of students identified those same actions as wrong. Six items were consistently reported as non-AD and/or "not wrong." Six students completed the pre-graduation survey and reported witnessing nine different types of AD. Six of these nine actions were the same consistently erred in the surveys. Discussion: The video seems to have a reported effect on the beliefs of what actions are academically

dishonest but no effect on beliefs of the rightness or wrongness of actions. The primary limitation in this study is the relative lateness of the video in the program of study. We plan to repeat this study with first year students and expand it to explore those consistently misidentified six actions.

The Impact of Generational Characteristics on Student Learning

Claudia Howell, Jenna Haynes, & Kevin Doyle, *Virginia Tech*

Generational markers are universally present and influence the ways in which people perceive the world around them. Depending on factors such as location, each generation adopts different markers that shape the members of those generations. In institutions of higher education, there are often differences between the generational markers of faculty members and students. Several differences include preference/method for communication, egalitarian versus hierarchical working relationships and expectation of faculty availability. Pedagogically, students of the millennial generation are relying more on technology as a means of communication inside the classroom. Accounting for generational markers, including communication style, use of power in the educational relationship and agreeing on terms of availability, can impact the learning environment and outcome of current undergraduate students. This poster presentation will outline the various generations as well as the markers present within those generations. Additionally, information will be provided concerning the ways in which differing generational markers are influencing pedagogical practices and the ways in which institutions are accounting for generation in pedagogical practices.

The Impact of Using a Backchannel on the Nature and Quality of Peer Feedback to Build Reflective Teaching Practice

Laura Kassner, *Virginia Tech*
Kate Cassada, *University of Richmond*

In a Fall 2013 graduate level course geared toward developing reflective teaching practice, the researchers employed a backchannel (live synchronous chat) to facilitate peer feedback during the viewing, in small groups, of recorded instruction delivered by each of the graduate students. The purpose of the study was to examine the nature and quality of peer feedback exchanged in the digital arena, and secondarily to gauge student impressions of the technology for use in their own pedagogical applications in K-12 classrooms. Participant surveys and chat transcripts were analyzed. Among other conclusions, participants noted various strengths of backchannels, including their ability to provide real-time feedback that is richer, when paired with oral feedback, than oral feedback might provide alone. A content analysis revealed comments were mostly positive observations or compliments about instructional strategies. Questions were asked and peer coaching suggestions were offered and accepted. Interestingly, when asked about K-12 applications, participants were less willing to consider experimenting with the practice in their own classrooms, citing a lack of trust in the maturity, typing skills and ability of young K-12 students to maintain focus on a task. Session attendees will experience and engage in a backchannel during the presentation.

Theatre Troupes – A Model to Learn 5 Stages of Team Development

S. A. Vasantha Kumar, *Dayananda Sagar College of Engineering, Bangalore*

Together Everyone Achieves More, TEAM has five stages of development; Forming, Storming, Norming, Performing and Adjourning. Just as the birds of the same feather flock together, theatre enthusiasts belonging to different demographic segments of the society come together with a sole purpose of making a successful show. The coordinator/ director of the play, who leads, take the team through all the 5 stages of development for the success of the show. In the first stage of forming, when an idea or opportunity of producing a play for a show /competition is made, the troupe first meets and get introduced to each other. They share information about their background, interests and experience and form first impressions of each other. Play reading takes place and team norms are set here. All teams go through this second stage of storming. Team members both old and new compete with each other for status and acceptance of their ideas. In theatre troupes, this can be for casting and work responsibilities. This also leads to conflicts in the group. The troupe coordinator /play director needs to be adept in facilitating the team through this stage. When the team moves to norming stage, they are beginning to work more effectively as a team. All is going smoothly. Team members are helping each other to grow and develop their skills. As the show day is approaching, the team is strongly motivated. Significant progress is made in terms of play run through, music, costumes, sets and technical rehearsals before the final show. High performing teams are successful and exhibit the best play appreciated by all. It is time to celebrate and wrap up. In The last stage of adjourning, the team members separate but carry along lot of memories and lessons learnt. This poster depicts theatre troupes as classic models to learn the five stages of group development and can be used as pedagogy in management classes.

Thinking Like a Physicist – An Approach to Teaching Students about Problem Solving

John Simonetti & Alma Robinson, *Virginia Tech*

The goal of our First Year Experience (FYE) Program – "Thinking Like a Physicist" – is to introduce freshman and transfer physics students to productive ways of thinking often at odds with what they learned in high school, community college, and everyday life. We hope this introduction will provide a firm basis for these students to successfully complete their university education and succeed in their future careers. In order to encourage our students to solve novel and difficult problems in creative ways, we help them learn how to attack quantitative problems like physicists by first studying and working on Fermi problems. We follow this by helping our students develop strategies to solve "standard" back-of-the-chapter physics problems in introductory physics – a necessary skill for their success – by exploring mathematician George Polya's heuristic approach to solving problems. Lastly, we have the students work in groups to develop and explore solutions to a real-world, big problem. Through these activities, we take our students through the various academic, realistic, and open-ended problems and problem-solving activities they will encounter at Virginia Tech, and beyond. We assess our students' growth in their understanding of their own problem solving strategies by having them complete written reflections before, during, and at the end of the course. In this poster, we will report on these results.

Transformative Learning and Classroom Climate: An Interdisciplinary Study of a Unique Graduate Seminar

Brian Kelleher Sohn, *University of Tennessee, Knoxville*

The social-emotional character of a course, often referred to as the classroom climate, is an important construct for instructors to consider since they can influence it significantly. Specific factors in climate like greater cohesiveness and goal direction have been "consistently and strongly associated with achievement and affective outcomes"

(Fraser, 1999, p. 65). Climate also is a contributor to transformative learning (Mezirow, 2009) when opportunities for openness, challenge, reflection, and action are provided (Johansson & Felten, 2014). As part of a large-scale phenomenological research project at a southeastern land-grant university, I examine the role of an intentionally phenomenological approach to classroom climate and its influence on learners through the use of participant interviews, reflections, and class session recordings. The instructor's goal for the climate was to recreate a *salon* where students could devote themselves to building understanding and skills and share expertise, perspectives, and curiosity. Students and the instructor highlighted factors they were aware of such as relationships, comfort, personal stories, and humor as important aspects of class sessions. They also reported changes in perspective and applications of course content to their personal and professional lives. In this poster I present preliminary findings and ground them in empirical research on classroom climate and philosophical works related to freedom (e.g., Rogers, 1969), sharing authority (Thayer-Bacon, 2008), and the pedagogic atmosphere (Bollnow, 1972/1989).

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Understanding Transfer Shock: The APSC Case Study

Jillian Lowery & Nada Tamim, *Virginia Tech*

Research has indicated that students' transition from two-year colleges to four-year academic institutions may prove to be overwhelming on many occasions. Many studies have been conducted on the transfer experience, typically focusing on institutional factors that impede or promote this experience. The purpose of the current study is to investigate the transfer shock phenomenon within the context of the Animal and Poultry Sciences (APSC) Department at Virginia Tech. More importantly, this study aims to gauge students' perceptions about factors and aspects that helped them or may further support them in completing their studies at APSC. The findings from this study will help to better understand the main challenges that face this growing population of students and allow for better advising in the Animal and Poultry Sciences Department. Students who transferred to Virginia Tech in the Fall of 2013, thus finishing two semesters as APSC students, were invited to participate and complete a web-based survey on their transition experience. While data collection is currently underway, preliminary findings based on the first batch of collected data indicate that time constraints and higher levels of academia are two of the greatest challenges for incoming students. Final results based on the complete set of data, including personal interviews, will be presented. Using the information collected, a fact sheet and short video will be generated that will help future transfer students as they make the transition into Virginia Tech.

Use of Cross-Disciplinary Teaching in Engaging Undergraduate Students to Improve Critical Thinking and Communication Skills

Susan Duncan, Courtney Crist, & Laurie Bianchi, *Virginia Tech*

Students graduating with a degree in life sciences are challenged with evaluating information sources such as peer reviewed, evidence based research articles or print and media popular press reports. Instructors must educate students to distinguish accurate information from propaganda. Students need to be capable to communicate factual information to related and unrelated fields. The goals of this study were to improve how students obtain legitimate information in science, improve the ability to critique information obtained, and improve their scientific communication. Guest experts in economics, political science, statistics, and communication discussed their discipline as related to functional foods topics. Students were tasked to write a Wiki on a functional food component with scientific research with relevant citations. They were also asked to evaluate a popular press article on their topic and critique the article on the accuracy of scientific support. A rubric was developed and used to evaluate and compare the Wiki products from the Fall 2013 course (multidisciplinary topics) with the previous course offering (Fall 2012; no multidisciplinary topics) without the guest lectures. The eight rubric criteria were categorized as Critical Thinking, Cross Discipline, and Communication. Each criterion could be scored between 1(lowest) and 3 (highest). All scores for the criteria were totaled on each Wiki. All critical thinking criteria had improved scores ($P<0.05$) from Fall 2012 to Fall 2013. Cross discipline focused criteria did not have improved scores ($P>0.05$) for the Fall 2013 despite the multidiscipline guest lectures. This study indicates that there is a need to develop educational material to improve undergraduates' ability to critically think about information sources. Results indicate further exploration is needed regarding the use of multidisciplinary teaching for classroom enrichment. While criteria may be specific to functional foods, they can be formatted to have meaning to any life science field.

Using a Simulation Model for Project Management Education

Saeed Rokooei, James D. Goedert, & Katherine Fickle*, University of Nebraska-Lincoln*

The aim of this paper is to concisely address the implementation and primitive results of a research project being developed at The Durham School of Architectural Engineering & Construction, University of Nebraska-Lincoln. Project-oriented Educational Research Fostering Excellence in Cyber-infrastructure Teaching (PERFECT) is a simulated tool to improve education of interdisciplinary area of project management for development and content delivery. The overall goal of this research project is to develop an effective and engaging project-oriented simulation to teach one area of the project management standard, project time management, as developed by the Project Management Institute (PMI) to enhance undergraduate education at the University of Nebraska. The researchers are developing a project-oriented interactive simulation using previously developed research methods, tools and a real world project for one of the ten knowledge areas defined by the Guide to the Project Management Body of Knowledge (PMBOK® Guide).The first draft of this simulation is tested for engagement and effectiveness in project-oriented courses in Construction program. The results of a retrospective pre & post survey for 28 construction students with no experience in project management showed that participant felt the increase of their project time management content knowledge was significant due to PERFECT exposure.

Using Motivational Interviewing Techniques to Increase Student Engagement in Class Discussions

Caroline M. Brackette, *Mercer University-Atlanta*

Motivational interviewing is a technique used to facilitate, and engage individuals in, intrinsic motivation. The goal is to change behaviors through a goal-oriented, person-centered approach that aims to elicit change while exploring and resolving ambivalence. The model is often used with the stages of change to assist facilitators in recognizing what strategies are warranted during the process of changing (DiClemente & Velasques, 2002; Miller & Rollnick, 2002). These same principles can be implemented in the classroom to engage, otherwise uninvolved, students in classroom discussions. Research in the counseling profession has indicated efficacy of this approach in counseling clients who might be ambivalent to change (Burke, Arkowitz, Menchola, 2003; Madson, Loignon, & Lane, 2009; Prochaska & Norcross, 2007). This presentation will provide an overview of motivational interviewing and the stages of change. Specific strategies that instructors can implement to engage students who are resistant to participation in group discussions will be addressed.

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Using Survey Feedback to Improve the Effectiveness of Statistical Collaborators, Walk-In Consultants, and Short Course Instructors

Christopher Casement & Eric A. Vance, *Virginia Tech*

The Laboratory for Interdisciplinary Statistical Analysis (LISA) at Virginia Tech is a laboratory for enabling and accelerating research in all fields using quantitative data and for training statisticians to be more effective statistical collaborators. LISA seeks to improve the effectiveness of statistical collaborators, walk-in consultants, and short course instructors by identifying their strengths and deficiencies via post-meeting surveys. LISA's primary mission is to train statistics students to become interdisciplinary collaborators (Awe and Vance, 2014). Since 2008, LISA clients have been asked approximately 20 questions regarding their collaboration or walk-in consulting meetings and about 10 questions regarding any short courses attended. These surveys, sent via email at the end of the semester or immediately after the short course, all ask a similar mix of quantitative and qualitative questions aimed at assessing the overall quality of a client's experience. The feedback provided by the respondents is shared with the collaborators and instructors to help them understand any strengths or weaknesses in their collaboration or teaching abilities. They are then equipped to provide more effective and efficient meetings or courses for future clients. These clients subsequently gain a better and quicker understanding of how to use statistics to answer their research questions. When analyzing the change in responses to each survey question over time, there was a significant increase in the percentage of positive responses for various questions. These included questions asking if the collaboration service received was helpful, if collaboration clients were satisfied with their meetings, and if short course attendees understood at least 80% of the content, among others. For those questions where there was no

significant increase in positive responses, there was no significant decrease over time. Thus the feedback provided to collaborators and instructors has only helped them become more effective in their meetings or short courses.

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Using Visualization to Enhance Problem Solving Performance:

An Integrated Pedagogic Approach

Deepa Deshpande & Brenda Murphy, *The University of Tennessee, Knoxville*

Problem-solving ability is widely regarded as a core skill in the physical sciences; but students commonly struggle to master this skill because they fail to make connections between abstract theoretical concepts and complex scenarios described in the problems. The process of making connections between concepts and problems was facilitated in this study by designing a sequential learning experience. Two homogenous classes of 17-18 year old students taking college preparatory mathematical physics course were recruited to investigate the effect of this treatment while learning 'projectile motion'. The unit is traditionally taught over two weeks. The treatment was randomly assigned to one class and instructor effect was controlled by having the same instructor teach the unit to both classes. In the first week of instruction, the treatment group participated in guided exploratory activities using a computer simulation of projectile motion having graphic and numeric displays, while the control group participated in a hands on lab with horizontally launched projectiles during 80 minute lab sessions. In the second week of instruction, the treatment group solved problems in projectile motion by modeling the problem scenario with a spreadsheet to generate graphs and tables, while the control group solved those using traditional techniques. The activities of treatment group were designed to generate identical visual outputs for encoding connections between theory and problems. The posttest scores of treatment group were found to be significantly higher than control group as revealed by a p-value of 0.038 with a 2-sample t-test. Most complex problems involving abstract spatial concepts impose a heavy cognitive load on the learner's working memory. The results of this study support the idea that external visual representations (presented by the simulation and spreadsheet) form a "distributed and coupled cognitive system" which scaffolds the limitation of short term memory (Liu & Stasko, 2010).

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Wednesday

February 4, 2015

Session 3

1:50-2:40 PM

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

A Course Facebook Page Increases Student Engagement with Course Content

Deborah J. Good, *Virginia Tech*

Abstract: With over 1.28 billion monthly users, including many 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 over two years of the course. During the first year, professor-generated posts were made exclusively, while during the second year, both professor- and student generated content was posted to the page. Significantly more students joined the Facebook page in the second year (86.3%), when student-generated posts were part of a class assignment, as compared to the first year when there was no student assignment (67.4%), even though membership was optional for both years. Facebook engagement (a term used by Facebook to describe activity with posts) was significantly lower in year one (6.51 engaged/post), when only professor-generated posts were made, as compared to year two, when student generated "creative content" was included (25.74 engaged/post). Much of this increase in the second year was due to engagement with the student-generated content (43 engaged/post) as compared to the professor-generated content (7.07 engaged/post), which was similar in magnitude to engagement in the first year, when only professor-generated content was posted to the page. In addition, "likes," "clicks," and "shares," as well as viral spread of posts, were significantly higher for the student-generated content in the second year, than either the first year or the professor-generated content in the second year. The results suggest that use of student-generated creative content for course related Facebook page increased student engagement in this pedagogical tool.

Literature Review

As of June 2014 (Noyes, 2014), there are over 1.28 billion active users of Facebook, with 1.01 billion of these using their mobile devices to access the site. When first designed in 2004, Facebook was used only as a social networking site for college students, as only those with a ".edu" email address could register for an account (Nguyen, 2004). Thus, it is not surprising that 83% of 18-24 year olds who use the internet regularly also use Facebook (Noyes, 2014). Fifty percent of this demographic goes on Facebook when they wake up (Noyes, 2014), with an average number of eight log-ins, and over 100 minutes per day recorded in one study of college students (Kwon, D'Angelo, & McLeod, 2013). Academics would like to capture some of that activity by students, and use Facebook as a pedagogical tool. In one study, an environmental course that used Facebook to provide news stories, websites, and comments, concluded that interaction on the site motivated pro-environmental behaviors in the students (Robelia, Greenhow, & Burton, 2011). Another study completed in an Organic Chemistry class found that students preferred to use Facebook as a discussion forum, rather than traditional educational software such as WebCT™, likely due to their familiarity with the medium (Schroeder & Greenbowe, 2009), and this same trend was also found for students in an Astronomy course (Miller, 2013). However, other studies suggest encouraging Facebook use by students in a course could detract from, rather than enhance, overall learning (Kirschner & Karpinski, 2010). Thus, it is unclear whether a Facebook course page can be used as a true pedagogical tool, or if this type of a course page would be a distraction, rather than a medium for learning. In addition, the type of content on a course Facebook page has not been assessed, nor has any study examined the use of Facebook-specific assignments as a pedagogical tool. In this study, a Facebook page for a large lecture-based nutrition course was created and studied over two years. In year one, only professor-posted material was used on the Facebook page, while in year two, a "creative content" assignment was developed such that student-generated content was also posted to the site. Students were asked to provide survey data and comments about their usage of the site, and Facebook post and page statistics (available to any page creator) were compared for year one and year two.

Methodology

Students were enrolled in a department-required nutrition class, which focused on the roles of vitamins and minerals in metabolism, nutrition and health. 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 in year 1. The IRB approved the study as "exempt" and the Facebook page was set up as a group education themed page. The "education" category was chosen for the page. Daily posts were made during the academic semester (excluding weekends). In year 2, students were asked to develop a "creative content" post, worth 3.3% of their grade. 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. In year 1, 69.4% of the class of 235 students joined the Facebook page, and by year 2, there were 392 members, representing both students from year 1 and new students from year 2. Of note, students in the first year regularly "liked" posts by students in the second year of the class, indicating anecdotally that they were still engaged with the class material, many after graduating. There was no difference in the average final grade for students who indicated by post-survey that they had joined the Facebook page, compared to those who indicated that they did not join the page (84.99 $\pm$ 7.71 versus 84.49 $\pm$ 8.06, *N.S.*).

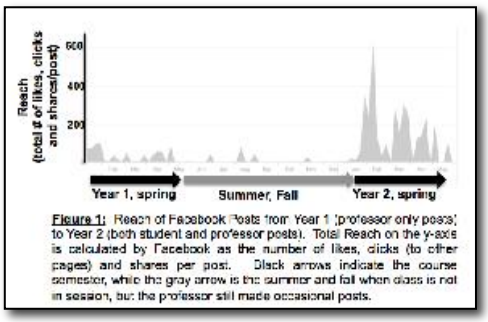

Figure 1: Reach of Facebook Posts from Year 1 (professor only posts) to Year 2 (both student and professor posts). Total Reach on the y-axis is calculated by Facebook as the number of likes, clicks (to other pages) and shares per post. Black arrows indicate the course semester, while the gray arrow is the summer and fall when class is not in session, but the professor still made occasional posts.

Reach and Engagement in the Facebook page: Reach, or the percent of users who saw posts in their daily Facebook feed was not statistically different between year one and year two. Likewise, student survey data supported this finding, as there was no significant difference in frequency with which students indicated that they read the posts in either year one or year two. Facebook describes "engagement" as shares, clicks and likes on a post, and tracks this data. While similar percentages of students saw the daily posts each year, engagement with the Facebook posts was significantly higher ($P \leq 0.001$) for year two, than for year one, and this is shown graphical in **Figure 1**. In examining engagement, or the individual users who clicked on posts, this difference is largely due to a highly significant increase ($P \leq 0.001$) in engagement with student-generated posts, compared to professor-generated posts. There was a highly significant increase in viral reach of posts, or posts that were seen by friends of the users on the page during year two as compared to year one, with this increase again being due to student-generated content. In year two, students were asked to comment on whether they preferred student- or professor-generated posts. Consistent with the Facebook post and page data, students indicated that they preferred student-generated posts. In addition, there was a significant difference in student responses to the questions: "Did you ever "like" (professor/student)-generated posts?" ($P \leq 0.01$).

Conclusion

In summary, the majority of students enrolled in a large lecture-type nutrition course, joined a Facebook page, which provided news stories, and anecdotes on vitamins and minerals in year one, and the inclusion of student-generated content in year two. Reach and engagement both decreased as the semester progressed in year one, which could have been due to increasing demands on student time, or decreasing interest in the material posted. However, in year two, with student-generated content being posted daily, engagement and was significantly higher throughout the year. Based on these data, it is concluded that a course Facebook page should include both professor-generated links, and student generated content to ensure full engagement and participation in the page. Overall it was found that a course Facebook page could be used as a pedagogical tool to enhance learning and communication skills of complex scientific subject matter.

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OpenDSA: Experiences using an Interactive eTextbook to Teach Data Structures and Algorithms

Clifford A. Shaffer, Eric Fouh, Sally Hamouda, and Mohammed F. Farghally
Virginia Tech

Abstract: We present experiences with using the interactive eTextbook system OpenDSA at a number of universities to teach Computer Science courses at the second and third semester levels. The OpenDSA project is an international collaboration that seeks to develop complete instructional materials for Data Structures and Algorithms courses, deeply integrating textbook-quality content with frequent use of algorithm visualizations and interactive exercises. We report results including feedback from students and instructors, along with performance data from use in courses.

We describe our recent experiences with using a new interactive eTextbook system, OpenDSA. OpenDSA (Fouh et al. 2012) was created to overcome certain problems encountered in undergraduate Computer Science education. While algorithm visualization (AV) has long been known to be a successful approach to presenting the dynamic behavior of computer algorithms (Naps et al. 2002; Fouh et al. 2012), instructors report various obstacles to finding and integrating good visualizations into their classes (Shaffer, et al 2010). OpenDSA provides a complete replacement to existing paper and online static textbooks, using a highly visual approach to presenting the content through frequent use of algorithm visualizations. It is a collection of online, open-source tutorials that combine textbook-quality text with algorithm visualizations and randomly generated instances of interactive examples. Even more important than the visualizations, OpenDSA contains a large body of interactive exercises, intended to provide students with unlimited practice.

Content within OpenDSA is organized into modules, each of which focuses on a specific topic such as Quicksort or Closed Hashing. OpenDSA is delivered as HTML5 pages through a standard web browser. The system is highly configurable, allowing instructors to create a “book instance” for their course that contains just the content that they want, the exercises that they want, and control over scoring and grading options. Modules are composed from a combination of text, images, visualizations, and a variety of exercises. Visualizations are written using the JavaScript Algorithm Visualization (JSAV) library (Karavirta and Shaffer 2013). Most AVs and exercises are designed to be self contained so that they are able to run both independently or in conjunction with OpenDSA (through iframe embedding). Many of our exercises require that the student manipulate a data structure to show the changes that an algorithm would make on it, such as clicking to swap elements in an array or clicking on appropriate nodes in a tree or graph. We refer to these as “proficiency exercises". This type of exercise was pioneered in the TRAKLA2 system (Malmi et al. 2004), whose developers work closely with us on OpenDSA. We use the Khan Academy framework to provide support for multiple choice, T/F, and various custom interactive exercises that we call “mini proficiency" exercises. All exercises are automatically graded and provide feedback to the user. OpenDSA uses mastery-based grading, meaning that students can repeat exercises until they get credit. OpenDSA collects log data for all user interactions occurring on an OpenDSA web page.

Methodology

OpenDSA’s first in-class use was in a Junior-level data structures and algorithms class at Virginia Tech in Fall 2012, where it was used to replace two-three weeks of course material (Hall and Shaffer 2013). In comparing test scores against a control group, the OpenDSA group scored about one-half standard deviation higher on the course midterm, which was just short of reaching statistical significance for the numbers involved. During Fall 2013 and Spring 2014, OpenDSA was used to varying degrees in nine sections of seven distinct courses involving five universities, three countries, and over 700 students. About half the sections were the traditional second semester programming course, and about half were a more advanced course on data structures that follows the standard second semester course. Use of OpenDSA materials ranged from supplemental readings to being the sole “textbook” and source of graded homework exercises.

Results

Analysis of log data from student use determined a number of interesting correlations. While students are more likely to view all slides in a slideshow visualization when they are given explicit credit for doing so, even students who did not get credit typically viewed at least portions of the visualizations. An important performance finding was that students who voluntarily did extra practice exercises (that is, repeated exercises for which they had already received credit) before a test did better on the test, with the results being statistically significant. Students consistently ranked OpenDSA as the second most important learning resource after programming labs. Students of a second semester programming course at Virginia Tech were presented with a number of scenarios for use, including using standard textbook, using OpenDSA with the online practice exercises being voluntary, using OpenDSA with the exercises being graded, and with instructor use of OpenDSA in lecture or not. They indicated the greatest feeling of confidence in successfully completing the course with the scenario where instructors used OpenDSA as a source of lecture content in class and the OpenDSA practice exercises were required for a grade.

We surveyed the instructors involved regarding their use of OpenDSA. Since the numbers were relatively small and the uses varied, the results are necessarily primarily anecdotal. Instructors most strongly indicated positive response to not needing to grade as much homework (since the auto-graded OpenDSA exercises can replace some paper homeworks). Several used OpenDSA as a lecture aide, and indicated that it permitted to them to shift their class focus away from the mechanics of how the various algorithms perform and more on analysis, performance implications, and other high-value conceptual content that often gets slighted when using traditional materials. Their main requests were for more OpenDSA content, and a reworking of the material in a form suitable for use as a lecture aide (course notes) to supplement the "textbook" version.

Future Work

Use of OpenDSA continues to expand as we develop more materials and make it more configurable. We have recently added support for changing the programming language used for examples, making it of use at more institutions. We have added support for translations to other written languages, and we are getting portions translated to Finnish, Swedish, and Portuguese. Recent additional NSF funding will allow us to create new materials on Formal Languages and Automata, and to expand our assessment activities. Another major focus for the near future is developing techniques for better visual presentation of algorithm analysis material, which is often the most difficult content in these courses for students to understand.

Acknowledgements

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Utilizing Neuroscience-Based Learning Principles in the Higher Education Classroom

Barbara Nadeau, *Quinnipiac University*

Abstract: Neuroscience has begun to prove what many college professors have long suspected -- cramming for exams doesn't work, multitasking is inefficient, and completing the readings before class is helpful. This practice session will explain the current research regarding how the brain learns and the factors that influence learning. Participants will be provided with examples of how to incorporate these principles into their classrooms and will be invited to reflect upon and discuss their own use of these learning principles.

Literature Review

In the past fifteen years neuroscientists have developed a greater understanding of the way the brain learns and the factors that influence learning (Doyle & Zakrajsek, 2013). It is now understood that learning is a process of building new neural networks and that there are certain learning strategies that can facilitate the development of these new networks (McGinty, Radin, & Kaminski, 2013). Therefore we can now design our courses to take advantage of the revelations from neuroscience. For instance, it has been demonstrated that memory for new information is stronger when studying is spaced over a period of a week rather than all in one day (Jang, Wixted, Pecher, Zeelenberg, & Huber, 2012; Pavlik & Anderson, 2008). Researchers have also found that some of the strategies that are regularly used by students actually inhibit learning. For example multi-tasking is inefficient and impedes learning (Ravizza, Hambrick, & Fenn, 2014) and even the longstanding practice of using flashcards for learning has been shown to be ineffective for retaining detailed information (Reagh & Yassa, 2014). On the other hand, strategies such as the use of concept maps and scaffolded learning are being supported by the neuroscience research. Researchers have shown that it is necessary to fully engage the lateral pre-frontal cortex in learning tasks in order to later be able to generalize the learning to new situations and that the lateral pre-frontal cortex becomes engaged when new learning is linked with prior learning (Cole, Laurent, & Stocco, 2013). Developing an understanding of these neuroscience concepts can improve teaching and learning (Doyle & Zakrajsek, 2013).

Objectives for the Practice Session

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

1. Identify the primary brain areas implicated in learning
2. Explain, in general terms, what is occurring in the brain during learning
3. Develop classroom strategies that incorporate the neuroscience of learning.

Description of the Practice

This session will begin with a brief, general, interactive neuroanatomy primer to orient participants to the brain areas implicated in learning. Major findings relative to memory, the impact of elaboration and distributed practice on learning, novelty and mindset will be discussed. The research regarding each concept will be described followed by examples of how these concepts can be incorporated into the classroom. Participants will be invited throughout the presentation to think about which of these concepts they are already utilizing and to share their strategies. Research regarding additional factors that influence learning such as sleep and exercise will also briefly be presented.

Discussion

Many higher education teachers have already instinctively discovered these principles but science is now providing credence to these practices. I have begun sharing this brain science with my students in order to promote these active learning practices. I have also adjusted my teaching style to incorporate these principles. Similar to others (Stupans, Scutter, & Pearce, 2010), since making these changes I have noticed an improvement in student grades as well as on my teaching evaluations.

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Large Class Pedagogy: Active Learning Practices that Follow the Research

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Abstract: As class sizes increase, many of the instructional options available to those who teach large classes decrease due to practical issues, such as classroom management challenges and the impracticalities of grading. While lecturing is often the resulting practice of choice, research has shown that passive learning strategies are often less effective at promoting learning than active approaches. This practice session will share, through modeling, active learning strategies that are effective and manageable in large class settings as well as the theoretical foundations that suggest these strategies will increase student learning and performance.

Literature Review

Large classes at most universities are a rite of passage for many students at the undergraduate level and present many challenges for the faculty who teach them. The shear number of students in a large course often limit the pedagogical and assessment approaches many faculty attempt to employ. For some, lecture and multiple-choice tests become the standard practices. With that said, the research question regarding active vs. passive learning has been clearly answered and confirmed over time, and we know that students will learn more in any class setting if rich, active, pedagogical approaches are employed (see Freeman et al., 2014; Hake, 1998; Light, 2001; McKeachie, Pintrich, Lin, Y.G. and Smith, 1987).

Goals and Objectives

Given the complexities of teaching lots of students in a single class, what does active learning look like in large class settings? This practice session will provide hands-on experiences as answers to this question are shared. Key learning theories will be shared to provide a foundation for the instructional practices that will be modeled throughout this session. Those who attend can expect to leave this session with concrete active learning practices that will be successful in any size classroom as well as an understanding of the theoretical underpinnings that support the selection of these approaches.

Description of Practices

This session will provide participants with a selection of effective teaching strategies aimed at initiating and building relationships with students (before, during and outside of regular class), enhancing communication with students (both inside and outside of class), creating greater class participation by students, methods for recognizing and acknowledging student's class participation, and increasing and maintaining class attendance. These strategies will be demonstrated with participants along with a discussion on their strengths and weaknesses, and the underlying rationale and pedagogical basis for them.

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Technology 101: Take Action for Integration into Your Classroom

Jennifer Lynne Lawlor, *Doctoral Student Educational Leadership, Southern Connecticut State University*

Abstract: Within the past 10 years, technology has become an integral component within our lives. A vast majority of students are surrounded by it, whether it is a laptop, tablet, or smartphone. With many higher education institutions have limited resources of professional development, it falls onto the instructor to create their own personal development to understand how to utilize the technology students are entering the classroom with to help ensure that the students are more engaged with the curriculum. This presentation examines the need of technology integration within our curriculum to engage students to further critically examine the information and the methods in which faculty can use within their classrooms which advance technology may not be present. Participants will explore basic engagement technology tools to better understand the ways to use the technology the students are entering the class with to the instructor's advantage.

Objectives

At the end of this session, participants will be able to:

1. Understand the need for technology integration within their curriculum, even on a granular level.
2. Recognize methods and reasons to have personal development to engage students further with technology.
3. Apply the techniques discussed throughout the presentation to their own curriculum.

Description

This presentation addresses the need for personal development regarding technology integration of the curriculum by focusing on the role that technology plays within the students' lives and the need to utilize the technology that students are entering the class with in order to further the students' engagement within the course. According to the 2013 K-12 Horizon Report, mobile learning and mobile devices are gateways to endless learning, collaboration and productivity fostered by the internet. This is apparent when you observe the amount of information which students have access to with just a click of a mouse. Marsh II et al (2004) suggested that basic strategies for improving student learning are to put great responsibility on students and to improve the presentation method by utilizing tools such as technology (as cited in Oh & Park, 2009). By utilizing educational technology tools, instructors can use the methods which students are used to (i.e. social media, texting, etc.) to their advantage to ensure that the students are engaged with the content. It is vital that teachers and educators need to be properly trained and versed in both computer usage and integration into the 21st century classroom so that students can begin to acquire these critical skills in their education (Mance, 2014). Unfortunately with budget constraints, professional development falls onto the instructor, which leads to independent personal development on the skills necessary to ensure that students are receiving the prudent information with the methods that will only help them succeed in their professions. Mance (2014) goes on to state that without instructors taking the action to implement technology within their classrooms, the American education system risks failing to properly prepare a large percentage of the students by giving them 20th century skills in a 21st century world.

The presenter will synthesize literature, including statistics to reflect the importance of technology integration. Then, the presenter will demonstrate free web-based education technology tools which will create an engaging environment while requiring limited technology knowledge on the instructor's part.

Discussion Questions

1. What are the stark effect of the lack of technology integration within the classroom?
2. What free technology tools are available to instructors today?
3. Where can instructors find more information and begin their personal development journey?

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Creating a Feedback Loop in the Higher Education Setting

Julie K. Marsh, *The College of William and Mary*

Abstract: Most learners experience formal education in a traditional format where the instructor is the expert and the learner is the novice who receives knowledge from the instructor. Learners are expected to find the "right" answer, but are often not taught to ask questions or embrace ambiguity. Most academic experiences focus on a well-defined problem, and learners use theories or formulas that give the answer. There is a need to expand learning using a feedback loop in order to allow learners and instructors to expand the communication of knowledge.

Objectives

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

1. Define and describe Design Thinking, participatory culture, and feedback loop
2. Recognize reasons for creating and using learner/instructor feedback loops
3. Develop various ways for incorporating a feedback loop in the classroom or asynchronously outside of the classroom
4. Explore different options for feedback loops (blog, Twitter, Edmodo, Google+, etc.)

Description

In the varied topography of professional practice, there is a high, hard ground overlooking a swamp. On the high ground, manageable problems lend themselves to solution through the application of research-based theory and technique. In the swampy lowland, messy, confusing problems defy technical solution. The irony of this situation is that the problems of the high ground tend to be relatively unimportant to individuals or society at large… while in the swamp lie the problems of greatest concern. (Schön, 1987)

In many traditional learning environments the instructors is considered the expert and the learner an empty vessel that the instructor will fill. The learner is a novice with very little experience who must receive knowledge from the instructor. Learners are expected to find the "right" answer, but are often not taught to ask questions or embrace ambiguity. Most academic experiences focus on mastering the high, hard ground: learners have a well-defined problem, and they use theories or formulas that give the answer. There is a need to expand learning using a feedback loop in order to allow learners and instructors to expand the communication of knowledge.

This presentation will discuss the tenets of Design Thinking (DT) and participatory culture creating and successfully using a feedback loop in the classroom to allow learners to explore ambiguity. The feedback loop discussed specifically is a blog forum, however more options for creating a feedback loop for learners and instructors will be explored, including options such as Twitter, Edmodo, and Google+.

Discussion

Allowing learners to engage in the learning process can be an ongoing process by using a feedback loop. This approach can be integrated into regular classroom activities, can be used asynchronously outside of class, and becomes a more efficient way for learners and the instructor to communicate more efficiently and effectively. The feedback loop also provides ongoing, regular feedback to the learner as s/he is exploring new knowledge.

Reclaiming Student and Faculty Agency Through Data-informed Reflective Practice

Jacob Grohs & David Knight, *Virginia Tech*

Abstract: This session is rooted in the belief that students and faculty alike need to (re)claim proactive roles in the learning endeavor. To do so requires data-informed reflective practice – where students self-assess and actively interpret classroom "data" to monitor and plan their own learning and where faculty solicit regular feedback, keep a pulse on student achievement, and strive to cyclically reflect as both teacher and educational researcher. This session offers insights from faculty efforts to encourage students to actively control their own learning through data-informed reflective practice in two distinct settings: (a) large lecture courses in undergraduate engineering mechanics and (b) graduate research methods and foundations courses in engineering education. Discussion throughout will focus on specific instructional strategies and methods (e.g., formative assessments, timely feedback) used and the perceived effectiveness of the methods from both students and faculty.

Literature Review

In *Democracy and Education*, John Dewey claims "the criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies the means for making this desire effective in fact" (1916, p.53). This aspirational view of education does not speak to disciplinary competencies or specific "content coverage," but rather overarching skills related to learner agency. In terms of educational psychology, one such skill is self-regulation. Paul Pintrich describes self-regulation as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" (2000, p. 453). Yet, the current educational environment in many universities makes such aspirations seem impossibly idealistic. The increased modularization of curriculum necessarily prioritizes specific disciplinary content coverage over any focused transdisciplinary competencies (e.g. self-regulation). The demands of large class sizes increasingly distance students and faculty from the teaching and learning endeavor – instructional and assessment methods become mechanized (e.g. online auto-grading) and, as a result, satisfaction and engagement for all suffer. In "Applying the Science of Learning to the University and Beyond," Halpern and Hakel claim that this sort of lecture-style approach works well for some outcomes but is "one of the worse arrangements for in-depth understanding," largely because "understanding is an *interpretive* process in which students must be active participants." (2003, p. 40). By extension, in order for faculty to understand the learning that is or is not occurring in the classroom, it must be an interpretive process in which both students and faculty must be active participants.

This proposal is grounded in the idea that data-informed reflective practice is critical to reclaiming agency in teaching and learning. Donald Schön posits "when a practitioner reflects in and on his practice, the possible objects of his reflection are as varied as the kinds of phenomena before him and the systems of knowing-in-practice which he brings to them" (1983, p.62). We believe collecting, sharing, and discussing data related to individual learning, overarching class-wide engagement and performance, and the perceived effectiveness of learning strategies can help foster ownership and metacognitive awareness in both students and teachers. Specific strategies involved in this proposal include use of formative assessments, daily feedback polls, periodic prompting about self-regulative strategies, peer feedback, and interactive co-teaching. Each individual strategy is well discussed in higher education pedagogy literature and has been linked to increased engagement and/or student achievement (e.g., formative assessments in William & Thompson 2007, self- and peer- assessment in Hanrahan & Isaacs 2001).

Goals and Objectives

As the result of participation in this session, attendees should be able to:

- Consider how more diverse forms of data might be collected and discussed within the classroom setting in order to foster reflective practice
- Discuss the opportunities and challenges of implementing counter normative instructional strategies in difficult educational environments
- Understand the importance of formative assessments and student feedback for teacher reflection and continuous improvement.

Description of Practice

This session offers insights from faculty efforts to encourage students to actively control their own learning through data-informed reflective practice in two distinct settings: (a) large lecture courses in undergraduate engineering mechanics and (b) graduate research methods and foundations courses in engineer education. Discussion throughout will focus on specific instructional strategies and methods (e.g., formative assessments, timely feedback) used and the perceived effectiveness of the methods from both students and faculty.

In the large lecture courses (Grohs), a formal research project has been embedded with two distinct goals: (1) to better understand relationships between motivation, course engagement (time on task), and achievement; and (2) the perceived effectiveness of three specific instructional interventions (i.e., formative assessments [example], exit slips [example], and online guided self-coaching before/after tests [example]). Several elements immediately feed information back to students, while others prompt about self-regulative skills (e.g. reflecting on classroom engagement, planning future allocation of effort).

In graduate courses (Knight) in engineering education, students must make a major epistemological shift from an engineering worldview to one of social sciences. Both the research methods and foundations courses are designed to help students make this shift, with explicit reading and writing strategy sessions built in to early class sessions and frequent, short early-semester assignments (unlike many other graduate courses) that enables abundant formative feedback be provided to students. For example, students work together during an early class session to dissect a never-before-seen article and discuss strategies for identifying key parts quickly and accurately. This instructional practice is a direct result of feedback from previous cohorts of students who struggled even approaching reading social science materials, let alone making sense of it. In addition, a peer review process, modelled after the journal submission process, is a major feature of both courses. Students provide formal, written feedback to each other and then must respond to critiques in a formal reply before submitting major assignments to be graded. The final assignment, quality of peer feedback, and response to the peer feedback are all factored into the assessment—this mechanism forces reflective practice in an effort to enhance students' self-regulative skills.

Discussion

In the practice session, attendees will hear both instructor perspectives on how students responded to various strategies, how feedback and reflection informed 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 different instructors teaching in very different environments, we hope to foster general conversation on (1) diverse interpretations of "data" in the classroom and how students and faculty alike can interpret and reflect more regardless of discipline; (2) opportunities and challenges of specific instructional strategies designed to cultivate student agency; and (3) reflecting as faculty on teaching and learning as part of a cycle of continuous improvement.

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Using Collaborative Technology Tools in the ESL Classroom

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Jess Himic, *University of North Carolina, Charlotte*

Abstract: In Intensive English Programs, blended-learning enables the face-to-face classroom to be supplemented with online content. In the physical classroom, students can easily engage in collaborative learning activities. However, adding digital content makes the learning environment even more robust and interactive, and allows students to work at their own pace while maintaining a spirit of teamwork. This session will focus on the use of electronic journals (E-journals), such as Penzu and Moodle, which are effective in promoting collaborative learning. E-journals can assist English as a Second Language (ESL) learners with their language acquisition. Unlike oral in-class collaboration, E-journals give opportunities for self-reflection, experimenting with new vocabulary, and developing writing skills. They also provide a concrete, permanent record for students to refer back to as they build their language skills. In addition, they can motivate learners and give them confidence to engage in activities and tasks outside of the English-language classroom. Using this technology also develops international students' understanding of a learner-centered teaching environment.

Literature Review

With so much research on the importance of developing 21st century skills for learners, focus has been on the importance of literacy and information literacy in particular. The use of digital technology, communication tools and/or networks appropriately to access, manage, integrate, evaluate and create information in order to function in a knowledge economy is being embedded in the education. Students are trained how to access information efficiently and effectively, evaluate information critically and competently, and use information accurately and creatively for the issue or problem at hand. In the past and for many years, foreign language teachers have used the computer to provide supplemental exercises to develop students' reading and writing skills. In recent years, advances in computer technology have motivated teachers to reassess the computer and consider it a valuable part of daily foreign language teaching (Higgins, 1993). Technology tools, whether internet-based or software applications, can be an extremely useful resource for teachers and learners of foreign languages. New technologies and applications allow students to become more involved in their learning and gain more insight about the culture of the language that is being taught (Saqlain, 2012). Studies have shown that using technology is very beneficial in learning, but in order to promote successful learning, classroom tasks and activities must be meaningful, be interactive, and have a clear purpose for the language student (Liu et al., 2002; Warschauer & Healey, 1998).

Goals and Objectives

The main goal and objective of the session is for the participants to understand how to use E-journals to provide a collaborative environment for their students. Participants will also become familiar with specific features within the E-journal platforms that facilitate and develop a balance of accuracy, fluency, and complexity in language learning, enabling students to become more active in their learning process and to gain English-language skills.

Description of Practice

Presenters will demonstrate the use and benefit of various E-journal tools. Focus will be on the following practices: Helping ESL teachers:

- create an online classroom for E-journals
- assign context-based homework and activities
- add additional content (photos, links, voice)
- organize materials
- comment and respond to students
- evaluate and track student performance

Helping ESL students:

- express original ideas in various streams of discourse
- develop writing skills
- create an identity; track, account for, and reflect on own learning process
- comment and respond to classmates in order to:
    - negotiate meaning and produce comprehensible output
    - strengthen vocabulary
    - exchange information and establish interdependence
    - think more deeply and more clearly

Discussion

The discussion will focus on the use of E-journals:

- as collaborative projects that will embed the concept of group work for foreign students and the practice of active learning versus passive learning (which is prevalent in their home countries)
- as creative technology in expressive projects aimed at encouraging language production while lowering students' affective filters and creating a fun learning environment
- as an environment that allows for self-reflection while practicing productive skills
- to develop a greater understanding of modern, culturally-appropriate ways of communication and interaction so that students can learn from and contribute to the online world
- to navigate western-oriented websites and online resources

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Conversation: Learner-centered Teaching: Project-based Learning, Problem-based Learning, Situational Learning, Inquiry-based Learning, Gaming, and More

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Susan Weaver, *University of the Cumberlands*

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. Research also indicates that there is a positive correlation between engagement in the learning process and intrinsic motivation (Deci, 1995) as well as sustainable learning through the development of critical thinking (Helle, Tynjala, & Olkinuora, 2006; Pink, 2006; Weimer, 2013). Students have a chance to connect the course work with meaningful learning, conceptual understanding, and higher order thinking through problem solving (National Research Council, 2000).The focus of this presentation is a conversation among attendees regarding the construction and implementation of learner-centered teaching within a higher-education course. How do students respond to such an approach? What are the productive and adverse aspects of such an approach?

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). Arum (2011) indicates that "Teaching students to think critically and communicate effectively are espoused as the principle goals of higher education" (p. 35). Critical thinking requires an interconnection between reasoning, logic, and what is perceived as reality. The development of critical thinking requires students to apply dialectical and dialogical reasoning, insightfulness, determination, creativity, and proficiency when solving complex problems (Costa and Kallick, 2009). As educators there is a strong desire to ensure that students gain the necessary critical thinking and 21st century skills to be successful (Gardner, 2006; Wagner, 2012, Penuel, Means, & Simkins, 2000). "Educators must specifically plan learning opportunities to provide students with experiences that will challenge their old ways of thinking and learning, giving them a reason to develop new habits of thinking deeply about all experiences"(Wiersema & Licklinder, 2009, p. 125). Research also indicates that there is a positive correlation between engagement in the learning process and intrinsic motivation (Deci, 1995) as well as sustainable learning through the development of critical thinking (Helle, Tynjala, & Olkinuora, 2006; Pink, 2006; Weimer, 2013).

McKeachie and Svinicki (2006) suggest that educators "recognize students' need for self-determination and autonomy, and opportunities for choice and control" (p 149). Education should focus on learning to learn (Gardner, 2006; Weimer, 2013). 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, Rohrbeck, Fantuzzo, 2006; Hmelo-Silver, 2004). This is accomplished through projects that require critical thinking and problem-solving abilities (Hmelo-Silver, 2004). 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). 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.

Objectives

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

1. Identify the various forms and attributes of learner-centered teaching.
2. Identify the key practices within audience members' learner-centered teaching – role of the teacher, balance of power, function of content, responsibility for learning, processes and purpose of evaluation.
3. Apply the essential principles and practices within learner-centered teaching based on audience members' course structure.
4. Construct a comparative analysis of the difference learner-centered teaching approaches.

Description

The theoretical constructivist premise for using learner-centered instruction is the establishment of optimal learning opportunities where students have the freedom and autonomy to engage in purposeful and relevant learning integrating new information and concepts with pre-existing perceptions (Hmelo-Silver, 2004; Wolters, 2003; Pink, 2006; Wagner,

2012; Weimer, 2013). Education should focus on learning to learn (Gardner, 2006; Weimer, 2013). Academically, critical thinking or the learning process requires the substantial use of literacy – listening, speaking, reading, and writing. Therefore, pedagogical strategies should be implemented that promote and support students' analysis and synthesis of course content, ability to listen and respond objectively, interactions with others when synthesizing and evaluating relevant information, self-reflection of personal growth, and willingness to revise previous concepts or opinions when presented with new information.

Session Construction

Learner-centered teaching is a constructivist pedagogical approach that requires the active engagement of learners as constructors of their own learning. 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. Workshop participants will discuss the various forms of instruction, how they have or want to implement such a form of instruction as well as the acceptance level of such an approach by their students. The objective is for a heightened degree of collegial conversation. The following format will be used:

1. What is learner-centered teaching including various forms (similarities and differences)?
2. Why is learner-centered teaching necessary in higher education?
3. Participants will break up into small groups, identify how the key practices of learner-centered teaching is or could be constructed.
4. Participants will share their experiences or desire to implement such a pedagogical approach.
5. Participants will construct concept webs high-lighting various approaches discussed within the group.
6. Participants will conduct a gallery walk to view and add to other concept webs.
7. Closure will consist of a sharing of new or renewed ideas among the participants.

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A Conversation for New Faculty and Instructors on Integrating Assessment of Student Learning into a Community-based Service-Learning Course

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Abstract: This conversation session will model and expand upon an innovative approach to integrating assessment in community-based, service-learning curricula. The scholarship of assessment has gained momentum in higher education in response to calls for accountability by various stakeholders, including those stakeholders at the institutional level, future employers, and community members and organizations, who want society-ready graduates. As a means to begin the conversation, faculty with a variety of experiences (one new faculty member without formal training as an educator, one with formal training as an educator, one with years of experience of using service learning in higher education, and one with training and emphasis on assessment and evaluation) will share a practice-based framework. Through a facilitated round table discussion, space will be created for new faculty and instructors to share strategies and implications for integrating assessments of learner-centered experiences and assignments across disciplines.

Literature Review

Accountability of teaching and learning in higher education, influenced by stakeholder demands for quality education and the growing competitiveness in the *knowledge market*, has influenced the growth of institutional and individual assessment (UNESCO, 2009). 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 learner-centered paradigm and innovative instructional practice put forth by faculty (Barr & Tagg, 1995). The service-learning praxis of connecting academia and community "within a framework of respect, reciprocity, relevance, and reflection," is a transition toward engagement in higher education (Butin, 2010, xiv). An educational praxis for community-based learning should address the process of innovation, creating spaces for learning and change in a manner that recognizes issues of identity, politics, and complexities of experience while competing with barriers toward action such as individuality, responsibility, and practicality (Fenwick, 2000, Kollmuss & Agyeman, 2002). 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).

Goals and Objectives

The focus of this conversation session will be to allow participants to learn from other educators in the beginning stages of their careers who also have an interest in embedding an assessment of student learning to guide pedagogical practices throughout a course. A description of an assessment of student learning in a Community Nutrition course by new instructors at Virginia Tech will serve as a jumping off point for the conversation. Participants will share their own strategies to embedding assessment in courses; discuss barriers to assessing student learning during a semester, and brainstorm ways to overcome these barriers. At the conclusion of the session, new educators will have a greater awareness of strategies available for embedding assessments of student learning into courses. As a result of attending this session, participants will be able to:

Objective 1: Describe and understand the culture of assessment as viewed by their home departments/institutions.
Objective 2: Illustrate innovative practices and strategies to integrate assessment measures into existing or new courses.
Objective 3: Navigate barriers experienced due to course material, nature of the course, or organizational structures.

Description of Topic to be Discussed

This session addresses the need for embedding assessment of service-learning in community-based courses, not only for the continuous measure of student learning but for an overarching perspective of connecting the "how to" of practice in higher education to the "why so". During this conversation session new faculty working collaboratively to integrate assessment within a community nutrition course will share their experience and processes used.

One noteworthy aspect of community-based programs is the interface between the university and community by way of service-learning curriculum. The course that will serve to begin the discussion was designed to introduce dietetics students in the Department of Human Nutrition Foods and Exercise to the principles of community-based work and help them to define and comprehend what constitutes 'community nutrition and physical activity'. Learning and engagement that occurs in these community-based settings is relevant to student, faculty, administration, future employers and community stakeholders, and a need for an assessment of this process is evident. A systematic, ongoing approach to collecting and using evidence to determine the level of student achievement toward student learning outcomes is a desired skill for educators. This process also places a greater emphasis on formative assessment, allowing educators to adjust their practices as necessary to help students achieve desired learning outcomes throughout the complex process of providing students with a combination of classroom-based learning, real-world experience, and a chance to practice civic responsibility.

Facilitation Techniques

The goal of the proposed conversation session is to share innovative ways to integrate assessment into community-based service-learning courses. Promoting an understanding of accountability in institutions of higher education and fostering assessment as a reflective tool for new faculty to implement in their work. This conversation will be facilitated as a round table discussion. We will begin the conversation by sharing our own strategy for integrating assessment into a community-based course then facilitating group discussion. Participants will be asked to brainstorm strategies for overcoming these barriers. The round table discussion will be facilitated through small group and round robin techniques to create a participatory experience.

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Wednesday

February 4, 2015

Session 4

3:00-3:50 PM

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

The Virtual Standardized Patient: an Effective Modality for Educating Preclinical Medical Student Presentation Skills. A Comparative Item Analysis of Live Standardized Patients versus Virtual Patients

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A**bstract:** Mastery of the clinical patient presentation is a keystone to effective coordination of clinical care and translates to patient safety, and effective and efficient medical care. A preclinical model for medical student education in clinical patient presentation has historically utilized the use of a standardized patient (SP) for history and exam, followed by a formal presentation to a clinical faculty member as a model. The SP model has been used to evaluate the student's ability to acquire history and physical exam findings, to formulate an assessment, and to determine diagnostic plan. VCOM has developed a model for presenting a virtual standardized patient utilizing an interactive learning management system. The objective of this research was to perform comparative analysis of the quality of the case presentation based on an item analysis of live SP versus virtual patients. A total of 340 students' performance was evaluated. Performance on the virtual case presentations and live patients were found to be comparable (percentage of correct answers was 77.3% and 76.8% respectively, $p = 0.9$). Item analysis on students scores in the 4 areas of the case presentation related to history, physical assessment and laboratory evaluation, differential, and plan showed no statistically significant difference in students' performance between virtual and live patients ($p > 0.05$). In this study which evaluated the students ability to gather, analyze, and communicate patient data; the group utilizing live standardized patients and presenting to experienced clinical faculty was comparable to that gathered in the virtual patient model. The use of the virtual patient for education could enhance medical education by providing a source for multiple cases with evaluation while not being encumbered by obstacles of live standardized patient. Based on the results of this study, virtual patient case development and use in competency assessment warrants further evaluation and development.

Literature Review

The use of standardized patients to evaluate and improve communication and diagnostic reasoning of medical students and residents has been studied for the past decade. Consistent improvements have been noted in multiple articles in patient – physician communication, especially in the areas of patient-centered care. Little information has been published regarding the importance of accurately measuring physician – physician communication (Gakhar and Spencer 2010). Accuracy in communication of such methods of sign-offs are importance in patient safety and the increasing importance of physician-physician communication in transfer of care has been identified (Solet, Norvell et al. 2005). In 2009, a systematic review of the literature came with the conclusion that despite the negative consequences of inadequate physician's handoffs, very little research has been done to identify best practices (Riesenberg, Leitzsch et al. 2009). The anecdotally suggested strategies of the accuracy of physician observed and rated performance has been the historical hallmark of rating of medical student to physician assessments of clinical case presentation communication competence. Although these observations have been made for the past decade, overall there is still a great need for effective measurement tools to evaluate competence in physician to physician communication skills especially in the areas of patient transitions of care; particularly in the presentation of the case upon admission to acute care, the transfer of care between physicians, and the discharge of the patient from acute inpatient care to ambulatory primary care (Patterson and Wears 2010).

The most common assessment methods used in evaluating medical students and medical residents in clinical skills assessment is utilizing multiple choice examinations to evaluate factual knowledge, standardized patient exams to evaluate problem solving and technical skills, and the standardized patient assessments communication skills. Virtual patients as computer based simulations are designed to complement clinical training education and assessments. In the past five years, medical schools in the U.S. and Canada have increased their inventory as well as the complexity of the virtual patient case as a learning and assessment tool (Huang, Reynolds et al. 2007). While the new virtual patients require less faculty time and resources in assessment, the time and technology for development, production costs, and testing of the virtual patient requires further studying. The purpose of this study is to test the validity of a new model of virtual patients to test the medical student to physician communication regarding clinical patient cases.

Methodology

This research compared the presentation performance of second-year osteopathic medical students (OMSII) enrolled at two campuses using two different modalities of acquiring a patient history and physical exam. One model utilized "live" standardized patient (SP), the historic model of live patient interview. The second model utilized a "virtual" patient utilizing an interactive learning management system (LMS). The sample size for this study consisted of two groups of second-year osteopathic medical students (OMSII) enrolled at two separate campuses totaling 340 students.

Four patient cases were presented consisting of Acute Inferior Wall Myocardial Infarction, Hemorrhagic Cerebrovascular Accident, Septic Ureteral Calculi, and Pneumonia with Sepsis. In both student groups, students were randomly assigned to one of the four patient cases. Prior to testing students were given access to self-directed learning modules on presentation skills. Students participating in the virtual module were also provided with instruction on the use of the virtual patient interface. Students were scored in the areas of the case presentation related to 1) History, 2) Physical assessment and laboratory evaluation, 3) Differential, and 4) Plan. All faculty graders completed a pre and post examination exercise to evaluate and determine the inter-rater variability. Faculty members were scored utilizing pre-recorded encounters with known presentation errors.

Results and Discussion

In this study Performance on the virtual case presentations and live patients were found to be comparable (percentage of correct answers was 77.3% and 76.8% respectively, $p = 0.9$). Item analysis on students' scores in the 4 areas of the case presentation showed no statistically significant difference in students' performance between virtual and live patients (see Table 1). Further analysis for each of the 4 cases still showed no statistically significant difference on students' performance between virtual and standardized patients.

Table 1. Comparison between virtual and standardized patients in the students' performance in case presentation

	Virtual Patient	Standardized Patient	P-value
History	94.4% $\pm$ 6.9	89.7 + 14.6	0.06
Physical Assessment	78.0 $\pm$ 17.4	78.3 + 20.7	0.6
Differential	69.8 + 19.8	64.8 + 19.4	0.5
Plan	58.7 + 28.1	62.2 + 30.1	0.6

In this study which evaluated the students ability to gather, analyze, and communicate patient data; the group utilizing live standardized patients and presenting to experienced clinical faculty was comparable to that gathered in the virtual patient model. The use of the virtual patient for education could enhance medical education by providing a source for multiple cases with evaluation while not being encumbered by obstacles of live standardized patient. Based on the results of this study, virtual patient case development and use in competency assessment warrants further evaluation and development.

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Using Simulated Virtual Interactivity in Construction Education

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Abstract: This paper briefly illustrates the design procedure, implementation and findings of a three year research project. Virtual Interactive Construction Education (VICE) is a project-based pedagogical model that uses a simulated environment to alter traditional subject-based lectures into virtual project-based interactive learning methods in construction education. For this purpose, the context of construction engineering and management curricula were aggregated into six construction project prototypes. VICE-Bridge is the first of these six prototypes that exposes players to experiential problem solving activities toward achieving a goal situation (construct the bridge) from an initial situation (start of construction). It was designed for students with little or no knowledge in construction. The optimal solution to the goal situation is a pre-determined sequence of construction activities. Resource decisions for each construction activity are compiled into actionable solution sets within a range of reasonable options. Each actionable solution set is developed as an animated sequence. Achievement of objectives was measured by increase in construction knowledge gain, level of engagement, and perceived construction knowledge gained as a result of the VICE intervention. The results support development of more construction management education and indicate that this particular simulation is an effective tool for construction education.

Literature Review

Improvements in construction education lead to better trained and more knowledgeable professionals in the construction industry which directly relates to industry (Goedert, Rokooei & Pawloski, 2012). The annual gross output of the construction industry is over a trillion dollars, which consists of roughly 5% of the Gross Domestic Product (GDP) (National Association of Home Builders, 2013). There are currently hundreds of construction programs in the US and in each of them hundreds of students pursuing their chosen profession. Construction education content has not been unanimously agreed upon by all instructors of this field. AbouRizk and Sawhney (1994) believed of traditional construction curricula are not efficient and urge alternative methods for construction education. McCabe, Ching and Savio (2000) addressed some deficiencies of traditional curricula and stated that most of coursework only present some theoretical notions and therefore, are not successfully able to enhance the capabilities of students in solving real world problems. Rojas and Mukherjee (2005) believe that traditional construction curricula do not completely perform their mission and, therefore, has led practitioners in construction education to investigate new learning method and tools like simulation. Simulations and serious games for education have been increasing in the last decade (Goedert, Rokooeisadabad & Pawloski, 2013). Providing project-based learning method and simulation in construction results in more capable graduates that impact economics and technology. In addition, using simulation in construction education provides a new way for female students to participate and learn construction materials (Rokooei, Goedert, Weerakoon, 2014).

Methodology

VICE Bridge is a game-based simulation platform to facilitate collaborative and competitive project-based student learning of construction scenarios. The platform provides a rich learning experience by enabling students to interactively find solutions to construction problems posed by domain experts. These problems support several construction specific parameters like governing resources, personnel and time with multiple solutions. Students learn by engaging in problem solving sessions leading to optimal, sub-optimal, and infeasible solutions. The whole project consists of three sections. Pre-game quiz, VICE Bridge, and Post-VICE survey. Participants sign in with an ID and password that are linked to demographic information. Participants are then directed to the pre-game quiz where they respond to various construction content questions to provide a baseline understanding. Users are allowed three attempts for computational questions after which the next question is shown without revealing the correct answer. Game play begins with the player to correctly sequencing the work breakdown structure (WBS). An avatar directs the users throughout the stages of the game while another avatar acts as a consultant provided information at a charge of $250 per request. An animation shows the consequences of each selection. Once players successfully complete the WBS, they are sequentially directed to decisions and education modules within each activity of a

single span bridge. Players are required to determine the appropriate quantity and make-up of personnel, materials and equipment. An animation responds to the player selection to simulate the construction space and attributes of specific activity selections. Cost and schedule variances are a performance measure built into the game. These accumulate in response to selection of resource. The accumulated cost and time are displayed during game play on the main screen. Education modules introduce new concepts and test students' construction understanding as appropriate during game play. In this way it is possible to assess the player's ability to transfer knowledge as opposed to rote memorization (Goedert et. al., 2013). Once the game is finished, players are automatically directed to where they self-report their perceived learning gains of a construction project with the retrospective pre and post survey questions. The survey asks the players to assess, on a five point Likert-scale, their own perception of construction knowledge gained.

Results

Forty high school students and twenty students from an undergraduate construction program successfully completed the test during spring and summer 2013. Seventy eight percent of all participants had no previous work experience and 80% of them reported no previous experience with virtual learning. Actual performance data were categorized into five areas and then, a paired sample t test was used for comparing each of these areas. As shown in Table 1, the paired sample t-test indicates that there was a significant difference between the mean scores of the pre and post-test construction content knowledge questions at a .05 significance level for all areas. Thus, VICE was shown to be an effective educational tool for construction education using the comparison of the pre- and post-evaluation of practical construction knowledge.

Questions	Excavation		Productivity		Pipepile		Formwork		Beam	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Not Solved (%)	100	20	54	14	90	57	99	89	85	44
Solved - Third Attempt (%)	0	3	6	5	3	3	1	0	5	34
Solved - Second Attempt (%)	0	28	19	19	3	12	0	3	4	6
Solved - First Attempt (%)	0	48	21	62	3	28	0	7	6	16
Mean	1	3.05	2.07	3.29	1.2	2.12	1.01	1.28	1.31	1.94
Std. Dev.	0	1.15	1.25	1.08	0.65	1.34	0.07	0.84	0.81	1.07
t-Test Result	Different		Different		Different		Different		Different	

Table1: Actual Performance Comparison For Pre and Post Simulation

Discussion

This test confirms previous findings, regarding that the capabilities of simulation in construction education. Positive results of VICE supports the existing findings that educational simulation can provide students with a learning platform to relate subject matter in a way that leads them to a better understanding of their disciplines. While more testing is necessary for conclusive results, the findings in this study suggest that continued efforts in this area are warranted.

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Beginning in SoTL Research: 10 Mistakes and How to Avoid Them

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Abstract: The Scholarship of Teaching and Learning (SoTL) may be unique in the research arena in that there is no agreed-upon disciplinary tradition of research methods. Though some promote educational or social science research methods, others encourage SoTL researchers to bring the methods of their own disciplinary research to the table (ISSOTL13, 2013). Whatever the methods, the SoTL world is populated by guest scholars; tourists who are "traveling outside of their home disciplines, nations, methodologies, communities, and even languages" (Chick & Poole, 2014, p. 1). As such, it can be difficult for those who are new to SoTL to successfully plan and carry out SoTL research projects. Grounded in best practice, as well as my experience as an editor, reviewer, researcher, and as one who works closely with faculty and graduate students at various stages of their SoTL projects, in this practice session we will discuss ten common mistakes made by those who are new to SoTL, and consider ways to avoid them.

Literature Review

The Scholarship of Teaching and Learning (SoTL) is the systematic study of teaching and learning (McKinney, 2007); it involves asking a question, gathering evidence, drawing conclusions based on that evidence, and making those findings public for the benefit of others. At its best, SoTL employs the strict rigor and diligence that is applied to disciplinary research (Felten, 2013; Hutchings, Huber, & Ciccone, 2011).

According to Chick and Poole (2014), the Scholarship of Teaching and Learning (SoTL) world is populated by guest scholars; tourists who are "traveling outside of their home disciplines, nations, methodologies, communities, and even languages" (p. 1). As such, it can be difficult for those who are new to SoTL to successfully plan and carry out SoTL research projects. Issues of methodology are complicated by the multi-disciplinarity of SoTL scholars and the various research methods employed by those in different disciplines (Felten, 2013; Poole, 2013).

There are other challenges that would-be SoTL researchers face even before they get to matters of methodology. Some are unfamiliar with protocols involved with human subjects research (or that protocols even exist); others may feel lost when it comes to grounding their research questions in theories that are unfamiliar to them (McKinney, 2012).

Goals and Objectives

This practice session is geared toward those who are new to SoTL, or those who are considering getting started in SoTL. In this session, participants will…

- Learn about common mistakes that are made by those new to SoTL research, and learn ways to overcome or avoid them;
- Share their own experiences and questions regarding SoTL research;
- Leave with practical ideas for how to get started with SoTL research.

Description of Practice

As an editor, reviewer, researcher, and as one who works closely with faculty and graduate students at various stages of their SoTL projects, I see a number of reoccurring mistakes—some easily avoidable, some that take more planning. In this session, I will present ten common mistakes, both from my own experience and from the literature, and offer suggestions and ideas for how to avoid these mistakes. With each point, participants will have the opportunity to share their own experiences, as well as to ask and answer questions.

Discussion

Many faculty members want to know more about their students' learning, but may be unsure about how to begin systematically looking at that learning. This can be particularly challenging for those who are unfamiliar with educational research or social science research.

As Coordinator of the Scholarship of Teaching and Learning, I regularly meet with faculty and graduate students at various stages of their SoTL projects. Too often, they come to me with problems that can be difficult to overcome: data with no approval from the Institutional Review Board; instruments that do not measure what they want them to measure; piles of data with no guiding research questions. Likewise, I have reviewed journal articles that come with their own set of problems. Grounded in these experiences, as well as the literature for best practice, I have compiled a list of ten common mistakes with advice for how to avoid them.

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Are You Testing What You Think You Are? How to Successfully Evaluate Test Items

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Abstract: The purpose of this session is to teach faculty a method for successfully evaluating their written Multiple Choice Question (MCQ) assessments. The meaningfulness of exam scores relies on successfully measuring students' knowledge of a given subject. MCQs developed by untrained faculty often contain technical flaws that introduce random error leading to a decrease in the assessments' overall quality. Learning how to classify MCQ items as high quality (e.g., meeting recommended standards) or poor quality (e.g., being technically flawed) will help participants from all disciplines minimize testwiseness (guessing, cueing, etc.) from their own assessments.

Literature Review

For a quality multiple-choice assessment to measure students' knowledge, skills, abilities, or other latent trait, it must possess suitable psychometric properties, be well written, and fair. Therefore, it is important for all test item developers to be aware of the major principles of test item construction (i.e., no negatively phrased questions, all options placed at the end of the question should be grammatically correct, no cueing effects, etc.). Although guidelines for creating sound exam items have been well researched (Case and Swanson, 2001; Haldyna, 2004), often times those guidelines are disregarded (Jozefowicz, Koeppen, Case, et al., 2002; Downing, 2005), and test evaluation may focus primarily on quantitative analysis (Downing and Haladyna, 1997). By reviewing all qualitative aspects (especially stem and answer options/distractors development) of exam items authors may minimize the number of flaws that can negatively impact the interpretation of scores.

The use of multiple-choice items is a preferred method for assessing medical students (McCourbrie, 2004), as well as students of other disciplines, due to their ability to sample a large content domain, as well as their ease of administration and scoring. Many credentialing organizations, such as the United States Medical Licensure Examinations (USMLE), use the multiple-choice format to assess and evaluate the competence of their future workforce. Providing students the opportunity to become familiar with the MCQ is important for their life-long learning and certification. Test item authors must be well versed in item writing standards because when those standards are violated the scores obtained from those assessments are imprecise and unsound (McCourbrie, 2004).

Goals and Objectives

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

1. Identify common violations of recommended item writing guidelines.
2. Recognize and categorize common technical flaws in multiple choice questions.
3. Develop qualitative strategies to systematically review MCQs.

Description of Session

The focus of this presentation is to teach exam item developers a method for recognizing potential flaws that often impact the effectiveness of MCQs in an exam. The most commonly identified MCQ technical flaws will be reviewed. Using an instrument (Hauge, LS, unpublished), participants will classify sample test items as flawed or as meeting recommended guidelines. By learning how to identify, and correct technical flaws, participants will leave the session knowing how to evaluate whether or not their own test items are constructed to measure student learning.

The presenters will ask participants to evaluate sample MCQ exam items that violate the most common item writing principles. To this end participants will use an instrument (Hauge, LS, unpublished) to aid in making a judgment about what percent of sample MCQ exam items meet the standard guidelines. Participants will leave the session with tools that will enable them to better evaluate the efficacy of test items created at their home intuitions.

Discussion Questions

1. How are you currently examining the quality of your in-house MCQ items?
2. What strategies have you tried at your institution to try and improve your MCQ assessments?
3. Will developing a system, such as the one presented during this session, help to improve faculty's ability to develop sound MCQ items?

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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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The Metacognitive Benefits of Peer and Self-Review

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Abstract: Metacognition—thinking about what one has learned—has important benefits for learning. One of the most direct ways to bring about metacognition is self-assessment. Student are asked to rate their own work against a set of rubric criteria. The questions they ask themselves often cause them to go back and improve their own work. Students may also be asked to review others' work. This allows them to compare others' work with their own. The experience that they gain in rating helps them see their work as an audience might see it. Moreover, students can receive much more feedback through self- and peer-assessment than they would get from the instructional staff. However, both self- and peer review have limitations. Weak students are not particularly accurate in self-assessment. Nor are peer-assigned scores always in line with staff-assigned scores, especially on assignments that students find very challenging. The greatest benefits may be achieved through a combination of these two approaches, as is done in the online peer-review system Calibrated Peer Review. This presentation reviews best practices, previous research results, and reports preliminary results from our project combining self- and peer review in Google's Course Builder MOOC platform.

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Literature Review

Research in self-review goes back to the 1960s (Gaier, 1961), and peer-assessment in higher education has been studied since the 1970s (Topping, 1998). A good deal of self-assessment research focuses on getting self-assessment to agree with instructor assessment (Falchikov & Boud, 1989), though self-assessment may have metacognitive benefits even when it does not agree with instuctor assessment. The same meta-analysis found that self-assessment is more successful when students are trained in self-assessment techniques. Peer review has been shown to be beneficial in many studies (Lockhart & Ng, 1995; Paulus, 1999). Similarly, training in peer review produces better outcomes (Min, 2006). In one experiment (Sadler & Good, 2006), self-grading outperformed peer grading in its correlation with instructor-assigned grades. Students who graded their own tests and took a test over the same material a week later showed marked improvement the second time around, but students who graded their peers' work showed no improvement. There is evidence that peer review and self-review are synergistic practices, since feedback from their peers helps students improve their self-assessment. The practices are combined in Calibrated Peer Review (Gunersel & Simpson, 2009).

Session Goals

1. To survey how self-review and peer review have been used in classes, and give attendees ideas on practices they might use in their classes.
2. To summarize what research has shown to be the benefits of self- and peer review, as well as the limitations on their effective use.
3. To outline a set of best practices that instructors can use to train reviewers and to develop effective rubrics for these assessment practices.

Outline of Presentation

This session will discuss the benefits of peer- and self-assessment. Both practices get students involved in the assessment process, and this has important metacognitive side benefits. Not only do they receive more feedback on their work, but as assessors, they review, summarize, and diagnose misconceived knowledge (Topping, 1998). Both reviewer and reviewee engage in higher-order thinking processes during peer assessment (Kollar & Fischer, 2010). Both self- and peer assessment rely on having a good rubric for students to use. A good rubric must be detailed enough to draw students' attention to the salient aspects of submitted work, but not so detailed that it is fatiguing to fill out. A rubric could be general (e.g., for any writing assignment), course-specific, or assignment specific. An assignment-specific rubric can be better tuned to the requirements of the assignment, but it requires more effort to produce, and is harder to validate.

Many instructors have experience with self- or peer review in their classes, so we will start out by asking them how they have used these methods (for what kind of assignments? formatively or summatively? face-to-face or online?), and what kind of rubric they have used. We will also ask about the benefits and challenges of these approaches (evidence of better learning, burden of administration, etc.). We will be reporting the findings of research studies, and we will ask them to predict what these studies have found (e.g., self-assessment seems to produce more accurate results in the sciences than in other fields).

The rise of MOOCs has focused a good deal of attention on peer and self-review, because they are one of the few scalable methods of assessment. A recent study of self-review in MOOCs (Wilkowski, Russell, & Deutsch, 2014) found it to be effective for low-stakes assessment of qualitative work. However, it requires considerable training to be effective, and when it is used summatively, low-performing students tend to inflate their grades. Although the literature on peer grading touts its utility in MOOCs, there is much room for improvement. The largest studies have been conducted on Coursera. Piech et al. (2013) studied over 7200 students in a MOOC on Human-Computer Interaction. Grades were assigned by peers, and effectively "spot-checked" by instructors. Even with their best statistical model, at least 26% of the peer-assigned grades were more than 5% away from the "true" grade that instructors would have assigned. In a study of 5876 students in other Coursera MOOCs, Kulkarni et al. (2013) found that 40% of assignment grades derived from peer review were off by at least one letter grade.

The lesson from this research is that while the formative benefits of self- and peer review are well established, in a summative context, it must be used with care. We are currently engaged in a study funded by a Google Research Award to study how to combine self- and peer review to improve the quality of assessment. As part of this research, we will produce a reviewer-training video that can be shared during the presentation.

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Using Emotional Literacy and Collaboration in the Classroom and Beyond

Anna Marie Moya-Garcia Dinallo, *University of New Mexico*

Abstract: This session will demonstrate ways in which collaboration and high-energy interactions can facilitate emotional literacy in learning environments. Emotional intelligence is not formally taught as core curriculum in higher education, and it's rarely used to its full potential in the learning environment. This presentation will review the work of Harvard psychologist Howard Gardner's (1983) theory of multiple human intelligences and Richard Davidson's (2012, 1995) emotional intelligences perspectives. High-energy practices and collaboration provide room for students with emotional-social intelligences to participate in the learning environment (Goleman, 2006). Body language, movement, and enthusiasm are some of the basic structural components to facilitating diverse learning pedagogy. This presentation will allow educators to reflect on their personal teaching style and areas of growth in the use of emotional literacy in the classroom and beyond. This workshop will be highly collaborative and offer participants methods to engage a broad array of student learners.

Literature Review

Emotional Intelligence is a primary form of communication that resides at the core of human interaction. However, higher education curriculum(s) often omit emotional components in the learning environment despite its power as a medium of information intake. Neuroscience literature makes it clear that we use both side of the human brain, however, there is a preference for logic-based instructions when teaching (Richardson, 1995). The literature suggests that collaborative and high-energy techniques are both components of emotional interactions. Emotional literacy is exercised though contextual group discussion, classroom movement, and intrapersonal passion. These techniques excite, and they allow the learner to both take in information from a sensory motor and use visceral components of learning (Weinstein, & Underwood, 1985; Learning Strategies, 2013). These methods have been used as core tenets of the Supplemental Instruction Model. This international model is a program designed to keep students engaged through high-energy practices, and it has been shown to improve student grades from half a letter grade to a full letter grade (Jacobs, Hurley, Unite, 2008). High energy and collaborative relationships provide a foundational understanding of emotional intelligence (Decety, 2009; Damasio, 1999). Moreover, these techniques provide insight into how to engage resistant or disconnected learners. The well-documented benefits of implementing emotional intelligence through high energy and collaboration are an effective pedagogical combination that merits inclusion in a wide range of university curriculum and institutions of diversity.

Goals and Objectives

This session is designed to help the educator develop their ability to connect with students and exercise emotional literacy through high-energy/collaborative strategy.

1) Attendees will gain exposure to emotional intelligence and collaborative learning literature.
2) Attendees will observe methods to integrate collaborative learning skills into diverse environments.
3) Attendees will practice high-energy (movement, body language, and excitement) techniques and reflect on their classrooms/workplace structure.

Description of Practice

This session is designed to help the educator develop their ability to connect with students and exercise emotional literacy through high-energy/collaborative strategy. This presentation will open with a review the work of Harvard psychologist Howard Gardner's (1983) theory of multiple human intelligences and Richard Davidson's (2012) emotional intelligences model. Attendees will discuss emotional intelligence and collaborative learning literature through hands-on techniques. Participants will move through various working stations to practice high-energy (movement, body language, and excitement) techniques and will have time to reflect upon their areas of growth as an educator.

The following areas of discussion will be provided;

1. What are your area(s) of growth as an educator?
2. What is your passion or hobby outside of education? How can you infuse this into teaching (metaphor, technique etc.)?

3. Which concept of collaboration or high-energy (movement, inclusion, body language, or context) aligns to your classrooms/workplace structure?

Discussion

As an education scholar, I provide workshops and training sessions for students and educators. I often find a disconnect in the classroom with students or attendees who loose focus. Higher education curriculum is dominated by the lecture format, which literature demonstrates is not nearly as productive as hands-on learning formats. Emotional literacy activities provide hands on learning formats to keep student and workshop attendees invested and focused within a broad band of curriculum. Recent studies have demonstrated that classroom disengagement is a hot topic in higher education. Some scholars argue that avoidant or distracted learners should be punished or eliminated from the learning environment. This presentation counters a punishment vantage point and provides tools for engaging multiple types of learners in the classroom through emotional intelligence. If students are bored or distracted it is in part the responsibility of the facilitator/educator to provide alternative pathways for success. Emotional engagement and high-energy practices are tied together and provide excitement for learning.

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Intuition vs Training: A Conversation on the Value of Student-centered Technology Orientation

Jason Burton & Erin M. Berman, *Radford University*

Abstract: Institutions of higher education often assume that because students grew up with digital media, they are automatically savvy technology users when they enter institutions of higher education. A growing body of empirical evidence suggests that this is not the case, and the explosion of virtual courses in U.S. universities compounds this ongoing disconnect. In this conversation session, participants will discuss how we might best equip students with the practical knowledge and skills they need to be successful in online college courses. In addition to technology education, we will also explore community building, the role of support services in reaching online students, and confronting the myth of the digital native.

Literature Review

Virtual classes are a growing trend in higher education. In 2013, seventy percent of all higher education institutions in the U.S. reported that online education "was critical to their long-term strategy," and 6.7 million college students were enrolled in an online course (Allen & Seaman, 2013). Institutions of higher education have a responsibility to systematically prepare online students for a new learning environment. Research has shown that effective orientations to online learning environments, along with ongoing technology support, will increase student retention (Scagnoli, 2001). Without the opportunity to learn how to interact in a social environment, which most researchers explain should be a component of any orientation, students are left feeling isolated, limiting their success (Gaide, 2004).

Although institutions of higher education vary in terms of the delivery of their orientation programs, there are some similarities in terms of content and design (Scagnoli, 2001). Specifically, research supports the need to obtain buy-in from all stakeholders and offer the orientation from a student's point of view (Lorenzetti, 2006). In addition, orientation experiences need to mirror the types of experiences students will have in the virtual classroom and provide students a chance to learn the technology as well as how to interact in an online social environment (Bacon, 2005; Bozarth, Chapman, & LaMonica, 2004; Cho, 2012; Dixon et al., 2012).

Orientations to online learning should focus on more than just providing a technology overview. Online orientations should prepare students for success in virtual environments and help students to find common ground. The inclusion of student support services, such as the library and the tutoring center, can strengthen orientation programs and help institutions of higher education to achieve these goals (Bacon, 2005; Cho, 2012; Gilmore & Lyons, 2012; Scagnoli, 2001). A recent study found that some level of orientation helps to reduce student anxiety (Gaide, 2004), provided it allows students to practice interacting and building confidence in creating their academic virtual presence, managing technology expectations, and navigating institutional learning management systems in low-stake contexts (Gilmore & Lyons, 2012).

Goals and Objectives

1. Review current literature concerning student-centered technology orientations
2. Discuss relevant topics concerning technology education and implementation
3. Identify obstacles to the implementation of orientations
4. Formulate ways to overcome obstacles to the implementation of technology orientations

Description of Topic to be Discussed

In this conversation session participants will consider the relevance of student-centered orientations. More specifically, participants will be asked to consider the following topics in small groups and report back:

- Is it important for students to understand institutional technologies, including the Learning Management System (LMS)?
- When should students build a working knowledge of the LMS?
- Who should be responsible for ensuring that students understand the LMS?
- How would you establish the need for technology education at your institution?
- What delivery modality for technology education is most appropriate at your institution?
- What topics might be covered in addition to technology and LMS use?
- How would you implement technology orientation or gain buy-in at your institution?

Facilitation Techniques

Facilitators will spend ten minutes laying the foundation for the conversations by addressing current literature related to technology education. Next, participants will be asked to engage in a think-pair-share activity focused on addressing current issues regarding technology education. During the debrief portion, participants will be asked to share their ideas on the various topics and brainstorm possible solutions for overcoming obstacles.

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As I am, So I Teach: A Conversation on Cultivating Authenticity in Online Education

Olga Dietlin, *Palm Beach Atlantic University*

Abstract: Genuineness, or authenticity, has long been established as the core characteristic of engaging, motivating and nurturing teachers. Psychological and counseling literature operationalized the notion of authenticity as a dimension of personality and established its link to a person's well-being and mental health. Recent pedagogical and leadership literature underscored the importance of being true to the self and others in order to facilitate a transformative experience. This session presents the key findings from the interdisciplinary research on the subject of authenticity and offers an opportunity to dialog about the challenges of cultivating genuineness and authenticity in the online classroom. Is the quest for "trueness" is even relevant for those who are limited by the available technology and separated from the learner in space and, often, time? If so, how do we find and then cultivate these ways of being and teaching in a virtual environment? Do our students expect our authenticity in the online world and how do they recognize a genuine encounter? What are some ways through which our colleagues bring one's sense of self into the virtual classroom? Balancing the intention to discuss existential concerns and practical lessons, the facilitator will invite you to share your ideas, best practices and personal notions of what it means to be real as an online educator.

Literature Review

One's character, or dispositions, has been established to be a foundational element of outstanding teaching and leadership. In her book *Teaching with Heart: Making Healthy Connections with Students* (1996), Deiro describes six outstanding teachers and identified eight predominant intrapersonal characteristics" that they held in common. "Genuineness and authenticity" emerged as a central characteristic, along with the inner locus of control, tolerance for ambiguity, humor, nonjudgmental stance, potency, and enthusiasm. Cranton and Carusetta (2004) collaborated with 22 educators from various disciplinary backgrounds during a 3-year period in order to grasp what authentic teaching means and to explore how authenticity is manifested in practice. Cranton (2001) defined authenticity as "the expression of the genuine self in the community" (as cited in Cranton and Carusetta, 2004, p. 7). Brookfield (1997) defined an authentic person as someone who offers a genuine presentation of self and demonstrates congruence between one's values and actions.

Kreber et al. (2007) attempted to find a common conceptual understanding of authenticity across the published research. The authors concluded:

> The literature reviewed here revealed authenticity in teaching as an intriguing but also complex and multidimensional phenomenon. Authenticity in teaching involves features such as being genuine; becoming more self-aware; being defined by one's self rather than by others' expectations; bringing parts of oneself into interactions with students; and critically reflecting on self, others, relationships and context, and so forth. … Authenticity is not just something that exclusively rests within myself … for authenticity to be meaningful it needs to be sought in relation to issues that matter crucially. (pp. 40-41).

Palmer (2000) argued with passion that "our deepest calling is to grow into our authentic self, whether or not it conforms to some image of who we ought to be" (p. 16). As a result of her groundbreaking research on guilt, shame and worthiness, Brene Brown (2010) articulated the notion of wholeheartedness – the capacity to authentically engage in our lives from a place of worthiness, cultivate courage and compassion, and embrace the imperfections of who we really are. She further defined authenticity as "a collection of choices that we have to make every day. It's about the choice to show up and be real. The choice to be honest. The choice to let our true self be seen" (2010, p. 49).

Earlier research in the counseling and psychology literature recognized authenticity not simply as a dimension or precursor to well-being but rather the very demonstration of healthy functioning (Winnicott, 1965; Yalom, 1980). Wood et al. (2008) developed an instrument to measure authenticity in an individual and tested whether authenticity is related to well-being, as it was previously hypothesized by in the literature. The researchers established that each

subscale of the instrument was strongly related to self-esteem and aspects of both subjective and psychological well-being.

Andrews, Garris and Magnusson (2006) suggested that excellent professors prefer a deep or meaningful approach to teaching and tend to engage in pedagogical processes that are congruent with their preferred approach, as well as their values, beliefs and personal characteristics. While research on effectiveness in online education is ample, to the knowledge of the presenter, no study explored the notion of and transferability of authenticity in the virtual classroom. This session will advance the dialog and exchange of ideas and experiences of the conference participants in relation to how they can "bring parts of oneself into interactions with students" (Kreber et al., 2007, p. 41) in the online classroom.

Goals and Objectives

As a result of participation in this conversation-based session, the participants will

1. Define the notion of authenticity in the classroom.
2. Operationalize the concept by reviewing the instruments from the literature.
3. Discuss the challenges of presenting one's true self in the virtual environment and facilitating meaningful connections with the students.
4. Relate the notion of authenticity to personal experience as an online educator.
5. Create a network for further dialog, exchange of ideas and best practices in the field.

Description

At the start of the session, the participants will be asked to finish the sentences: "I feel most authentic when I…" and "I feel least authentic when I…" within the context of their experience of teaching online. The presenter will briefly describe several definitions for the notion of authenticity as they emerged from the interdisciplinary research (psychology, pedagogy and leadership). The assessment instrument developed by Wood et al. (2008) will also be provided. The remainder of the session will be devoted to the dialog on authenticity interjected by the examples of best practices identified by the presents in their own practice and literature. The participants will discuss how these practices may be relevant to them and offer their own ideas for cultivating authenticity in the online world.

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A Conversation on the Syllabus as a Mechanism of Power in Education

Angie M. Mann-Williams, *Virginia Commonwealth University*
Nathan H. Perkins, *Loyola University Chicago*

Abstract: This conversation section will focus on the syllabus as a mechanism of power in higher education. Findings and implications from a qualitative research study, which examined syllabi in Master of Social Work (MSW) courses at a large university in the Mid-Atlantic will serve as a springboard for discussion of issues related to power in education. Along with results of the study, information on how the syllabus has been used in higher education and in court cases will be presented for group consideration. Participants will be presented with questions regarding their experiences with syllabi, implications of the power of syllabi, and ways to address power created by syllabi in higher education.

Literature Review

Power and privilege are inherent within societal (Foucault, 1980) and educational systems. The issue of power in higher education receives minimal attention in the literature despite the profession's desire to address oppression and social injustice. Vodde (2002) asserts that power and oppression are uncontested due to manifestations of privilege within the social work educational system. In an effort to examine inherent power structures within social work education, the authors conducted a study of MSW syllabi of a social work program at a large university in the Mid-Atlantic. A thematic analysis was conducted to uncover themes of power, which existed within the syllabi. Five themes emerged relating to power imbalance, including: differential expectations, directive language, lack of consistency, configuration & design, and instructor bias. The results of the data analysis indicate a need to consider how language is used in syllabi as well as to consider how the construction of syllabi speak to uncontested power structures that go unaddressed. Furthermore, the findings of the study bring into question how power language within social work syllabi are linked to pedagogical practices within classrooms.

Results of the study highlight dynamics of power, which are omnipresent in educational systems. Particularly for social work education, a parallel process exists between social work educators and students and social work practitioners and clients. This parallel process exists as social work education socializes students to become social work practitioners. Furthermore, to not address the issue of power is to potentially ignore how the instructor/student interaction can serve as learning tool for working with clients. Breton (1999) acknowledges the influential nature of an empowerment approach to social work education whereby opportunities for students and instructors to share responsibility in the sharing and building of knowledge. Breton contends that such an approach is likely to be more influential in the practice of social work whereby human service organizations and social workers integrate the notion of partnership within daily practices and policies. Neutralizing power within the classroom setting allows for students to be at the center of their learning experience allowing for conceptual changes to take place within their minds (Dewey, 1916). By addressing power structures, educators can help provide a learning opportunity related to fighting oppression and the importance of voice for everyone.

Within this roundtable, the authors will present the research conducted, which will serve as a springboard for discussion of issues related to power in higher education. Consistent with notion of a reciprocal learning process where the experiences and voices of students are appreciated in the classroom learning experience (Friere, 1985), all participants at the roundtable will be encouraged to engage in a dialogue exchange. A progressive pedagogical approach, informed by the educational philosophies of Friere and Dewey will be used to guide the discussion. Using an inclusive process the participants will focus on ways of addressing power dynamics within higher education, including syllabi development and pedagogical practices.

Goals and Objectives

Participants in this paper session will be able to:

1. Enhance their understanding of the syllabus as a power structure in higher education.
2. Identify the implications of examining how the syllabus can affect students, instructors, the classroom, and other facets of educational systems.

3. Identify ways of addressing power dynamics inherent in the syllabus within higher education, including syllabi development and pedagogical practices.

Description of Topic to be Discussed

The syllabus as tool in higher education will be presented and discussed focusing on a qualitative research project the authors conducted to examine one aspect of power in high education. Along with a brief description of the project, ways in which the syllabus has been used in higher education as a tool of power will be discussed in this conversation section. Participants will be prompted to discuss their experiences with the syllabus in courses they have taught and reflect on the syllabus as an instrument that has implications for power in the classroom.

Facilitation Techniques

After briefly presenting on the research project examining syllabi in an MSW program and how the syllabus has been conceptualized/used in the past, the authors of this conversation section will facilitate the conversation through a serious of questions to elicit discussion of participants. Examples of the questions that will be posed in the session include, but are not limited to:

- How have you noticed the syllabus as a mechanism of power in your classroom?
- What experiences have you had with the syllabus in your classroom?
    - How has the syllabus been beneficial to your classroom process?
    - Has the syllabus ever impeded your classroom process?
- How do you think the syllabus is consistent with the focus on adult learning in higher education?
- Are there ways in which you think the syllabus could be reconceptualized in order to better address power dynamics in the classroom?
    - What are the potential issues of doing this?
    - What are the potential benefits of doing?

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Wednesday

February 4, 2015

Session 5

4:10-5:00 PM

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

Scoping Assessments for Improved Teaching and Learning:
Examining Cases in Uganda, Cambodia and Nicaragua

Tom Hammett, *Virginia Tech*

Innovation for Agricultural Training and Education (innovATE) is funded by the U.S. Agency for International Development (USAID) as a part of the presidential Feed the Future initiative to tackle global food insecurity or the factors that cause hunger on a large scale. One of the biggest constraints to achieving food security is lack on an adequately trained workforce. InnovATE works with institutions and partners to determine the needs of the agriculture sector that are not being met by the agricultural education and training (AET) systems. InnovATE helps schools in the developing world improve teaching and learning capacity through improved pedagogy, and enabling training and education programs to make their curricula more current, relevant and comprehensive to equip the next generation of leaders in local food production. Cases from innovate assessments in Uganda, Cambodia and Nicaragua will be examined. Using assessment tools the program uses a variety of platforms and venues to modernize AET systems so that they address current and emerging issues including climate change, drought, resource scarcity, malnutrition, and gender equity.

It's No Vacation: Assessing Learning Objectives in Study Abroad Programs

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Abstract: In times of skyrocketing costs in higher education along with an increasing emphasis on internationalization, study abroad programs have to justify their additional costs with the clear added value of the educational experience abroad. Universities are increasingly seeking evidenced-based evaluations of how well study abroad programs are performing. By assessing the effectiveness of these programs, educators can better build relationships and help convince administrators, faculty, students, and parents about the educational quality and effectiveness of these study abroad programs. This paper describes one method for assessing the big-picture goals of study abroad programs that is straightforward, transferable, and repeatable.

Because study abroad programs are substantially different experiences from on-campus classroom experiences, there is a real need to be able to demonstrate that they are also academically rigorous and meet student learning needs. It is important to assess the programs rather than just individual classes because classes may have standardized learning outcomes and rarely are designed with the study abroad program in mind. Assessing study abroad programs helps demonstrate in quantifiable ways their success in meeting student learning outcomes. With the amount of money students pay to participate in study abroad programs, it is important to verify that they are meeting meaningful learning objectives and to find ways to continue to improve the programs' effectiveness.

Literature Review

The study abroad program assessed here is an example of what Kehl and Morris (2007/2008) called "island programs," in which students travel to a host country with faculty and fellow students from their own university. More specifically, this program was short-term, with students participating for three to six weeks. Previous research has shown mixed results in regards to the effectiveness of such programs. Kehl and Morris (2007/2008) showed that semester-long faculty-led programs were effective for increasing students' global-mindedness, but students who participated in programs lasting less than eight weeks were no more global minded than students who planned to study abroad but had not yet done so (see also Medina-Lopez-Portillo, 2004). By contrast, Hamad and Lee (2014) compared students who participated in study abroad programs of various lengths. They found that the length of the program had no effect on students' willingness to communicate with people from different cultures or their ability to adapt to different cultures, although students who studied abroad for longer periods did show less exclusive identification with their own cultural and ethnic groups. Similarly, Chieffo and Griffiths (2004) compared students who participated in short-term study abroad programs with students enrolled in equivalent classes on their home campuses and found that the students who studied abroad showed greater intercultural awareness, understanding of global interdependence, personal growth, and functional knowledge of tasks like making international phone calls.

Methodology

Based on the extant literature, discussions with university officials, and the researchers' experience in planning and executing study abroad programs, we developed and refined a set of three big-picture learning outcomes for our study abroad program.

1. Students will be able to describe the similarities and differences between the U.S. and their host county in one or more of the following areas: economic, political, environmental, health care, religion, education, values, beliefs, customs and/or practices.
2. Students will be able to explain how academic or professional fields are studied and/or practiced within the host country.
3. Students will reflect upon their study abroad experience by expanding upon how the experience enriched their life, articulate their thoughts on what it means to be a global citizen, and how the experience has challenged their worldview.

The researchers developed a rubric to standardize the assessment process. Both the rubric and the learning outcomes were designed to be as broadly applicable across programs and disciplines as possible, but still specific enough to get meaningful data about the study abroad experience.

To evaluate these learning outcomes, students are required to write short papers that address each of the outcomes. The researchers then used the rubric to assess how well each of the participants met the learning outcomes. In order to separate the programmatic assessment from student grading, each instructor assessed students from the other instructor's class. With students who were enrolled in both classes, both instructors assessed their essays as an additional means to cross-check the reliability and usability of the rubric. While a lot of study abroad assessment research has relied on data from self-report questionnaires, this study follows the lead that previous researchers have used such as student journal assignments (Santanello and Wolff, 2007/2008). This approach can provide a more direct assessment of how much students actually learn, rather than how much they think they have learned.

Data Analysis and Results

Table: Mean Scores for All Measures

Outcome 1			Outcome 2			Outcome 3			
Accuracy	Importance	**Average**	Accuracy	Importance	**Average**	Enriched	Global Citizen	Worldview	**Average**
1.88	1.82	**1.85**	1.88	2.19	**2.03**	2.44	0.94	1.72	**1.70**

The rubric developed by the researchers broke the first two outcomes into two components: the accuracy of the students' observations and the depth or importance of their observations. The third outcome was divided into three components, how much the experience enriched the student's life, how much the student could demonstrate an understanding of being a global citizen, and how much the experience affected the student's worldview. All components were measured on a scale of poor (0), marginal (1), satisfactory (2), and excellent (3). As seen in the table, students' average scores were all within 0.3 points of "Satisfactory." The outlier was the students' ability to demonstrate an understanding of what it means to be a global citizen, which was marginal.

Discussion and Conclusion

The two key findings were first, the importance of determining and clearly articulating the desired learning outcomes, and second, determining areas of focus for student learning and planning the curriculum to address those areas of perceived weakness. The results revealed which areas needed improvement or modification. For example, one of the key elements of the rubric was the significance or importance of the observations that students made. The idea being that success in this area would be demonstrated by the students focusing on less superficial observations. While the students did this better for the second outcome, a small change of wording in the prompt would likely encourage students to reflect on more important issues. Reading through the journal entries of the students confirms that they in general had significant observations, but they did not necessarily focus on them for the short essay assignment. The weakest score of the outcome was about being a global citizen. In order to address this issue, the researchers plan on integrating the issue of global citizenship into the classroom as well as informal discussions before and during the study abroad program. The assessment process itself seems to be successful in that it codifies the desired learning outcomes and provides a relatively simple and repeatable way of measuring that success. The process developed for this assessment research can be used as is or adapted for use in a broad range of study abroad programs to provide continuing data to interested parties.

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Collaborative Course Planning in the Learning-Centered Classroom

Michael Abelson and Thomas J. Nelson, *Virginia Commonwealth University*

Abstract: This practice session will explore how the learning-centered classroom can be enhanced by collaborative course planning. The session leaders have co-designed their first year writing and critical thinking general education courses for seven years in the Department of Focused Inquiry at Virginia Commonwealth University—planning jointly but teaching separately. Over this time, we have come to understand that our planning process directly correlates to and, we believe, enhances the learning-centered pedagogy to which we subscribe. Traditional models of course planning, especially in higher education, perceive the instructor as the transmitter of information and knowledge to the student—the leader on a (sometimes forced) march through the subject matter. Collaborative planning offers instructors a powerful tool for shifting the emphasis to student learning and empowerment. If the common understanding of course planning is as solitary, linear, and objectives-oriented, then the introduction of collaboration creates an enhanced model that is iterative, reflective, and learning-centered—indeed, a model more suited to the learning process itself.

Literature Review

The literature on collaborative course planning in higher education is meager. Aside from some passing consideration in accounts of team teaching, very little addresses our interest in collaborative planning. As Stark and Lattuca (1997) make clear, the process of program planning is deeply collaborative, involving a wide range of partners including university and departmental committees, academic administrators, and accrediting bodies. But because of an understandable desire for faculty autonomy (Stark & Lattuca 1997), attention to the opportunities afforded by voluntary collaborative course planning has received little attention.

Prominent initiatives to reform the higher education classroom using the principles of learning-centered pedagogy (Barr & Tagg 1995 and Weimer 2002) advocate a curriculum which prioritizes student learning over instructor-led coverage of content. Weimer (2002) points out that pedagogical literature frequently focuses on issues related to teaching rather than student learning. As a result, she advocates further research into course planning that prioritizes structures and activities which facilitate student engagement and ownership over the learning process. While one of the central goals of learner-centered teaching is to empower students to take more responsibility for their own learning, Weimer acknowledges that this sort of teaching requires significant attention to planning and the construction of appropriate learning experiences. Ironically, the emphasis on student learning in the literature leads to a de-emphasis of the more challenging dimensions of course planning in this new paradigm. Despite an emphasis on recursion, process learning, collaborative inquiry, and shared decision-making for students in the learner-centered curriculum, similar goals have not commonly been advocated for the teachers.

Goals and Objectives

We hope that, following this session, participants will be able to

- Identify and reflect on tendencies in their course planning
- Recognize the reflective and iterative nature of collaborative course planning in learning-centered courses
- Engage in collaborative course planning with colleagues

Description of the Practice

Participants in this session will learn about an intensive model of collaborative course planning that incorporates recursion, collaborative inquiry, and shared decision-making. It will be demonstrated that the model of collaboration employed by the presenters can emulate and extend the goals of learning-centered education for teachers and students alike. After a discussion of our practice and its relationship to the literature, we will lead participants through some planning activities: first planning alone and then with a partner. This comparison will help illuminate our extension of contemporary planning models into a collaborative, learning-centered practice.

Discussion

We hope to engage participants in a discussion of individual and collaborative planning processes. Possible discussion questions include the following: How do pairs approach a planning task differently than individuals? What are the conditions needed for effective collaborative course planning? What are the essential habits of mind for collaboration? What are the benefits and drawbacks of collaborative planning? Does behind-the-scene collaboration among instructors create a culture of collaboration in the classroom?

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"When Should I Jump in?" : Helping Students Manage Team Conflict

Marie C. Paretti, Holly M. Matusovich, & Kelly J. Cross, *Virginia Tech*

Abstract: Teaming skills are fundamental to many disciplines, and research has demonstrated positive outcomes from cooperative group work. However, developing essential teaming skills and having positive team experiences require more than simply putting students into groups; to effectively support student learning, faculty must play an active role. Recent studies suggest, in fact, that students want more explicit instruction about teaming skills and team building processes. Faculty engagement can be particularly critical with respect to team conflicts. Research has shown that perceptions of negative group work experiences and team conflict in particular are directly impacted by the level of faculty intervention. Greater faculty engagement can have a positive impact on desired team outcomes and on students' perceptions of team experiences. Yet most faculty lack explicit training in team dynamics and are often uncertain about how to help students negotiate the kinds of conflicts that emerge as students work together on short- and long-term projects. In this interactive practice session, we offer research-based and practitioner-focused approaches to help faculty support students in addressing common team conflicts and developing conflict management strategies. Using recent research by the presenters on student and faculty beliefs about teamwork learning in engineering as a starting point, the session integrates research from a range of fields to provide practical strategies for helping students manage team conflicts.

Literature Review

Across disciplines, teamwork is recognized as an essential skill by educators, researchers, and students. However, resources for helping faculty teaching these skills and develop effective teamwork pedagogies are limited. and faculty may not be able to effectively leverage those resources that are available (Matusovich, Paretti, Motto, & Cross, 2012). Yet as the use of collaborative learning and team projects continues to grow, many instructors find themselves in a position to mediate dysfunctional student teams or counsel students regarding negative interpersonal dynamics occurring during a team project (Chapman, Meuter, Toy, & Wright, 2010).

Team conflict can be a productive, normal part of team development; it is, in fact, included in Tuckman's classic model (1965) of team development, as part of the "storming" phase. However, while storming is an essential part of team growth, unresolved or poorly managed conflict can negatively impact students' team experiences, including both the team's performance and the team member's satisfaction and learning (Behfar, Mannix, Peterson, & Trochim, 2010; Pauli, Mohiyeddini, Bray, Michie, & Street, 2008). For example, Pauli (2008) developed an instrument to evaluate negative group work experiences and identified group fractionization and storming as two of the four dimensions contributing to negative group work experiences (the other two are lack of group commitment and disorganization of project task). Group fractionization is defined as "severe interactional and communicative difficulties" (p. 56) at the group level that can result in the team dividing into unacknowledged and unresolved factions or isolating certain individuals., while storming focuses on negative interpersonal interaction between group members. Conflict management must occur throughout the team experience to promote cohesion and avoid the development of personal conflict (Tekleab, Quigley, & Tesluk, 2009).

Importantly, research suggests that effective faculty engagement with these types of conflict can diminish the negative impact. (Pauli et al., 2008) and help students explicitly build skills they can transfer to other team environments. Because the level of faculty intervention has an inverse relationship with these negative team outcomes. (Pauli et al., 2008), faculty engagement in conflict management practices with students can play a critical role in both managing the conflict and avoiding negative team experiences. Despite the importance of conflict management, it is difficult for students to do, difficult for faculty to do, and perhaps even more difficult for faculty to help students learn to do for themselves. Research suggests that one key is helping faculty understand the nature of team conflicts (Behfar et al., 2010; Tekleab et al., 2009). That is, faculty need to understand the structures that contribute to conflict in order to help students manage it properly (Behfar et al., 2010). As faculty managing student teams start to understand how team member experiences and perceptions impact team process and outcomes (LeDoux, Gorman, & Woehr, 2012), we can better support student teams by avoiding negative team experiences

such as trust issues, which lead to dysfunction. (Pohopien et al., 2012) At the same time, faculty can develop proactive strategies to mitigate conflict. For example, because conflict and the absence of trust can be significant challenges for student teams, faculty can support team development by actively creating opportunities for students to engage in trust-building exercises to enhance positive interaction and communication among team members (Pohopien et al., 2012).

Goals and Objectives for the Practice Session

Given the importance of faculty engagement in supporting effective team dynamics, the goal of the practice session is to create a space where faculty can learn and practice strategies and tools to effectively manage student team conflict within the context of their classrooms. At the end of the practice session, faculty will (1) be familiar with common types of conflicts as well as suggested tools and practices to address them; (2) be able to describe settings in which different strategies are more likely to be successful; (3) have experience engaging in conflict management scenarios; (4) have resources to provide further assistance and direction as they mentor student teams.

Description of the Practice Model

We will start the session with a quick review of key research-based findings about helping student teams manage conflict that motivate our suggested approaches. Group discussion will identify previous successes and failures from participants. Using this discussion, facilitators will then briefly introduce some tools and strategies to minimize negative impacts of conflict on student teams, and provide scenarios to allow participants to work through concrete situations, adapt ideas and practices to their own classrooms, and expose unanticipated challenges in the approaches. The group will discuss experiences in the different scenarios collectively. Finally, facilitators will synthesize the discussion and provide resources relevant to the pedagogical gaps identified by the discussion. The session will close with a survey that includes a session evaluation and opportunities for future collaboration. The facilitators will encourage participants to attempt strategies in their courses in small incremental phases and suggest future collaborations with participants to identify innovative approaches unfamiliar to them.

Discussion

The session is intentionally structured to allow the facilitators to shape the session to the needs and interests of the participants. Drawing on research from many different settings, along with extensive classroom experience working with student teams at all levels, the facilitators will help participants both understand common problems and develop practical classroom approaches. Participants will be able to learn from published resources, but also explore how such resources apply to the particulars of their own classrooms.

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Broadening the Cultural Lens through Authentic Experiential Modalities: The Effects of Reflective Journaling on Student Learning

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Abstract: Both digital and print reflective journals were used as part of a class that examines the concepts of language and culture and their relationships to teaching and learning in U.S. public schools. As a way to frame cultural awareness and understand that world perspectives shape our views on how to work with students and families, preservice teachers used blogs, websites and print journals to document their own personal narratives on cultural experiences and backgrounds. After theoretical perspectives of diversity were studied, the preservice teachers spent three days in NYC experiencing diverse settings that gave an authentic dimension for more complex learning and extended the journals from personal narratives to more in-depth critical reflections.

Literature Review

One of the concerns in colleges of education is making connections between theory and practice. To make these connections we know that we must engage students, use authentic learning strategies, and provide a venue to encourage personal and professional development. Ever since Dewey (1933) recommended journaling as a means to critically reflect on learning, many educators have espoused the benefits of the journaling process (Schön, 1983; Jarvis, 2001; Dyment & O'Connell, 2010). In particular, students have been encouraged to base their reflections in a personal context to encourage an examination of beliefs, values, and assumptions (Fritson, 2008; Minott, 2008). Moreover, if students in higher education write their thoughts, they may be more likely to think deeply and even revisit and challenge their beliefs (Hubbs & Brand, 2010). From these reflections the hope is that an expertise will emerge as individuals ask themselves critical questions, develop conclusions, and create action plans about their profession.

Attention has also been given to understanding how these journaling activities affect students intrapersonally. Fritson (2008) studied the effects of journaling on students and their self-efficacy and locus of control. This author based her study on journaling that has been used for decades in cognitive-behavioral therapy to acknowledge change behaviors (Beck & Beck, 1995; Nicholas, 2006). Another use of journaling is in expressive arts where visual journaling involves and encourages individuals to express their inner language in different ways. This practice may make the process more desirable and can be used as a model that encourages the development of journaling as a habit.

And finally, in a time when technology has progressed to allow not only text but also visual images that can be easily uploaded and manipulated, it only makes sense to use what we know about journaling and combine it with current digital tools. Recent studies have shown success in bringing social media to the literacy classroom (White & Hungerford-Kresser, 2014), audiovisual journaling (Falk-Ross, 2012), and blogging in teacher education programs to link field experiences with class curriculum (Wopereis, Sloep & Poortman, 2010; Venable, 2014). These studies and others served as the basis for implementing digitally based journals into a higher education classroom studying language and culture.

Goals/Objectives/Discussion for the Practice Session

Students were given the following explanation of journaling:

> Educators and professionals use reflection and inquiry as tools to broaden their perspectives of the world. They employ this knowledge in professional practice that is responsive to the needs of a diverse student and client population. In order to promote introspection and reflection, an academic journal must be kept on class readings, videos, discussions and life experiences that may occur during the semester that directly relate to course concepts or materials.

Attention was given to factors for successful journaling in education as researched by Dyment & O'Connell (2010) including: training for students, timely and supportive feedback, and a systematic way to analyze online submissions. Because the instructors co-teaching the course come from the two major perspectives of teacher education and expressive arts, students were exposed to journaling as an intrapersonal journey and as a way to express thoughts about course content.

Goals for the Session:

1. Share the planning, rationale, and implementation for journaling use.
2. Discuss the journey during the semester from initial interactions to travel to revelations on language and culture through the technology rich journals.
3. Share digital journals.
4. Engage the audience in a discussion of journaling and other digital formats that have been successful in expanding the boundaries of learning in higher education.

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Interdisciplinary Collaboration Through Faculty Learning Communities

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Abstract: This interactive session will introduce the topics of interdisciplinary collaboration and Faculty Learning Communities. The tenets of effective collaboration will be described and utilized as a conceptual basis for enacting the process of interdisciplinary collaboration through the structure of FLCs. Participants will enhance their capacity to engage in interdisciplinary collaboration for teaching and research.

Literature Review

It is very rare that any one individual can affect real change in the world at large and those that do create real change most often achieve it through orchestrated collaborations with others. Addressing the critical challenges facing the world today, what Omenn (2006) described as grand challenges, requires substantive interdisciplinary collaboration between individuals whose expertise lie within varied disciplines of knowledge. Additionally, as time moves forward it is likely that future generations of agricultural researchers and practitioners will find it increasingly necessary to cross disciplinary, cultural, and national boundaries in order to overcome the most critical scientific and socio-technological challenges facing the world (Borrego & Newswander, 2010). It is therefore important that research and practice be dedicated to creating a better understanding of interdisciplinary collaboration so that the educational system can continue to improve upon existing STEM research and career development pathways.

Bossio, Loch, Schier, & Mazzolini (2014), define interdisciplinary collaboration as the process of engaging practitioners or researchers from different fields of study or disciplines and integrating aspects of each discipline within an integrative approach to address a specific practical or research problem. Interdisciplinary collaborations are integrative and incorporate the methods and perspectives common to the disciplines of the partner collaborators in order to synthesize knowledge and provide insights regarding a complex problem or challenge. Repko (2012) stated that, interdisciplinary work creates a more comprehensive and insightful understanding through the enactment of an integrative process which responds to questions or challenges that are too broad or complex to be adequately addressed by one discipline or field of study.

Viewing interdisciplinary collaboration from an education and training perspective, it quickly becomes apparent that there is virtually no literature regarding the identification of learning outcomes, methods of instruction, or benchmarks for assessing learning outcomes and impacts (Borrego & Newswander (2010). The potential benefits improving the capacity of faculty to educate and train future faculty, researchers, and practitioners as interdisciplinary collaborators within a STEM career development pathway model are manifold. One specific avenue for strengthening interdisciplinary collaboration discussed in the literature is the development of Faculty Learning Communities (FLC). These groups are structured assemblages where faculty members from various disciplines engage in discussion to build community (Little, Fallon, Dauenhauer, Balzano, & Halquist, 2010). FLC's are usually topic or cohort based and are most often utilized in the context of teaching and learning issues, however, the concept can also be applied to research and problem solving (Cox, 2011).

Goals and Objectives

Participants in this dynamic session will engage in learning experiences designed to build their capacity for: 1) designing, leading, and evaluating collaborative interdisciplinary FLC projects; and 2) utilizing cross-cutting resources and techniques for interdisciplinary teaching, research, and project management.

Description

Based upon research investigating the implementation of collaboration, Johnson and Johnson (2009) have posited that five variables mediate the effectiveness of collaboration: 1) positive interdependence; 2) individual accountability; 3) promotive interaction; 4) appropriate use of social skills; and 5) group processing. These concepts will form the basis of the session and will inform the design of activities. Presenters will illustrate a model for the process of creating and operationalizing FLC's using the findings of Johnson and Johnson (2009) as a conceptual basis. Guidance for actuating the capacity of FLC's to build interdisciplinary collaboration will be supported by

research from Bossio, Loch, Schier, and Mazzolini (2014) and their action research developed guideposts for interdisciplinary collaboration (Table 1). By framing the session around building capacity for interdisciplinary

Table 2
Guideposts for interdisciplinary collaboration (Bossio, Loch, Schier, & Mazzolini, 2014)

Social Expectations	Focuses on expectations to create a community of practice based on trust, similar values, and similar motivations towards outcomes. A sense of community contributes reduces an individualistic pursuit to solving one problem.
Disciplinary Expectations	Refers to disciplinary culture and how it affects relationships within groups. It is critical to have a uniting interest and goal that allows the team to communicate and work through interdisciplinary barriers.
Outcome Expectations	Start small and build successes. Successful outcomes are a great motivator to continue in collaborations.

collaboration as a standalone process, the activities will transcend traditional departmental, college, and program boundaries. The session outputs and outcomes will be tied to knowledge, interactions, and competencies related to the participants' capacity to engage in, lead, and evaluate interdisciplinary collaboration irrespective of their specific field of study. The session is designed as a scalable model that can be adapted for implementation across any fields of study in order to build capacity for interdisciplinary collaboration across campus and beyond.

Discussion

When interdisciplinary collaboration works it maximizes the talents and expertise of individuals and their allied ensemble in order to generate knowledge or affect change through applied work (Repko, 2008). Implementing a mode of interdisciplinary collaboration in FLCs quite literally changes the game and creates new opportunities for faculty, students, and communities. In order to create real change in our educational system we must work with what we can influence or control. Engaging in a model of interdisciplinary collaboration is within our sphere of influence as teaching and researcher faculty.

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Leveraging Email Correspondence to Facilitate Data-driven Teaching Improvements

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Abstract: Identifying areas of improvement for teaching practices is critical to the development of teachers. Moreover, utilizing data that fits a teacher's personal context creates an opportunity for data-driven decision-making as opposed to anecdotal inferences. Email correspondence represents a dominant form of communication between student and teacher that may be leveraged as a rich data source. This presentation demonstrates the process of conducting individual email analysis, which includes the aggregation, organization, and conceptualizing of email correspondence. Sharing my personal experiences from the analysis, outcomes include insights into teaching practices, course policy, and efficacy of protocols. The process is not an evaluation, but a tool. The conclusions drawn from the interpretation of data may differ across teachers. It is my hope that initiating discussion around the method will facilitate the maturation of this form of analysis.

Literature Review

Although professional development of higher education faculty is viewed as an important component to supporting faculty, there are barriers against universal support for teachers. A survey of academic deans reported budgetary constraints as a primary reason for not offering policies supporting professional development related to teaching as well as not being a priority or believed to be important for part-time faculty (Gehrke & Kezar, 2014). The lack of support for professional development in teaching creates a difficult environment for growth. Research has demonstrated professional development which utilizes collaboration amongst teachers or instructional experts is an effective mechanism for modifying practice (Camburn, 2010).

Desiring the benefits of professional development in a climate of loose support compels educators to search for creative ways to impact their practice given the resources available. Methodologies such as Self-Study for Teacher Education Professionals (S-STEP) emphasize self-reflective practice to elicit learning about one's teaching (LaBoskey, 2004; Pinnegar & Hamilton, 2009; Samaras, 2011). Rodgers (2002) asserts that an active stance on reflection can enable teachers to better see the learning process through their students' eyes. Reflection-on-action (Schön, 1983), a preemptive or retrospective strategy, is particularly fitting for teachers who must adapt quickly in the classroom, but have opportunities between classes or semesters to properly reflect.

Sending and reading email continues to be a leading activity of Internet usage (Purcell, 2011). Furthermore, the rise in mobile technology has enhanced the ability of faculty members to communicate with students (Wilen-Daugenti, 2008). Teachers do not need to be at their desk or in the classroom to communicate with students, they are able to more readily communicate electronically. Coupled with the growth of distance education (Parker, Lenhart, & Moore, 2011), email correspondence is a readily available, digitized, reliable representative sample of teacher-student communication.

Goals and Objectives

The goal of sharing my work is to introduce a semi-automated analytic tool that teachers may use to receive feedback on their email correspondence. Email represents a large extant data source that is already digitized, minimizing the data collection process. An expedited method for facilitating data-driven inquiry into teaching and learning is a powerful tool for educators.

Naturally, not all faculty will use email exactly the same way. Conclusions drawn from the data reports may be highly contextualized or some may be generalized. The tool does not tell you if you are a good teacher or not, it provides a data-driven prompt for self-reflection on practice. As a secondary goal of the practice session, I hope to elicit feedback from other faculty to improve and extend the tool. The measures I have developed stem from my own perspectives on what is considered valuable data to extract from email records. Dialogue amongst colleagues will better inform the types of reporting and analysis that would be useful for other teachers.

Description of Practice

The process of analyzing email records is separated into four phases: aggregating data, organizing data, conceptualizing data, and analysis of data concepts. Each phase is detailed so participants may "try this at home" and apply the practice to their own needs. Aggregating data involves the collection of email records to include in your analysis. Organizing data is focused on the actual structure of email correspondence and the implications for data storage. Understanding the structure of email, as well as the organizational requirements, is vital to recognizing the capabilities and limitations of email analysis. Conceptualizing data is the identification of descriptive patterns and the definition of said patterns. Currently, this phase includes the following filters and groupings: time, date, period, response time, frequency, and content. Analysis of data concepts is the final phase and is contingent on the structures of the previous phase. Analyzing data concepts involves the interpretation of reporting from the tool and assigning meaning to the findings which are congruent with self-reflection on previous practices.

Discussion

While the process may seem simplistic, the challenge is in handling a large data set. From Spring 2010 through Fall 2013, I identified 3944 emails spanning 293 students. This represents a rich data source, but without technology assistance it would be infeasible to tap into the data. By using the tool I have identified areas of strength in my teaching as well as areas of weakness which need improvement. Additionally, I have used the tool to assess the efficacy of classroom protocols including student use of their school accounts instead of their personal accounts as well as student accuracy in properly formatting emails for the course. In some cases reports have been confirmatory that protocols and policies are sufficient, but in other cases the tool's reporting has spurred the impetus for adaptation in my teaching.

The tool is not without its limitations. The looseness in email standards as well as email's ambiguity in usage creates logical problems in analysis. In order to overcome these limitations, more targeted qualitative methods will be necessary to fully understand the meaning of correspondences. However, the inability to automate qualitative analysis may prove counter-productive to the tool's purpose of a semi-automated reporting process to catalyze self-reflection.

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A Conversation on the Need for Female Doctoral Students to Successfully Manage their Multiple Identity Dimensions in Order to Persist in the Doctoral Process

Lucinda S. Spaulding, Amanda J. Rockinson-Szapkiw, & Maria T. Spaulding, *Liberty University*

Abstract: This conversation focuses on challenges specific to female doctoral students given their multiple dimensions of identity (e.g., wife, mother, daughter, professional, emerging scholar) and the tensions they experience as they intersect these dimensions across the varied stages of the doctoral journey. This discussion is prompted by research indicating many women fail to successfully negotiate these tensions and consequently choose not to begin or cease to persist in a doctoral program. In this session we discuss (a) tensions women face in the doctoral process, (b) a theoretical foundation for female identity, and (c) strategies for successfully intersecting multiple identity dimensions, leading to doctoral persistence.

Literature Review

This discussion is prompted by perennially high doctoral attrition rates (40 – 60%; Council of Graduate Schools, 2009) and is grounded in a conceptual model of identity that posits women need to acknowledge and successfully manage the multiple dimensions of their identity (Jones & McEwan, 2000) to persist in the doctoral process.

While women are accessing higher education at increasing rates (National Science Foundation, 2012), women are more likely than men to be late completers and less likely than men to complete their doctoral degree (Council of Graduate Schools, 2009). Further, academia has a documented 'unfriendliness' toward females (Moyer, Salovey, & Casey-Cannon, 1999), few female role models given the underrepresentation of women in tenured positions (Monroe, Ozyurt, Wrigley, & Alexander, 2008), and female students reporting that being a mother detracts from being perceived a "serious student" (Lynch, 2008, p. 596). Added to this, females often need to balance financial, maternal, community, spouse, and family of origin responsibilities in addition to academic ones (Johnson, Greaves, & Repta, 2007). Consequently, many women experience guilt and shame when pursuing their doctorate, feeling that they are unsuccessfully balancing family responsibilities and academics (Brown & Watson, 2010), with the "stress of trying to be successful as both a mother and a student contribut[ing] to dissatisfaction in both roles" (Haynes, Bulosan, Citty, & Grant-Harris, 2012 p. 3). These feelings lead to internal conflict and identity confusion. Feeling unable to successfully negotiate these vying dimensions of identity, women are vulnerable to departure, a decision that is costly for society and the institution, but most significantly, the woman herself, who experiences a significant blow to her confidence, loss of return on the time and finances invested, and potentially restricted employment options given the decision to depart (Lovitts & Nelson, 2000).

Understanding and supporting a female's desire to assume the identity of "doctoral student" cannot be accomplished without accounting for her multiple identity dimensions (e.g., wife, mother, daughter, sister, working professional, etc.). Jones and McEwan (2000) developed a conceptual model that suggests females have multiple dimensions of identity, with one's core sense of self (personal identity) at the center. Intersecting the core are significant identity dimensions, such as race, gender, or religion, as well as contextual influences, like family background and life experiences. Accordingly, "no one dimension may be understood singularly; it can be understood only in relation to other dimensions" (Jones & McEwan, 2000, p. 410). Thus, failure to successfully intersect the identity dimension of "scholar" with the core and with other identity dimensions results in internal conflict, feelings of guilt and shame, and all too often brings individuals to a breaking point where either (a) the goal of obtaining the doctorate is abandoned (Lovitts & Nelson, 2000), or conversely, (b) family and personal relationships "break down as a result of a student's involvement in [her] studies" (Wellington & Sikes, 2006, p. 731). As both outcomes have significant repercussions, research and interdisciplinary discussion are needed to explore how females can effectively manage multiple intersecting identity dimensions, across various contexts, in order to successfully navigate the doctorate.

Goals and Objectives

Participants will be able to (a) discuss the problem of doctoral attrition as it relates to female identity; (b) apply an identity model to understand the tensions women experience as they intersect their core identity with their developing identity of emerging scholar across the stages of the doctoral journey; (c) describe strategies females can

employ to manage multiple intersecting identity dimensions; (d) identify supports universities and faculty can implement to foster persistence in female doctoral students.

Description of Topic

Though the doctoral journey is inherently challenging and places strain on doctoral students and their relationships, it is possible to successfully navigate the process and maintain a healthy sense of self and commitment to loved ones (Rockinson-Szapkiw, Spaulding, Swezey, Wicks, 2014; Spaulding & Rockinson-Szapkiw, 2012). After presenting the identity model and applying it to the identity transformation females experience in the doctoral process, we will discuss three strategies females can employ to successfully negotiate multiple identity dimensions and persist to completion: (a) integrate the family; (b) honor and balance identity dimensions; and (c) develop a strong support system. In addition to discussing strategies females can employ, we will discuss strategies for program administrators and faculty to support female students: (a) foster academic and social integration through course and program design (e.g., a cohort model, distance and flexible course offerings) (b) provide opportunities for financial integration (e.g., scholarships, fellowships, assistantships); (c) provide opportunities for students to develop their identity as a scholar through mentoring and collaboration (e.g., co-authoring publications and conducting presentations with faculty).

Facilitation Techniques

After briefly introducing ourselves (two female associate professors – one with three young children, and a female doctoral student with two young children) and our own challenges negotiating multiple identity dimensions in the doctoral process, we will survey the audience to determine disciplines and professions/positions represented. Next, we will discuss attrition across disciplines and challenges specific to females in various programs (e.g., sciences versus social sciences), requesting input from individuals across the disciplines represented. We will then discuss Jones and McEwen's (2000) conceptual model for multiple dimensions of identity and the concept of intersectionality, concluding with the presentation and eliciting of interdisciplinary strategies female students can employ and administrators and faculty can integrate into their programs and courses to foster doctoral persistence.

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Civic Engagement in General Education Courses: A Conversation about Projects That Benefit Both Campus and Community

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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 and have labeled such engagement as a "High Impact Practice." As members of a university community that is currently championing a "scholar-citizen initiative," the discussion facilitators have designed activities and assignments that encourage students to engage with both on and off-campus communities, but would like a better understanding of the ways that these activities can benefit community partners as much as they do students. The session will focus on applications of civic engagement pedagogy in ways that benefit, rather than burden, both students and community partners.

Literature Review

In January 2012, The National Task Force on Civic Learning and Democratic Engagement issued their report "A Crucible Moment: College Learning and Democracy's Future." The report, which was commissioned by the Department of Education, unveiled at the White House, and published by the AAC&U, asked the nation to "[r]eclaim and reinvest in the fundamental civic and democratic mission of schools and of all sectors within higher education" (p. vi). Likewise, Andrew Delbanco suggests in his 2012 book, *College: What it Was, is, and Should Be* that college should help students to "develop certain qualities of mind and heart requisite for reflective citizenship" (p. 3). While Delbanco looks to the past and the ways in which this mission was once at the heart of public colleges and universities, the authors of "A Crucible Moment" look at the present and call for colleges and universities to reclaim this civic mission in order to save our democracy from the problems of low voter turnout, uncivil public discourse, and distrust in government that seem to be at an all-time high.

While it is clear that these are all problems for democracy, and that education is a key to ameliorating them, the best ways of implementing civic components into the classroom are not quite clear. According to Peter Levine (2011) in his article "What do we know about civic engagement?" there are, in fact, practices that can be harmful to either community members or to the youth practitioners attempting to engage with them. Levine cites scholars who worry that service alone can create "a distinction between the active server and the passive recipient" and studies from the book *Freedom Summer* (1988) that show students who went to Mississippi in 1964 paid for their social contributions with (some of) their psychological well-being. Thus, it is important in general education courses to start students off with projects that are appropriate not only for the goals of the course, but for the level of preparation and understanding of the students.

While emotional and/or physical harm are the worst case scenarios, there is also the question of whether or not a partnership will benefit *both* the community partners and the students. In the article "Student and Faculty Perspectives on Motivation to Collaborate in a Service-Learning Course," by Rebecca Pope-Ruark, Paige Ransbury, Mia Brady, and Rachel Fishman , student Rachel Fishman argues that "For me personally, and for my group, communicating with our partner posed collaboration challenges that we were not used to, but the situation and our genuine passion for the organization's mission motivated us to make changes and succeed" (p. 141). Encouraging students to keep these thoughts in mind as both citizens and burgeoning professionals is of growing importance when combating issues such as low civic engagement and political participation in local, national, and global issues facing our 21st world. In this conversation, we hope to get at how we might best do that in our general education classes.

Goals and Objectives

Session participants will emerge from the conversation with:

- A clearer picture of civic engagement practices in general education courses.
- A variety of ways of defining, designing, and implementing civic engagement across disciplines, settings, and institutions.
- Reassurance that they belong to a supportive network of educators and practitioners.

Description of Topic(s) to be Discussed

Conversation during this session will focus on the challenges and victories in implementing civic engagement projects within courses and programs, including:

- How do we define civic engagement?
- How do we engage general education students in civic projects?
- How do we build productive and sustainable partnerships among faculty, staff, students, and community members?

Facilitation Techniques

Participants will briefly introduce themselves and explain how they define civic engagement. Discussion will then turn to practices and/or possibilities for student projects and community partnerships. A summary of key ideas from the conversation will be noted throughout the session, and participants will be encouraged to share assignments or ideas with the facilitators, who will upload the materials to the session page.

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The Pros and Cons of Digital Devices in the College Classroom: A Conversation with Faculty

Russell Binkley, Nancy Luke, & Freya Kinner
Western Carolina University

Abstract: Concerns over and interests in the use of digital devices in the college classroom have grown in the past few years among faculty and students. The opinions and practices relating to this issue cover a wide continuum from banning electronics in class to using them as an essential tool for student learning. This conversation session will support and encourage participants using both small and whole group discussion techniques to explore the pros and cons as well as strategies and solutions to this complex and relevant topic. Session facilitators will gather, synthesize, and send via email the information and ideas from the group discussions with those attendees wishing this material.

What seems clear is that there has been an increase among college students in using digital devices in their courses and that bringing personal mobile devices to class, referred to as BYOD (bring your own device), is also on the rise. College instructors are, for each student, reserving and bringing to class computer equipment such as laptops and tablets to enhance their teaching and support student learning. What may *not* always seem clear is the precise way that students are using these devices during class. Use of digital devices by students may either be for academic purposes such as research or collaboration or may conversely be used to "fight boredom, entertain themselves, and stay connected to the outside world" (McCoy, 2013, p. 1). Faculty are grappling with the issues surrounding this practice in a variety of ways. Their responses span from the practice of embracing the active use of mobile phones by students as audience response devices (e.g. clickers) to banning any use of technology in class by students or even refraining from using it themselves (Bowen, 2012).

Literature Review

While not a new phenomenon, computer and digital device use in the college classroom has been studied for the past three decades with research ranging from preference and use based on gender (Arch & Cummins, 1989) to a meta-analysis of the effectiveness of computer-based teaching in higher education classrooms (Kulik, Kulik, & Cohen, 1980). More recently, however, some of the focus has shifted to how college students as well as faculty use computers and digital devices in face-to-face settings to support active learning (Han & Finkelstein, 2013; Junco, Heiberger, & Loken, 2011), including collaboration and group work (Lampe et al, 2011; Gikas & Grant, 2013).

According to Parker, Moore, & Lenhart (2011), there are only a few universities who have college-wide policies in place for use of digital devices such as laptops and mobile phones. The majority of colleges leave the decision up to individual faculty as to whether students may use these devices in class. When instructors do allow or encourage student use of technology for note taking or in-class research, students may become off-task and distracted by social media, games, or email (McCoy, 2013). In response, some college faculty forbid the use of electronics during class time and express frustration with having to "police" student use of devices or tolerate interruptions such as phones ringing in class. Faculty and students' perceptions of the appropriateness and utility of digital devices in the classroom differ widely (Baker, Lusk & Neuhauser, 2012), and while college instructors may discourage the use of these devices, students will continue to use them either openly or in a concealed manner.

Goals and Objectives for and a Description of the Topic to be Discussed

The goal of this conversation session is to provide faculty opportunities to engage in open discussion about the challenges and successes they are experiencing in their classrooms with regards to student use of digital devices. Session facilitators will begin the conversation by contextualizing this issue within the framework of both positive and negative impacts of computing devices in the college classroom. They will also provide a short overview of some of the recent research guiding these discussions across college campuses, and will offer practical strategies for using digital devices to support instruction or how to set and enforce policies and practices for barring the use of these devices. Facilitators will conclude their introductory, 10-minute presentation by briefly sharing their

experiences and perspectives on this issue and by offering some of the ways that they have grappled with and made best use of electronic devices in the classroom.

This session will focus on encouraging conversation and engaged discussion about innovative practices in the college classroom that relate to the use of laptops, tablets, and smart phones as well as concerns about insuring rigor, quality, and positive student learning with or without sanctioned use these devices. Facilitators will ask that attendees share not only their experiences and opinions but also their ideas for how best to address how or whether to use digital devices in the college classroom.

Facilitation Techniques

After a brief introduction of the topic to provide context for participants, facilitators will use the *Four Corners* technique developed by Angelo and Cross (1993) to determine where initially each attendee stands on the issue of digital devices in the college classroom. Attendees will be asked to choose one of these four labels to reflect their current view: *strongly in favor*, *in favor*, *against*, or *strongly against*. Depending on how they self-identify, participants will gather into four groups with others choosing the same label. Each group will be given a charge for the time that they work in their group and will appoint a recorder to capture, on poster paper, *Reasons* (e.g. student population, classroom discipline) for their stance on the issues and *Strategies and Solutions* related to their stance (e.g. Strongly against might choose to have clear policies with strong consequences about the ban on electronics in class). After working in groups for 15-20 minutes, all participants will gather again as a whole group and share the results of their small group conversation. Facilitators will take each group's poster, compile and synthesize the information recorded, and will send it via email to participants who wish to have this material.

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Thursday

February 5, 2015

Presentation Sessions

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

Thursday

February 5, 2015

Session 6

9:00-9:50 AM

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

PINK TIME: Evidence of Self-Regulated Learning and Academic Motivation

Timothy D. Baird and David Kniola
Virginia Tech

Abstract: Life-long learning is a fundamental educational outcome and increasingly central to higher education in the United States and globally. To guide students towards this aim, teaching faculty have rooted their pedagogy in concepts of self-regulated learning and academic motivation. This mixed methods study investigates patterns of learning and the efficacy of a novel class assignment designed to challenge traditional approaches to learning. Results show greater understanding of self-regulated learning among students, clear demonstration of this knowledge, and improved academic motivation. These findings have clear implications for teaching faculty seeking to enhance critical thinking and bolster knowledge retention and knowledge transfer.

Introduction

Higher education is currently facing a convergence of crises. Studies have shown that students are not learning to think, are taking on crippling student debt, and have difficulty finding employment after they graduate. 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. The importance of a college education has been highlighted as an *economic* imperative shifting a nation's gaze to the accumulation of wealth and national security rather than education.

Despite these challenges, enrollments continue to soar. Students and their families look to colleges and universities as the gateway to adulthood and careers. However, an educational model that continues to prioritize the *content* of learning over the *process* of learning will fail. Straight "A" students will not necessarily thrive in this new world, learners will. Learning and a good education require good teachers (Deresiewicz, 2014). The best teachers explore pedagogical practices that challenge student learners in unexpected ways, helping them construct a uniquely personal understanding of the world. Our efforts here are to further examine practices that are based in a very simple premise of creating life-long learners. We recognize this idea varies among different cultural, organizational, and perhaps political contexts; however, the central aim is near universal—to direct and support students to be independent, discerning, and intentional thinkers.

Following these concerns, the research presented here represents our most recent efforts associated with an ongoing, multi-year examination of student-outcomes in response to an iterative assignment called PINK TIME, which asks students to "skip class, do anything you want, and give yourself a grade." Our initial study, which we presented at this conference in 2014, focused on describing students' activities and perceptions of the *assignment*. Now, we are focused on student perceptions of *learning*. Correspondingly, this phase of our study was guided a broad research question: "How does the PINK TIME assignment influence self-regulated learning and academic motivation?"

Literature Review

The general concept of self-regulated learning (SLR) requires a range of activities and a "web of skills" (Nilson, 2013) that span cognitive, affective, and physical behaviors that enhance and fortify learning (Schunk & Zimmerman, 2012). In short, SLR is about managing one's own learning. Bandura (1977) showed that children with higher levels of self-efficacy and self-regulation learned more. SLR includes elements of personal character, self-efficacy, motivation, and metacognition indicative of self-sufficiency and academic achievement (Zimmerman, 1990) and resulting in long-term knowledge retention and transfer.

Motivation for learning and contributing factors to motivation are well documented and encompass a wide, though often dizzying, range of theories. Motivation, specifically academic motivation (Schunk, Pintrich, & Meece, 2008), is a key element in learning. Jones (2009), for example, identified academic motivation as a clear subset of broader motivation for learning in the higher education setting. He contends that motivation is a process that is inferred from student actions and verbalization. Based on analysis and synthesis of motivation research, Jones posits the MUSIC

Model and has validated its components (Jones & Skaggs, 2012). In the MUSIC Model, students are motivated when they perceive five key principles in the learning environment —eMpowerment [sic], usefulness, success, interest, and caring. Instructors, therefore, have agency to create such a learning environment whereby increased student motivation leads to increased student learning.

Methodology

To address the question: "How does the PINK TIME assignment influence self-regulated learning and academic motivation?" we used a concurrent mixed methods study design. This method was selected to better understand self-regulated learning and academic motivation by converging quantitative and qualitative data. In the first phase of data collection, researchers worked with students to co-construct a self-regulated learning rubric. This was an iterative process wherein researchers presented a rubric to the students, who then worked in groups to provide substantive feedback on the rubric, which was then incorporated into the rubric design. The goal for the rubric was to provide students with a tool to measure the relationship between their own perceptions of their work and a set of behaviors indicative of self-regulated learning. Then, for each iteration of the PINK TIME assignment students used the rubric to assess their own activities. Researchers also completed rubrics for each student, however, these were not provided to the students. Basic descriptive statistics was used to analyze these data. In the second phase, researchers conducted semi-structured follow-up interviews with 7 students at the end of the semester. Interview questions were grounded in the MUSIC Model of Academic Motivation (Jones, 2009). Recordings of the interviews were transcribed and analyses included deductive and inductive coding of themes through an iterative process.

Results and Discussion

Early analyses of these data yield several findings. First, co-construction of the rubric with students supports student buy-in (i.e., perceived legitimacy) through comprehension of the rubric's goals, and improvement of its form. Second, preliminary analyses of data from student-completed rubrics indicate improved measures of self-regulated learning with subsequent iterations of the assignment. Third, content analysis of students' interview responses indicate high perceived value in the PINK TIME assignment and in the focus academic motivation. In interviews, students repeatedly described the assignment in terms of "eye opening," "game changing," and "refreshing." Nearly every student articulated, with some variation, "I've never been asked to explore a personal interest and give myself a grade. It has changed the way I approach my learning." Importantly, and central to our argument, student's expressed higher levels of ownership of and investment in their learning.

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"I'd Like to Thank the Academy:" Enhancing Student Motivation and Deep Engagement with Course or Program-Specific Awards Ceremonies

Donald W. Caudill, *Gardner-Webb University*

Abstract: For more than 25 years, the presenter has given the "Donny Awards" in his courses for outstanding achievement on specific parts of project assignments! This practical pedagogical tool has enriched his classroom and online teaching and motivated students to become more engaged with the course topics and perform at higher levels. The "Donny Awards" ceremony can easily be adapted to virtually any course offered at any college or university. Participants will learn how to implement an awards program for their classes and acquire a collection of practical strategies for creating the "best" ceremonies (suitable for diverse students' abilities and learning styles). Participants will be given hands-on suggestions and shown actual types of awards and programs. Participants will practice techniques in this interactive practice session and gain ideas for immediate use. Participants will go back to the classroom with an armful of instructor-tested strategies for designing and implementing an exciting and powerful awards program.

Literature Review

An exhaustive search of the literature (by both the presenter and professional librarians) was conducted on utilizing awards programs in the classroom and no empirical research was found. One non-empirical article was somewhat useful, however. Erekson (2011) presented "an approach for engaging undergraduates in historical research by identifying a public need, introducing the tasks to the students, teaching them to research and write historical work, and guiding them in the planning and execution of a public poster session and awards ceremony." Therefore, the "awards ceremony" component was as a result of judging of the posters. This presenter has gathered a plethora of data from former students regarding the effectiveness of his awards ceremonies. Many students (including graduate students) credit winning a "Donny Award" at giving them an edge in getting promotions and/or jobs.

Goals and Objectives for the Practice Session

Participants attending this session will be able to:

1. List the advantages (and possible pitfalls) of implementing a course/program awards ceremony.
2. Define and describe what an awards ceremony entails and how it can be produced.
3. Identify ways to implement an awards ceremony in their classrooms.
4. Judge which types of awards are best.
5. Analyze specific strategies for designing and implementing an awards program.

Description of the Practice to be Modeled

Participants (from any field or discipline) will learn how to implement an awards program in one or more of their courses. My students submit their "entries" to YouTube. Fellow students "vote" on the awards. An actual program from one of my Spring 2014 classes is below.

Discussion

While there is very little published information regarding the effectiveness of an awards program, the presenter has for over 25 years had one associated with most of his courses. He has found that student motivation and engagement have increased dramatically. Though a few students initially view the "Donny Awards" as corny, nearly 100 percent come to embrace this innovative pedagogical tool and many graduates credit it as instrumental in them securing jobs.

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The Alfred and Shirley Wampler Caudill Center for Ethics and Entrepreneurship

The Alfred and Shirley Wampler Caudill Center for Ethics and Entrepreneurship was named in October 2013 in memory of Alfred Caudill and in honor of Shirley Wampler Caudill, the parents of Gardner-Webb University Professor of Marketing Dr. Donald W. Caudill.

"Mother and Dad worked hard and sacrificed for their three children," Caudill said. "Through the Center, Mother's and Dad's sacrifices will be honored," he said. "It's totally about them."

While neither of Caudill's parents had more than an eighth grade education, both held higher education in great esteem and made tremendous personal and financial sacrifices so that Caudill could earn a bachelor's degree (the first in many generations of his family), two master's degrees, and a doctorate.

In addition, they both taught him through personal example the principles of integrity and entrepreneurship that make the naming of the Center in their honor so fitting.

"My parents taught me that all labor has dignity," Caudill said. "Dad worked as a coal miner until he became disabled. Mother worked in a sewing factory, then in the kitchen of a hospital for over 30 years. After Mother completed her GED, she attended Mountain Empire Community College and later became a certified dietary manager, earning those credentials from Auburn University."

Throughout their lives, both Mr. and Mrs. Caudill demonstrated the entrepreneurial spirit of the Center by looking for opportunities to make extra money to support their family. Mr. Caudill helped his son operate a garage. Mrs. Caudill did laundry and ironing. "While our family was considered poor, we were never without food, clothing or shelter," Caudill said. "In fact, many people about Mother's same age comment that Mother kept the floors of our house so clean that you could literally eat off of them."

In addition to instilling a strong work ethic in their children, Mr. and Mrs. Caudill taught them the ethical values that make hard work worthwhile. "They never cheated anyone," Caudill said. "My parents taught me that your word is your honor and you should do what you say you will do. They taught me that material things are not as important as helping others. With my parents, serving others and God came first."

More than anything, Mr. and Mrs. Caudill lived by the golden rule, Caudill said. "They taught me to always treat everyone as you would want to be treated."

Alfred and Shirley Wampler Caudill were married for 37 years, until Mr. Caudill passed away in 1992. They raised three children in Norton, Virginia, the geographic center of the Appalachian Mountains. Mrs. Caudill currently resides in Virginia and enjoys church activities, sewing, reading, cooking (especially frying pies and baking cakes), gardening and canning.

–Amanda Wood Wilhelm

BADM 654-O Promotion Strategies

The Soft Drinks

1. *Willow* – Ashley Warfield
   "Drink Willow. It's not far from the tree."
2. *ER LIVE* – Louis Brown
   "More than a drink; it's a lifestyle. ER LIVE. Enjoy, live and relax."
3. *Contradiction* – Chelsie Hilbourn
   "Caramel & Pretzel. The Perfect Contradiction"
4. *Bella Cosa* – Ronna Hazlerli
   "Wake. Drink. Live."
5. *Bebida Elegante* – Frederick Keenan
   "Bonjusire. Sophisticated. Luminous."
6. *Quant-Energyzer* – Ila Kozuka
   "Refresh and recharge with Quant Energizer. It gets you going."
7. *Lucioria* – Melani McNeilly
   "Transform the way you live."
8. *ZEAX* – John Palinkas
   "Warm, Fizzy, Gingerly Healthy and Great Tasting *Zeax*"

The "Donny" Awards

Outstanding Achievement in Product Development Strategy
Donny: (tie) *Contradiction & ZEAX*

Outstanding Achievement in Brand Creation Strategy
Donny: *Contradiction*

Outstanding Achievement in Logo Design Strategy
Donny: *Contradiction*
Honorable Mention: *Willow*

Outstanding Achievement in Celebrity Selection Strategy
Donny: *ZEAX*

Outstanding Achievement in Jingle Creation Strategy
Donny: (tie) *Bella Cosa & Bebida Elegante*

Outstanding Achievement in Radio Advertising Strategy
Donny: (tie) *Bella Cosa & Bebida*

Outstanding Achievement in TV Advertising Strategy
Donny: *Lucioria*
Honorable Mention: *Willow*

Outstanding Achievement in Co-operative Advertising Strategy
Donny: *Contradiction*
Honorable Mention: *Willow*

Outstanding Achievement in Comparative Advertising Strategy
Donny: (tie) *Contradiction & Bella Cosa*

Outstanding Achievement in Sales Promotion Strategy
Donny: *Bebida Elegante*

Outstanding Achievement in Print (Coupon) Advertising Strategy
Donny: *Contradiction*

Outstanding Achievement in Public Relations Strategy
Donny: (tie) *Willow & Quant-Energyzer*

Outstanding Achievement in Public Service Announcement

Promoting Student Communities in the Online Education Setting

Cynthia Brown & Sharon A. Cumbie, *University of West Georgia*

Abstract: A caring and transpersonal approach to teaching facilitates the creation of an atmosphere that will support students to develop a cohesive sense of community. Online learning communities have become immensely popular in recent years. Though learners enjoy the convenience of being able to take online courses, some also express the belief that online students lose the personal quality of the face-to-face class experience. Appropriate socialization is vital to the quality of an online program. To increase online student engagement, facilitate communication, provide support, and promote success for graduate students, two strategies are currently being used in our online learning environment. This presentation will describe both the Caring Groups and the Caring Connections website and explore how they could be a successful endeavor for any online program of study. Implementation of the two strategies within the online learning format will be discussed, along with some of the challenges and successes experienced along the path of implementation. Participants will then have the opportunity to engage with the Caring Connections website and to engage in discussion related to the potential use of this strategy for student socialization and engagement.

Literature Review

A caring and transpersonal approach to teaching facilitates the creation of an atmosphere that will support students to develop a cohesive sense of community (Cumbie & Wolverton, 2004). Watson (2008) asserts that we must view each person as a unique human being. She maintains that the person in a caring relationship perceives the other's feelings and sets apart one person from another and from the ordinary. The caring-transpersonal perspective for education implies a focus on the uniqueness of self and other and the uniqueness of the moment, wherein the coming together in relationship is mutual and reciprocal.

Online learning communities have become increasingly popular in recent years; however, delivering quality education in an online environment creates challenges and risks of losing students who do not feel they are a part of the process. Though learners enjoy the convenience of being able to take online courses, some report missing face-to-face contact with their peers. Individuals also express the belief that online students lose the personal quality of the face-to-face class experience (Cumbie & Wolverton, 2004).

A virtual community is defined as a group of individuals who have the same interest and communicate online to share their knowledge and learn from each other. Liu & Zhang, 2012, stress how vital the role of socialization is to the quality of online learning. Socialization is about people being able to associate and establish connections on one or more levels. Implementation of discussion forums in distance learning has a profound impact on learners' achievement and is highly recommended (Rose & Ray, 2011). There should be social, teaching, and cognitive presence in an online educational community (Tucker, 2012). On a web-based discussion forum, learners can socialize, make connections, provide support, learn from one another, and develop a cohesive virtual community. (Jones, 2011).

Goals and Objectives

At the end of this session participants will be able to:

- Describe the caring framework that is the underpinning of this education practice approach;
- Identify the elements of socialization within an online education environment;
- Describe two strategies being used to increase online student engagement, facilitate communication, provide support, and promote success for graduate students;
- Explore a website used to promote socialization and engagement among students in an online graduate program;
- Engage in discussion related to the potential application of these strategies for student socialization and engagement.

Discussion

The Graduate programs (MSN, EdD) at the University of West Georgia, Tanner Heath System School of Nursing, are 100% online. To increase online student engagement, facilitate communication, provide support, and promote success for graduate students, two strategies are currently being used in the online learning environment on Desire to Learn (D2L). This presentation will describe both the Caring Groups and the Caring Connections website and explore how they could be a successful endeavor for any online program of study. Implementation of the two strategies within the online learning format will be discussed, along with some of the challenges and successes experienced along the path of implementation. Participants will then have the opportunity to view the Caring Connections website and to engage in discussion related to potential application of these strategies for student socialization and engagement.

The first strategy is the use of Caring Groups. The online students within one course each semester are divided into groups of four to five students. The purpose of the small groups is for the students to provide support to one another, engage in self-care activities, and have a forum for discussion throughout the semester. The faculty member overseeing the groups provides support as needed and posts an open discussion question for the Caring Groups at designated points throughout the semester. The second approach is an external Caring Connections site created on D2L; one for the master's students and one for the EdD students. Each group has access to the Caring Connections site, which is available throughout the academic year for students to engage with one another. The Caring Connections site, monitored by graduate faculty members, provides inspirational quotes, photographs, music, self - care tips, activities, and an ongoing discussion board posted by faculty and students. We will conclude the session by presenting some examples of students' responses to participation in the Caring Groups and Caring Connections website.

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Techniques for Strengthening Strategic Decision- Making:
A Practice Workshop on Using Non-Traditional Problem-Based Learning

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Abstract: Problem-based learning is an instructional technique in which an instructor initiates and facilitates student inquiry during which students, usually in teams, investigate open-ended, context-specific problems so as to produce a team product that offers one or more solutions to the issue under study. When used successfully, the technique engages students and facilitates learning of the underlying concepts embedded in the issue under study. Even so, the technique has generated criticism including: lack of content coverage, difficulties with student teams, failure to address most critical questions, inefficient student time use, inefficient faculty time use and uneven levels of student achievement. The aim of this workshop is to illustrate and discuss useful techniques, matched to specific difficulties, to better manage problem-based learning. The three techniques described and illustrated constitute non-traditional methods of using problem-based learning and mitigate a set of traditional criticisms. The content is grounded in published research on the topic, the experience of the facilitators and the practice of the participants.

Literature Review

Problem-based Learning (PBL) as an instructional technique can be a remarkably effective and engaging tool for students and teachers (Krauss and Boss, 2013). However, use of the techniques comes with costs and difficulties that instructors must manage effectively for the techniques to achieve its potential. Among the potential costs and problems are lack of coverage and attention to most critical content, ineffective use of student and faculty time, problems with student teams, and potential uneven levels of student engagement and individual achievement (Maurer and Neuhold, 2012; Shah and Meisenberg, 2012).

Yet instructor experimentation with variations on the PBL theme has demonstrated a series of non-traditional approaches that overcome many of the suggested difficulties.

Goals and Objectives

Objectives for the session include the following:

- Identify the value of and difficulties with traditional problem-based learning approaches for instruction.
- Describe several innovative approaches to expand and better manage the problem-based approach.
- Illustrate, practice and discuss at least three approaches/techniques (and examples) useful strategies to mitigate at least some of the critical issues.
- Suggest ideas for continuing research into the topic.

Description of Idea or Topic

After identifying the difficulties that often hinder effectiveness of problem-based learning (PBL), we will identify a set of approaches and techniques that instructors can employ to deal with the difficulties. The techniques include several non-traditional ways to employ problem-based learning including at least iterative case studies, student-built cases, and community-based problems. In discussing and demonstrating these non-traditional techniques for managing problem-based learning, time will be split between examining options and discussing techniques for mitigating problems that might emerge with each technique. Each participant should leave with several new ideas about how to deploy and manage PBL more effectively.

Discussion/Practice Techniques

The plan for the session follows:

- Conceptualize the issues in terms of potential value, prevalence and issues/difficulties of using problem-base learning for instructional purposes, especially in business and engineering. (10 min presentation)
- Introduce sample(s) of ways presenters have used non-traditional techniques to address and mitigate various difficulties, and the outcomes of efforts. (10 min)
- Express guidelines for creating non-traditional problems and cases. (5 min).
- Divide participants into work groups around each of the major categories of techniques and develop an idea, complete with guidelines and questions that might be used in class. (10 min)
- Reconvene and harvest ideas from each group for techniques to deal with specific issues. (15 min)

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Designing a Flipped Classroom to Motivate Students

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Abstract: "Flipping" has become a popular term to use for a variety of instructional practices that are supposed to motivate students and enhance learning. But there is nothing magical about flipping. In fact, flipping, like any other instructional strategy, can be effective or ineffective depending on how it is implemented. The purpose of this session is to discuss how flipping can be implemented effectively to motivate students. When principles from motivation science are followed, flipping can be an effective instructional method to engage students in courses. In this session, we will share, model, and discuss strategies to flip courses in ways that are consistent with motivation science research.

Literature Review

In a "flipped classroom" the classroom and homework elements of a traditional classroom are reversed: students watch a lecture at "home" (often in the form of a video) and do their homework in the classroom (often by engaging with the instructor and other students in activities, discussions, debates, or projects). Flipping has become popular over the past few years because of its several potential advantages over traditional instruction: students can watch the video lecture at a time convenient for them, the videos can be paused or re-watched, flipping leaves more class time for engaging activities, teachers can work more closely with students during class time (especially with those who need the most help), and teachers save time by not having to repeat what they lectured about in class to students who missed class (Bergmann & Sams, 2012). Other often-cited benefits of a flipped classroom are that it engages students, improves students' attitudes, or improves students' learning (Yarbro, Arfstrom, McKnight, & McKnight, 2014). Although initial findings related to flipped classrooms are promising, there is little scientific research to guide instructors in how to design flipped classrooms to motivate students most effectively (Bishop & Verleger, 2013; Goodwin & Miller, 2013). Yet, the lack of research about the effects of flipping on students' motivation does not have to leave instructors clueless about how to effectively implement flipping. Years of research related to motivation and learning in the fields of education and psychology have provided many principles of effective teaching (Ormrod & Jones, 2015). The purpose of this session is to help instructors understand how to use these motivation principles to design effective flipped classrooms.

Much is known about how to motivate students, as is evidenced by the plethora of research articles in the field of motivation (see Schunk, Meece, & Pintrich, 2014). To help higher education instructors translate that research into practical strategies, Jones (2009, 2010) developed the MUSIC Model of Academic Motivation. 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). 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. In this session, I will explain how instructors can use the MUSIC model components in flipping their classroom in a manner that is consistent with motivation science research and theories. I will briefly explain the MUSIC model components in this section, see Jones (2009) and www.MotivatingStudents.info for more information.

The *empowerment* component of the MUSIC model 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).

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,
- the ability to evaluate whether flipping the classroom practices are consistent with motivation research and theories, and
- the ability to design instruction to flip their classroom in a manner that is consistent with motivation science research and theories.

Description of Practice

The session will be organized in the following order:

- *5 minutes* – I will begin the session with an explanation of current conceptions of flipped classrooms.
- *10 minutes* – I will explain the MUSIC Model of Academic Motivation to ensure that participants understand the basic tenets of the model.
- *20 minutes* – I will show real-world examples of flipped classrooms and ask participants to work in groups to analyze whether the examples would promote students' motivation based on motivation research and theories.
- *10 minutes* – Participants will discuss with one another how they might incorporate flipping into their courses or modify the flipping elements that they already incorporate.
- *5 minutes* – I will answer final questions from participants and/or have participants share ideas.

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A Model Faculty Development Program for Best Practices in Quantitative Reasoning Instruction

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Abstract: Our Numeracy Infusion Course for Higher Education (NICHE) teaches best practices for effective Quantitative Reasoning (QR) instruction to faculty in a wide range of disciplines. 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. In NICHE we employ the same strategies recognized as effective methods for teaching QR to our training of faculty as QR instructors (e.g., collaborative learning, constructivist and discovery methods, etc.) This practice session will engage attendees in some of the activities and exercises associated with NICHE to illustrate how we train our faculty in best practices.

Literature Review

Whether called numeracy, Quantitative Literacy (QL) or Quantitative Reasoning (QR), infusing quantitative material throughout the curriculum is an imperative of higher education. Many scholars have called for a multidisciplinary, active learning approach to QR instruction. (See, for example, Bressoud 2009; Briggs 2006; Diefenderfer, Doan and Salowey 2006; Fink and Nordmoe 2006; Gordon and Winn 2006; Haines and Jordan 2006; Hartzler and Leoni 2006; Hillyard et al. 2010; Johnson 2006; and Taylor 2006.) As Ganter (2006: 13) has pointed out, "QL must be everywhere in the curriculum, in all disciplines and all courses." Indeed, a multidisciplinary approach is central to many QR initiatives. "Like learning to write well or speaking a foreign language, numeracy is not something mastered in a single course…. Thus quantitative material needs to permeate the curriculum, not only in the sciences but also in the social sciences and, in appropriate cases, in the humanities…." (Bok 2006: 134). Similarly, Steen (2004) notes that QL programs should involve faculty from multiple disciplines.

The recognition that QR is the responsibility of *all* faculty provides the impetus for the Numeracy Infusion Course for Higher Education (NICHE). NICHE is an outgrowth of a QR faculty development program that has been in place at Lehman College of the City University of New York (CUNY) since the 2010–2011 academic year. In 2011, faculty from Lehman College and LaGuardia Community College (also of CUNY) received support from the National Science Foundation to develop NICHE, a QR faculty development program structured primarily as an online course to serve CUNY faculty from across the disciplines. Research on effective pedagogy informs NICHE and provides a foundation for each unit of the course. Enrollees not only review the relevant literature, but engage in activities and prepare instructional materials that are anchored in these approaches. A more comprehensive review of these strategies can be found on the NICHE website. (See "QR Best Practices" at www.teachqr.org.)

Goals and Objectives for Practice Session

(1) To promote greater awareness of the importance of cross-disciplinary instruction in quantitative reasoning.
(2) To increase faculty knowledge of resources available for teaching quantitative reasoning.
(3) To raise awareness of best practices for teaching quantitative reasoning.
(4) To engage faculty in a variety of pedagogical activities that model best practices for teaching QR (e.g., collaborative learning and discovery methods, etc.).
(5) To promote a discussion of how to effectively train faculty to respond to students' QR deficiencies.

Description of Practices to be Exemplified

After providing an overview of our Numeracy Infusion Course for Higher Education (NICHE), we will engage faculty in some of the activities that are component parts of our faculty development program. Although NICHE includes dozens of activities, we will present two examples including:

(1) We will engage session attendees in an exercise where they graph a course they have taught (or might teach) according to how quantitative it is and how much reasoning it involves. We will illustrate how we do this in the online environment, but given limited technology we will do it using a white board or chalkboard at the session.

(2) We will engage in a hands-on activity showing how we can use constructivist and discovery methods to teach about the classic Monty Hall Problem probability problem. We will distribute decks of cards for faculty to engage in this collaborative/group exercise, whereby the learn how to teach students about conditional probability by engaging in a very memorable active learning card exercise.

Discussion

Our Numeracy Infusion Course for Higher Education (NICHE) has had a notable impact on changing the way that faculty plan to approach teaching QR. The overwhelming majority of faculty who participated in NICHE plan to place a heavier emphasis on QR in their course instruction and have become familiar with a wide range of tools for teaching quantitative reasoning and improving statistical literacy. In particular, many faculty plan to place a more deliberate emphasis on teaching QR, to incorporate more data analysis and real-world examples into their teaching, and to employ best practices that include articulating learning goals, providing learning opportunities, and undertaking assessment to improve teaching.

Our practice session will engage faculty in a discussion about these activities by engaging them in some of them. Each activity outlined above will be followed by a discussion of session attendee's results, reflections, and a conversation about strategies for incorporating best practices into faculty development initiatives.

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Utilizing Imagination as an Expansion of Experience through the Ignatian Examin

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Abstract: This practice session will demonstrate the connection of experience, imagination, and learning. After a discussion of the literature regarding imagination, participants will be guided through an Ignatian Examin reflective exercise. The Ignatian Examin utilizes imagination through structured reflection as an expansion of experience. Participants will have time to offer feedback regarding the exercise, the role of imagination, and discuss potential pedagogical applications. Upon completion of the session, participants will be able to define and describe the Ignatian Examin reflective exercise, describe the connection of imagination and experience, and incorporate an Ignatian Examin reflective exercise into their teaching practice and personal development.

Literature Review

Imagination has been referred to as a "road from direct activity to representative knowledge" (Dewey, 1944, pp 246-247). This practice session will include a review of the Ignatian Examin (Loyola Press, n.d.), and allow participants to experience the Examin and offer feedback. The goal is that participants will be able to incorporate the Ignatian Examin into their teaching practice and personal development.

There are a variety of viewpoints regarding the process and content of imagination. Influenced by developmental psychologist L.S. Vygotsky, Pelaprat (2011) offered imagination as a process that resolves gaps that are a result of biological and cultural-historical constraints. The author presented the biological example of our constant saccadic eye movement, and our need to fill the resulting gaps between what the eye captures in order to complete our view of the world. This process can be likened to how we make meaning between the panels of a comic book story. Pelaprat (2011) offered a definition of imagination as, "the process of resolving and connecting the fragmented, poorly coordinated experiences of the world so as to bring about a stable image of the world" (p. 399). He concluded that "imagination is constitutive of human thought" (p. 413), and necessary to resolving gaps through image making.

Zittoun (2013) offered a developmental view of imagination in which disrupting events cause disjunctions from a person's experience. She reported, "imagination can be seen as an excursion; we will say that imagination, as process, create 'loops' out of the present" (p. 306). Authors have depicted these "loops" in a variety of ways. The ruptures that prompt loops are typically described as either imposed or chosen. Distinctive from Pelaprat (2011), Zittoun (2013) held that imagination is an expansion of experience more than a gap-filling process. This paper presupposes a psychological development view of imagination, in which imagination is an expansion of experience.

Ignatius of Loyola designed the Examin as a reflective exercise that utilizes imagination. He was born in Spain in 1491. After a cannonball shattered his leg ending his career as a knight, he read a book pertaining to the life of Christ, and began a spiritual journey. This path resulted in his development of *The Spiritual Exercises* (Ganss, 1991), and the formation of the Society of Jesus religious order, members of which are called Jesuits. The Jesuit focus is missionary work, social justice, and education. The Ignatian Examin is a reflective exercise included in *The Spiritual Exercises*.

In our fast paced world, adult learners move from action to action, often multi-tasking, neglecting time for pause and reflection. The Ignatian Examin is structured to offer guidance, and open for imagination to flourish. I contend that the Ignatian Examin offers imaginative space as an expansion of experience. With Ignatian pedagogy, reflection is a significant link between experience and future action. Experience for St. Ignatius was to "taste something internally" (Duminuco, n.d., p. 14). This process entails reason, heart, and will. With Ignatian pedagogy, feelings and imagination are welcomed into the realm of learning. The Ignatian Examin includes five reflective steps, which are to "(1) Become aware of God's presence (2) Review the day with gratitude (3) Pay attention to your emotions (4) Choose one feature of the day and pray from it (5) Look toward tomorrow" (Loyola Press, n.d.). The intention is that by practicing the Examin twice each day participants can recognize God's presence in their day and plan actions accordingly. Imagination is a key in the Examin.

Whether guided or practiced alone, the Ignatian Examin is an exercise in which participants have an opportunity to pause, reflect, and use their imagination. Although Ignatius' goal was for participants to detect the presence of God and better understand God's direction for their lives, the version I propose is generalized for any type of religious background, or for participants without religious interests. I modified the steps as follows: (1) Bring back to mind your day. Try to review with appreciation. What worked? What was good? (2) Go a little deeper. What feelings arose? Consider details, context, people, senses, good and bad. (3) What patterns or themes did you see? What was your focus, intentions, motivations? (4) Did the day have a message for you? What does this mean for your today and tomorrow? (5) What actions might follow?

There are a variety of viewpoints regarding the nature of imagination, and how it relates to experience and learning. The Ignatian Examin is an opportunity for pause and reflection, the utilization of imagination, thus expanding experience. I contend this expansion of experience through the utilizations of imagination is a significant aspect of our learning.

Objectives of the Practice Session

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

1. Define and describe the Ignatian Examin reflective exercise.
2. Describe the connection of imagination and experience.
3. Incorporate an Ignatian Examin reflective exercise into their teaching practice and personal development.

Description of the Practice to be Modeled

After a brief explanation of the Ignatian Examin, I will guide participants through an Ignatian Examin. I will read each step and allow a couple minutes for silent reflection upon each question: (1) Bring back to mind your day. Try to review with appreciation. What worked? What was good? (2) Go a little deeper. What feelings arose? Consider details, context, people, senses, good and bad. (3) What patterns or themes did you see? What was your focus, intentions, motivations? (4) Did the day have a message for you? What does this mean for your today and tomorrow? (5) What actions might follow? The Examin will be followed by 20 minutes of participant feedback and questions.

Discussion

Discussion questions include:

1. How did practicing the Ignatian Examin connect imagination and experience?
2. How might you include an Ignatian Examin in a classroom or virtual setting?
3. What are the implications for adult learning?

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Twitter in Collaborative Learning: A Conversation on Student Engagement with 140 Characters

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Abstract: The growth of Social Media has spread like wild fire over the past ten years. According to Twitter, Inc.'s Second Quarter Report (July 2014), Twitter alone currently has 271 million active users. With current students participating in multiple platforms of Social Media, it is important that we as educators find a way to integrate Social Media into our classrooms to keep students engaged. But how do we implement this? Will integrating Twitter in the classroom spark collaboration between students and educators? Or could Twitter in class become a distraction for students? This is a conversation on how we can use the microblogging tool Twitter to engage students in collaborative learning.

Literature Review

Microblogging is described as a form of communication in which users can describe their current status in short posts distributed by instant messages, mobile phones, email or the Web (Java, Song, Finin & Tseng (2007). Twitter is the most used Social Media Microblogging tool. Microblogging allows users to publish and share brief updates for real-time and asynchronous communication with no more than 140 characters. (Gao, Luo & Zhang, 2012). Some academics are using Twitter as a method for sharing information about their research, teaching, and service with other academics and students more broadly. (Rinaldo, Tapp & Laverie 2011). Educators often find it difficult to keep students engaged in traditional forms of educational practices. (Dhir, Buragga & Boreqqah, 2013). Because current students are Digital Natives, it is imperative that we apply new technologies in the classroom to engage them. Twitter in education, allows instructors respond to students more quickly due to mobile notifications and mention alerts. The 140-character limit is viewed as an advantage by some researchers because it requires participants to write succinctly by focusing on the key points. (Luo & Gao, 2012). Past studies have shown that educators can design Twitter assignments to improve learning outcomes, and more broadly to improve different measures of student engagement. (Ullyot, 2014). The challenge for educationalists is to facilitate the connection between learners and relevant resources and to help leaners make sense of those resources. (Evans, 2014). This conversation will focus on best practices and integrating Twitter into the classroom.

Goals and Objectives

The goal of this session is to spark a conversation discussing how Twitter can encourage and enhance collaboration and discussion in higher education classrooms. During the session, I will focus on:

- Defining what Twitter is and why it is a powerful social media outlet
- Discussing the integration of Twitter in the classroom
- Identifying issues and concerns surrounding Twitter in education
- Discussing how Twitter increases learner participation and collaboration

Description of Topic to be Discussed

Participants who attend this session will develop a greater understanding of Twitter and its integration into higher education classrooms. The facilitator will monitor and engage in conversation with participants regarding personal thoughts, experience and challenges with using Twitter for group collaboration. Active participation is encouraged.

Facilitation Techniques

To start the session, there will be a brief overview of Twitter and then we will move into the conversation. The conversation will be guided by the facilitator and questions will be introduced to continue the conversation:

- What are the benefits for both instructors and learners?
- What are the major concerns and/or barriers with using social media? How do we address these concerns?

How can instructors introduce Twitter in the classroom and maintain student engagement?

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Conversation: Best Classroom Practices for Serving Students Challenged By PTSD

Amelia D. Compton, *Wake Technical Community College*

Abstract: Many college students are challenged by post-traumatic stress disorder (PTSD), and the symptoms of PTSD often negatively impact success in the classroom. The effective use of classroom policies and teaching strategies that are supportive of these students' use of adaptive coping skills will be discussed. Participants will be encouraged to devise a plan for putting at least one of these strategies to use in their current classes.

Literature Review

Despite the significant prevalence of post-traumatic stress disorder (PTSD) (National Institutes of Health, 2014), relatively few reports of empirical studies on best classroom practices for serving students challenged by PTSD have been published. The existing literature suggests that a faculty member's own anxiety levels, and beliefs and feelings about sources of trauma may affect his or her interaction with students in ways that impact student success (Barnard-Brak, Bagby, Jones, & Sulak, 2011; Lafferty, Alford, Davis, & O'Connor, 2008). In persons challenged by PTSD after physical injuries, Matthews, Harris, & Cumming (2009) found that reducing negative self-appraisals and increasing symptom coping skills were correlated with increased work potential. Ellison, et al., (2012) found that students who were veterans challenged by PTSD desired support services specifically linked to success in the college environment.

Goals and Objectives

As a result of attending this conversation session, the participant

--will be able to describe some of the symptoms experienced by persons challenged by PTSD

--will be able to reflect upon his or her own beliefs and attitudes toward sources of trauma and toward persons who have experienced traumatic events

--will be able to describe several classroom policies and practices that support the use of coping strategies by students challenged by PTSD

--will have created a plan to put at least one of these practices in place in her or his own classroom

Description of Topic to be Discussed

Our discussion will be shaped by the following questions:

1. Have you had a student who has self-disclosed being challenged by PTSD?
2. Have you had a student whose behavior suggested to you that he or she might be challenged by PTSD?
3. What various issues might PTSD pose for a student in terms of attendance, maintain attention and focus during class, coping with loud noises or fire drills, classroom seating, interactions with other students, etc.?
4. What classroom policies and/or teaching strategies might make it easier for students challenged by PTSD to use their coping skills effectively?
5. What plan can you devise to put one of these teaching strategies into practice next week?

Facilitation Techniques

Dr. Compton will first provide an overview of the causes and symptoms of PTSD with a brief PowerPoint presentation (approximately 10 minutes). Questions 1, 2, & 3 above will be posed to the entire group (20-30 minutes). Participants will be asked to break into groups of 3-4 for discussion of questions 4 & 5 above; Dr. Compton will circulate to foster discussions as needed (remaining time up to the final 5 minutes). Dr. Compton will re-convene all the participants for a wrap-up and thanks.

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Thursday

February 5, 2015

Session 7

10:10-11:00 AM

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

Collaborative Analysis and Revision of Learning Objectives

Matt Spindler, *Virginia Tech*

Abstract: The purpose of this study was to report on a collaborative method for employing Bloom's revised taxonomy as a means to describe, assess, and revise the learning objectives postsecondary instructors operationalized in their instruction. The study uses an example case to describe a generalizable process for assessing learning objectives instructors use within classroom instruction. The example case illustrates that 74% of the original specified learning objectives utilized in classroom instruction by 26 instructors were characterized as addressing primarily lower order cognitive processes. Following the collaborative revision process only 44% of learning objectives described and assessed were designed to elicit lower order cognitive processes and only 45% of those objectives were characterized as addressing lower order cognitive processes focused within the factual category of knowledge. Instructional development professionals and providers of professional development should consider implementing learning activities for instructors that emphasize the importance of using frameworks, such as, Bloom's revised taxonomy to construct and organize student learning opportunities. An emphasis should be placed on creating and utilizing learning opportunities that pass beyond memorization and move students towards learning how to address novel challenges as self-aware innovators.

Literature Review

The process of engaging students in meaningful high utility learning opportunities should begin with a clear specification of educational goals and objectives (Blumberg, 2009). Explicitly aligning instruction and learning activities with well written goals and objectives will help to ensure that learning activities and assessments are focused and germane to the academic and career challenges students will face in the future (Blumberg, 2009). Moreover, if instructional goals and objectives are structured and organized appropriately, learning activities are contextualized and will support the acquisition of a range of knowledge types at variety of cognitive processing levels (Blumberg, 2009).

Bloom's revised taxonomy (Anderson, Krathwohl, Airasian, Cruiskshank, Mayer, Pintrich, Raths, & Wittrock, 2001) is an effective tool for writing, organizing, and analyzing learning goals and objectives (Blumberg, 2009). Bloom's revised taxonomy (Anderson, Krathwohl, et al. 2001) allows researchers and educators to conceptually chunk large amounts of complex information in order to bring more precision to applied practice. One of the critical strengths of the revised taxonomy is that it can be employed as a syntactic logic tool at the macro level for curriculum planning and program assessment and at the micro level for lesson planning and student assessment (Cannon & Feinstein, 2005).

In the revised taxonomy, learning objectives can be described and represented using the two-dimensional taxonomic design illustrated in Table 1 (Anderson, Krathwohl, et al. 2001). Table 1 illustrates that intersection of the four categories of the knowledge dimension and six categories of the cognitive process dimension form

Table 1
A two-dimensional illustration of the relationship between the knowledge and cognitive processing dimensions of Bloom's revised taxonomy

	Cognitive Process Dimension					
Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual	A1	A2	A3	A4	A5	A6
Conceptual	B1	B2	B3	B4	B5	B6
Procedural	C1	C2	C3	C4	C5	C6
Metacognitive	D1	D2	D3	D4	D5	D6

Note. Adapted from Krathwohl, 2002. p. 216.

twenty-four discrete cells which afford educators the opportunity to more precisely classify learning objectives based upon the specific facets of the intersecting dimensions. (Krathwohl, 2002). Table 1 illustrates that the categories across the horizontal aspect address level of cognitive processing and the categories on the vertical aspect address type of cognitive processing. As the taxonomic niches traverse the table diagonally toward the lower right hand corner learning objectives tend to be more abstract, complex, multifaceted, and require greater learner independence.

Methodology

The target population for the example case consisted of 26 postsecondary instructors working within a university system in a North Eastern state that took part in a two day institute. The participants of this descriptive study worked in range of 2-year and 4-year institutions and specialized in a variety of science based fields of study. Within the function of the institute the participants were organized into cooperative learning groups of three to four people and assigned several goal oriented tasks. The tasks included employing Bloom's revised taxonomy to collaboratively analyze, revise, and reanalyze the learning objectives each individual instructor utilized within a course of study in order to: a) promote higher levels of student cognition; and b) effectively align learning objectives with pertinent departmental and campus priorities and assessment strategies.

Results

Very few of the original learning objectives reviewed were designed to support abstract, complex, open, or multifaceted learning opportunities that require greater learner independence and higher levels of cognitive processing. A substantial majority (74%) of the original learning objectives described and assessed were designed to elicit lower order cognitive processes and 71% of those objectives were characterized as addressing lower order cognitive processes focused only on the factual category of knowledge. the revision process resulted in a more even distribution of level learning objectives across a range of cognitive process and knowledge dimensions. Following the collaborative revision process only 44% of the learning objectives described and assessed were designed to elicit lower order cognitive processes and only 45% of those objectives were characterized as addressing lower order cognitive processes focused within the factual category of knowledge. In addition, the cooperative revision process lead to an increase in the number of learning objectives that emphasized conceptual and procedural dimensions of knowledge at higher cognitive processing levels.

Discussion

The central conclusion of this research was that the generalizable collaborative process that employed Bloom's revised taxonomy was an effective means of assisting the instructors to create a greater diversity of learning objectives that addressed a wider range of cognitive process and knowledge dimensions. Further, the cooperative process effectively helped instructors to create higher order learning objectives that went well beyond the simple memorization of facts. Instructor development professionals and providers of professional development may also want to consider implementing instruction for instructors that emphasizes the importance of using frameworks, such as, Bloom's revised taxonomy to construct and organize student learning opportunities. An emphasis should be placed on creating and utilizing learning opportunities that pass beyond rote memorization and move students towards learning how to address novel challenges and developing as self-aware innovators.

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Learner-Centered Professional Development for Teachers

Nancy Flanagan Knapp, University of Georgia

Abstract: Professional development is vital to helping teachers move from traditional to more learner-centered teaching, yet much professional development fails to respect teachers as professionals and learners themselves. As I have developed and used it for five years, learner-centered professional development begins with teachers' perceived needs and local issues. Through accessing and critiquing current scholarship in a collaborative, interactive workshop, teachers develop their own action plans and are then supported throughout the school year as they enact, revise, evaluate and share their plans, through a facilitated community of practice. Data, including teacher responses and individual case summaries, are presented showing that not only do teachers engage positively and enthusiastically in this sort of in-service learning, but they also make substantial innovations in practice, leading to documented gains in student learning.

Literature Review

"We know that from the moment students enter a school, the most important factor in their success...is [their] teacher" (President Obama, 2010). Thus, teacher education as a form of higher education can influence student learning at all ages, and even future participation in higher education. Teachers tend to teach as they have been taught (Lortie, 1975), and many teachers have grown up in traditional, lecture and memorization-based classrooms (Grossman, 1991). Yet we have known for at least 20 years that students learn best in more learner-centered classrooms, where teachers organize and support and facilitate learning, but students are given a voice in how and what they learn and how that learning is assessed; their backgrounds, interests and prior knowledge are respected and used as a foundation for learning; their individual differences and diversity are not just accommodated but valued; and they are treated as agents of their own learning and partners in the educational process (APA, 1997).

Many colleges of education have brought their pre-service teacher education programs more in line with this learner-centered model, yet professional development, much of which is also offered by higher-education faculty, too often conforms to a traditional model long recognized as inadequate (Darling-Hammond & Richardson, 2009). Many professional development activities fail to engage teachers in meaningful learning (Gorozidis & Papaioannou, 2014): typically, teachers attend a required, brief workshop on a topic chosen by district-level staff, where they watch a Powerpoint presentation advocating one-size fits all "best practices" (Smith & Kritsonis, 2006), and then return to their individual classrooms where they are supposed to "implement" these practices with no ongoing support for doing the professional work necessary to adapt them to their unique groups of students and classroom contexts (Borko, 2004; Richardson, 2003). In short, practicing teachers as learners are often not treated as we would have them treat the learners in their classrooms, nor are their needs, knowledge, and lived experiences often recognized as the necessary starting point for successful professional development.

Model and Methods

This paper describes my work over five years with over 70 teachers in three districts using a more learner-centered model of professional development, specifically in literacy, and some of the things these teachers and their students have done as a result of this work. Five essential components of this model are:

1) *Teachers interact with and critique up-to-date knowledge about literacy acquisition, development, motivation and teaching that is both theoretically sound and proven in practice.*
2) *Based on their learning, teachers develop an action plan to address an issue or problem of their choice in their own classrooms or schools.*
3) *Teachers implement, adjust, and evaluate their action plans throughout the school year.*
4) *Teachers collaborate and support each other through an ongoing facilitated Community of Practice.*
5) *Teachers are supported throughout their project planning, implementation and evaluation with funds for materials, multiple site visits, and ongoing consultation and assistance.*

Data for this report are drawn primarily from teachers' evaluations of the workshop and follow-up activities and teachers' final Action Plan reports, many including aggregated student achievement data. Additional data sources

include workshop materials, emails and postings on the community website, field notes from visits, and pre- and post-assessments of participants' familiarity with literacy theories and strategies. Data analysis has been primarily qualitative, through summarization of individual teacher cases and thematic analysis across teacher responses, although counts, percentages, and other forms of quantitative data (especially as related to student achievement) are reported as appropriate.

Results

Analysis of Action Plan final reports indicate that 58 out of 75 participants made substantial, positive changes in their teaching practices. Each year 93-100% of participants indicated on anonymous evaluations that they would recommend the workshop to colleagues, and informal feedback from associated school and district administrators has been very positive. The final paper and presentation will include specific comments, organized by themes, from participants regarding both workshop and follow-up processes, an outline of the summer workshop and materials used, details of the Action Plan design process, and analysis of revisions, key elements, and cautions in doing this kind of learner-centered professional development. Some of the many teacher projects that will be shared include:

- *A second-grade teacher in a Title 1 school* decided to incorporate student choice into sight word study. Although at pretest, 73% of her students had not even mastered the kindergarten and first grade sight words, by years' end, 14 of her 18 students had mastered all second-grade sight words, and 13 had also mastered all the third-grade sight words.
- *A fifth-grade teacher* implemented intensive, frequent, personalized writing projects based on a Writer's Workshop model in his classroom. The percentage of students scoring a 3, 4, or 5 (passing) on state Benchmark tests increased 26% between August and December, with almost 42% scoring a 5, which far exceeded even the April scores of his previous year's class.
- *A middle-school special education teacher,* whose students scored 4+ years below grade level, added a fluency component to her mandated decoding and word identification program. After the first unit, her sixth-grade students had all improved at least 20 wpm, her seventh-grade students all improved at least 50 wpm, and the eighth-graders had all gained at least 40 wpm. In addition, many began to show increased confidence in reading.
- *An English teacher at an alternative high school with no library* instituted free voluntary reading during his 30-minute daily homeroom period. Pass rates on the state American Literature EOCT went up 12% that year.

Discussion

Like other learners, teachers learn best when their prior knowledge and experience is respected and built upon, when they are encouraged to think for themselves and also collaborate with others, and when they are enabled to use their learning for authentic purposes that align with their own interests, while receiving just-in-time support and being encouraged to evaluate, revise and share what they have learned. As I have developed and used it for five years, such learner-centered professional development offers a feasible, effective model to support significant, positive changes in teaching practice and gains in student achievement.

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Urban Legend or Practical Pedagogy? Are You A Teaching Ninja?

Alyssa Archer, Candice Benjes-Small, Susan Van Patten, *Radford University*

Abstract: Pedagogical researchers have made huge advancements over the past ten years. However, some disproven theories and practices continue to be propagated in educational literature and popular culture. This game will highlight evidence based pedagogical theories that are easily adapted to the classroom, and dispel myths about teaching that seem to linger in common beliefs. With the rise of cognitive development research, many of the false assumptions can be replaced with solid strategies for how to improve students' learning and retention.

Literature Review

This session will explore a range of topics including in-class techniques, students' study practices, and many generally held beliefs about students' learning abilities. A brief summary of foundational literature follows.

The lecture is still an integral part of many classrooms. However, how long can our students pay attention during a lecture (Szpunar, Moulton, & Schacter, 2013; Smallwood, Fishman, & Schooler, 2007)? Should information be presented all at once or spread over a period of time (Carpenter, Cepeda, Rohrer, Kange, & Pashler, 2012)? Is it more helpful to students to delay feedback on assessments or provide immediate feedback (Shute, 2008; Dihoff, Brosvic, & Epstein, 2012)? Do practice tests coddle students or improve their results (Rawson & Dunlosky, 2012)?

In terms of how to help students best study, should we encourage students to highlight and summarize from their textbooks (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013)? What kinds of notetaking practices are backed up by evidence (Raver & Maydosz, 2010; Clark, Nguyen, & Sweller, 2011; Mueller & Oppenheimer, 2014)?

There are many theories regarding how students learn. Will persuading students to devote 10,000 hours to their field of study ensure they succeed (Ericsson, Prietula, & Cokely, 2007; Hambrick et al., 2014; Epstein, 2013; Goleman, 2013)? Can the Millennial generation multitask (Wood et al., 2012; Sana, Weston, & Cepeda, 2013)? Is the learning pyramid theory valid (Kirschner & van Merriënboer, 2013)? How much should we appeal to visual, aural, and kinesthetic learners (Lilienfeld, Lynn, Ruscio, & Beyerstein, 2009)?

Goals and Objectives

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

1. Discriminate between learning theories that are solidly rooted in research and those which need debunking;
2. Explain why some teaching strategies are more effective than others; and
3. Incorporate current pedagogical research into their teaching practices.

Description of Practice to Be Exemplified

This session will be structured as an interactive group quiz. The audience will be divided into teams and shown a series of common teaching practices or learning theories. After each one, the team will have an opportunity to briefly deliberate and vote on whether it is an urban legend or sound pedagogy. After each vote we will discuss current research related to the topic and how it can influence our teaching strategies. The team with the most correct answers will be declared winners and given "Teaching Ninja" pins.

Discussion

Many professors teach the way they were taught or use techniques that they liked as students. As one professor memorably put it to a co-author: "How did I learn to teach? By observing teachers for 20 years." But a growing body of evidence suggests that our personal preferences and "gut instincts" about how people learn are often wrong. Professors should examine their teaching practices and question their effectiveness, rather than perpetuating pedagogical choices which in fact do not promote learning. This session will dispel learning myths, reinforce sound methods, and encourage participants to foster learning strategies supported by cognitive psychology and education research. The interactive quiz format will serve as an excellent framing device, as recent studies have shown that

immediate testing and feedback is among the most effective approaches to learning (Brown, Roediger, & McDaniel, 2014).

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Using Examples, Illustrations and Visuals to Explain Concepts

Shawn M. Bielicki, Donna Davis Donald, Ben Kalu, N. Troy Matthews, Nancy Richardson, & Robert Van Engen
Liberty University

Abstract: In response to recent *National Survey of Student Engagement (NSSE)* results, this faculty panel/workshop will share practical strategies that can be implemented in any classroom to successfully engage students and explain difficult theoretical concepts through the effective use of examples, illustrations, and visuals.

Literature Review

Visual teaching tools, relevant examples, and organizational illustrations can help students break down and understand difficult concepts. Studies have shown the effective use of graphics and images, whether done with props, worksheets, or multimedia, to have a positive correlation on comprehension and retention of complex material (e.g., Marzano, 2003; Vekiri, 2002; Winn 1991). Additional research in the area of visual-argument theory supports the notion that examples, graphics, and visuals require fewer cognitive processes (e.g., Robsinon & Molina, 2002; Robinson & Skinner, 1996) and therefore are more easily processed and understood.

Quality examples, illustrations, and visuals do a better job explaining contextual relationships, recognize patterns, organize information, and incorporate new learning (Robinson & Schraw, 1994; Robinson & Skinner, 1996). This is especially helpful to today's visual, digital-native learners that have grown up in a sensory, graphical, and visual media-friendly age (Fischman, 2001). The use of these methods also creates bridges and better cross-cultural understandings for the many foreign nationals found in college classrooms (Nilson, 2010).

Goals and Objectives for the Practice Session

Upon completion, participants will be able to:

1. Recognize the importance of using examples, illustrations, and visuals in the classroom.
2. Implement a strategy for teaching with examples, illustrations, and visuals.
3. Use effective teaching methods to help explain difficult concepts to students.
4. Use visual strategies to increase student engagement and learning.

Description of the Practice to Be Modeled

This interactive practice session will feature one moderator with five presenters each sharing, modeling, demonstrating, and discussing various teaching strategies that can lead to increased student engagement and understanding of difficult theoretical concepts. Individual presenters will take turns on stage, engaging the audience and showcasing effective teaching methods that utilize relevant examples, graphical models, illustrations, and other visuals. Presenters will showcase content-specific materials and experiences, which can easily be amended to different content areas. Strategies modeled can be used in day-to-day classroom teaching to help strategically better explain and decode problematic theories, bringing them down to the students' level. This interactive presentation uses audience participation. The session will close with an open forum for questions and sharing.

Discussion

Best practices literature often cites the use of relevant examples, graphics, illustrations, and visuals as effective teaching methods in college classrooms (e.g., Marzano, 2003; Nilson, 2010). Despite this common conception, the use of these methods is sometimes considered less academic or scholarly and is sometimes evasive or missing in higher education classes. This runs in conflict to the modern college student who grew up in the visual, digital age. Reaching students on their turf or in their language is sometimes all it takes to explain difficult theoretical concepts. These replicable demonstrations showcase how using these methods can stay scholarly, but increase student comprehension of material.

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Learning Games: How Incorporating Games Can Equip Faculty as They Seek to Answer the "Now What?" in Their Flipped Classrooms

Thomas Chase Hagood & Naomi Norman, *The University of Georgia*

Abstract: This unique practice session marries a consideration of the ongoing revolution in American higher education pedagogies—namely, that of "gamification" and "flipping." It also asks participants to reflect on how institutions, Centers for Teaching and Learning, and other similar instructional units can equip and develop faculty to utilize games when flipping their classes and, thus, address the intimidating and gnawing question: "Now that I've flipped my class, what are my students (and I) to do *during* class?" In the first half of the session, participants will engage in an interactive discussion on the Reacting to the Past pedagogy. The second half of the session will examine the presenters' creation and implementation of faculty development programming on course redesign that incorporate the pedagogy; herein, presenters will showcase their experiences with constructing faculty development partnerships and discuss the resultant faculty workshops, four-day summer institute, fellows program, upcoming national conference, etc. Participants will be asked to share their experiences, impressions and questions.

Literature Review

The fusion of innovative instruction and faculty development has inspired a new, exciting, and rapidly expanding area of research and practice-based studies. Certainly, the learner-centricity of gaming in higher education has received attention of teachers, scholars and eager students and, for advocates, it holds the potential to bring together the disparate worlds of critical (simulated) learning environments, intrinsic motivation and meaningful, deep learning, no matter the academic discipline or topic (Bain, 2011; Doyle, 2011; Bonwell,1991). That is, if the game is interesting, and perhaps, as José Bowen phrased it, "pleasantly frustrating" (Bowen, 2012; Gee, 2004).

Reacting to the Past (RTTP) consists of elaborate games, set in the past, in which students are assigned roles informed by classic texts in the history of ideas. Class sessions are run entirely by students; instructors advise and guide students and grade their oral and written work. It seeks to draw students into the past, promote engagement with big ideas, and improve intellectual and academic skills. (reacting.barnard.edu; Carnes, 2014). The results of this type of student-centered pedagogy is significant when considering course or programs designed specifically for first-year students as RTTP's pedagogy can introduce them to both their peers, disciplinary research, and the expectations of the college classroom (Lazrus and McKay, 2013). Additionally, RTTP has the ability to envelop any and all students within a world of play that inspires, motivates and challenges students to own their learning, to learn with their peers, to set learning goals and, importantly, express their learning in impassioned and appropriate ways (Lightcap, 2009).

Implementing course redesigns with game-based pedagogies like RTTP can be a complicated process for even the most talented of teachers no matter the redesign's active-learning benefits (Dyer, 2013; Bonwell and Eison, 1991). Additionally, the design of the flipped classroom and its explicit questions about in-class activities can present difficult challenges for faculty, especially when faced with redesigning previous, traditional courses by integrating flipped pedagogies (Bowen, 2012; Berrett, 2012; Fink, 2013).

Goals and Objectives for the Practice Session

Participants in this session will reflect on how institutions, Centers for Teaching and Learning, and other similar instructional units can equip and develop faculty to utilize games when flipping their classes and, thus, address the intimidating and gnawing question: "Now that I've flipped my class, what are my students (and I) to do *during* class?" In the first half of the session, participants will engage in an interactive discussion on the Reacting to the Past pedagogy. The second half of the session will examine the presenters' creation and implementation of faculty development programming on course redesign that incorporate the pedagogy; herein, presenters will showcase their experiences with constructing faculty development partnerships and discuss the resultant faculty workshops, four-day summer institute, fellows program, upcoming national conference, etc. This segment will shift from an overview of the pedagogy to demonstrating an approach to constructing faculty development partnerships that have had transformative impacts on pedagogical practices across a Research I institution. Participants will be asked to share their experiences, impressions and questions.

Description of Practice

The presenters will guide session participants through the evolution of RTTP's history and its current existence—as a national consortium and within their institution. The first portion of the session will ask participants to suspend their thinking on the traditional lecture-as-teaching and explore the world of the flipped classroom and gaming in higher education via Reacting to the Past. What does the practice look like? What do students do? What do instructors do? What resources exist if I were to flip my class with RTTP? The second segment of the session will examine what partnerships have emerged at the presenters' institution to craft meaningful and lasting changes with RTTP, flipped adoption. Hagood and Norman will share materials, images, and videos from their experiences so that individuals can observe their faculty development practices. Finally, given the high-participation and de-centering aspects inherent in RTTP, participants will be asked to discuss how this model of collaboration could be adopted in other kinds situations and institutions.

Discussion

This practice session emerged from an ongoing and productive partnership between a free-standing academic program, UGA Reacting to the Past, and the Center for Teaching and Learning (CTL), a departmental unit within UGA's Office of the Vice President for Instruction. Since Fall 2013, Hagood and Norman have planned and executed faculty development and pedagogically-transformative experiences around Reacting to the Past and they have been quite successful. As one faculty participant from the CTL/RTTP 2014 Maymester Institute stated, "The institute was extremely well-organized and both Chase and Naomi were engaging and knowledgeable…exhibiting all the characteristics of good teachers! I think it is wonderful in general that CTL sponsors institutes like this because it's a wonderful way for faculty to discuss and ultimately improve their teaching!" As long-time adopters of the pedagogy, Hagood and Norman designed these programs to attract faculty who seek to involve students (and themselves) with active-learning strategies, yet, were unfamiliar with Reacting to the Past. Hagood's training as an historian and his present position within the CTL and Norman's background in Classics and position as the Director of the UGA Reacting program have made for an effective pairing; one whose successes (and shortcomings) they would like to share with participants at the 2015 Conference on Higher Education Pedagogy.

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Contemplation in Higher Education: A Case for Mindfulness in the Classroom

Laura Boyd Farmer and Jenna Haynes, *Virginia Tech*

Abstract: A growing interest in the many cognitive, social, and emotional benefits of mindfulness meditation has led to its increased use in educational settings, including college and university settings. The presenters of this practice session will discuss research support for incorporating mindfulness as a complement to one's regular teaching practices, explain basic mindfulness concepts, and facilitate an experiential exercise in mindfulness that may be utilized in the classroom.

Literature Review

Mindfulness meditation, an ancient contemplative practice, has risen in popularity in recent years and is being used in a variety of settings. Once considered to be a spiritual practice, mindfulness has also been applied in medical settings, therapeutic settings, and now educational settings. There are many benefits of mindfulness practice, including improved focus, attention, emotion regulation, empathy, compassion, self-awareness (iBme, 2012). Mindfulness has also been shown to reduce blood pressure (Chen et al., 2013), anxiety, and stress (iBme, 2012). Specifically related to academia, mindfulness practice improves cognitive flexibility (Bush, 2011; Helber, Zook & Immergut, 2012), student engagement (Schreiner, 2010), encourages self-exploration (Grace, 2011), and enhances curiosity and observational skills (Haynes, Irvine, & Bridges, 2013), which promotes optimal learning.

Mindfulness is moment-by-moment awareness of the present in a non-judgmental manner (Kabat-Zinn, 1990). When one is mindful, one is fully aware of thoughts, feelings, physical sensations, and sensory experiences. In addition, attention is directed to the present experience in a non-judgmental way, creating an openness to the flow of one's experiences (Moore & Malinowski, 2009). Langer & Modoveanu (2000) describe mindfulness as a process of drawing novel distinctions, which include: "greater sensitivity to one's environment, more openness to new information, the creation of new categories for structuring perception, and enhanced awareness of multiple perspectives" (p. 2). By cultivating mindful dispositions, students experience increased tolerance for ambiguity, thus allowing for more contemplative, creative solutions to be applied to the complex issues of society and culture (Ritchart & Perkins, 2000).

Goals and Objectives

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

- Understand literature supporting mindfulness in higher education settings
- Identify cognitive, social, and emotional benefits of mindfulness practice
- Engage in a mindfulness exercise that may be used in everyday practice, as well as in the classroom
- Develop modes of formal and informal mindfulness practices for self and students

Description of Practice

After teaching basic concepts and forms of mindfulness practice, the presenters will facilitate a 10-minute experiential exercise in mindfulness meditation. The 10-minute exercise is commonly referred to as "mindful breathing" (Brantley, 2007), and is one of the most basic forms of mindfulness meditation. Participants are invited to engage in the exercise followed by discussion of their experience. Presenters hope to engage participants in a dialogue about different ways that mindfulness may be incorporated into various classes. Participants will also receive information and resources to build upon their knowledge and use of mindfulness.

Discussion

As a counselor educator and scholar, I teach beginning counseling students the basic concepts of mindfulness so that they may have the tools to begin a formal or informal practice coinciding with their training. Counselors are especially vulnerable to conditions such as "compassion fatigue" (Figley, 2002) and "burn-out" (Maslach, 2003) due to the overuse of emotional resources when responding to clients. Counselors and other human service professionals

are uniquely charged to "sit with" human suffering on a daily basis. While mindfulness certainly has benefits for those studying counseling, students across other disciplines in higher education also benefit. The presenters will make a case for including mindfulness education and practice in any educational curriculum to improve the holistic learning experience of college students.

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Portfolio for Student-Teachers of Languages, a Reflection Tool for Initial Language-teacher Education

Vilma Tafani, Laureta Vavla, Merita Hoxha, *University of Elbasan, Albania*

Abstract: The use of the portfolios in initial teacher preparation is recently being used at "A. Xbuvani" University, Elbasan, Albania. It got the impetus from the European Portfolio of Student-Teachers of Languages (EPOSTL), promoted by the European Center of Modern Languages, (ECML), in Graz, Austria. This practice session will focus mostly on two issues: How mentors perceive *the Portfolio of Student Teachers of Languages (POSTL)* and how do student-teachers view it. The presenters will try to answer these questions: How beneficial is the POSTL (illustrated with examples, ideas from mentors and student-teacher)? What is the role of the teachers and mentors regarding the POSTL? How is it helping the students to change the way they evaluate and self-evaluate? How does it help student-teachers to integrate theory and practice? Etc. Through literature study, interviews and questionnaires, which are conducted with probationary teachers, student-teachers and mentors, the presenters aim to bring to the session their insights; share ideas and discuss the usefulness and benefits of using portfolios, with the aim of leading to a discussion with the participants.

Literature Review

The presenters will synthesize scholarly literature on using portfolio for student-teachers, including examples of their experience. Studying the literature, implementing, assessing and improving through reviewing have been the steps followed. The literature examined for this issue has mostly been the *European Portfolio for Student Teachers of Languages*, Council of Europe, 2007 and the Newby D. et al. (2011), *Using the European Portfolio for Student Teachers of Languages*; Council of Europe, Austria, ECML Publications. The presenters have also participated in three international conferences organized on these issues by ECML, in Graz, Austria, in 2008, 2011 and 2014. The use of EPOSTL has crossed the borders of Europe. It has now been used in Japan, in Egypt, etc. Besides other functions, the presenters focus more on the POSTL as a tool of reflection and as a helper for student-teachers to enhance their self-assessing abilities, which are closely connected to reflection function. "EPOSTL is a tool to promote professional growth through reflection and dialogue. As such it is seen as a means of enhancing autonomous learning" (EPOSTL 2008). According to Newby, (2011) 'Self-assessment function, requires students to make a qualitative judgment about their developing competences and to chart their growth and progress …'.

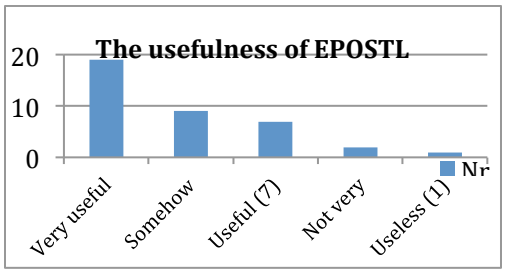
Goals and Objectives

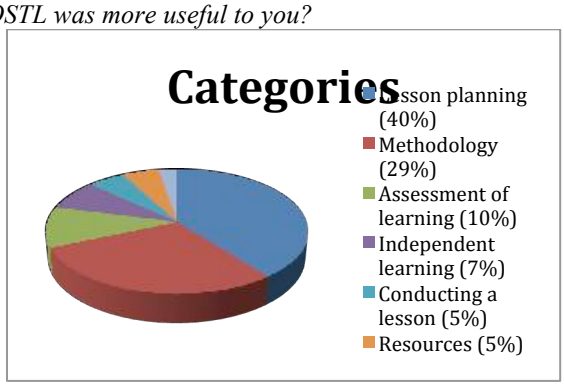
The aim of this practice session is to describe and to explain the steps followed in using the portfolio for student-teachers at Elbasan University, develop strategies for using it, apply practices through the examples given. Through mentors' and student-teachers' feedback the participants will be able to see the effective ways used and to try them in their own context. The presentation is prepared through studying the relevant literature, conducting interviews and questionnaires with university teachers, in-service teachers, mentors and student-teachers, with the aim of receiving feedback, sharing ideas, opinions and improving our important mission in preparing teachers of English for the future generations. This study will partly fill the gap between theory and practice and serve as a reliable source of reference for others, who share an interest in the same related issues.

Description of Practice

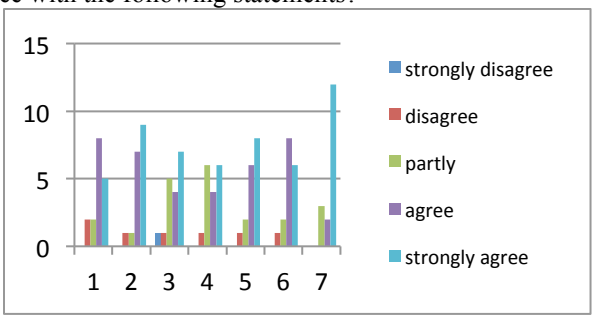
This presentation addresses the issue of using POSTL, as a reflection tool, focusing mostly on mentors and student-teachers perceptions of it. It aims demonstrating what is being done and at the same time sharing ideas with the participants about this issue. The presenters will try to give their own personal and academic experiences, discuss ways to incorporate the use of portfolios into the whole process of student-teachers pedagogical education. Long lectures and authoritative attitudes no longer work. New methods and techniques can improve the quality of teaching and learning in higher education. University teachers and mentors are critical to students' success. Creating a culture of warmth and support builds trust in the learning community, in our case among student-teachers. The use of the POSTL has proven all these. It has not only influenced students' achievements but has also contributed to the improvement in mentor-students relationship. Since portfolio has been used, a lot of things have changed in these relations. Interesting to know is, that from data collected from the interviews and questionnaires most of the new

teachers who graduated during the last three years, mentors and student-teachers are aware of POSTL and its use, whereas teachers who graduated many years ago, they don't know about its use and effectiveness. All the participants asked have not used any other portfolio but this. 80% of the student-teachers found it difficult to use the Portfolio at the beginning, but once they got used, they found it challenging and could not stop using it. The presenters will give some of these impressions to the audience. When student-teachers where asked what they expected from using the portfolio, almost 100% expected it to help them in all the teaching process. Both mentors and student-teachers wrote that it would help them to identify their strong and weak points during the teaching process. When the students were asked*: Which category of POSTL was more useful to you?*
Their answers are shown in these charts.





When the student-teachers were asked: Do you agree or disagree with the following statements?
The POSTL made me think of different aspects of teacher education.
The POSTL helped me to understand what competences a teacher of languages should have.
The POSTL made me aware of the competences I have developed, those I still need to develop.
The POSTL helped me trace my progress.
The POSTL is a good instrument for the self-assessment and peer assessment.
The POSTL is a useful teaching and learning device.
The Albanian student benefit by using POSTL regularly.



Discussion

The presenters through brainstorming possible solutions and interacting with the audience will lead the discussion towards the following statements: Students found it difficult to work with EPOSTL at the beginning as a result of the fact that they have not used any other portfolio before but once they got familiar with it they started using it regularly and found it very useful and helpful. Students find it hard to connect theory with practice. Training sessions should be organized with mentors to make them familiar with POSTL and how to use it. Experiences provide students with the opportunity to integrate knowledge gained through books and lectures into their teaching practice. Questions: What are the major problems student-teachers face with during their teaching process? What are some of the challenges encountered during the implementation of POSTL? Is this experience useful? What would you suggest to improve our mission of preparing new teachers of languages?

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Ensuring Academic Integrity with Online Proctoring

Jessica Mathieu, *ProctorU*

Abstract: The presentation will demonstrate how educators can prevent cheating, ensure the academic integrity of distance learning programs, and advance policies designed to reduce incidents of dishonesty online using a number of strategies. The presenter will also share industry research and best practices.

Presentation Summary

As students navigate through a plethora of available resources, plagiarism and academic dishonesty continue to be major problems in academia. In an effort to curb or redefine academic dishonesty, some instructors tailor their online exams so that outside resources are permitted, thus weakening the integrity and lowering the educational standards of their exams.

Most plagiarism comes from social networking sites, Wikipedia and other online resources where students can collaborate and share work from previous classes. Approaches such as strategic exam design and online proctoring can help minimize some of these factors and ensure academic integrity.

Attendees can expect to learn:

- The differences between identity authentication and attendance verification
- How to employ anti-plagiarism tactics
- Ways to develop secure exam structures
- How to tighten proctoring requirements

Helping Students Succeed in Writing: A Conversation to Explore Best Practices in Collaboration

Jeannie Scruggs Garber, Elliott Freeman, & Sarah Cox
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Abstract: Collaboration between faculty and writing center professionals can support the development of student writers by generating mutual understanding and respect, sharing techniques for evaluation and feedback, and placing an emphasis on writing as a process. A wide array of literature exists which explores the importance of general collaboration in academia, but this specific venue of collaboration remains largely unexamined. In this conversation session, participants will share their experiences and challenges in working with stakeholders across departmental divides in order to improve student writing.

Literature Review

Collaboration is a powerful and growing trend in higher education, one which is intended to bridge the gap between disciplines. Interdisciplinary work often has the goal of smoothing communication by enhancing mutual understanding, especially in light of the fact that "developing and participating in interdisciplinary coursework require[s] reorganizing the ways we think about and evaluate our own discipline and the disciplines with which we interact" (Weinburg and Harding, 2004, p. 24). This is a particularly keen challenge because of academia's powerful dedication to individualism and academic freedom. Even more problematic is the simple fact that the structures of the academy—regimented departmental divides and areas of responsibility—do not often lend themselves well to the kind of intimate and congenial atmosphere of interdepartmental collaboration (Kezar, 2005).

Despite these challenges, collaboration between faculty and writing center professionals can be fruitful, though it is often plagued by misunderstandings about the function of writing centers (Harris, 1990). Jefferson (2009) attests to the fact that faculty support and collaboration is often essential for the success of a writing center, but little scholarship examines the effect that faculty-writing center collaboration can have on *the students themselves*.

One of the core values that Kezar (2005) articulates in her review of collaboration in academia is student-centered learning. Adopting this as a guiding principle for interdepartmental and interdisciplinary work can help to "generate a rationale for cooperation, an experimental ethos, and a tendency to see the value in other people's work" (p. 56). Furthermore, Garner (2005) points out that both faculty and staff can benefit from talking about writing because the students see that faculty are utilizing writing centers, especially those whose discipline is not writing; writing consultants can facilitate clearly-written assignments; and faculty can see firsthand how writing centers function. This kind of collegial collaboration between writing centers and faculty helps to strengthen writing across the institution.

Goals and Objectives

1. Describe a collaborative initiative among faculty and writing center professionals focused on strengthening student writing skills.
2. Facilitate discussion among participants to explore best practices related to writing skill evaluation, development and feedback.
3. Develop a take-home list of strategies that have been successful in helping students succeed in writing.

Description of Topic to be Discussed

This conversation will focus on sharing strategies currently being used in higher education to positively impact students' writing skills. Key areas of discussion will be the benefits and challenges of collaboration between faculty and the writing center professionals, the need for published solutions to support graduate writing skill development and the compilation of a list of successful initiatives that have impacted student writing abilities.

Facilitation Techniques

This discussion will be formatted as an interactive, fast paced sharing session that will result in immediately useable information for the participants. Presenters will share the conversation objectives and briefly describe a collaborative initiative among faculty and writing center professionals that has impacted graduate writing skill development. Participants will divide into small groups, share their personal objectives for this session, and use pre-planned questions to facilitate sharing of successful strategies and student outcomes. Each group will report back to the larger group with at least two strategies to be included in the take-home list. This session will conclude with a debriefing which will recap the session objectives, finalize the take home list of strategies, and identify questions for further consideration.

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"Success In Circuit Lies": A Conversation about The Value of Unpredictability, *Jouissance*, and Indirection in Higher Education Pedagogy

Chris Osmond, *Appalachian State University*
Sharon A. Cumbie, *University of West Georgia*

Abstract: *Jouissance* is theorized by Lacan as a joyous experience that exceeds expectations. It is a satisfaction that overflows boundaries, and may threaten as well as liberate. This conversation will explore the value of admitting *jouissant* elements of teaching and learning into pedagogical practice. What does an understanding of *jouissance* bring to higher education classroom practice generally? Is the "enlivening" potential of jouissance sufficient compensation for its "threat"? How would a *jouissant* approach to pedagogy manifest in diverse curriculum sites? Might *jouissant* approaches to instruction be considered a useful anodyne to our current pedagogical context, in which only predictable, measurable outcomes are valued?

Literature Review

For Lacan (1998), the terms *plaisir* and *jouissance* denote two types of joyous experience. The first denotes satisfaction, the joy that comes from completion, "topping off," meeting expectations; it is associated with those pleasures that can be verified by cultural norms. *Plaisir* is contrasted to *jouissance,* which is unpredictable and disruptive pleasure; its intensity can destroy as well as satisfy. Taubman (2006) plays out some of the implications of the term.

> *Jouissance*, as Lacan defines it, exceeds pleasure or is an excess of aggressive enjoyment that is beyond pleasure and is tied to pain…*jouissance* can also designate a kind of ecstasy tied to loss of control and rational consciousness, and secondarily to violence, either emotional or physical. Such ecstasy can result from intense suffering – think of the mortification of the saints – or from surrender to the thrill of risk, or from the unbridled release of aggression in the service of a good. …*Jouissance* can also be experienced by fulfilling the letter of the law in the service of one's secret pleasures. …*Jouissance* can also designate the pleasure that results from a transgressive act because of its transgressiveness. It is in this sense that the degree of pleasure is in direct relation to the price one must pay for it (p. 29).

So might a moment of *plaisir* become *jouissant* through a shift in degree, motivation, or context. This is the moment where rigid compliance begins to give intrinsic pleasure, for example, or the moment where the transgressive becomes thrilling precisely because it is transgressive, the moment that Fagen and Becker (2000) have in mind when they describe "enjoying the tyranny of the disallowed". These pleasures are not cultivated, but rather happened upon; they do not grow from the ground, but rather crash in through a window. To the degree that they can be predicted, they cease to be *jouissant.* The danger of *jouissance* is one of its core traits, and one of the reasons it is so hard to name its place in education. It lurks on the excessive edges of education, a sense of possibility that both enlivens and threatens the quest to ensure that students have learned a verifiable "enough."

The potential of *jouissance* haunts our daily experience as pedagogues, simultaneously exemplifying that word's imputations of transcendence, menace, and evanescence. We desire its intensity as part of our students' learning experience, but we simultaneously fear our lack of control over it. Most troubling of all in a scope-and-sequence driven educational world: we don't know when it will come.

All this means that exploring the role of *jouissance* in the rational, objectives-driven milieu of education is challenging if not quixotic. Education values elements of unpredictability only when they can be rationalized as part of a greater productive project (Scott 1998). For example, Csikszentmihalyi's (1996) popular formulation of "flow" prizes the pleasure of "losing oneself" as an important aspect of creative endeavor, and research on critical thinking values brainstorming and relaxing of associative boundaries in the name of encountering unexpected solutions (Perkins 2000). However, such work values these experiences in the context of clear goals and consistent feedback that locates the self-losing and boundary-blurring in relation to those goals. *Jouissance* is intrinsically the obverse of goal-oriented practice, potentially beginning at the moment when experience "exceeds" the normative and veering quickly into unknown territory. We need spaces in which to discuss the benefits and risks of creating curriculum

open to *jouissance*, as well as opportunities to consider the challenges of introducing *jouissant* pedagogy into our practice.

Goals and Objectives

At the end of this session, participants will be able to:

- Compare and contrast *plaisir* and *jouissance* and their corresponding educational outcomes;
- Reflect upon sites in their current teaching responsibilities where a *jouissant* perspective might indicate new pedagogical choices to adumbrate unanticipated learning outcomes;
- Learn from other participants' perspectives on their own courses;
- Synthesize next steps that they might implement in their teaching responsibilities.

Description of Topic to be Discussed

Questions to be explored include:

- What does an understanding of *jouissance* bring to higher education classroom practice generally?
- Is the "enlivening" potential of jouissance sufficient compensation for its "threat"?
- How would a *jouissant* approach to pedagogy manifest in diverse curriculum sites? What would be its limits and affordances (Eisner 1994)?
- Might *jouissant* approaches to instruction be considered a useful anodyne to our current pedagogical context, in which only predictable, measurable outcomes are valued?

Facilitation Techniques

The session will begin with a reading of the Emily Dickinson poem "Tell All The Truth But Tell It Slant," which introduces the idea that the most valuable learnings can be peripheral to instructional choices.

> *Tell all the truth but tell it slant —*
> *Success in Circuit lies*
> *Too bright for our infirm Delight*
> *The Truth's superb surprise*
> *As Lightning to the Children eased*
> *With explanation kind*
> *The Truth must dazzle gradually*
> *Or every man be blind —*

The co-facilitators will briefly explain the concept of *jouissance* and describe their own teaching experience with *jouissant* outcomes from four years of experience in an interdisciplinary seminar for future caring professionals (Osmond et al 2012). Participants will discuss the value of *jouissant* practice outcomes in their own settings in pairs, then come back to large group to share insights.

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Thursday

February 5, 2015

Session 8

11:20-12:10 PM

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

Implementing Cooperative Learning into Nursing Curriculum

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Farmingdale State College

Abstract: Educators can be the catalyst to use active strategic learning activities in the classroom to meet the educational needs of today's college student. Educators often lack the knowledge of how to implement diverse strategies for student success. Cooperative learning is a method of active learning educators can easily learn and implement. This active learning strategy expands the traditional classroom boundaries for both the educator and student. Cooperative learning provides the educator with the potential to transform the learning process from a traditional classroom atmosphere to a student centered learning environment. This method supports interdependence and not independence, cooperation and not competition among students. Students today want to be supported, share ideas, problem solve, work as a team, bridge gaps between cultures, while learning. To facilitate these goals promotion of cooperation, not competition, between students is significant to achieve the benefits of this learning approach.

Literature Review

Cooperative learning supports the development of critical thinking skills to enable the student to identify, assess and respond to situations that require prompt attention. The ability to problem-solve and make decisions are vital for the nursing student to acquire. In comparison to lecture or a teacher-centered approach, cooperative learning improves students' critical thinking and reasoning capabilities resulting in academic achievement. Cooperative learning is a skillful constructed approach to developing the student's finesse of working with others. This learning strategy has been identified to increase a student's: (a) self-esteem, (b) ability to manage conflict, (c) learning motivation, and (d) collaboration and interaction with peers (Henry, 2005). While there are few studies related to incorporating cooperative learning among nursing students, the literature supports active learning strategies within the undergraduate nursing educational setting (Sand-Jecklin, 2006; Kaddoura, 2011).

Cooperative learning places the responsibility on each individual to be committed to accomplish class objectives in small groups. The lecture approach to teaching delivers too much information in a finite time and maximizes instructor control. Disadvantages to this teaching strategy are: (a) disengagement of the participants, (b) decrease in student feedback, (c) unrealistic level of students' knowledge building and comprehension, and (d) minimal retention of information presented (George Mason University, 2010). In the mid 1990's, instructional programs in which students work in small groups to help one another master content were implemented into various subject areas and levels of education. Though this teaching strategy requires time to master, skilled facilitators provide better service to learners and find cooperative learning to be a joy in the classroom (Lujan & DiCarlo, 2006). Johnson, Smith, and Johnson (2007) support active learning strategies to capitalize on student learning in colleges and universities.

Methodology

The design for this quantitative descriptive study used a convenience sample of 27 nursing students enrolled in a medical-surgical nursing course for the 2011-2012 consecutive semesters to examine cooperative learning in a structured classroom setting. The faculty members used identical cooperative learning strategies using published case studies as the method for instruction for fall and spring semesters. In the fall semester, the self selected sample group consisted of five students and remained static for the fall semester. Typically, the students in this class did not seek out other classmates with high academic scores to join their group. The students chose to have their friends as members of their group resulting in groups with homogenous levels of academic achievement. Based on the semester final grades, strategies for group selection in the spring semester were changed. In the spring semester, the faculty selected the group to reflect a heterogeneous mix. Students remained in groups for the entire spring semester. The instructor provided clear objectives for the group learning activity. Students were asked to gather into groups to discuss, research, and answer the published case studies. Each group was given a case study and allowed 30 minutes to complete the assignment. During this time frame, students could access any available resources such as notes, textbook, on-line resources and open active group discussions to complete the assignment. During this active learning period the instructor provided formative assessment to improve student attainment. All groups formally presented case studies in front of the class. Open discussion was encouraged for all participants.

Students voluntarily completed end of semester Cooperative Learning Survey as a summative assessment of this strategy. Three 50-item multiple choice in class exams were used each semester to measure students academic achievement using the cooperative learning strategy.

Results and Discussion

Twenty students completed the Cooperative Learning Survey. While both groups have experienced passive instructional methods the overall percent of students agreed that cooperative learning is a preferred method to enhance the learning. Homogenous groups exhibited limited interaction, participation, and sharing of ideas within their groups and lacked expansion of the concepts during their presentations. In contrast, the heterogeneous groups demonstrated: (a) a high level of thinking, (b) multiple viewpoints, (c) shared contributions, and (d) a commitment to overall learning success. In the fall semester, 81.6% of the students were academically successful with the implementation of homogeneous student groups. In the spring, 95% of the students in the heterogeneous groups displayed academic success. While this analysis identified student academic success, the overall final grades still displayed significant variances for those students who were successful in the course.

Conclusion

Cooperative learning using case studies in the classroom addresses the students' learning needs and the course objectives for this nursing course (Figure 1). The overall implementation of cooperative learning allowed the students to learn concepts through combining the students' interdependent abilities to benefit each individual group member's learning experience. It is essential to transform traditional educational strategies to active student-centered learning experiences that promote critical thinking. The implementation of case studies as a cooperative learning strategy enhances knowledge building, interactive relationships, and the ability to problem solve in preparation for future nursing practice. Nurse educators should consider overall curriculum focus that contributes to student preference for the use of active learning strategies to promote student critical thinking and analysis of information.

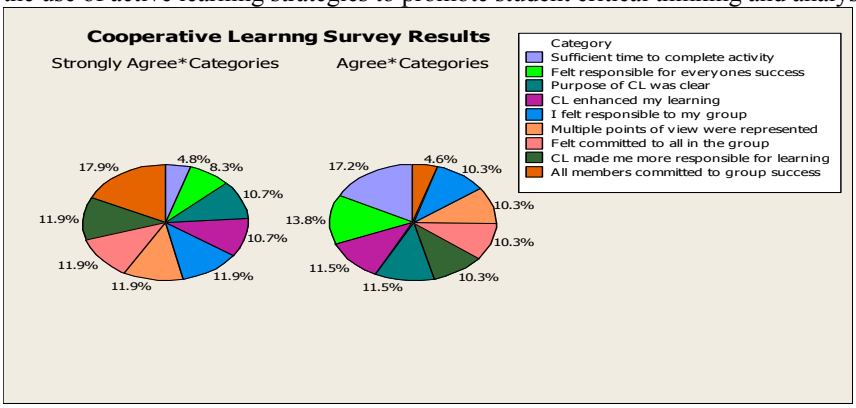

Figure 1. *Cooperative Learning Survey Results*

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Who Says They Can't? A Case Study of Engineers and Non-Engineers Collaborating on Undergraduate Research Projects

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Abstract: Research Experience for Undergraduates in Cognitive Communication (REU_CC) sponsored by the National Science Foundation provides summer research opportunities for undergraduate students. While many REU program sites recruit upper class undergraduate students, the REU_CC program has recruited students across different majors and academic levels. Specifically, in 2014, REU-CC primarily focused on providing research opportunities and experiences to younger students in multidisciplinary fields of study with minimal to no knowledge of cognitive communication (CC). Our mixed methods explanatory investigation of this cohort of students has shown positive outcomes related to students' academic self-efficacy, conflict resolution skills, and attitudes toward research as a learning environment focused on open-ended problem solving.

Literature Review

The Association of American Colleges and Universities (AAC&U, 2007) expressed the importance of creating active learner adults as one of the important outcome of students' postsecondary education. For example, students' abilities to research information, learn new skills, and problem solve are a few of many important skills gained in college (Nelson, et al., 2014). Design-focused senior design and capstone courses have traditionally been the focus of upper level engineering curricula. Historically the idea of involving younger students - mainly freshmen and sophomores without foundational disciplinary background - has not been taken seriously. There have been studies investigating the involvement of younger students in research and design, but the depth of the research has been shown to be constricted.

Design courses targeted toward younger students have shown some success. For example, the Penn State Abington robotics program offered design and research opportunities to freshman and sophomore undergraduate students (Avanzato, 2000). Providing early exposure to research and group projects with direct and intense supervision from faculty as well as graduate students has the potential to help younger – freshman - students increase their academic self-efficacy, conflict resolution skills, and propensity to persist in their academic lives. The Research Experience for Undergraduates in Cognitive Communication (REU_CC) program provided undergraduates with a 10-week training and guided research experience in a controlled environment. The program's overarching goals were to provide opportunities for underrepresented students to perform research and increase their academic self-efficacy. The purpose of this study was to investigate the effect of undergraduate research in a multidisciplinary environment on younger students' academic self-efficacy, conflict resolution skills, and attitudes toward research as an open-ended problem-solving learning environment.

Methodology

Each summer since 2009, REU_CC has hosted ten undergraduate students from various fields of study, primarily Computer Engineering, Computer Science, Electrical Engineering, and Mathematics, to participate in CC related guided research. While the majority of students have been somewhat familiar with the wireless communications field, none of the 2014 cohort, the focus of this investigation, were familiar with the field of Cognitive Communication. Figure 1 shows the demographics of these students; from ten participating students three were females and the rest were males. The recruitment and selection process of student was based on GPA, attending college, statement of purpose, and letters of recommendation. A competitive GPA and strong letters of recommendation ensured positive academic disposition while the statement of purpose revealed interest in learning about the field of CC. The methodology for this case study followed an explanatory mixed methods approach with pre- and post-test questionnaires and several focus group sessions during the program to investigate perceptions and attitudes. To evaluate students' academic self-efficacy, we utilized an instrument adapted from Bandura (1982), Owen and Froman (1988), and Schunk and Hanson (1989). The students' conflict style or response to conflict situations was assessed by the Thomas Kilmann Conflict Mode Instrument (Thomas & Kilmann, 1974). As shown in Figure 2, the program was divided into two primary chronological series (pre-program and 10-week session) to

address students' lack of knowledge or exposure to the field of CC and students' lack of research experience. Evaluation and assessment were ongoing during and after the 10-week session.

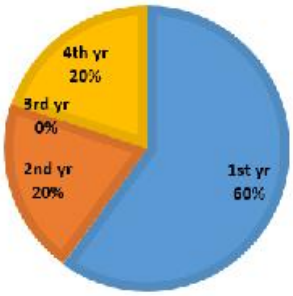

Figure 1: *Students' Academic Level*

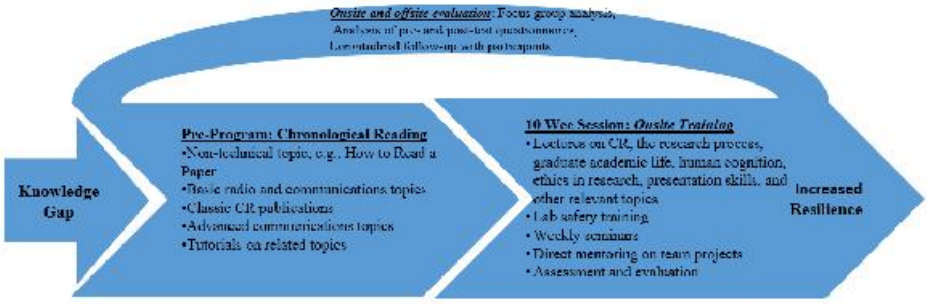

Figure 2: *Program Chronology*

Result

Our preliminary results has shown an increase in student's academic self-efficacy by providing guidance on sophisticated research topics—mentoring—at early stage in one's academic career. Moreover, it has shown an increase in students' ability to collaborate and mange conflicts among the group members. For example one of the participants mentioned that the program has improved her ability to negotiate team responsibility. Another student stated that participating in this program has helped her understand the process of a typical research project. She continued that she has learned that failure happens often in the process of research, however one must learn to persevere, reflect, and problem solve during the progression of any research project.

Discussion

Our preliminary result from the mixed methods has indicated an increase in students' academic self-efficacy, conflict resolution skills, and attitudes toward research process. The REU program funded by NSF has provided a positive and successful academic research and mentoring program for young undergraduates. These preliminary analysis will be investigated further by the collected questionnaire as well as the focus group discussions.

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Student Writing for Self-Authorship and Democracy: Engaging Students Critically

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Abstract: One particular method for achieving democratic pedagogy for college students may be through student development theory. This paper used insights from the theories of Robert Kegan and Marcia Baxter Magolda, specifically the notion of self-authorship, in order to create a democratic pedagogical method. Kegan and Baxter Magolda describe self-authorship as a state where an individual no longer relies on the authority and prescriptions of others to make her decisions, but rather, uses her "internal voice" and trusts her own abilities (Baxter Magolda, 2009; Kegan, 1994). This paper recasts self-authorship as a democratic activity by linking self-authorship to a student's scholarly writing. Through scholarly writing, students can begin to formulate their internal voice. A conceptual framework was created by which professors can assess the writing of students and help guide the student toward democratic self-authorship. The thesis or research question in a student's writing is arguably the most important aspect to a scholarly paper. This framework is meant to judge a student's thesis or research question and encourage the student to write theses or research questions that are more indicative of democratic self-authorship. In order to encourage self-authorship and the internal voice, writers can be guided by professors to formulate claims which are acts of judgment, evaluation and ultimately creation, instead of claims which are merely repetitions of existing works. Of course, a thesis must also be grounded in evidence; it cannot be fantasy (Booth, Colomb & Williams, 2008). The framework is not meant to be rigid and can apply to any course where students must defend an argument with evidence.

One of the most prominent strands of student development theory is rooted in the developmental theories of Piaget and Erikson. Robert Kegan drew on Erikson's developmental stages and used them to create a theory of the evolution of human consciousness and meaning making (Evans, Forney, Guido, Patton, & Renn, 2010). It is the author's belief that Kegan's theory can also promote democratic thinking and citizenship behaviors. Kegan (1994) particularly focuses on the personal unfolding of organizing experience, as a person develops. This unfolding experience is more complex ways of knowing reality. It is the process by which a human child grows into an adult and how that child turned adult makes meaning out of his or her surroundings. Growth includes an ongoing renegotiation of one's relationship with the external world. These former experiences are not simply replaced but rather subsumed into higher states of consciousness. Similarly to Erikson, each stage of Kegan's theory is characterized by conflict or some sort of tension that needs to be resolved. When the tension in one phase is resolved, one can progress to the next stage (Evans et al., 2010; Kegan, 1994).

Kegan argued that human consciousness passes through five stages. The first three stages usually occur throughout childhood and young adulthood (Evans, et al, 2010; Kegan, 1994). The third stage is the "socialized mind" and usually occurs in the middle teenage years. In this stage, the individual experiences other human beings as a source of internal validation (Evans, et al, 2010; Kegan, 1994). The individual follows the dictates and rules of outside authorities. The fourth stage is the most crucial; it is what Kegan (1994) called self-authorship. Kegan (1994) describes self-authorship as a state when an individual no longer follows the dictates and authority of others, but rather acts from an internal sense of conviction. Baxter Magolda (2009) notes that in order to be self-authored, one must follow what she calls their internal voice. This does not mean that the individual disregards others and lives a self-interested life, but rather, the individual can evaluate and decide on information without blindly accepting it from others (Baxter Magolda, 2009; Evans, et al, 2010). Kegan (1994) argues that the tasks of modern life, such as work, parenting and partnering, require self-authorship, yet many adults simply cannot attain this level of consciousness. Baxter Magolda (2009) argues that higher education has the responsibility promote self-authorship for its students.

Another crucial concept elaborated by Kegan (1994) is the notion of holding environments. Individuals do not just spontaneously pass from one stage to the next. Rather, they require grooming and coaching by mentors if they are to successfully reach the next stage (Evans et al., 2010; Kegan, 1994). During the transitional periods when an individual is progressing to a higher stage but not quite there yet, Kegan called this a holding environment and Baxter Magolda called it the crossroads (Baxter Magolda, 2009; Evans et al., 2010; Kegan, 1994). These holding environments can and usually do occur during the college years and are crucial for positive development. Yet, educators must know how to engage students in these holding environments and guide this positive development. One method to achieve this is by presenting students with self-authorship tasks (Evans et al, 2010). One such self-authorship task may be scholarly writing and the creation of an original argument.

Kegan and Baxter Magolda examine the social, emotive and cognitive dimensions of student development. However, since this present framework is mainly focused on the cognitive development of students, the present framework is also grounded in more cognitive developmental theories, specifically those of William Perry (1968) and James Barber (2012). Perry distinguished between different cognitive phases. He defined dualistic knowing as when an individual sees problems as having a definitive answer and when individuals show deference to an absolute authority for understanding. Perry defined relativistic knowing as when individual recognizes there are multiple solutions to a problem, but the individual can defend a particular solution with evidence. In addition, at this stage, individuals realize that authorities are not absolute in their knowledge (Perry, 1968). Barber performed a grounded theory study and identified three different methods by which students integrate and process information in their college courses. He argued that the highest method was synthesis (Barber, 2012). Synthesis is when students take existing pieces of information and use them to create a wholly new idea. The notions of dualistic and relativistic knowing, as well as synthesis, are used in the framework below to differentiate advanced cognitive thinking from more basic cognitive thinking.

Baxter Magolda argued that most students arrive at college in phase three, the socialized mind (Evans et. al, 2010; Baxter Magolda, 2009). She further argues that it is the task of the college to help students achieve stage four, self-authorship (Evans et. al, 2010). Professors are expected to figure out how to "nudge minds to life" (Baxter Magolda & King, 2012, pg. 1). They are expected to respond to the multitude of student needs and abilities (Baxter Magolda & King, 2012). The framework put forth in this paper will hopefully fill this need.

Goals

Description of practice: Below are the three phases of conceptual framework. Participants are to:

1. First try to remember examples of student writing that could fight into one of the phases and justify why it should be placed in this phase.
2. Second, write a thesis that fits into each phase and justify why it fits into each phase.
3. Lastly, brainstorm ways to make the framework more accurate and inclusive and ways to encourage more democratic writing.

Participant activity: 1. Each participant will be asked to write a thesis, or think of student writing they have graded in the past for examples, which corresponds to one of the levels in the rubric.
2. I will create a handout with a number of different theses. Participants will be asked to label each theses according to the rubric and a discussion will follow asking participants to justify their claims.
3. A general discussion will facilitated around the idea of advantages and shortcomings of the rubric and how it can be improved/expanded.

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Using Games for Deconstruction and Reflection in Teaching

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Abstract: Research supports the benefits of using games in teaching at all levels of education (Devonshire et al., 2014; Dixit, 2005; Kumar & Lightner (2007). Games have been used in K-12 education to teach a variety of subjects. They have also been used to teach higher education students. This presentation offers practical examples of how I use the Name 5 Game as a scaffolding tool in graduate classes to introduce topics, deconstruct and reflect on concepts. Participants will have an opportunity to formulate their own concepts of how they can use the game in their own classrooms regardless of discipline.

Literature Review

Educators are always trying to find ways of improving student engagement and motivation. Using interactive games in the classrooms is viewed as a strategy that improves student engagement and active learning (Devonshire et al., 2014; Predmore & Manduley, 2006). Active learning only occurs if the games are well designed (Dixit, 2005). Games in the classroom can be based on a variety of formats that include, computer, television and film, literature, etc. Kumar and Lightner (2007) outlined four reasons why the inclusion of games in classrooms is an effective pedagogical strategy: (a) games encourage active learning, collaboration and interactive engagement; (b) there are memory and performance benefits for students; (c) learners are exposed to diverse social interactions; (e) games reach and engage students who may have different learning styles; and (f) improved transfer of learning comes through required participation and involvement. Predmore and Manduley, (2006) asserted that the immediate feedback provided by computer/electronic games energizes students, giving them a sense of liberation that is not present when an instructor calls on a student to answer a question in a classroom. This assertion concurs with Devonshire et al. (2014) who argued that "Another major benefit of learning games is that they encourage participation by reducing the negative effects of failure on self-esteem that other teaching styles, such as direct questioning, can cause" (p. 1). The reasons outlined for engaging games in the classroom provide alternative ways for educators to experiment with games in order to improve motivation and active learning.

Goals and Objectives for the Session

The goal of this session is to introduce the Name 5 game to promote deconstruction and reflection in college classrooms. By the end of the session, participants should be able to:

1. Identify the kinds of topics, concepts, and contexts in which the Name 5 game would be effective in student instruction
2. Outline the main ideas for deconstruction and reflection
3. Describe how they would adapt the game to their subject area and course goals.
4. Discuss other possible ways of improving the Name 5 Game to promote deep reflection and discussion in college classrooms.

Description of the Practice to be Modeled

I will present and model how I use the Name 5 Game to teach leadership to graduate classes. After this activity, the participants will be asked to identify the main ideas and concepts for deconstruction and reflection that they think the presenter was trying to convey. As the presenter, I will then give my own ideas for deconstruction and reflection about the topic. Participants will be divided into groups and discuss how they could use the game in their own classrooms. Groups will report their ideas and topics about how they could use the game in their classes. The presenter concludes the session by soliciting feedback on how this game could be improved to promote deep thinking and reflection in college classrooms, and how the game could be adapted for different types of learners, to accommodate different fields, or particular learning contexts.

Discussion

Traditional methods of teaching such as lectures and note taking are instructor centered and devoid of engaging students as critical thinkers and knowledge creators. Instructors have to be innovative in teaching, move from this

old paradigm and use student centered approaches that foster active learning. Students bring their experiences that are viewed as unique epistemic advantages that enrich individual and group learning. Students socialize with their own and each other's knowledge in game based-learning. This is due to the fact that "Students assume 'collective cognitive responsibility' and work to improve not only their own knowledge but also that of the entire community" (Bielaczyc & Ow, 2013, p, 34). The use of games is viewed as essential in knowledge building and in aiding deconstruction and reflection to improve quality of instruction in higher education.

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Development of a Structured Undergraduate Research Experience: Framework and Implications

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Abstract: Participating in undergraduate research can be a pivotal experience for students in the life sciences field. Development of critical thinking skills, in addition to oral and written scientific skills, is essential in ensuring students develop a greater understanding of basic scientific knowledge and the research process. Often, larger universities lack the resources to involve a majority of the undergraduate population in research. By developing a structured, theory-based approach to undergraduate research, we have successfully shown that more students are able to participate in a high-quality, high-impact research experience. Students develop novel, independent projects, often in collaboration with other research faculty, with a timeline of expectations. Students walk away with an engaging and productive experience where career goals, problem-solving skills, time management skills, and independence in a lab have been developed. After implementing this approach to undergraduate research, students reported feeling challenged to think critically and prepared for future career paths. The developed method allows for a progressive and maintainable computational lab environment where undergraduates participate in publishable research. Future areas for development include implementation in a traditional bench-top lab and across disciplines. Utilizing the structured approach to undergraduate research can allow for more students to experience undergraduate research and develop into more confident, independent scientists ready for the graduate school and professional research environment.

Literature Review

Studies suggest that undergraduate research experiences are high-impact activities that improve the educational outcomes of students who participate (Lopatto, 2004). Students who participate in novel research exploration walk away with a greater understanding and appreciation for the research process and application of basic science knowledge, while contributing something worthwhile to the scientific community (Rasche, 2004). Conversations with students regarding their expectations for research experience led to the development of a program within the Bevan Molecular Modeling Lab for providing information and opportunities to nurture independent scientists interested in pursuing research careers and potentially graduate-level education. In addition, this research experience and mentoring support is thought to be supportive of women and minority students, giving them access to faculty and peers in the field (Barlow & Villarejo, 2004).

Teaching and research are often isolated endeavors at research universities (Anderson et al., 2011). Producing an effective and successful research scientist should incorporate research and discussions on how students learn in order to improve the effectiveness of the research training experience and the perceptions of the students regarding that experience (Anderson et al., 2011). To this end, concepts in educational theory were incorporated into the research process. The purpose for developing this practice of cognitive engagement was to provide a consistent, individualized, self-sustaining research experience that trains undergraduates to become independent researchers. Most universities lack the resources to involve a majority of students in undergraduate research (Desai et al., 2008; Wood, 2003). By utilizing the structured approach reported in this practice session, more students can engage in a high-quality undergraduate research experience, leading to enhanced learning of basic research practices, retention of students in scientific fields, and positive career outlooks for graduates.

Objectives

The practice session will focus on outlining the practices used in the authors' research lab to train undergraduate students to be independent researchers. The model described will include examples of a syllabus, research projects, planned activities, and grading rubrics. Activities include written assignments, peer mentoring, weekly meetings and group discussions, and workshops on research conducted in other labs. A timeline is established for each student regarding her/his research endeavors and plans following graduation. Each student outlines a plan that is tailored to their career goals and desired outcomes from the experience. The described method also facilitates working with larger groups of students (10-15 undergraduates), while maintaining a realistic view of the research ongoing in the lab. Problems encountered and successes through development of the model will be presented, and are open topics for discussion. By the end of the session, participants should walk away with:

1. A step-by-step guide for creating a student-centered undergraduate research environment.
2. An understanding of the purpose and scope for implementing a structured undergraduate research methodology.
3. The educational gaps that are addressed with this method and the benefits to addressing those gaps.

Outcomes for the described method:

1. An established mentoring pipeline for students wanting to participate in undergraduate research.
2. Consistent training for all students independent of research interests and future goals.
3. Avenues for pursuing novel and collaborative research projects in a university setting.
4. Practiced skill development in scientific writing, collaboration, hypothesis-based experimentation, and leadership for undergraduate students.
5. Practiced professional development skills such as project management, research education, and assessment of learning outcomes for graduate students.

Description of Practice

This session will outline the practices developed in an undergraduate research experience taken for course credit. Upon applying for a position in the research lab, students are given a copy of the syllabus developed for the experience. Because students sign up for course credit, the expectations are outlined and tracked like the typical course experience. Students are given grading rubrics for their assignments to be completed by the end of each semester in the lab, which include: draft of an abstract for the project, introduction section of the final research paper, final semester paper, and final semester oral presentation. This approach allows students to develop scientific writing and presentation skills not commonly addressed in undergraduate coursework at larger universities. Graduate student mentors play an important role, with outcomes beneficial to their development as principal investigators and university faculty. They train and guide the research process, and facilitate professional development discussions. This model was developed in and works well in a computational lab setting, but can be adjusted to apply to traditional bench-top labs.

Discussion Questions

1. How might this method be used in a non-computational laboratory setting?
2. What are the internal and external goods for such a method? (How does the lab benefit? How do the students benefit?)
3. Should research faculty members who recruit undergraduate research students be trained on education theory, assessment methods, and high-impact practices for the undergraduate research experience? Why and how?
4. How could a university implement an undergraduate research program based on this methodology?

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Conversation: Increasing Interaction in Online Learning

Nancy Flanagan Knapp, *University of Georgia*

Abstract: Interaction - discussion, questioning, conferencing, and joint work on projects - has long been known to be essential to both student engagement and deep learning in education. Facilitating such interaction, both among students and between students and their instructor, is an even more difficult task and requires even more deliberate planning and resources in online learning environments, than it does in traditional, face-to-face classrooms (where it is still, unfortunately, all too rare!). Scholars of teaching and learning who are involved in or concerned with online learning are invited to join this conversation, to share and discuss experiences with, strategies for, and difficulties faced in increasing interaction in online learning environments.

Literature Review

Theorists and scholars in constructivist learning (e.g., Piaget, 1970; Rogoff, 1990; Vygotsky, 1978) have been telling us for decades that structured interactive discussion and activities are vital to learning because it is through articulation, exploration and application of knowledge that people learn most and best retain that knowledge (Brown, Collins, and Duguid, 1989). Lack of such interactivity has been a serious concern in online learning since its inception (Mulienberg & Berge, 2005; Roberts & McInnerney, 2007; Song, Singleton, Hill, & Koh, 2003), and it remains a significant problem to this day, across academic areas. For example, the online MBA students studied by Kim, Liu, and Bonk (2005) cited "difficulty in communicating with peers [due in part to] the absence of face-to-face contacts" as their greatest challenge in online learning (p. 342). Keengwe, Adjei-Boateng, and Dityeeont (2013) lament that, "due to the absence of face-to-face contacts, students and instructors are usually faced with the lack of active social presence and meaningful interactions in online learning" (p. 597). Even the six "exemplary online teachers" in multiple disciplines studied by Baran, Correla, & Thompson (2013), acknowledged that "they were not that successful in terms of building relationships with students because of the absence of immediacy and sensory and expressive information, [and] nonverbal cues" (p. 26). Indeed, the high rate of student attrition in online courses, a matter of large and growing concern in higher education (Allen & Seaman, 2013), may be due in part to the sense of isolation and disengagement students often experience, due to the lack of familiar types of social interaction in online courses (Richardson & Swan, 2003).

Goals and Objectives

Many of us at this conference, including myself, are working to find and implement instructional strategies that enable and encourage students in online courses to interact with each other and with us more often, more fully, and in ways that foster deep, versus shallow, thinking and learning (Willingham, 2003). In the course of this work, we are learning important things about the barriers to interaction in online learning, and about which strategies are effective and ineffective for promote engaged, thoughtful interaction, as opposed to the appearance of interaction through mere compliance on the parts of our students. The goal of this conversation session will be to facilitate participants' sharing some of what we have learned with each other, and to open lines of communication and potential scholarly collaboration among participants.

Description of Topic(s) to be Discussed

While participants will, I hope, bring their own ideas and questions and concerns to this conversation, potential topics of discussion include:

-- Synchronous versus asynchronous interactions - balancing effectiveness and feasibility
-- Synchronous video-conferencing as one means of interaction - factors, software options, & student responses.
-- The Discussion Board - should/can it be saved?
-- Interaction through Google +, Facebook, Twitter, Pinterest, and other social media
-- Strategies to promote small group interaction in online courses
-- Free, low-cost or institutionally available software to promote interaction in online courses
-- How do barriers such as language, distance (time zones), and the digital divide affect options for increasing interaction in online courses?

Facilitation Techniques

Prior to the conference, I will post and/or send out to potential participants the following questions for reflection, and ask them to jot down brief answers to bring with them to the conversation (paper copies will also be available):

1. Why are you are interested in increasing interaction in online learning environments? What in your own experience has led you to feel this is important?
2. Which two of the potential topics listed (see above) most interest you? Is there another topic(s) you are hoping we get to talk about?
3. What is one strategy you have used to increase interaction in your own online courses that you feel was effective to some degree (even if not perfect)?

To start off the session I will very briefly (5 min. or less) describe why I wanted to have this conversation and some of the dilemmas related to interaction in online learning environments noted both in the literature (see above) and in my own work. Then we will share our responses to questions 1 and 3 above and discuss the topics most participants chose as "of interest" (I will conduct a brief "show of hands" poll, after adding any additional topics suggested). In the final minutes, each participant will be invited to share a personal "take-away"--one idea or strategy or new question they will take from our conversation.

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A Conversation about Fostering Effective Interaction in Distance Learning with Pedagogically-Smart Technology Integration

Wei Li & Jennifer M. Brill, *Virginia Tech*

Abstract: Interaction, as one of the most critical elements in distance learning, has great potential to increase motivation, satisfaction, participation, communication, and learner achievement. Facilitating effective interaction in distance learning depends heavily on the use of technology. However, adopting appropriate interaction technologies poses a challenge for distance educators in higher education who are experts in their respective disciplines but perhaps not well versed in the pedagogical affordances of emerging technologies and how to integrate them in meaningful but manageable ways. Pedagogically substantiated technology integration strategies are needed to help these distance educators make smart choices. The purpose of this conversation is to discuss how educators can identify and integrate pedagogically valuable technologies to foster interaction that supports learning in distance environments.

Literature Review

Distance learning is a growing part of educational practice (McIsaac & Gunawardena, 2000). With the rapid development of emerging technologies, distance learning has more options in regards to course resources, diversity of learning activities and types of communication tools for supporting teaching and learning (Beldarrain, 2006). Based on transactional distance theory, the distance of importance in distance learning is not the geographical separation of learners and instructor, but rather the intellectual, social, and cultural distance (Kearsley & Moore, 1996; Moore, 1989). Adopting appropriate technologies and instructional strategies to foster interaction is one approach to minimize such psychological distance (Beldarrain, 2006).

According to Wagner (1994), interaction refers to "reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events mutually influence one another" (p.8). In 1989, Moore addressed the use of technologies through learner-content, learner-instructor, and learner-learner interactions. Hillman, Willis, and Gunawardena (1994) suggested that emerging distance technologies required the consideration of learner-interface interaction, which occurs when learners use technologies to interact with the content, instructors, and other learners. The rapid growth of more advanced technologies has created unique opportunities for more sophisticated interactions in the technology-mediated environment (Anderson, 2003).

Studies support that interaction can improve the learning process in distance learning in that it has the potential to increase motivation, satisfaction, participation, communication and learner achievement. Jung, Choi, Lim, and Leem (2002) asserted that learners' satisfaction and participation increased as greater amounts of interaction were provided by an online course. Swan (2002) concluded that there was a strong correlation between students' perceptions of interaction and students' perceived learning.

Facilitating interaction in distance education depends on the appropriate use of technology. A valid challenge facing many distance learning educators today is how to incorporate technology into instruction to enhance and support meaningful interaction. To take advantages of interaction possibilities enabled by technologies, the investigation of technological attributes as well as the instructional strategies and pedagogies for integrating technologies to foster interaction in distance learning is necessary.

Goals and Objectives

The goal of this conversation session is to provide participants with an understanding of how to integrate technology to support interaction for learning in distance environments. Upon completion of the session, participants will be able to:

- describe the pedagogical role of interaction in distance learning.
- identify attributes of current and emerging technologies that foster pedagogically meaningful interaction.
- develop specific strategies for integrating technologies to foster learner-centered interaction in distance environments.

Description of Topic to be Discussed

There is wide recognition that interaction can be supported by the integration of current and emerging technologies in distance learning environments. However, technology does not, by itself, guarantee the quality of interaction, particularly when it comes to supporting learning. A challenge facing many educators in higher education is how to integrate technologies for the design of pedagogically meaningful interaction in distance learning while also facing the practicalities of time and technology limitations.

In general, current distance learning practices do not maximize the interactive learning possibilities of today's technologies. In fact, technologies, despite their affordances, are often reduced to repositories for content (Richards, 2006), raising a number of largely unanswered questions for consideration by distance learning researchers and practitioners: How can distance educators integrate technology to foster meaningful interaction in distance learning? What pedagogies for integrating technologies encourage such interaction in distance learning? What factors foster heightened levels of interaction? How does one decide on the types of technologies in terms of modes and levels of interaction. The desire of educators to maximize the learning impact of distance interactions has challenged us in a new way when it comes to integrating technologies into distance environments. Practical pedagogical and technological guidance for interaction design is needed to support distance educators as they select, adapt, and integrate technologies.

Facilitation Techniques

The conversation session will begin by asking participants to share how they are currently fostering interaction in their distance learning environments, first privately in writing and then through discussion. Next, those present will be asked to share their goals for student interaction; in other words, what do they hope to achieve with learners through interaction. Facilitators will broaden the conversation by describing the concept of interaction in learning, the role of interaction in distance learning, and the progression of technology-mediated interaction as new technologies have emerged and offered new affordances for supporting learning. A framework will be provided for how one might choose and integrate interactive technologies based on identified pedagogical goals. Using the framework, participants will have the opportunity to reconsider, redesign and share an interaction that they currently use with distance learners to experiment with maximizing pedagogical intent through technological and implementation choices.

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Teaching Conservatives, Liberals, AND Libertarians:
A Conversation About Opening Learners to More Pluralistic Views of Academic Content

Kathy Greenberg, Deepa Deshpande, Karen Franklin, Neil Greenberg,
Brenda Murphy, Kristina Plaas, Howard Pollio, Brian Sohn, and Sandra Thomas,
The University of Tennessee, Knoxville

Abstract. As instructors, our ultimate goal is to awaken students to the pleasures and advantages of mastery and a deep understanding of our content. Ideas emerging from neuroscience; biology; social, moral, and evolutionary psychology, all indicate the natural state of humans is to develop worldviews that bind and blind (Haidt, 2012). So, how can we help students go beyond merely memorizing content and regurgitating it back to us? How can we help students engage in transformative learning that broadens their understanding of our academic content and the world? In this conversation session, we will look at the content we teach beyond our own passion for it—and explore ways to open students to more pluralistic views of content. Depending upon the academic fields of participants we might explore the following: How can we help students with conservative religious worldviews open themselves to the study of evolution? How can we help students with liberal worldviews of economic stimulation open themselves to the need to explore non-Western views of capitalism? How can we help students with libertarian views open themselves to sociological issues of share responsibility for poverty? While this session should not digress into a focus on politics and religion, we hope all who participate will gain insights into assumptions underlying our own worldviews about higher education pedagogy and the academic content we teach.

Literature Review

College and university instructors' ultimate goal is to deepen students' understanding of specific academic content—and ultimately to a transformational learning experience. According to recent research in social and evolutionary psychology, neuroscience, and other fields, however, humans are *bounded and blinded* (Haidt, 2012) by their personal worldviews. Damasio (1994), for example, studied brain-damaged patients whose personal and work lives became highly dysfunctional when they lost the ability to make decisions based on gut reactions; they were no longer able to reason well. Haidt (2012) found that people make moral decisions rather quickly, through intuition, rather than reasoning. When his research participants' reasons were challenged about their moral perspectives, most held to their initial reactions regarding specific scenarios. When considered from an evolutionary perspective (Wilson, 1975), cognition developed late in humans and remains the important but nevertheless servant of intuition (also a form of cognition), which developed much earlier. Pinker (2002) reported on the gut reaction that guided a majority of scientists, based on their moral perspectives, to refute sound research conclusions of E.O. Wilson. The implications for academic study are clear: We need to accommodate gut reactions based on intuition and affect in order for students to be able to reason well with academic content.

Further, the western, highly educated perspective of individualism represents a minority view; most people value a sociocentric perspective and their moral assumptions go deeper to include community conventions that may or may not support academic understanding of the world, especially regarding the rights of individuals over that of society. But these worldviews are not clearly seen in the academic classroom where students may work hard to hide or temporarily ignore their intuitive beliefs or traditional conventions—and agree superficially with the instructor's opinions—when they actually retain their original perspectives and (in some cases) misconceptions. For example, Hammer (1989) described student strategies in the study of physics, where one student deepened skills and understanding by comparing her intuition about some aspect of physics and course learning, which enabled her to overcome misconceptions.

So, how can we help students loosen their judgments of the content, instructor and students with different worldviews and truly explore content at a deeper level? Our PERT research team has been investigating an existential phenomenological approach to pedagogy through an in-depth case study of a graduate seminar. Based on post-class written reflections, individual audiotaped interviews, and focus groups conducted at end of the semester students clearly indicated transformative learning. For example, they often reflected on new insights that changed

their worldviews and described how they were applying their learning of the academic content to their personal and professional lives.

Goals and Objectives

At the end of this session, participants will be able to

1. Reflect on the influence of affect and intuition in binding and blinding learning.
2. Confront the challenge of covering content in a manner that ignores personal worldviews.
3. Identify strategies for opening the classroom to descriptions of experiences that help students suspend assumptions interfering with transformative learning related to academic content.
4. Suspend our own assumptions in order to better understand the perspectives and personal experiences of others regarding this important issue in higher education pedagogy.

Description of Topic

The purpose of this conversation session is to engage participants in exploring (briefly) the implications of research findings in neuroscience and social, moral, and evolutionary psychology as well as educational pedagogy about the roles of intuition, affect, and reasoning in learning and two major causes of interference with learning in higher education: (a) how worldviews naturally bind and blind students to their assumptions about content, and (b) how exclusive focus on content related explanations and fact inhibits suspension of assumptions across worldviews essential to transformative learning. One of our presenters will briefly share an example of our research-based, existential approach that encourages students to first reflect on descriptions of content-related personal experiences subsequently used to illustrate explanations of specific content, thereby helping them suspend assumptions, think deeply about content and alternative perspectives, and apply this understanding in their personal and professional lives. We will then open the conversation for all participants to describe personal experiences in teaching content to students with widely varying worldviews and the issues they have faced and addressed and the strategies they found useful. Together, we will discuss ways we can help students suspend their assumptions and move toward a deeper, more pluralistic understanding of content—and why this focus is needed for transformative learning to occur.

Facilitation Techniques

The session will begin with a 10 minute overview of (a) the emerging literature regarding human nature of worldviews that bind and blind, (b) studies in education about the rigidity of intuitive understanding, and (c) our research-based existential approach to transformational learning in higher education. Then, we will devote 35 minutes to an open conversation, inviting participants to share their personal experiences in attempting to overcome conflicting worldviews and strategies that might assist this challenge in a culturally diverse classroom. If needed, we will pose specific examples of issues, such as: In biological sciences, how can we help students with conservative religious worldviews open themselves to the study of evolution? Finally, during the last 5 minutes of the session, we will engage participants in reflecting upon ideas that particularly stood out for them during our conversation.

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Thursday

February 5, 2015

Poster Session B

12:10-1:30 PM

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

A Shift in Paradigm: Yes, You Can Have Your Crop and Eat It Too

Ozzie Abaye, Gregory Welbaum, Kang Xia, & Bo Zhang, *Virginia Tech*

Educational activities like field trips, hands on exercises, such as cooking, combine knowledge with "doing". In 2010, in response to an increased interest in the "food-chain – production to consumption", we added a food lab to the traditionally lecture-based World Crops and Cropping Systems course at Virginia Tech. This is upper-division undergraduate class intended for both major and non-majors. The course can also fulfill a requirement for core area 7 (Critical Issues in a Global Context). Therefor the course attracts students from the entire university (all colleges from over 18 departments each year). We selected those recipes that transform the single crop across cultural boundaries and expressed cultural values. For example a dish made out of corn is known as *ugali* in East Africa, *S nsima* or *nshima* in Zambia, *pap* or *mealie pap* in South African and in Zimbabwe. Italians eat polenta almost the same as Ugali. To further connect food with culture, we asked the international students in class and colleagues who have cultural connections with certain foods to come to the food lab and share their experience. During the wheat lab, Dr. Kang Xia (CSES) showed the students how to make Chinese Dumplings(Jiaozi). Dr. Kang also shared the tradition involving the making of dumpling in China. It was one of the most popular lab periods. Similarly, a student in class from Peru, Grazia Apolinares, shared a family recipe for Tamales Verdes (Green Tamales**).** She said **"**In Peru Green Tamales are a traditional meal from the Andes and the coast and is usually eaten as a breakfast meal. The traditional one is orange colored due to the different chili peppers". It also includes olives, hard boiled eggs, and chili in the filling". The outcome of the food lab exceeded our expectations (90%+ favorable rate). The students comments included: ...interesting to learn how other cultures use the different crops; The food lab was a great addition... I would have never tried half the food we did in this lab if out on my own; ...I cooked a few of the recipes that I got from class for some of my friends. Most importantly, this approach gives students a greater appreciation of world crop production, processing, usage and preparation as nutritious food from field to fork.

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A Strategy for Sport Management Students Seeking Internships

Kevin Ayers, *Radford University*

Many universites require students to complete full-time internships in order to graduate. The benefits of the internship experience for the sport management student has been well-documented (Hager, 1984; Parkhouse, 1978, 1984, 1987; Parks, 1991; VanderZwaag, 1980). Obtaining an internship can be a difficult and stressful prospect for students especially when the institution does not engage in placement. Few have written about specific strategies used to attain the sport management internship (Verner, 2004; Cuneen and Sidwell, 1994). This presentation discusses a specific self-search process for students seeking internship. This strategy can be incorporated into a programs curriculum and helps students to gain practical experience with professional development activity.

An Exploration of Self-regulated Learning Among Health Science Students

Salvador Bondoc & Christine Fitzgerald, *Quinnipiac University*

This presentation describes early findings of a longitudinal study which seeks to describe health science students' self-regulation and how they may change over time. The study also seeks to determine whether self-regulated learning (SRL) among health science students is linked to academic achievement. A total of 138 students from two health science programs were surveyed at the start and end of their Freshman year and at the end of their Sophomore year using the Motivated Strategies for Learning Questionnaire (MSLQ). Initial comparison shows no significant change in MSLQ scores. However, significant interaction between MSLQ and grade point averages were noted ($F[1, 119] = 5.028$, $p = .027$). In particular, students with low GPA scored the least in the MSLQ and in select subscales. Further examination reveals potential deficiencies in cognitive, affective and behavioral aspects of self-regulated learning. Implications toward academic support and advisement will be discussed.

Applying the Scholarship of Teaching and Learning to a Virtual Course

Marlene Preston, Brandi Quesenberry, Kayla Hastrup, & Cecilia Lopez, *Virginia Tech*

At institutions across the country, online courses are increasing in demand. Since virtual courses are here to stay, it is imperative that instructors learn how to best engage students and create effective online learning environments. To further assess our online course, research was conducted and strategies applied using Scholarship of Teaching and Learning. 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. The Virtual Public Speaking (VPS) course includes traditional principles of public speaking, while capitalizing on current technology 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 highlighted. Research shows that students often feel isolated in online courses; therefore, it may be more important that online courses include ample student-to-student and student-to-instructor communication to counteract this problem. Additionally, research shows that through the use of meaningful communication-based assignments, students can be actively involved in an online course and build connections with peers and the instructor. After three summer trials of VPS, course instructors began an in-depth review of the course structure and assignments, as well as a review of the self-reported data regarding student perceptions of growth across various presentational competencies and proficiency with course technology. This SOTL study helped to document the efficacy of the course and allowed the designers to consider further enhancements for subsequent iterations. Although online courses can suffer from reduced communication and student engagement, our research on the VPS course confirms that by incorporating multiple opportunities for teacher-to-student and peer-to-peer interactions, student involvement and satisfaction can remain high in the virtual classroom.

Are Graduate Teaching Assistants Equipped to Support College Students with Autism Spectrum Disorders?

T. A. Hassenfeldt, R. S. Factor, & A. Scarpa, *Virginia Tech*

Graduate Teaching Assistants (GTAs) are an important part of higher education, as they will bring their knowledge of modern classroom technology and teaching methods to their future positions in academia (Park, 2004). As such, there is immense value in training GTAs to support students with unique learning needs, such as those with Autism Spectrum Disorders (ASD). An increasing number of young adults with ASD attend college, and these students may need help navigating its complexities (White, Ollendick, & Bray, 2011). The current study investigated GTAs' understanding of this neurological disorder as well as their related pedagogical training. An online survey assessed GTAs' knowledge of ASD, including Tipton and Blacher's (2014) adaptation of the Autism Awareness Survey. Complete data were obtained from 52 current or past GTAs at a large research university (63% Caucasian; 60% female), most of whom had taught an undergraduate laboratory or lecture. Twenty percent of respondents had not heard of ASD, while 13% had a previous student who disclosed their ASD diagnosis. Only 14% of GTAs felt well-prepared to teach college students with ASD, and 86% of these GTAs indicated that this confidence was due to previous schooling or job training. Ninety-eight percent of GTAs did not endorse having received any ASD-specific training from their current school. Only 10% of GTAs felt they had received training from their school related to teaching students with any type of physical or mental health difficulties. GTAs clearly lack adequate information on how to support students with a variety of learning and psychological disorders, including ASD. While resources may exist to guide GTAs regarding these issues, greater awareness of and accessibility to this information may increase its utility. Improved resource distribution would provide a richer experience for students with ASD and their instructors.

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Assessing the Assessment Process: Developing a Rubric for Reporting at Virginia Tech

Ardian Daku, Ryan Cook, & Steven Culver, *Virginia Tech*

Given recent accreditation guidelines and state and federal mandates, it has become increasingly important that degree programs demonstrate that students are learning what we say they are learning. To that end, degree programs at Virginia Tech have developed student learning outcomes (what skills, knowledge, and abilities students possess when they graduate), measured and collected data on those outcomes, and have developed plans to adjust program or curricula to improve student learning. The purpose of our project was to evaluate these more than 250 program level assessment processes to ensure they were complete and of high quality. To assess the quality and completeness of the data, the presenters developed two one-page summary sheets for each program. For the first summary sheet, presenters gathered program and student learning data that had been uploaded to WEAVEonline, a repository for assessment data, into a template. This template allowed the presenters take a snapshot of the program, decreasing the possibility for misevaluation. For the second summary sheet, presenters developed a rubric utilizing SACSCOC evaluation criteria which allowed them to assess the completeness of data. The rubric assessed the inclusion of a mission statement, number of student learning and program outcomes, presence of outcomes data in the past year, presence of data over the past three years, number of action plans, and evidence of change made in the department based on measurement (direct and indirect separately) of a student outcome in the last three years.

These summary sheets could then be distributed to programs, providing a formative evaluation and engaging program faculty in a meaningful dialogue.

Barriers to Thinking: A Conversation about What Prevents Our Students from Learning

Eric Pappas & Rosealie Lynch, *James Madison University*

In the last decade, cognitive and behavioral barriers among university students have taken a new complexion, and many faculty now find themselves taking time and energy to overcome students' barriers to learning along with teaching regular disciplinary material. Often, the most common complaint among faculty is our students' relationship with/dependence upon technology, and the variety of problems it may cause. In addition, contemporary college students show a sometimes dramatic increase in problems related to relationships, stress and anxiety, family issues, health problems, personality disorders, and depression. For faculty, these issues pose a variety of instructional problems, that is, how to teach in such a manner that does not allow these barriers to dramatically influence our teaching. This conversation addresses these issues.

Closing the Research to Practice Gap through Online Professional Development: Considerations for Design and Implementation

Shawnna Helf, *Winthrop University*

There is often a gap between the research that happens in universities and this research being integrated into practice at the school and classroom levels. The purpose of professional development is to change teacher behaviors in order to improve instructional practices. The teacher workshop is the most typical form of professional development provided to practicing teachers (Abbott, Walton, Tapia, & Greenwood, 1999), yet it is also the most criticized in the professional literature (Garet, Porter, Desimone, Birman, & Yoon, 2001). A workshop typically involves a group of educators (e.g., grade level, school, school district) inviting a specialist in a particular area (e.g., reading, inclusion) to provide one day or several days of topic-focused training. At the end of the workshop, teachers may receive materials and contact information, then they return to the classroom to implement the skills independently. Often, little or no follow up in the form of support or monitoring is provided from the specialists to the teachers. Support through collaboration with colleagues may or may not be available after the workshop. Professional development is most effective when it is a sustained, intensive process that is integrated into practice. In this session, one model for providing online professional development will be shared. In this model, the professional development (a) spanned two months, providing more guidance, monitoring, and follow-up from the instructor; (b) included participants from across the state of South Carolina, which provided opportunities for participants to interact with and learn from each other; (c) provided participants many opportunities to apply learning in the context of their classrooms; and (d) was self-paced, making it more efficient than a "one-size fits all" model. Participant performance and feedback will be shared, as well as considerations for designing and implementing these experiences.

Collaborative Practice in Education -- Training the Rural Superintendent: Program Proposal

Jerry D. Jones & Margaret S. Trueman, *Fayetteville State University*

Leadership for rural county school systems in the twenty-first century demands experience and skills set that will facilitate the meeting of diverse student needs; needs found to impede successful learning outcomes. This proposal is for an educational leadership training program that teaches leadership strategies that will address the needs of K-12 students by encompassing the expertise of others in the academic and service communities. Foundational to this program will be a culture that allows the realization that educators and leaders do not have all the answers. The focus of education has traditionally been driven by teaching and learning but it is essential that there is a shift to channeling resources to what is best for each student and each school system. To affect all students there needs to be a collaborative approach to education that draws on the expertise of all, rather than the few; an expertise that supports the sociocultural uniquities of each rural school system. The power for change must be culled from the skills, attitudes and values of a variety of academic and community constituents that have, or could have, a vested interest in an educational system grounded in the realities of the twenty-first century. The academic disciplines vital to this program include sociology; social work; history, political science; economics; marketing; entrepreneurship; health and wellness, and technology. Concurrently there must be the inclusion of societal groups in the training of educational leaders. These community groups include, but are not limited to, civic groups, faith-based groups, veterans, health/wellness groups, and information technologies. This community-academic initiative would provide a leadership model and training for the twenty-first century school leader to meet the real needs of their educational community.

Conducting Needs Assessment to Determine the Quality of College Graduates for Saudi Labor Market: A Case Study of Woman Graduates in Computer Science and Banking Sector

Mashael Alqahtani, *Virginia Tech*

Education plays a central role in preparing individuals to enter the labor force, as well as in equipping them with the skills to engage in lifelong learning experiences. However, the relationship between educational outcomes and labor force needs is a complex one that does not always align well. In Saudi Arabia, the rapid expansion of higher education has not necessarily been accompanied by rapid economic growth. Growing body of literature has investigated the role of higher education on supporting graduate employability in Saudi contexts, often with reference to either the quality of the higher education outcomes or the employers' views regarding what higher education should be providing. However, none of the methodologies and tools related to needs assessment were constructed in the Middle East. Therefore, this study examines the current status and effects of the unemployment rate on college graduates in Saudi Arabia by using a need assessment process. At a minimum needs assessment methodologies and tools would need to be translated. It can also be assumed that existing methodologies would need to accommodate different cultural settings. A case study of female graduates from Computer Science of selected Saudi universities and employers from the banking sector will be chosen to conduct needs assessment. This process will collect and analyze data to determine what employability competencies the current graduates have, what employability competencies that the current labor market requires, and any discrepancies between these two. Finding of this study will be used to contribute to the higher education literature in Saudi Arabia as it is the first study that conduct needs assessment to explore the quality of college graduates and employers perception in terms of employability competencies needed for Saudi labor market.

Conversation: Supporting Faculty Long Term through the Creation of a Critical Thinking Teaching Circle

Mary L. Padden, Lee Ann Guenther, & Marcia Fiedler, *The Richard Stockton College of New Jersey*

Three faculty created a campus wide Critical Thinking Teaching Circle (CTTC) to provide long term support of faculty efforts in including critical thinking teaching/learning and assessment strategies in their courses. This initiative was an outgrowth of opportunities to participate in a summer Institute on Critical Thinking at the college as well as one faculty's experience in attending the 33rd International Critical Thinking Institute (ICTI). The purpose of the CTTC was to provide ongoing interactive sharing and support in the use of critical thinking teaching/learning and assessment strategies to the larger college community. CTTC members included experienced and novice full, part time, and adjunct faculty representing each school at the college with the exception of the School of Business. A copy of the Nosich (2012) text*, Learning to Think Things Through* and the ICTI poster, *Standards Elements Traits* were provided to each member as resources. Through monthly meetings and creation of a learning management system repository of teaching/learning and assessment materials, this grass roots initiative expanded faculty efforts to foster critical thinking skills in our students. At the end of the academic year, CTTC members shared written reflections on challenges and successes encountered in their efforts. From these reflections, the CTTC has been revised and moves into its second year more focused with a structure that includes monthly topics and guest speakers. We would like to share what we have learned along our journey to and through critical thinking in this Conversation Session.

Conveying Algorithm Analysis Concepts Through Visualization

Mohammed F. Farghally, Eric Fouh, Sally Hamouda, & Clifford A. Shaffer, *Virginia Tech*

Data structures and algorithms (DSA) courses emphasize abstract concepts related to procedural dynamics and algorithm analysis. These concepts are hard for students to grasp when conveyed using traditional textbook material. Algorithm visualizations (AVs) emerged as a technique for conveying DSA concepts using interactive visual representations. Current AVs focus mainly on conveying algorithm dynamics concepts, and the AV community has a lot of successful experience with this. The AV community has produced little in the way of visualizations to present algorithm analysis concepts that are still conveyed using text and static images. Inspired from the concept of visual proofs [1], we seek to systematically develop a new generation of visualizations capable of conveying algorithm analysis concepts to give the required intuition about the running time analysis of an algorithm. The sorting modules of OpenDSA e-textbook [2] were enhanced with interactive algorithm analysis visualizations in which analysis explanations are presented as a series of slides where each statement of the explanation is connected to a visual showing the data structure or the algorithm. Graphical primitives are leveraged to represent the amount of work required for each algorithm step in which the total running time can be viewed as the total surface area of the resulting shape. To evaluate the pedagogical effectiveness of these visualizations, we are planning to conduct time and performance evaluation across two offerings of CS3114 in Virginia Tech. In time evaluation, the time spent by students looking at the analysis material without and with the visualizations will be compared to get an indication about students' engagement. In performance evaluation, students' grades with and without the visualizations will be compared to assess learning gains.

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Creating an Online Asynchronous Elementary Education Course

Drew Polly, *University of North Carolina at Charlotte*

This research study examined students' work samples during the implementation of an undergraduate elementary education course in an online asynchronous format. The course, which focuses on preparing students to simultaneously teach literacy and content in elementary school classrooms, included two major projects, an interdisciplinary unit, and an edTPA literacy project. Inductive qualitative analyses of these two projects indicated that: 1) both sets of projects for all students met the benchmark on faculty-developed rubrics, 2) the amount of feedback required by the instructor varied greatly by student, and 3) students' reactions to the online format were overall positive with the only complaint being the amount of work assigned. Implications for online course instruction are also shared.

Curing the High DWF Rate in First Year Science Courses

Adam Childers, Jan Minton, Hannah Robbins, Kristin Sherman, & David Taylor, *Roanoke College*

Freshman entering college oftentimes have trouble adapting to the rigor of their courses; science classes in particular can seriously damage a student's GPA, putting them at risk for academic probation or suspension. First semester calculus has perennially had one of the highest DWF rates at the college leading the mathematics faculty to rethink the course to address this problem. The main issue with calculus is the broad range of mathematics backgrounds with which the students enter the course. Our solution has been to split calculus into two separate tracks. The first track has the same pace as the previous offering, but the second track splits our original course into two semesters with additional just-in-time algebra review. In previous years students couldn't understand calculus content because their algebra and trigonometry skills were weak. After analyzing the success and failure rates of previous students, we used a placement test score, along with SAT math and high school GPA values to place them in an appropriate section. Additionally, we allow students to switch from the one semester track back to the two semester track after the first test to ensure that we get them in the correct track for their ability level. Sections from each track are paired to help facilitate this. In this poster, we will discuss how we implemented the new calculus curriculum and the preliminary results of how successful the change has been by analyzing current DWF rates with those of previous years. While we focus on calculus as an example on how to improve mixed ability first year science courses, we will also address how to implement this strategy in other science courses.

Designing Student Assignment to Reflect Evidence-Based Practice

Milena Staykova, *Jefferson College of Health Sciences*

Finding the evidence to guide clinical decision-making becomes a fundamental skill for professional practice in the contemporary healthcare. Despite the proven benefit of nursing care based on evidence, many nurses may feel intimidated by the efforts to find quality information. The skills to find and appraise evidence for quality, rigor, and applicability in clinical practice should be properly introduced in the classrooms. In nursing, policy and procedures, and clinical practice guidelines (CPGs) direct the decisions of daily practice. An assignment in a research course for senior nursing students, ask them to compare local and national guideline recommendations. The knowledge from this experience will be then instrumental in future professional care. Pedagogical Practice: In this classroom assignment, the students apply knowledge gained from reviewing evidence resources when seeking for potential recommendations addressing a clinical PICOT question. The students first select a national guideline by searching the following sites: National Clearinghouse @ guidelines.gov, TRIP, the Joanna Briggs Institute, or the Registered

Nurse Association of Ontario. From the national guideline, the students identify three recommendations that are applicable to the clinical area of interest as indicated in the research question. Second, the students select a local guideline from local and identify three recommendations that are related to the same areas of the national guideline. Finally, the students compare three recommendations from the national and local guidelines, summarize the lessons learned from this assignment, and clearly answer the following:
1) Discuss the impact of the CPG on the nursing practice in general.
2) Explain how a nurse may initiate change that is furnished by the knowledge from the national guideline.
3) Make a recommendation to the local Policy and Procedure committee whether they need to update the CPG or not. Explain why "yes" and why "not".
4) Explain how you plan to use the skills developed during this assignment in your future professional practice.
Discussion: This assignment introduces the students to the sources of evidence that guide their clinical practice. Furthermore, the assignment is integral in developing critical thinking appraising evidence from local and national sources.

Designing an Interdisciplinary Graduate Course: A Student Centered Approach to Curriculum Development

Garland Mason, Kim Niewolny, & Susan Clark, *Virginia Tech*
Amanda McWhirt & Michelle Shroeder-Moreno, *North Carolina State University*

Interdisciplinary graduate curriculum is becoming ever more relevant. Universities are increasingly offering interdisciplinary programs that require collaborations across colleges, departments, and academic units to create dynamic learning experiences. This study examines graduate student learning preferences and expectations as a foundation to create an interdisciplinary graduate course in food systems at two land-grant universities. Using a descriptive qualitative design, we conducted four focus groups for the purpose of student-centered course development. Twenty-seven master's and doctoral students from both universities participated. Focus group data illustrate students' perceived knowledge of the proposed subject matter, their professional and personal interests in course content, and their ideas for potential course design and learning assessments. The focus groups also allowed us to better understand students' motivation in taking this interdisciplinary course within the context of their own educational and career goals. Findings demonstrate a strong desire for interdisciplinary content and learning collaborations with peers. Additionally students indicate interest in learning from community practitioners to support experiential learning goals. However, students expressed varying levels of understanding about the nature of experiential learning and had divergent visions for the scope and scale of these learning opportunities. The course will be designed based on focus group data, a literature review, and experience gained from a food systems course previously taught at one of the universities using an action research model. The graduate-level course on food systems, with a focus on food security, will be offered simultaneously at both universities in 2015. Through this poster presentation we will share results of our analysis and discuss the use of student-centered approaches in curriculum development, especially in the development of an interdisciplinary course. We will also provide copies of the course syllabus for others to adapt in the creation of their own related courses.

Developing a Concept Inventory to Enhance Teaching of Recursion

Sally Hamouda, N. Dwight Barnette, Eric Fouh, Mohammed F. Farghally, Hicham G. Elmongui, & Clifford A. Shaffer, *Virginia Tech*

Recursion is one of the most important and most difficult topics in lower division computer science courses. Recursion is an advanced programming skill rather than conceptual knowledge, and it is hard to know if students understand it well or not. We describe our development process to create a concept inventory (CI) that can be used as a pre- and post-test to evaluate the effectiveness of recursion teaching. As part of this process, we identified misconceptions that recursion instruction should address. We also conducted a survey of instructors regarding the state of recursion instruction. Based on these results, we can conclude that (1) there exists a need for a better process

of instruction on this topic, based on increased practice, and (2) that students universally do not spend enough time out-of-class practicing recursion. This gives space for an educational intervention on recursion that provides students with additional practice. We have developed a tutorial on recursion as part of the OpenDSA framework, a collection of open-source materials that make extensive use of algorithm visualizations and automatically assessed interactive exercises. The tutorial provides additional value over and above typical instruction as it currently occurs. As a side benefit, the act of doing the practice exercises will help to insure that students spend adequate time on the process of learning recursion. The CI will be used to measure the learning gains from the tutorial. The recursion tutorial will be used in CS2 courses, replacing or augmenting current instruction on recursion.

Development of Electronic Instructor's Manuals for College Textbooks

Kathleen Parrott & Julia Beamish, *Virginia Tech*

Kitchen Planning: Guidelines, Codes, Standards (Beamish, 2013) is described on the publisher's website as: "the leading resource for student and professional kitchen designers—completely revised and updated" (Wiley, 2014). *Bath Planning: Guidelines, Codes, Standards* (Parrott, 2013) receives a similar description on the same website. An important goal in the development of these comprehensive references were their use as texts for college level classes in residential design, especially programs accredited by the National Kitchen and Bath Association. Therefore, the authors were challenged to also develop Instructor's Manuals for both books. Each book chapter has a companion chapter in the Instructor's Manual, available on a password protected portion of the Wiley website, formatted as follows:

- *Chapter Summary.*
- *Learning Objectives.*
- *Key Terms* – terminology that could be defined within the book chapter.
- *Review Questions* – keyed to pages in the book chapter, these review questions were also included in the text books.
- *Topics for Instructor-led Discussion* – questions to encourage students to think and discuss topics in the chapter, especially as related to current issues.
- *Application Activities* – three or more activities or projects that could be used in a classroom or course setting to integrate the knowledge gained from the chapter.
- *On-line Exercises* – learning activities that depend on internet resources and frequently involve product selection and specification.

There were several challenges in the development of the Instructor's Manuals, including the rigidity of the format and the separation of content by chapters. The authors created cross-referencing of activities, especially in the *Application* and *On-line* sections to better integrate content and facilitate learning. In addition, the texts were broadly targeted to diverse North American audiences, so vocabulary and measurement systems had to be appropriate to both U.S. and Canadian design practices, requiring some duplication in presentation.

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Don't Say Don't: A Look at How Positive Language Used in the Prekindergarten through Twelfth Grade Setting Can Be Applied in Higher Level Education

Katie Bell, *Mercer University*

Research displays that there is a significant impact of teachers', peers' and other influential mentors' language and interactions on primary school children's self-talk and self-perception (Burnett & McCrindle, 1999). Moreover, when students experienced positive interactions and positive statements made by teachers and peers, these students were shown to have higher self-esteem, and students who experienced negative interactions and negative statements were shown to have lower self-esteem (Burnett & McCrindle, 1999). However based upon the presenter's review of the literature, not much research has been conducted in order to determine how teacher and peer statements and interactions in a higher level of education impact a student's self-esteem and self-perception. First, the presenter will reflect upon the importance of improving student, teachers, peers, and other influence mentors' relationships. Second, the presenter will discuss how teacher, peer, and other influential mentor statements and interactions can be altered in order to improve student/teacher relationships in an academic setting. More specifically, the presenter will delineate specific language and interactional techniques that have been utilized in the early education classroom setting as well as an analysis of the efficacy of these techniques. Last, the presenter will discuss how these language and interactional techniques can be applied in a higher level of education.
Keywords: positive/negative statements, positive/negative interactions, self-esteem, self-perception, interactional techniques

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Dual/Concurrent Enrollment as a Strategy for Pedagogical Innovation and Institutional Change

Miles S. McCrimmon*, Reynolds Community College*

Concurrent enrollment (CE), the practice of offering college courses to high school students, has long been viewed by academics and admissions officers in higher education with healthy skepticism, even as it has increasingly been touted (and mandated) by legislators as a near panacea. College and high school partners that offer CE have begun to move out of their defensive crouch, especially as layers of policy, oversight, best practices, and strategic thinking have been latticed into its administration. Once supporters and skeptics both get past the hidebound thinking that dictates a specific location where (and time during which) the "first two years" of college must take place, new vistas for strategic innovation open up for the institutional partners engaged in designing and delivering CE coursework. This poster session focuses on how five strategic objectives have been enhanced at a community college since it launched a comprehensive CE program with the school divisions in its service area: (a) achieving student and faculty learning communities through cohort-based, linked courses; (b) using open educational resources (OER) as alternatives to traditional print textbooks; (c) maintaining collegial transparency through a shared, visible collection of pedagogical tools and teaching resources; (d) conducting programmatic assessment using a stable population of full-time CE students; (e) refining professional development in several core disciplines. What do these five arenas have in common? They are each persistent domains of innovation, core values central to the work of secondary and postsecondary education, but damnably difficult to develop and sustain. Perhaps the greatest boon for an institution that chooses to expand its reach through CE is the potentially profound and long-term ripple effect CE can have on the institution's own internal standards and practices. By going public and seeing itself through others' eyes, an institution is challenged to articulate its highest aspirations.

E-Learning as Part of Training Special Education Students in Teaching Low-performing Children

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Training students to become experts in learning deficiencies requires more in-depth theoretical knowledge and practical tools (Shulman, 2005). The current training programs for teachers aims to educate teachers to be well-oriented at being a teacher in the 21st century. This study was conducted over a period of one year by using the "Synchronous Short- Term Tailored Teaching for Low-Performing Students" (Fuchs, et al. 2012) method by students from The Kibbutzim College of Education, who mentored school children in basic skills of Mathematics and Language. The study was made using quantitative methods with qualitative additions. The sample data included 98 school children in grades 4 and 5 in a community school in the central Israel with a population from a lower middle class socio-economic background. Pedagogic Conclusions: The students praise their abilities and professional understanding after experiencing building and teaching children in the tailored e-learning programs. Conducting tailored e-learning sessions for children with learning deficiencies and low performing children help maintain the difference in grades compared to the other children in the class and help in not raising it. More insight should be given to the currently employed methods of evaluation in the educational system and on building a personal evaluation scale alongside with the grades of the class.

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e-Mail of Board Review Questions in Osteopathic Medical School Education - Preliminary Evaluation of an Asynchronous Learning Tool, "The Weakly Bored"

Richard P. Wyeth, Dalia Meisha, & James Powers, *Edward Via College of Osteopathic Medicine*

This study evaluates student perception of the utility of "The Weakly Bored" as effective in medical education and board preparation. The investigators sent weekly review questions, written by the authors and reviewed by scientists and physicians to all VCOM medical students and graduates. Questions were sent on Friday followed by answers Monday with explanations of correct and incorrect answers. After three years of weekly questions, students were e-mailed an online survey asking for anonymous assessment. Study outcomes include participants' evaluation of the usefulness of "The Weakly Bored" and its resemblance to the Comprehensive Osteopathic Medical Licensing Examination (COMLEX) for those who have taken it using a 5-point Likert scale. Of respondents (n=107) 75% reported reading "The Weakly Bored" at least every 2 weeks. On average, respondents spent 5 minutes per questions with 70% answering questions prior to receiving answers. In terms of the usefulness of "The Weakly Bored", 81% agreed "The Weakly Bored" was useful in improving understanding of clinical and biomedical concepts with 87% ranking it 3 or better. A small proportion of the participants (30%) had taken either COMLEX 1 or 2 and 82% of those rated the resemblances of "The Weakly Bored" to the actual board exam as 3 or better. Eighty-five percent of those who have taken COMLEX agreed that "The Weakly Bored" is similar to the COMLEX compared to 49% of respondents who have not taken COMLEX ($p=0.004$). This suggests that student perception of the "Weakly Board" in terms of similarity to COMLEX style questions differs significantly from before to after taking the COMLEX exam. From this preliminary assessment, "The Weakly Bored" appears a useful, novel and effective adjunct in osteopathic medical education. Future work will consider including COMLEX grades and GPA in evaluating "The Weakly Bored."

E-PORTFOLIO: Instructor Influences and Impressions of Student Learning in STEM Fields

Daniel Yaffe & Jianqiang Zhang, *Virginia Tech*
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University STEM Instructors are increasingly using e-portfolios to assess student learning. Due to their growing presence in University STEM courses, it important to understand how and why STEM instructors are using e-portfolios and whether or not STEM instructors perceive them to be effective at assessing student learning. In order to understand the instructor perspective of the value and effectiveness of e-portfolio, we interviewed five STEM instructors at a large state university in the Mid-Atlantic and asked the following research questions: What are STEM instructors' perceptions of e-portfolio as a reflective tool? How do STEM instructors evaluate e-portfolio assessments and what type of feedback do they give students on these assessments? How STEM instructors think these types of assignments contribute to students' learning of course material? How do STEM instructors see e-portfolios as contributing to students' professional development in STEM fields? What STEM instructors see as the purpose of e-portfolio? The interviews yielded a phenomenological study that revealed the attitudes of STEM instructors using e-portfolio toward e-portfolios, how and why STEM instructors used e-portfolios, and whether or not they perceived e-portfolios as effective at encouraging or revealing student learning. The results suggest ways that other instructors might approach and use e-portfolios to make them more effective tools for student assessment.

Effects of Spatial Intelligence-based Instruction on Learning Pictorial Idiomatic Expressions in an EFL Context

Mehdi Solhi Andarab & Ebru Öztürk, *English Preparatory School, Bahcesehir University, Turkey*

In this study, at the outset, the effect of spatial intelligence-based instruction on learning pictorial idiomatic expressions in an EFL context was investigated. Then, an attempt was made to find the possible difference between male and female learners' spatial intelligence with regard to the learning of pictorial idioms. To this end, 50 female and 50 male EFL students were randomly selected. After distributing a questionnaire, the female participants with high spatial intelligence were assigned to the experimental group and the participants with low intelligence were assigned into the control group. The same procedure was followed with regard to the male participants. Due to the fact that the number of the students was slightly high, they were divided into several subgroups. Groups proved to be homogenous with regards to their understanding of the idioms in focus. Then, the pictorial spatial intelligence-based idioms were taught to the both control (the learners with low spatial intelligence profile) and the experimental groups (the learners with high spatial intelligence profile). The treatment lasted for 3 months, 2 days a week. An independent samples t-test run on the scores obtained from a posttest indicated that there was a significant difference between the control and the experimental groups of the both male and female learners in understanding the meaning of the idiomatic expressions. However, the results obtained from the two-way ANOVA run on the data obtained from the posttest showed that there was not a significant difference between the male and female learners' intelligence in learning the pictorial idioms. As a result, the spatial intelligence-based instruction of English idioms proved to be highly beneficial when teaching idioms.

Employability Among Engineering Students: A Case Study from Bangalore

S.A.Vasantha Kumar, *Dayananda Sagar College of Engineering, Bangalore*

More than 70 percent of engineering graduates are not employable as per India informatics. Out of 3500 engineering colleges in India, companies visit 700 colleges for campus recruitment. Companies feel 3.25% of candidates are good to be employed. Out of 10 lakh engineers who pass out every year, 25,000 get suitable job, 1, 75,000 get some job while 8 lakh engineers fail to get a job. A popular Bangalore daily news paper recently reports that 30% of F1 Visas to US are from Bangalore while Chennai stand at 25%. The statistics are alarming. Employability refers to graduates' achievements and their potential to obtain a graduate job. This poster reports on a study that taps into a timely topic in order to determine the employability indices of engineering students. An existing scale was adated to measure three constructs of employability namely, self-esteem, self-efficacy and self-confidence. For a pilot sample of 75 students at 5% significance level and 9% error rate, the sample size calculated was 610. The reliability of the instrument used was established by determining the Cronbach alpha coefficient as 0.87. For a final survey on 611 students at Dayananda Sagar College of Engineering, Bangalore, employability indices were developed and classified. The demographic profiles of students chosen were gender, educational background, family income and aggregate marks. Using chi-square tests of cross table relationships, the influence of demographics on employability indices were examined. It was observed that except gender all other demographics do influence employability. This study enabled to classify students based on employability indices. The questions are how to increase employability among engineering students? Indian Engineering graduates are looking at the greener pastures of the west. Accelerated economy generates jobs. Can the students with medium and low employability be trained as entrepreneurs and hence create jobs? This poster also suggests some suitable measures that answer the above questions.

Employing Innovative Pedagogy to Enhance Preservice Teachers' Reflective Practice Utilizing Digital Technology: A Pilot Study

Paula Schubert, *Limestone College*
J. Elizabeth Casey, *Huntingdon College*

This pilot study examined how the use of digital technology might enhance preservice teachers' teaching experiences and reflective practice in elementary and middle schools during practicum. Reflective practice has demonstrated enhanced understanding of teaching practices and improvement in strategy selection (Day, 1999; Lave and Wenger, 1991). Likewise, reflective practice can enhance self-efficacy in preservice teachers (Darling-Hammond, 2003; Aubusson, Griffin, and Steele, 2010). The goal of this study was to enhance preservice teachers' reflective practice, thus enhancing strategy selection and classroom instruction. Aubusson (2004) and Aubusson, Griffin, and Steele (2010) noted that preservice teachers often engaged in descriptive rather than analytical reflective practice. If preservice teachers are explicitly taught how to engage in reflective practice through modeling by college supervising teachers, and then engage in reflective practice with and without self-video, will self-refection enhance instruction?

One focus of this study was to enhance preservice teachers' reflective practice through their increased awareness and use of technological tools. This study analyzed preservice teachers' written reflections pre and post use of digital technology to enhance written reflections of their classroom instruction during field experiences. Results revealed that when preservice teachers were engaged in effective reflective practice via digital technologies, enhanced self-efficacy resulted. This pilot study, undergirded with sociocultural theory (Vygotsky, 1978), engaged preservice teachers at two colleges in two southeastern states and focused on preservice teachers' reflective practice before and after the use of digital technology. For this study, a valued pedagogical goal was established, and the intervention was adapted and/or modified to ensure preservice teachers understood how to effectively reflect on their classroom instruction to improve educational outcomes for K-8 students.

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Engaged Learning Leadership

David D. Carbonara, *Duquesne University*

This proposal presents a description of how to measure the effectiveness of a Director of Engaged Learning at a college or university. Engaged learning encompasses activities of service learning, medical and dental science preceptor models, ethical medicine, community advocacy, accounting majors working with clients, field experiences for pre-service teachers, study abroad programs and other examples of connecting the theoretical concepts from the higher education classroom to the practice of those concepts in actual businesses, institutions and communities and global, virtual environments. Smyth, Angus, Down and McInerney (2008) discuss the problem of young people becoming disconnected from schooling, while Dunlap(1998) discusses the positive changes students experience as a result of engaged learning as measured by reflection. Technology can play a large role to provide opportunities for students to engage in their learning. A Center of Engaged Learning needs a leader that motivates faculty and students to create and participate in the activities and knows how to integrate instructional technology to create global opportunities for the students. The Director of an Engaged Learning Center leads the process to collaborate with faculty and administrators to construct a living strategic plan based on a shared vision of the philosophy and outcomes of engaged learning. Reflections are used to measure, assess and evaluate student's interpretation of the engaged learning process based on Bradley's Criteria for Assessing Levels of Reflection (1995). It is anticipated that students with one or two semesters of engaged learning experience will receive Level One scores on the Bradley Criteria list, while students with more than two semesters will receive Level Two or even a few Level Three scores. The Director of Engaged Learning will exhibit positive examples of communication and collaboration with immediate members of the engaged learning community. The director's effectiveness will also be measured by an increase in student participation rate in engaged learning and that more students will score at higher levels of Bradley's list after two semesters.

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Estimate Personal Student's Responsibility to Learn

Uladzimir Shtukar, *North Carolina Central University*

A new quantitative evaluation method is proposed to determine a personal student's responsibility grade at any Math/Science class. The grade is an assessment of the extent to which a student performed his/her responsibilities toward succeeding in a class. Each grade is estimated from five equally weighted factors that are introduced in the session as a base for any evaluation. The implication of students' responsibility grades on their final grades is analyzed for classes taught by the author. Responsibility grades of 70% and greater are found to guarantee a passing course final grades (A, B, or C) for the most undergraduate students and for all graduate students.

Examining Student Questioning Habits as a Means of Assessing Media Literacy in Higher Education

Evelien Schilder, *Virginia Tech*
Theresa Redmond, *Appalachian State University*

Media literacy education (MLE) has historically been taught by using a series of critical questions or key principles to guide learners as they engage in analysis, evaluation, and interpretation of media messages. Since questioning plays a central role in MLE, the critical questioning habits of students in four university classes were assessed before and after they took a course in which media literacy was a key component. The purpose of this study was to develop a systematic way to assess students' questioning habits and to assess whether their questioning habits improved by taking a media literacy related course. Students' questioning habits were assessed based on the complexity of questions they asked and the types of questions they asked. The pretest was conducted in August 2014 and the posttest will be conducted in November 2014.

Examining the Impact of Coursework Intended to Prepare Math Deficient University Students for STEM Achievement and Sustained Learning: A Regression Discontinuity Design

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

Expanding the number of students successfully graduating from Science Technology Engineering and Mathematics (STEM) disciplines is a priority of many institutions. Ironically, this increase in demand parallels a period of time in which there is a growing population of students who display both disinterest and poor performance in abstract mathematics. As a result, it is often necessary to accept students into these programs that are not fully prepared for the coursework required for the STEM disciplines. Typically, students who are not prepared are not retained. The current investigation examines the impact of developmental coursework that was intended to build the foundational skills and knowledge of students entering a university STEM program. This investigation includes data from students with below average ACT mathematics scores who are required to successfully complete a lab-intensive remedial course (treatment) from 2008-2014. Using a regression discontinuity design, treatment group student data is compared to control group students (higher ACT mathematics scores) on achievement in later required core courses. It was found that students who were remediated performed as well as or better than students judged as not in need of remediation, in subsequent core courses, suggesting that the remedial coursework provides a positive sustained impact.

Exploring the Design and Effectiveness of Social Media Learning Activities (SMLAs)

Ghania Zgheib, *George Mason University*

This study explored how experienced faculty are using social media to support student learning. More specifically it analyzed the types of social media learning activities (SMLAs), their design, the cognitive processes that they support, and the types of knowledge that students engage in when completing SMLAs. A multiple case-study design was conducted in Fall 2013, and data was gathered from five different cases of six faculty using social media in their courses. The analysis of the SMLAs and students' posts in SMLAs revealed that social media has the potential to support student learning and promote different levels of cognitive processes and types of knowledge despite the lack of use of the social feature in social media. The analysis also suggested that faculty used social media to replace Learning Management Systems.

Faculty Development through Knowledge Management: Attitude and Attribute towards Computer

Sudeshna Lahiri*, University of Calcutta*

Education sector in India has been the largest after USA and China. To keep pace with the global market, Government of India has launched National Mission in Education through ICT to increase the coverage in all the 378 universities and 18064 colleges during Eleventh Plan. The Indo-U.S. Interuniversity Network for Higher Education and Research was launched in 2005, which is collaboration between over 20 American universities and Amrita University, Indian Space Research Organisation (ISRO) and the Department of Science and Technology (DST) to enhance higher education and research in India through the EDUSAT e-learning network. Although the Universities and higher institutes in India have had computers for almost two decades in India, ways to use them effectively have evolved slowly and patchily. The use of ICT may be more frequently for research with very fewer uses for pedagogy and classroom instructions among the teachers in higher education in India. The purpose of the study is to measure attitude towards computer among teachers teaching in University of Calcutta (India) in relation to Computer usage attributes. The methodology employs descriptive research with a sample of 100 teachers, irrespective of their position as Assistant Professor, Associate Professor and Professor, randomly selected from the various departments surveyed. The study further explores the attitude of teachers towards computers and identified Computer usage attributes vis-a-vis occupational variables. The study reveals that the University teachers use ICT to generate resources for research projects and papers rather than developing instructional materials and exploring it as teaching aid for classroom interaction. To conclude, there is a mismatch in knowledge management among University teachers in reference to knowledge generation and knowledge dissemination.

Flipping the Classroom to Enhance the First-Year Experience

Mike Krackow, *Virginia Military Institute*

Virginia Military Institute developed a Core Curriculum is that will graduate students who possess "a lifetime commitment to physical fitness and wellness" as one of its attributes. Specific learning outcomes through the Health and Wellness domain included: (1) applying a working knowledge of wellness-related behaviors to achieve and maintain a healthy lifestyle, and (2) recognizing the impact of physical inactivity on health and wellness in a societal context. As part of the new Core Curriculum, the PE 105 Wellness Concepts course was developed for first-year cadets.

Future Faculty: Teaching Them How to Teach

Claudia Howell & Laura E. Welfare, *Virginia Tech*

Doctoral teaching internships are an effective way to prepare students to teach as faculty in their chosen discipline. Teaching internships provide doctoral students the opportunity to practice the complex task of teaching a college level course, with an individualized balance of challenge and support from the faculty supervisor. Individualized instruction like this allows for scaffolding (Wood, Bruner, & Ross, 1976) and thereby maximizes doctoral student learning. The internship requires doctoral students to practice their new teaching skills, reflect on those experiences, receive and integrate feedback about their performance, and evaluate the outcomes of their work. It is an intentionally structured, authentic learning experience (Herrington & Herrington, 2006) and a core component of Counselor Education doctoral programs. In the Counselor Education program at Virginia Tech, doctoral students co-teach master's level courses with core faculty. Faculty members model methods for curriculum planning, interactive classroom instruction, and assessment of student work. Doctoral students choose personalized goals, assume leadership roles in the class, and receive weekly supervision from faculty. Classes are videotaped so doctoral students are able to review their work after the fact, when they can focus on their own performance or other chosen aspects of the class. Doctoral students show segments of these videos in supervision with faculty and a small group of fellow doctoral students. Doctoral students collect feedback from master's students, which are combined with a self-assessment in a program evaluation of their teaching. The program evaluation and faculty evaluation become fodder for discussion at the conclusion of the semester and often prompt ideas for ongoing development. The internship allows doctoral students the opportunity to practice new skills in an authentic environment that, without faculty supervision, would be inaccessible. It is one strategy for preparing doctoral students for the complex and often autonomous task of teaching college courses that will be part of their jobs as faculty.

Getting to Know the Hopscotch iPad-based Programming Language

David D. Carbonara, Joseph Kush, & Bekir Mugayitoglu, *Duquesne University*

Teaching children programming is a new way to develop their computational thinking and problem solving skills. In particular, in this century, computational thinking and problem solving via coding is the best way to solve science, technology, engineering and mathematics (STEM) problems, and that is also what students need. Hopscotch block-based programming language for iPad designed for young novice programmers, ages 7 to up. The goal with Hopscotch is not simply to help young children learn to code. The world of Hopscotch is expanding opportunities for young novice programmers to imagine, create, and learn through coding. The ultimate goal is to help young novice programmers develop as creative thinkers, makers, and innovators.

Graduate Degrees in Agriculture and Natural Resources at 72 Land Grant Institutions

Teneisha Hodge-Wilson, Demontre Purvis, Mary Marchant, Claire Kelling, Ho Renee Cho, Kyle Malec, Eric Smith, & Eric Vance, *Virginia Tech*

Recently, there has been a pervasive concern that there will not be enough scientists in the future that are able to solve advanced agriculture and research-oriented problems. Therefore, the FAEIS (Food and Agricultural Education Information System) team determined and interpreted the growth in the number of masters' and doctorate degrees awarded in colleges of agriculture and natural resources compared to all masters' and doctorate degrees awarded. Specifically, we examined seventy-two Land-grant institutions for the reporting years of 2004 through 2012. Data for the analyses were retrieved from the Food and Agricultural Education Information System at

http://www.faeis.ahnrit.vt.edu/. We focused our analysis on four major trends: graduate degrees awarded by the largest programs, gender, and ethnicity as well as the aggregated trend. We were able to draw conclusions specific to each area of analysis. Overall, we found that from 2004 to 2012, there has been a slow growth in the number of degrees awarded for doctoral programs in colleges of agriculture and natural resources compared to all degree programs at Land-grant institutions.

Helping Internationally Educated Academic Professionals Become Teaching Faculty in North American Academic Institutions

Valerie Scovill & Maria Glass, *George Brown College*

As our institutions of higher learning become more multicultural, we are welcoming people into our professional communities who have teaching credentials and experience from around the world. However, there can be barriers for internationally educated and experienced academic professionals to acquiring and maintaining a teaching position. Some of the barriers are a lack of experience with how professionals communicate with one another in an academic setting, and some are a lack of understanding of what North American students expect of their teachers and their learning environment. In 2007, George Brown College in Toronto received funding to pilot a program in which internationally experienced college and university professors could learn, and put into practice, active learning approaches to their classroom practice, and professional communications strategies to their job search. The result was a 2-semester program designed to address these needs. Over the past 7 years the program has evolved to become a unique post-graduate program, with hybrid delivery, which sees more than 80% of its graduates become successfully employed in the field of higher education. This session will describe the evolution of the program, the lessons learned, and the challenges and successes experienced through its development, and the changes as the program develops into a fully online delivery model.

Increasing Learners' Retention and Persistence in MOOCs Design-Based Research (DBR) Plan

Maha Al-Freih, Nada Dabbagh, & Brenda Bannan*, George Mason University*

In 2008, a new learning model emerged in the e-learning landscape and has attracted the attention of educational researchers, designers, instructors, and students; namely Massive Open Online Courses (MOOCs). MOOCs stood out because of their unprecedented scalability and open access, which challenged many of the conventions we had about formal learning. However, the novelty and scalability of MOOCs posed new challenges to the educational community. The first challenge is the wide variation in student demographics, objectives, behavior, and self-organization skills, which makes it impossible to describe a singular profile of MOOC registrants. Furthermore, the potential scale of enrollment poses new pedagogical challenges such as minimal direct learner support. Hence, learners are expected to direct and regulate their own learning in a MOOC (Daradoumis, Bassi, Xhafa, & Caballé, 2013; Fini, 2009; Glance, Forsey, & Riley, 2013; Kop, Fournier, & Mak, 2011). These challenges have also been linked to the high attrition rate in MOOCs. This attrition rate has not been sufficiently examined in the literature. DBR offers an appropriate framework for examining the causes of high attrition in MOOCs as it allows for a holistic and comprehensive investigation into complex and novel learning situations such as those present in MOOCs (Bannan, 2013). The overarching goal of the DBR plan that I will share is to identify instructional design strategies that can help combat the high attrition rate and increase learners' retention and persistence in MOOCs. Specifically, my DBR plan attempts to address the following research questions:

RQ1: What are the causes of the extremely high attrition rates in MOOCs?

RQ2: How can we increase learners' retention and persistence in MOOCs?

RQ2a: Does support for self-regulated learning processes in MOOC design increase learner retention and persistence?

RQ2b: Does increased instructor and peer social presence increase learner retention and persistence in a MOOC?

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Increasing the Content Knowledge of Educators who Instruct Children with Language-Based Learning Challenges: Findings from 3 Discrete Professional Development Seminars

Elizabeth Lanter, Annu Kuriakose, & Heather Geddings, *Radford University*

In the United States, children with language-based learning challenges make up a majority of children receiving special education services (U.S. Department of Education, 2013). To teach these children effectively, it has been argued that educators must possess content-specific knowledge (National Joint Committee on Learning Disabilities, 1997). Professional development is a means by which educators can gain this content-specific knowledge. This research reports on gains in content specific knowledge for school-based professions. Two externally funded projects enabled Radford University to offer 3 discrete, professional development seminars that were structured and topic-specific to the instructional needs of young, school-age children with language-based learning challenges. Each of the 3 professional development seminars was led by a highly experienced and respected keynote speaker and was offered at no cost to the school-based professionals invited. Given that high quality professional development has been described as including the advancement of educators' content knowledge (e.g., The No Child Left Behind Act of 2001), the primary goal of each seminar was to increase the content knowledge of the educators who attended. A secondary goal of each seminar was to investigate the professional development needs of the educators in the region and also probe their beliefs toward the university offering professional development activities.

Innovation for Agricultural Training and Education: An International Perspective

Tom A.L. Hammett, *Virginia Tech*

The Innovation for Agricultural Training and Education (*innovATE*) program, is a U.S Agency for International Development (USAID) funded program managed by a consortium of U.S. universities led by Virginia Tech, and in partnership with Pennsylvania State University, Tuskegee University, and the University of Florida. *innovATE* helps schools in the developing world improve their curricula, strengthen administrative capacity, and build their infrastructure and serves as a high-profile embodiment of USAID's renewed commitment to agriculture education and technology capacity development that stimulates innovation and entrepreneurship in the agriculture sector of selected Feed the Future countries. The latter is a presidential initiative to tackle global food insecurity—a term referring to the complex factors that cause hunger on a national scale. *innovATE* modernizes agricultural education

systems to address climate change, drought, resource scarcity, malnutrition and gender equity and helps schools improve curricula, strengthen administrative capacity and build infrastructure, by offering training modules, downloadable training documents, and interventions on both a large scale and specific to individual educational strands (secondary, university, etc.) *innovATE* seeks to improve global security by ensuring that the next generation of agricultural professionals receives the training and education it needs. Ultimately, we're empowering countries to grow the food they need to feed their own people.

Inquiry as a Methodology and Practice in Higher Education Online Instruction

Rose Mary Mautino & Theresa Henderson, *Duquesne University*

As online education continues to expand rapidly within higher education, universities and researchers have placed an increased emphasis on understanding adult learning theory in combination with effective online learning environments. With this prevalent online student population growth, an increased priority has emerged to assist faculty in gaining new pedagogical skills that engage students towards higher levels of thinking, promote active student involvement, accommodate individual differences and motivate learners in the online classroom (Zsohar & Smith, 2008). Online teaching requires faculty members to think differently about teaching and learning, learn an array of new technological skills, and engage in ongoing professional developments for the design and development of quality online instruction (Fish & Wickersham, 2009). Various course designs and instructional models continue to be evaluated to gain a deeper understanding of quality and effective online instruction. The inquiry-based instruction and learning model has shown to promote student learning through student-driven and instructor-guided investigations of student "centered" questions and proves to be a potent pedagogical tool in higher education (Justice, Rice, Warry, Inglis, Miller & Sammon, 2006).

Instructional Technology's Impact on Student Learning in Mathematics

Kathy D. Spradlin & Carla Miller, *Liberty University*

The purpose of a course redesign is to replace traditional instruction with student-centered instruction with the goal of improving student learning outcomes. The administration at a large private university challenged the faculty to find innovative ways to provide instruction in undergraduate classes and engage today's generation of students by using technology. The goal was to increase pass rates and retention rates. The Center for Academic Support and Advising Services, College of General Studies, and Department of Mathematics formed a partnership to investigate and plan a course redesign. Based on research by the National Center for Academic Transformation, five math courses were redesigned to use an emporium instructional model, in which students are taking more responsibility for their own learning. The essential components of the redesign are: weekly class meetings, required hours in a computer lab, and faculty and trained tutors providing immediate assistance. Each student can choose the balance of technology and human interaction that suits his learning style and may work faster or slower than the published schedule. All instructional material and assignments are delivered by commercial educational software so students receive immediate feedback and repeated practice in order to achieve mastery. Pass rates, retention rates, pass rates in subsequent math courses, and results of student surveys have been used to make changes over the course of five semesters of using the emporium model.

Integrating News Media into the College Classroom

Erika Nicholas & Holly Moore, *Radford University*

Utilizing news media videos in the classroom allows students to connect course readings with local and global concerns. Media resources also enable students to visualize real world events and issues, while providing additional support for deeper understanding of course goals and fostering interaction with assigned readings. By engaging students across multiple platforms, critical thinking skills are fostered and class participation increases. News media videos are diverse in subject matter, are easy to access, and are generally free to download or stream. Since news media is diverse in coverage, instructors are easily able to locate videos to match course content. The continued availability of these videos on a public platform makes it convenient for students to access and watch content outside of the classroom, while permitting instructors to stream in the classroom without fear of copyright infringement. To study these theories, the authors made the following observations in two college courses across four individual sections: Students were required to read either a news article or a non-fiction piece dealing with a specific issue for homework. During the subsequent class meeting, the instructors incorporated news media to emphasize the themes present in the assigned printed articles. Once students combined the information gleaned from the article and corresponding video/s, they were able to develop more detailed and critical observations of the issues being discussed. However limited the observations from these case studies may be, the findings show that compared with a static reading to discussion system students are better able to foster critical thinking skills and increase discussion after the incorporation of news media in the classroom. Along with the authors' observations other studies will be considered based on media resources incorporated in the classroom to advocate for the academic significance of fostering critical thinking and the increase of class participation.

Islamabad in Climate Change Perspectives (1981 TO 2010) and its Impact on Tertiary Level Students

Samia Rehman Dogar & Muhammad Hassan, *Federal College of Education, Islamabad*

The study was designed to investigate the degree of climate change over the past 30 years and its impact on tertiary level students. It was designed to improve the quality of teaching learning process in the subject of physics at secondary level by designing strategies to minimize the impact of climate change. The population of the study is comprised 422 tertiary level schools of ICT (Islamabad Capital territory).The data will be collected through personal interview and document analysis .The sources of data are three institution ie 1. Weather Record of Pakistan Metrological Department (PMD) 2. Tertiary level student's School records (1981 to 2010) 3. Interview through structured question from School staff and Hospital staff (1981 to 2010) 4. Hospital Record of Specific Wards (1981 to 2010) Climate change over 30 years will also be judged through weather frosting record of Pakistan Metrological Department (PMD).Personal interviews of school and hospital staff will be conducted about climate related diseases and the perceived increase or decrease will be verified with hospital records. The data will be analyzed from Frequencies and percentages. The hypotheses will be tested statistically by using correlation ANOVA (analysis of variance) and T-test through statistical package for social sciences (SPSS).

Let Me Tell You What I Really Want: College Students' Redesign of Assignments

Szu-Yueh Chien, *University of Georgia*

The digital generation grows up with a massive amount of technology tools handy. It is significant for educators of all levels to effectively integrate technology into their instruction to help the digital generation create significant learning experiences. This study aims to help educators in higher education understand college students' perception

of engaging activities or assignments. The participants were 21 college students enrolled in a technology integration course. In one of the course projects, the participants were asked to re-design one assignment or course material in another class and to complete a reflection paper. In their reflection paper, the participants needed to describe both the old and new design and to justify for their new design. The preliminary finding was that the participants expressed a strong need in visual aids and creativity. Instead of writing a short essay, the participants preferred creating multimodal products to perform their understanding or knowledge. This study provides educators in higher education with a better understanding of what an engaging activity or assignment is from college students' perspective. This result can help educators develop and design various assignments and activities to engage the digital generation in a more creative and interesting way.

Leveraging Data to Create Personalized Learning Environments

David B. Knight, Troy Abel, Cory Brozina, Chris Frisina, & Eric M. Stauffer, *Virginia Tech*

A convergence of pressures has led researchers to seek innovative ways to measure and track student learning outcomes and empirically identify the conditions that lead to their development. Learning analytics is an emerging field of inquiry that uses existing student traces to aggregate and illuminate student data through visualizations and dashboards in an attempt to improve learning outcomes. While there are currently efforts both in vendor and academic arenas to try and understand the long-term learning and decision-making effects of such dashboards, there appears to be a missed opportunity in the development of these dashboards in vivo using human-centered usability practices to develop these new tools for learning. Practices that select relevant data traces and develop dashboards *with* learners instead of *for* learners may lead to stronger student self-efficacy, build on existing social learning theory, and benefit from perspectives found within human-centered design practices. Our interdisciplinary team of faculty and graduate students from engineering education, computer science, human computer interaction, human centered design, the learning sciences, and visual communications are following a mixed-methods, human-centered approach to developing a dashboard breaks new ground in learning analytics by involving the end users throughout the design and development process. Qualitative data will be generated and analyzed through participatory design action research methodologies exploring user feelings and attitudes towards success and how that information could inform the selection of data sources. Quantitative research will identify patterns across currently disparate institutional databases, including incoming student surveys, longitudinal surveys within the first year engineering courses, and existing data sets found within the Scholar learning management system, This study identifies what learners and instructors desire in learning dashboards; illuminating patterns across currently disparate institutional databases helps learners (and instructors) regulate learning processes and make empirically supported adjustments to current practices.

Making a Scholarship Support Group Work!

Shari A. Whicker, *Virginia Tech Carilion School of Medicine*
Alisa Nagler, Stephen Demeo, Sarah Bean, & Aditee P. Narayan, *Duke University Medical Center*
Deborah Engle, Saumil Chudgar, & Colleen O. Grochowski, *Duke University School of Medicine*

With manuscript acceptance rates for most desirable medical education journals dipping to 10-15%, it is increasingly important to produce higher quality studies. Existing barriers include lack of training, time, or funding; competing responsibilities; small n's; challenges implementing randomized controlled trials within educational settings; lack of mentors; and difficulty defining relevant and measurable outcomes. Therefore, educators at Duke University Medical Center convened the Medical Education Scholarship Support group, a multi-disciplinary supportive community with the goal of providing a collaborative peer-mentoring environment with increased scholarly outputs. Eight participants founded the group, with representation across disciplines, teaching foci, departments, and academic ranks. Participants gather monthly to share current education research challenges. Different topics are addressed each session including trouble-shooting real-time project issues, manuscript review

and feedback, funding application collaboration and development, and research and publication ethical issues. MESS continues to meet its goals and participants value the collaborative and supportive nature of the group, with 100% participant retention. MESS has led to additional scholarly activities including peer-reviewed journal submissions, collaborative grant applications, submissions for national presentation, and multi-institutional projects. A research support group can transcend institution walls. Despite one of our authors relocating to another institution, she has maintained membership and participates in monthly meetings via Facetime. MESS has broadened its focus and now serves as a model for our Medical Educators Academy. We are currently developing an enhanced structure to 1.Present quarterly faculty development sessions on topics with which novice medical education researchers typically struggle (e.g. IRB, funding, collaborating, finding time); 2.Provide individual mentoring for junior medical education researchers; 3.Invite non-members to present scholarly works in progress for feedback. The MESS model could easily be adapted for use at other institutions and disciplines, thus reducing the barriers education researchers face and providing a broader impact on the research landscape as a whole.

Meaningful Learning From the Humanistic Education at the University: The Students Voice

Guillermo Alfaro, Hilda Patiño, Mónica Chávez, & Andrés Navarro*, Universidad Iberoamericana, Ciudad de México*

The humanistic education is a constant concern to the higher education institutions in Mexico and in the world. The phenomenon of globalization, which appears to favor individualistic approaches, the quest for personal gain while neglecting of the social, humanistic currents, makes us a call to retrieve the task of forming a critical and committed awareness with common causes, revitalize a sense of solidarity and interdependence; promote the values of responsibility, generosity, compassion and cooperation based on the principle that recognizes human dignity beyond cultural differences, sexual orientation, religious orientation, etc. Along with a society that is fragmented, currents of humanism represent the desire to recover the most human of our species and to educate citizens for a better society. The comprehensive liberal education thus becomes a civilizational project that concerns undoubtedly to educational institutions. This research takes as a benchmark previous studies that have been conducted on the effectiveness of humanistic education courses for undergraduates at the Universidad Iberoamericana Ciudad de México. The present research question asks undergraduate students' opinion about the value of the liberal education courses they were enrolled in during 2010 and 2011. A total of 4625 written responses were examined and interpreted trough a qualitative methodology, in order to develop the fundamental categories, and their respective sub categories that made possible to build up the concept of meaningful learning from the perception of college students.

Methodology Strategies: An Intervention into Challenges Faced by Pre-service Teachers in Subject Content Knowledge Learning of Physical Science.

A.M.O. Agbomeji & T.M. Buthelezi, *University of Kwazulu-Natal Durban, South Africa*

The challenges in the teaching of Physical Science subject in South African schools are numerous and multi-faceted and affect educational efficiency in this subject. Such challenges span across technical efficiency that focuses on the provision of basic school inputs (educators, books, laboratories, and equipment); and pedagogy that focuses on teaching skills, subject content knowledge, and classroom size and organisation. The Curriculum and Policy Statement (CAPS) document for grade 10-12 Physical Sciences integrates subject content knowledge of physical and chemical phenomena. As such, in an attempt to prepare teachers who will be able to teach Physical Science in schools, some initial teacher education programmes also integrate such phenomena in their Physical Science for Educators major subject. While this seems logical, it oftentimes weaken the subject content knowledge gained of either of the phenomena as pre-service teachers tend to concentrate on the phenomena they enjoy and best understand. In addition, the overlapping of scientific concepts between chemistry and physics (that constitute physical science), together with the language of learning and teaching used that does not adequately cater for students from diverse learning backgrounds, also contribute to the students' superficial grasp of subject content

knowledge of Physics and Chemistry. Consequently, students struggle to apply scientific concepts, theories and laws learnt to their environment. Therefore, this paper discusses the pre-service teachers' experiences of learning Physical Science for Educators. Data were generated from self-reflection reports and focused group discussions. About fifty two pre-service teachers who were in their second year of Bachelor of Education degree participated in completing a self-reflection report and two focused group discussions were conducted. Qualitative data generated were analysed by coding, re-coding, and generating categories; later themes were identified. The findings provide insights into the challenges, relating to the subject content knowledge, faced by pre-service teachers in the teaching and learning of Physical Science for Educators major subject at a University. Based on the findings of this study, this paper argues that while the Curriculum and Policy Statements (CAPS) document (grades 10-12) for Physical Sciences in schools integrates Physics and Chemistry, the curriculum for pre-service teachers should provide for less integration to deepen the subject content knowledge of each of the phenomena (Physics and Chemistry) in Physical Science.

Methods of Delivering Public Health Messages to Children in Underserved Areas of Honduras

Dean Sutphin, Susan Meacham, Brian Hill, Maria Garcia, Caitlin Coleman, & Dalia Meisha, *Edward Via College of Osteopathic Medicine*

In 2012 VCOM initiated service mission trips conducted in underserved communities in Honduras, Dominican Republic and El Salvador that offer educational sessions to children on health. A five year longitudinal research component provides a means of evaluating the methods of delivering messages to children on personal hygiene, oral health, nutrition substance abuse and violence. Methods: The first service mission trip was conducted in Tegucigalpa, Honduras, December 2012. VCOM Post baccalaureate (VCOM PB) students followed an Institutional Review Board approved protocol to deliver short information sessions with corresponding pre- and post-tests to small groups (10 children), 5-6 groups daily. Oral lessons were enhanced with posters, songs, games, hand washing, role playing, etc. In a small, remote mountain village, Guajire, in Honduras children (n=55) from Day 1 had an average age of 9 ± 2.26 years (mean + SD). Children from Day 5 (n=47) were from a rural valley all-boys orphanage, Jovenes en Camino, with participating children 12 ± 3.30 years of age. The average percent change in correct answers was variable; personal hygiene, 49.5%; substance abuse, 31.2%; oral health,19.5%; nutrition, 9.2%; and violence, 8.9%. Percentages of change in correct answers were variable among the topics delivered, yet the differences were not statistically significant, $p = 0.41$. Lack of statistical significance indicated that different health education groups were comparable in terms of positive delivery of the health message. Observations to improve future efforts included minimizing competing external factors, i.e., shorten activities to not exceeding children's attention spans and reduce input from parents accompanying children responding to surveys. Children's engagement improved when the message was focused and they had hands on activities, i.e., hand washing or flossing on oral cavity models, and when physically active, i.e., playing an educational game or role playing.

More Than Necessary: How to Show University Students that Learning a Second Language is Meaningful and Not Just Required

Bonita S. Phelps, *Western Kentucky University*

Many university students take language courses, (i.e. German, French, Spanish), because the courses are graduation requirements. When students are in a class due to compulsion and not out of a desire to learn the subject, the instructor has the extra responsibility of showing students how the course is meaningful to their lives inside and outside of the classroom. This poster session will share ways that an instructor of a language course can communicate the value of language learning to his or her students. The poster session will also invite attendees to share their own thoughts, experiences and practices.

Narrative Inquiry: Increasing Multicultural Competencies among Students and Teachers

Tanyeka Hayes, *Mercer University*

Narrative inquiry is the interdisciplinary study of the activities involved in generating and analyzing stories of life experiences (Schwandt, 2007). Pedagogically, the narrative approach is found in social constructivism. Utilizing narrative inquiry in classrooms has been the focus of increasing attention in recent years (Hattman and Prosser, 2008; Cooper, 2013). Narrative inquiry uses field texts, such as stories, autobiography, journals, field notes, letters, conversations, family stories, photos (and other artifacts), and life experience, as the units of analysis to understand the way people create meaning in their lives as narratives (Clandinin & Connelly, 2000). The idea of narrative is fertile ground for educators who know intuitively the value of stories in teaching and learning. Narrative inquiries allow students and teachers the opportunity to embrace uncertainty and shift cultural assumptions. This poster presentation will provide examples of how to incorporate narrative inquiry in classrooms to increase multicultural competencies among students and teachers. At the end of this poster presentation, participants will understand various narrative inquiry concepts and tools to assist the students and teachers in enhancing their multicultural competencies.

Needs Assessment and Participant Satisfaction for Development of the J.M.A. Nutrition Program in Tegucigalpa, Honduras

Isabel Hefner, *Virginia Tech*
Dean Sutphin, *Edward Via College of Osteopathic Medicine*

The James Moody Adams Clinic (JMA) at Baxter Institute offers quality healthcare and spiritual support to the poor urban community in Tegucigalpa, Honduras. Over 60% of Hondurans lives below the poverty line, 30% underemployed and many lack basic education and hygiene. The J.M.A. Clinic Nutrition Program enrolls single mothers in Tegucigalpa and surrounding villages to provide family free medical and dental care, supplementary food, and vocational training to promote empowerment and boost employability. The objective of the study was to determine the efficacy and satisfaction with the Nutrition Program. A VCOM IRB-approved free-response survey was conducted with 24 Nutrition Program participants, pertaining to family health and nutrition, competency gained through vocational classes, and intent to pursue future employment. Data analysis determined how the Program supported families, and improvements to fulfill their self-determined physical, spiritual, and educational needs. The results indicate that a majority of the 21 participants live in the city, while 30% commuted an average of 90 minutes from rural areas to J.M.A for classes; 78% desire fresh produce in their food supplements and desired instruction on agriculture techniques to grow their own food; 95% desired classes in food preparation. All participants were concerned for personal safety, lack of access to potable water, and/or food insecurity in their home and community. Emotional counseling or therapy was desired by 24%. Ninety percent of the participants intended to pursue a career related to their vocational training, and 94% of that population had goals to go into business for themselves. All participants had at least one child or grandchild in their care, and 67% had 3 children or more. In conclusion, the J.M.A Nutrition Program meets the basic needs of the participants' families, lifestyles, and nutritional and educational requirements, and the Program fosters long-term well-being. Findings should be used to enhance the J.M.A. Clinic's goal of developing the community and empowering the impoverished.

Online Education: A Middle East Partnership and Engineering Students' Academic Resilience

Roofia Galeshi, *Radford University*
Randa F. Abdelmagid & Leslie Pendleton, *Virginia Tech*

In the past decade the world has witnessed fundamental changes in higher education. Online education (OE), which has offered opportunities to students from all over the world to enroll in American universities, is more often appealing to nontraditional students with existing professional or family obligations (Aslanian, 2001). International students who aspire to obtain a degree from a reputable American university could easily benefit from OE. This study sought to measure VT-MENA Egyptian PhD students' academic environment preference - online versus face-to-face - and its effect on their academic social identity. The result revealed no differences among male and female PhD students participating in VT-MENA.

Online Synchronous Environments: Minimizing Distance and Maximizing Outcomes

Yaw Adu-Gyamfi, Tracy T. Ellett, & A. Lynn Mayberry, *Liberty University*

Imagine the latest viral video sensation featuring today's online student population: students from all generations and backgrounds with varying academic skills and challenges earning their degrees while balancing work and family responsibilities. These students lack the regular face to face contact with instructors proven necessary for course engagement and relationship development. Online students and instructors must find other means of connecting. Maintaining student engagement and motivation in online courses is especially challenging due to the physical and psychological "transactional distance" inherent in the typical asynchronous online instructional format. Synchronous, real time, sessions using web conferencing technology is one strategy to overcome the effects of transactional distance. Session participants will learn how synchronous webinars were piloted in English and communication courses to connect with students and build specific skills in assignment areas.

Potter Pedagogy: Talking about Teaching and Learning through Popular Literature

Laura Cruz & Martha K. Diede, *Western Carolina University*

This research study integrates theoretical perspectives drawn from the humanities in order to evaluate critically pedagogical practice, as reflected through the Harry Potter book series. Literature surrounding Harry Potter's teachers falls typically into two areas. Essays such as those collected by Valerie Frankel (2013) and Elizabeth Heilman (2009) focus on ways in which teachers can use the novels to teach subjects such as science and math, to increase student understanding and awareness of social issues like sexism and racism, and to introduce scholarly disciplines. Others writers such as Dickinson (2006) and Bixler (2011) lionize the British structure of Hogwarts and British teaching practice as models for U.S. teachers in a variety of teaching situations. Conn and Elliott (2005) even suggest that magical testing practices may offer instruction for planning and performing assessments. This study approaches Potter pedagogy not as an analogy or exemplar, but rather from the perspective of practice and examines ways that the teachers of Hogwarts serve as rich case studies for both the possibilities and pitfalls inherent in contemporary theories and narratives of teaching and learning. Participants in the poster session will be invited to incorporate "Potter pedagogy" as tool for self-reflection and to engage in interdisciplinary conversations using the Potter canon as a common lens.

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Promoting and Facilitating Doctoral Students Indigenous Research Methodology Processes: A Personal Case Study

Joy Mwendwa, *Liberty University*

Doctoral students need special support as they wade through the journey of academic and professional development. The key project in every doctoral student's radar is the dissertation research project. Doctoral candidates who are drawn to indigenous methodologies for their dissertation project, may be intimidated to embrace this research methodology as they may encounter added challenges including but not limited to; scarcity of written traditional knowledge, misunderstood views on motivations to promote traditional knowledge systems and life engagement commitments, and lack of an inviting and challenging space for research from dissertation committee. As a doctoral candidate who experienced tremendous support, I highlight the strategies employed by my dissertation chair and department that made the difference in my journey. Understanding decolonization strategies, challenging students to race for the rich substance in qualitative data, and taking a humble stance to pedagogy to learn and celebrate with one's students are some critical approaches. This presentation will further define indigenous methodology, identify indigenous research methods, and discuss the implications of promoting indigenous research methodology in higher education.

Proposal for Evaluation: An Interdisciplinary Program

Yingqi Wang, *Virginia Tech*

The importance of interdisciplinary education has been noticed in the recently years. Translational Plant Science program (TPS) is an interdisciplinary graduation training program, which was funded by a research one university. A formative evaluation will be conducted to assess how effectively the TPS program will achieve their goals to enhance their interdisciplinary thinking skills development from different disciplines and integrate different forms of knowledge to better prepare them for a career. The questions used to guide this report are (1) how effectively the program enhances students' learning experience in disciplinary thinking, such as critical thinking, convergent and divergent thinking; (2) what impact the program has on students' collaborative skills development; (3) how effectively the program facilitates students' interdisciplinary research skills. Logic model will be used to explicitly demonstrate the process of this program including inputs/ resource, outputs (activities and participation) and outcomes (short term, medium term and long term). The primary stakeholders are graduate students in the TPS program. Theory-Driven Outcome evaluation approach will be introduced and guide this study. Mixed methods (in-depth personal interview, pre-post on-line surveys and self-reflection) will be conducted to provide more validated and reliable evaluation evidence. SPSS will be used to achieve descriptive results, and T-test will be conducted to analysis whether there was significant differences before and after students participate in this program. Constant comparison will be employed to analyze qualitative data. Timeline and cost will be discussed in this proposal.

Publisher-Provided Digital Learning Tools: Impact on Student Learning, Attendance and Final Course Grades

Jayne E. Bucy & Jenna McCutchen, *Radford University*

Available in almost every subject area, online digital learning tools come bundled with textbooks and provide students with videos, interactive presentations, digital flashcards and multiple-choice questions. Textbook publishers make claims to their effectiveness; reporting higher student grades, pass rates and student retention. The current study undertook to systematically investigate the impact of one digital learning tool, Connect® Learn Smart by McGraw Hill Publishing on student learning, class attendance and final course grades. Data was collected from 124 student enrolled in two section of Lifespan Psychology. The two course sections were taught back-to-back by the same professor. One section was required to use the digital learning tools while the other section had access to the tools and was encouraged but was not required to use them. Groups entered the semester with similar knowledge as measured by pretesting. By the end of the semester, the treatment group spent significantly more time (20 hours vs. 8 hours) using the digital tool and completed a significantly larger proportion of the digital tasks (87% vs. 32%) than the control group. While both groups showed significant learning as measured by pre-test/post-test differences, no group differences were found. There were also no group differences in class attendance. While significant differences were expected and found in the amount of time spent using the tools, no differences were found between sections in average exam grades or final course grade. Student feedback was also collected to assess perceived benefits of the tools. Students required to use the tools found them helpful and were more likely to recommend the tools to future classes. Possible explanations for the failure to find group differences will be provided.

Revisions to the ePortfolio Comprehensive Exam: Meeting the Needs of Multiple Stakeholders

Debora Bays & Brenda-Jean Tyler, *Radford University*

The use of electronic portfolios in teacher preparation programs is widespread, and portfolios serve multiple purposes (e.g., promoting reflection, demonstrating competence with professional standards, or enhancing technology skills), according to the needs of multiple stakeholders. Faculty in a special education teacher preparation program revised the required electronic portfolio process for their MS in Special Education candidates so that: (a) it is a more effective tool for preparing reflective practitioners; (b) it more effectively captures evidence of teacher candidates' impact on K-12 student achievement; (c) it is a streamlined and useful tool for faculty to evaluate candidates' knowledge and skills related to Council for Exceptional Children (CEC) and Council for the Accreditation of Educator Preparation (CAEP) Professional Standards, and thus, to guide program decision-making; and, (d) it is a tool that prospective employers can easily use in the interview process to compare applicants. As an initial step in the revision process, in 2013, faculty collaboratively reviewed current research literature on the ePortfolio and conducted surveys with alumni and employers regarding the purposes, uses, benefits and challenges of the electronic portfolio. In spring 2014, an additional set of recent graduates were surveyed to provide up-to-date data. Results from these surveys were used to focus revisions to the electronic portfolio/comprehensive exam. The revised draft of the electronic portfolio/comprehensive exam guidance document was presented to a set of employer stakeholders to obtain feedback on the proposed revisions. The results of this work will be shared and will serve as points for further discussion among attendees during the interactive session.

Students Respond Positively To Clicker Use in a Medium Size University Class

Mara Grossman, Courtney Vengrin, J. Roger Harris, & Donna Westfall-Rudd, *Virginia Tech*

Educators have adopted the use of clicker technology in in higher education classrooms in order to achieve a variety of educational goals, including increasing student engagement, participation and learning. The majority of research on clicker use has been in large classrooms; most of the studies in recent comprehensive reviews (Keough, 2012; Kay and LeSage, 2009) were based on sample sizes of over 80 students. To date, a few studies have looked at clicker use in smaller classrooms (Beckert et al., 2011; Morgan, 2008). Not enough research has been done to make recommendations for clicker use based on class size. The objective of this study was to determine if the educational gains associated with clicker use in larger classrooms can be found in a college level course where a more intimate class setting and fewer students might address student issues with participation. A research study was carried out to ascertain student response to the incorporation of clicker technology in a medium-size horticulture class (approximately 45 students). Students used clickers during lecture to review course material shortly after it was presented and discussed. The questions were displayed, students responded anonymously using clickers, the classroom consensus was shown, and the correct answer was discussed. While student responses were used as part of a participation grade, their specific responses were ungraded. A survey was conducted online using Qualtrics in order to determine students' perceptions of using clickers. Data was collected in the same course in two consecutive years. Overall, students responded positively to the use of clickers in class. Clickers motivated students to attend class and to pay attention during class. Students found the use of clicker questions helped them understand course material and study for exams. Clickers were found to be an effective educational tool for this medium size university class.

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Students' Perceived Motivation in SCALE-UP Science Courses: A Mixed Methods Study

Jessica R. Chittum, Kathryne Drezek McConnell, & Jill Sible, *Virginia Tech*

Demand for effective large class pedagogy in higher education is increasing. One pedagogy, titled "SCALE-UP" (Student-Centered Active Learning Environments for Undergraduate Programs) is designed to accommodate large classes while focusing on structured teaching practices that encourage collaborative, active learning in a technology-rich environment. SCALE-UP courses were initiated within the College of Science at one large state university to urge students to continue their studies in the sciences by providing positive and active learning experiences. To formatively assess the impact of this university's SCALE-UP initiative, we obtained a sample of students from several SCALE-UP science courses and examined their motivation-related beliefs. In this mixed-methods study, we measured academic motivation from the framework of a model of academic motivation that includes five well-known motivation-related constructs: autonomy, utility value, expectancy, interest, and caring (Jones, 2009). Our data suggest that these science students held *moderately high* to *high* motivation-related perceptions, and qualitative

data offers several themes to further explain how and why these students were motivated in their SCALE-UP science courses.

The Cultural Discontinuity Hypothesis: An Appalachian American Perspective in Eastern Kentucky

Timothy W. Conner II, *Morehead State University*

K.M. Tyler et al. (2008) propose a quantitative method to measure differences between school and home experiences had by students of ethnic minority status and how such differences (cultural discontinuity) may affect psychological factors related to student achievement. Although study of cultural discontinuity has been applied to racial/ethnic student populations, little attention has been given to the ways in which cultural discontinuity may manifest in the Appalachian American population. This study conceptualizes the socio-cultural conditions that would warrant such an investigation, establishing evidence from ten interview subjects of the presence of cultural values associated with Appalachian Americans from Eastern Kentucky. The interviewee evidence provides a necessary starting point for investigating regional culture and marginalization effects that may occur based on membership within the Appalachian American community.

The Design of an Autonomy-Supportive Peer Assessment Environment to Enhance Learner Engagement

Jiangmei Yuan, *University of Georgia*

Peer Assessment is widely implemented in education. However, students are not highly engaged in peer assessment. Autonomy involves acting volitionally. It is closely related to a sense of choice and self-endorsement of one's behaviors (Deci & Ryan, 2008; Gagné & Deci, 2005), and leads to engagement in academic tasks (Fredricks et al., 2004). This poster aims to design an autonomy-supportive peer assessment environment to enhance students' engagement. Strategies to support students' need for autonomy include: (a) providing rationales for the tasks, (b) acknowledging negative feelings, (c) using non-controlling language, (d) offering choices (Su and Reeve, 2011). Deci and colleagues (1994) suggest that at least two strategies need to be present to create an autonomy-supportive environment. The design of an autonomy-supportive peer assessment is listed as follows.

Giving Students a Rationale
Peer assessment is useful for you. It will give you an opportunity to

- Get more information about the reading topic through your peers' work
- Learn how you can improve your own work
- Improve your critical thinking skills while assessing your peers' work
- Get to know what your peers think about your work
-

Offering Choices
One example is to give students choices regarding aspects to focus on when they assess their peers' work. Students can choose two of the three aspects: critical thinking assessment, accuracy of the content, and language of their peers' essays (i.e., grammar, spelling, wording, syntax).

Acknowledging Negative Feelings
The common negative feelings are:

- I'm not comfortable criticizing peers' work:
- Sometimes my peers' work is like trash:
- I'm not comfortable criticizing peers' work:

Ways to acknowledge negative feelings will be presented on the poster.

Using Non-Controlling Language

Non-controlling language will avoid using words such as "should," "must," and "have to."

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The Dreaded Cumulative Test – Does it Have Value for Students?

Timothy W. Conner II, Lola Aagaard, & Ronald L. Skidmore, *Morehead State University*

Although there has been much published research on the benefits of distributed practice (Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006) and the testing effect (Eisenkraemer, Jaeger, & Stein, 2013), very few studies are available regarding cumulative testing in college courses. Those available show a benefit to cumulative testing (Lawrence, 2014; Rohm, Sparzo, & Bennett, 1986; Szpunar, McDermott, & Roediger, 2007). Lawrence (2014) looked at the effects of continuously cumulative testing throughout a semester and found it had benefit over non-cumulative tests followed by a cumulative final. Like Lawrence (2014), the present study contrasted continuously cumulative testing with cumulative testing only at the final exam, but added in a control that had no cumulative testing at all. Three sections of the same required course for teacher education students were used for this study, with each section having three exams during the semester. One section had continuously cumulative testing (n=34), one had a cumulative final (n=36), and in one section none of the exams was cumulative (the control – n=30). Cumulative items were present on the final exam for the control group to answer, although control students' final exam grade was based solely on the non-cumulative items. All sections were taught by the same instructor. The study is being carried out in Fall 2014, so results will be available at the poster session in February, 2015. Analysis of variance will be used to analyze the scores from the final exam by course section. If one type of testing is associated with higher final exam scores, there will be implications for teachers who are interested in maximizing the learning of their students over the course of a semester.

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The Effect of Learning Environment (On-line vs. On-campus) on Students' Learning Behavior

Ramezan Dowlati, *Northern Virginia Community College*

Distance education has made participants in a virtual learning environment feel like individuals who are distant from each other doing a self-paced work. This makes education less formal than before and provides room for more expression of individual differences in learning behavior. Generational changes in the developments of learning behavior have already interested psychologists and educators. Research in this area can help educational institutions and public policy makers have a more realistic approach as they try to reformat educational systems on a national or institutional level. This study has analyzed two aspects of students' behavior (procrastination and self-disclosure) in distance learning courses and compared it with a similar group in traditional face-to-face classes. The target was a population of college students most of whom have spent their after-childhood years in the new century. The samples included groups of students who took courses e in the field of psychology. The results revealed that students adjust to e-learning environment differently. Overall, the rate of procrastination appears to be, overall, higher among on-line students than their face-to-face peers. However, about half of the students in e-learning group were able to manage their time and work at a satisfactory level. Also, the comparison of self-disclosure behavior pointed at interesting differences. The ratio of students who shared higher quantity and quality of personal information was higher among the e-learning group.

The Importance of Creating and Environment of Mutual Respect in the Classroom

Amanda Watson, *Murray State University*

Promoting an academic alliance between instructor and students is essential in developing a strong learning environment in the classroom. This alliance can be created by establishing cooperation, communication, security, a shared responsibility for learning, and mutual respect in the classroom (Tiberius & Billson, 1991). The purpose of this investigation was to examine those factors that may contribute to and result from a classroom environment high in mutual respect. Anonymous, end-of-semester, teaching evaluations were collected from 156 students in 6 sections of 3 unique courses in the Psychology department of a large Southeastern University between 2011 and 2014. Students were asked to report on various aspects of their learning experience, including their instructor's effectiveness, the level of mutual respect in the classroom, and their expected grade in the course, among other variables. On average, students rated the atmosphere of mutual respect in the classroom as 5.84 on a 6-point scale. Student rating of respect was positively associated with all other ratings in the evaluation (all r's> .401; all p's < .001), with the exception of their expected grade in the course (r = .086, p = .292). The directionality of these associations, however, is unknown. It is likely that student agreement with statements such as "the instructor was well-prepared" and "the instructor presented subject matter clearly" may have influenced their feeling of mutual respect, whereas agreement with statements such as "my interest in the subject matter was stimulated by this course" may have come as a happy result of this mutual respect. Results imply that instructors can actively work to create a classroom environment of mutual respect in which students can thrive. Results will be discussed in terms of the directionality of the association between mutual respect and student ratings on other scales as well as the implications of this directionality.

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The Potential Impact of Online/Distance Education for K-12 Special Education Students: A Meta-Analytic Investigation

Karen H. Larwin, *Youngstown State University*
Matthew J. Erickson, *Slippery Rock University*
Emmaleigh Given, *Kent State University*

The present meta-analysis is a comprehensive investigation of the effectiveness of online/distance educational opportunities on student achievement specifically for students with disabilities in grades K-12. An overall effect size of d = -.015 was calculated from 7 studies for a total of 54 different effect size measures, based on a sample of data from n = 24,031 participants. These results suggest that the achievement level of the typical students with disabilities did not differ from the achievement of students in the control group. However, further investigation indicates that students with disabilities experiencing online/distance education performed better than comparable students with disabilities who were in traditional face-to-face classrooms. Study demonstrates that sub-categories can be used to further the understanding of how the use of online/distance education could serve as one solution for shrinking the achievement gap for exceptional individuals. Implications and limitations are discussed.

The "Normal" School, the Forerunner of Pedagogical Thought in Albania

Liman Varoshi & Vilma Tafani*, University of Elbasan, Albania*

This presentation aims at calling to attention and highlighting the precious contribution of the Normal School, "Normalisti" Journal and the efforts of the Albanian scholars during the 30' (1920 – 1930). The researchers also aim to stress how actual and contemporary sound still today the teaching methodologies and the philosophy of education of that time. The Normal School grew in the conspicuous and prominent intellectual environment typical for those years. That period, for us, the followers of those outstanding scholars is a source of meditation and indices. We have to face with and draw lessons from that broad and all-round intellectual, philosophical, pedagogical and constructive production. Reading, rereading, studying the writings of that time, you cannot help nostalgia for those times. But what is that that fascinates us in the 21-st century? Our nostalgia for the intellectual atmosphere of those years has its roots in the pedagogical thought it provided; it is a sign of intellectual renaissance/renewal; it derives from the need of the intellectuals for social and pedagogical development. Today, we lack real scientific scholars, who at the same time are real good teachers.

Traditional vs. Interactive Text: The Effects of Rich Media on Long Term Memory and Task Persistence

Lisa Stoneman & Gary Whitt, *Roanoke College*

Interactive technology applications have generated much interest among educators. This study tested the effects of rich media, specifically i-Author technology, on long term memory and task persistence. i-Author is a new technology with strong education application potential. Participants (n=70) were a convenience sample of college

students, recruited as volunteers. Participants were randomly assigned to one of two testing groups. One group was given an i-pad with a traditional narrative text only and the other an i-pad with a rich media version of the same text. After completion of interaction with the text, eight reading comprehension questions were completed by each participant. Both participant groups completed the same question set. The 2-page texts, created by the principal investigation team, tell the story of the birth of King Arthur and include illustrations as well as text. The traditional version appears as book pages on the i-pad; it contains the same illustrations as the rich media version. The rich media version of the story is narrated in addition to appearing in print and the illustrations may be manipulated by the reader. Eight survey questions, asked of all participants, refer directly to specific details from the story such as the names of geographic regions and characters. An additional question asked participants to rate their interest in the story on a 10-pt. scale. Findings are pending data analysis. These findings may be significant to educators seeking to incorporate a variety of teaching methodologies in the hopes of improving student outcomes. Additional research is planned using a K-12 participant sample.

Universal Design for Instruction: Effective Instructional Strategies for Students with Disabilities

Tavarous Saint-Louis, *Mercer University*

The number of students attending college with disabilities has risen over the past several years. Access to appropriate accommodations is essential for the success of these students while attending college and other post-secondary institutions. Although attendance in higher education has risen for this population, the graduation rate is lower when compared to students without disabilities (Cook, Gerber, & Murphy, 2000). Today the primary avenue of resources for college students with disabilities has been to provide modifications and accommodations such as those mandated by the Americans with Disabilities Act. Research has shown a need for more diverse and effective instructional strategies to make learning more accessible to students with disabilities (Scott, McGuire, & Embry, 2002). Universal Design for Instruction is a universally designed curriculum which provides a diverse student population multiple means of representation, expression and engagement in the class room. The principles of UDI address the areas of class climate, interaction, physical environments and products, delivery methods, information resources and technology, feedback, assessment and accommodation. UDI allows all individuals to gain knowledge, skills and enthusiasm for learning (Scott, McGuire, & Embry, 2002). This presentation will allow participants to identify different types of disabilities and the common barriers students with disabilities may face at the post-secondary level as well as effective techniques and strategies of the Universal Design for Instruction for faculty to implement.

Relationship Between Mentoring and Career Development of Higher Education Faculty Members

Atif Omar Bin Tareef, *University of Jordan*

The study aimed at identifying the extent to which applying total quality management at the University of Jordan as perceived by its faculties. Also, it aimed at identified the significant statistical differences in applying total quality management at the University of Jordan from faculty's perspective due to years of experience and academic qualification. Results showed that faculties applied the total quality management standard in a high way, also there were no significant difference in this application due to experience on qualification of faculties.

Use of Pinterest with Visual Learners – Success!

Elizabeth H. Dull, *High Point University*
Doris H. Kincade, *Virginia Tech*

Social media is everywhere! Retail stores send Instagrams and sports heroes Tweet; even the CDC has a Pinterest page (Reynolds, 2013). Among the many social media tools, Pinterest provides one of the most visually rich environments (Sago, 2013). This tool should be a no-brainer in design classrooms, as these programs often attract students who are visual learners, who learn interactively, and who love the opportunity to use social media as a legitimate classroom option. However, Pinterest has been virtually ignored in academic studies (e.g., Duffy, 2013) by design and many visually-driven fields. For years, design programs maintained storage rooms of fabrics, stacks of color samples, and hordes of old magazines; used by students to create inspiration boards to start projects and presentation boards for final projects. Now resources we struggled to maintain are at our fingertips with the internet. In addition to almost instantaneous gratification with no messy materials, Pinterest lets our students find samples from many sources (other Pinterest boards to manufacturers' websites), and, if created for the course, can be established so multiple users can attach "pins", allowing faculty as well as students to introduce new resources. With Pinterest, students may select samples, form image compositions, add video clips, and/or weblinks, and integrate it into a digital presentation - activities once done with cut-and-paste. We introduced Pinterest into three of our design classrooms. Instead of traditional cut-and-paste with paper and fabric, our students created Pinterest boards for assignments to render their final presentations in digital form. Students were more excited about this tool than they ever were about cutting up old magazines, with the added benefit of work being more current in content and more professional in appearance. The board for multiple users proved so popular, it is still maintained; “passed on” to the next class of students.

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Using an Interactive eTextbook to Teach Data Structures and Algorithms: Findings from Using the OpenDSA System in CS2 and CS3 Course

Eric Fouh, Sally Hamouda, Mohammed F. Farghally, & Clifford A. Shaffer, *Virginia Tech*

The focus of this poster is on instructor and student experience with using an eTextbook system called OpenDSA [1]. We present how instructors used OpenDSA and its impact on how they present their class. Learning technologies in computer science education (CSE) have been most closely associated with teaching of programming, including automatic assessment of programming exercises. However, when it comes to presenting Computer Science content and concepts, learning technologies have not been heavily used. Interactive eTextbooks have the potential to make it easy for instructors to introduce both visualizations and practice exercises into their courses. OpenDSA is an interactive textbook for DSA courses aiming to reach that goal by integrating AVs, interactive exercises with immediate feedback, and high quality content presentation. Following an initial pilot study during Fall 2012 [2], during Spring and Fall 2013 and Spring 2014 OpenDSA has been used to teach a total of 8 CS courses, by 7 instructors. Some of these courses were traditional CS2 courses, and some where more advanced DSA courses that we identify as “CS3”. OpenDSA was used in various ways by instructors. We analyzed clickstream data to see how students used OpenDSA, and attempted to deduce from the clickstream behavior patterns that affect performance. We also surveyed students regarding their attitude towards OpenDSA and how the system interacts

with their own feelings of self-efficacy. The survey responses and data collected showed that students are enthusiastic about OpenDSA and used the Algorithm Visualizations embedded within OpenDSA.

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Using Online Learning Communities to Enhance Student Learning in Computing-related Courses

Anu Gokhale, *Illinois State University*

Prevailing labor projections regarding the shortage of technical professionals provide impetus for increasing majors in information technology (IT). Computing applications continue to impact medicine, finance, manufacturing, and numerous other sectors of society, and therefore technology-related fields have tremendous job opportunities and represent some of the highest-earning majors. Unfortunately, many highly talented female and minority students never investigate computing as an academic option. Although Blacks comprise 12 percent of the total population and 11 percent of the workforce in the United States, they account for only three percent of the employed computer scientists and engineers. The low proportion of participation is also true for women; they comprise 46 percent of the nation's workforce but only 15 percent of the computing workforce. Some of the barriers faced by women and minorities are founded in cultural expectations established well before the college level, but universities can take effective steps to increase their recruitment and retention in technical majors. The current study uses an innovative approach – online learning communities with the aim to enhance learning and create more positive attitudes toward IT. Our NSF-funded project works with students in introductory technical courses to increase student understanding of applications of concepts discussed in lecture. Considerable attention has been given recently to the Net Generation. This project explores and exploits tools like blogs and online discussions to promote a student community knit by common interests, and provide a sense of support for students struggling with technical content. Bloggers engage readers with ideas, questions, and links, and promote interaction. The online learning communities have proven effective in enhancing learning and making the computing-related courses exciting and engaging. Additionally, this strategy creates more positive attitudes toward IT measured by a scale (published in a peer-reviewed journal), especially among women and minority students without alienating the traditional while males.

Visualizing NP Complete Proofs and Reductions in OpenDSA

Nabanita Maji & Clifford A. Shaffer, *Virginia Tech*

Studying and understanding the concepts of reduction and NP-Completeness are among the tougher facets in Theory of Algorithms courses at the senior and graduate levels. Our aim is to improve learning by providing intuitive, interactive, and easy-to-understand visualizations. We aim to develop visualizations that explain the standard problems that are used when presenting NP-Completeness, and the process of reduction of one problem to another. Additional visualizations will illustrate standard NP-completeness proofs. This work is being done within the framework of OpenDSA, an open-source eTextbook system that provides tools for developing visualizations and interactive exercises.

What Students Learn: Evaluating the Multicultural Academic Opportunities Program Summer Research Internship

Delight B. Yokley & Jody A. Thompson-Marshall, *Virginia Tech*

The purpose of this summative evaluation was to examine students' experience while participating in the Multicultural Academic Opportunities Program Summer Research Internship (MAOP SRI). Summer research internships provide students with the opportunity to work with a faculty mentor in a mentor/protégé relationship to design, conduct, and present a scholarly research presentation. Twenty-seven undergraduate interns from 16 different higher education institutions worked in various academic departments over the summer. The participants were given a pre- and post- surveys, which implored mixed methods. The surveys focused on understanding reasons why students selected the program, what they hoped to receive from the internship and their experiences while in the internship. Additional questions centered on the student's experience with the learning process. Preliminary results suggest the learning experience was enhanced when interns understood the expectations of faculty mentors, confirmed the feasibility of attending graduate school, and/or conducting research in the future.

What We Learned from over 200 Online Graduate Students: A New Approach to Online Orientation

Susan Welch, Mary Bishop, Jean Cook, & Dianne West, *University of West Georgia*

Students who begin their online graduate education often lack the technological preparedness and scholarly writing skills needed to make a successful transition to the contemporary online learning environment. This presentation will offer two innovative online orientation programs for Masters and Doctoral nursing students that simulate course activities in an online Learning Management System. The objectives of our online orientation are to familiarize the students with various online technologies, formulate social interactions and a sense of connectedness to the School of Nursing, improve scholarly writing, discover learning strategies and time management skills as well as complete literature searches. With enhanced orientation through accelerated learning modules, students gain a true perspective of asynchronous online learning is as well as the principles of scholarly writing. Integral to the design is active student engagement in a risk-free environment with assignments that will enhance individual scholarly writing.

What's Behind a Successful Non-clinical Journal Club?

Shari A. Whicker, *Virginia Tech Carilion School of Medicine*
Alisa Nagler, Mariah Rudd, & Mitchell T. Heflin, *Duke University Medical Center*

Sir William Osler established medical journal clubs in the 1800s to encourage ongoing review of medical literature. The mission has since grown to serve as a bridge between research literature and clinical practice and to teach critical appraisal skills. With the recent increased interest in medical education careers, a need has arisen for journal clubs focused on medical education. Little is known about how to do this successfully. In response, Duke University Medical Center convened a medical education journal club (MEJC). This MEJC includes trainees involved in a Residents-as-Teachers (RAT) Concentration and their faculty advisors. Prior to each MEJC, 2-3 trainees choose an article related to their project. A template developed specifically for the MEJC guides presenters through the critical appraisal process. Presentations are 30 minutes: 20 for summary of the analysis, 10 for discussion. We meet from 5:30-7:00pm (w/dinner) quarterly and the schedule is known well in advance. Following each session, feedback and self-assessment forms are completed for each presenter. The MEJC creates a community of collaborative relationships with like-minded colleagues of varied specialties and provides an effective forum for trainees to learn to critically appraise and present literature and apply what they learn to their own research. Session predictability and consistency has been important to maximizing attendance. Mean trainee attendance over two years is 82%. All

presenters thus far have received an average score of **4.5**/5 or above on evaluation of article introduction/background, methods/results description, conclusions discussion, presentation skills and utilization of adult learning principles. RAT graduates rated MEJC as "useful" or "extremely useful." This MEJC model could easily be adapted for use within other institutions and for other non-clinical purposes. It keeps participants current on relevant research, fosters continued development of scholarship, and supports a community of faculty and trainees from across specialties.

Who's Watching You? Lessons Learned from Online Proctoring

Mari-Wells Hedgpeth, Kathryn W. Smith, Johanna Foster, & Julia Xin, *University of North Carolina at Chapel Hill*

Research by Cizek (1999) indicates cheating has greatly increased over the last 30 years. Efforts to protect test content and minimize threats must be pursued in order to preserve the integrity of high-stakes assessments. To combat possible exam security breaches our undergraduate medical school decided to use an online proctoring agent in conjunction with our proprietary, web-based, assessment software to monitor students' online behavior during exams. The commercial system monitoring agent found 1) works with our existing bring your own device (Windows or Mac) laptop policy; 2) functions with our own secure, web-based, testing software and authentication process; and 3) allows students' computers to be monitored by a proctor during secure, in-class, exam administrations. The monitoring software allows the human proctor to efficiently view all examinees' screens in one testing room. A proctor can rapidly tell if an examinee attempts to access prohibited browsers or applications, and monitor keystrokes in real time. As the monitoring agent is employed it allows the proctor's screen, with thumbnail images of all examinees' screens, to be video recorded and saved so that it may be later analyzed in cases of possible security breaches. Though online proctoring management has been moderate-to-difficult to implement we have found that by creating a high quality proctoring model we can use our own assessment software, allow students to use a device of their choosing, enhance the integrity of exam administrations, and help ensure that resulting performance data are of high quality. As educational outcomes continue to be based in assessment, medical school administrators have a responsibility to ensure that exam results are reliable and trustworthy. This approach of combining traditional, human proctoring with online proctoring may be an effective way of further helping to prevent test fraud, item theft, and maintain confidence in test results.

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Why Do Women Persist? A Phenomenological Analysis of Domestic and International Female Engineering PhD Students

Cassandra Groen, Kasey Lee Richardson, Raven Weaver, Christina Wade, Xiaoyan Ma, & Penny Burge, *Virginia Tech*

Retention of females pursuing higher education in engineering-related fields of study is a well-established topic of concern. The literature reveals varying trends among retention rates between international and domestic students at all levels of education; however, few studies have been exclusively dedicated to retention of both domestic and international women doctoral students in engineering programs, particularly those utilizing phenomenological methods. To investigate the similar and distinct characteristics impacting persistence among domestic and international female engineering students at the graduate level, we conducted face-to-face interviews with five women PhD students, each from a different PhD-granting engineering program at one university. The analysis of data suggested that each of the five women face multiple challenges during graduate school, though the nature of those challenges may differ depending upon domestic or international status. Additionally, participants identified

various barriers to persistence in their respective programs. To cope, each participant described a sense of integration and relatedness within her specific departmental experience from which she constructed a culture of support. While these cultures of support were similar in nature, our preliminary findings have revealed distinct features unique to each participant. Our results indicate the salient role of encouraging domestic and international female doctoral engineering students to develop a culture of support within and beyond the academic community. We will highlight several components of these cultures of support so that instructors and advisors may assist in encouraging the persistence of women within engineering-related higher education programs.

Wordpress in Higher Education: Building Web Skills and a Portfolio

K.Westmoreland Bowers & Samuel Jennings, *Radford University*

Abstract: As college students prepare for life after graduation, they must consider the best way to stand out among their peers. Traditional résumés offer little in terms of expressing creativity and reflecting a job applicant's personality. Websites, however, provide opportunities for students to showcase originality, as well as provide an organized and accessible portfolio and demonstrate a web presence. This is especially important to students in various media fields whose best representation of their abilities lies in the works they have produced while honing their craft. Even with the many tools available today that allow for quick construction of a website, students should see their website as something they are building throughout their college career and something to maintain once they enter the workforce. Wordpress offers advantages to both novice and more skilled website creators. By starting students off with the basic blog, students have a chance to become familiar with the basics of website creation. Wordpress also offers a number of plugins and a desktop server program so that students may progress to higher levels of control and detail in building their sites. Since the basic of the tools and interface are consistent across the Wordpress platform, students will find it easier to scaffold their learning, mastering tools when they are ready for them. While there are other content management systems that can help students build websites, Wordpress represents 60.9% of the market share and many top companies such as CNN, GM, UPS, EBay, and The New York Times use Wordpress to power their sites (Web Technology Surveys, 2014). In order to introduce students to Wordpress and to encourage building their skills in website creation, we have created a list of best practices through which professors can students started and promote growth in their content management and website creation skills.

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Thursday

February 5, 2015

Session 9

1:50-2:40 PM

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

Faculty Experiences with a Curricular Redesign: Strategies and Supports

Susan Bickerstaff and Maria Cormier, *Community College Research Center*

Abstract: Curricular redesigns aimed at improving student learning and outcomes are increasingly common. These types of reforms may require a significant pedagogical shift for many instructors. This study addresses a gap in the research literature on how college instructors learn to teach a new course and the types of professional and institutional supports they need to make those changes. It draws on qualitative data collected from instructors beginning to teach a newly integrated reading and writing course designed for community college students with academic needs. Findings reveal that although faculty entered into the integrated reading and writing reform with a core belief that the two subjects should be taught together, the integration of the disciplines presented a number of complexities. This analysis suggests that learning to teach the other discipline is not sufficient; instructors are in need of strategies for teaching both subjects together. Beyond the clear implications for researchers, practitioners, and policymakers with an interest in developmental English and reading, this paper has implications for a broader audience of educational reformers and scholars interested in creating professional supports for faculty embarking on instructional reform.

Literature Review

The adoption of an instructional reform may require significant changes to teaching practice, which implies an opportunity for faculty to reflect on their pedagogy and engage in professional supports related to instruction. Unfortunately, the context of postsecondary education presents unique challenges for developing high quality professional learning opportunities focused on teaching and learning (e.g., Furco & Moely, 2012). Faculty have an array of responsibilities that extend beyond classroom teaching. Traditionally, colleges and universities support professional development activities aimed at enhancing disciplinary expertise (Brawer, 1990). Additionally, faculty typically engage in professional learning related to organizational development (institutional policies and structures), scholarly and personal development, and curriculum development (Taylor and Rege Colet, 2010).

However, the past several decades have seen a shift, as more postsecondary institutions structure opportunities for faculty to learn about instruction and classroom practice. This coincides with extensive instructional reforms in some fields, including developmental reading and English (Edgecombe, Cormier, Bickerstaff & Barragan, 2013). To ameliorate poor success rates among students referred to remedial English (writing) and reading, many states and colleges are moving to a single integrated reading and writing course for students deemed in need of additional academic preparation. Given the historical separation between these disciplines in higher education, this change requires many faculty members to teach new content. At institutions engaging in this reform, faculty report challenges with revising the course content and adopting pedagogical practices to optimize the integrated curriculum (Goen & Gillotte-Tropp, 2003). However, additional research is needed on how these challenges might be addressed through professional learning opportunities and institutional supports.

Methodology

This paper presents a comparative case study (Yin, 2003) of three instructors' experiences of integrating the two disciplines and the implications for instructors' professional learning needs. The instructors from three different community colleges in a state system were purposively selected based on recommendations from colleagues and according to exploratory classroom observations. They were identified not only as skilled instructors but also as diverse in their backgrounds, perspectives on the reform, and approaches to delivering the integrated curriculum. The sources of data were collected over two semesters and include the following:

- Curricular materials (e.g., syllabi, textbooks, assignments) from each course,
- Twelve audio-recorded, semi-structured interviews (four per participant),
- Five audio-recorded reflections (one or two per participant) that focused on strategies used to integrate reading and writing in class activities, assignments, and curricular materials,
- Five focus groups with students enrolled in participants courses (one or two per participant),
- Observations of six classrooms (two per participant) across two semesters

Interviews, focus groups and audio reflections were transcribed and uploaded into Atlas.ti for coding and analysis. Using frameworks from the literature and researcher reflections, the team developed a series of initial deductive codes. This coding scheme continues to be revised inductively as new themes surface in the dataset. Interpretation is currently ongoing. This proposal presents findings from preliminary analysis.

Results

Case study faculty entered into the integrated reading and writing reform with a core belief that the two subjects should be integrated, and reported that they had combined reading and writing in the previous self-contained courses, to a great or lesser extent. Yet despite this willingness, the integration of the disciplines surfaced a number of complexities as instructors worked to revamp curricular materials and classroom activities. Through the analysis of the case studies, several overarching themes emerge, including a general tendency to rely on curricular materials and teaching practices employed in previous courses. Faculty expressed concern about a lack of time to cover skill instruction: "One of the things that I have struggled with is the grammar piece. I feel like I really don't have much time to spend on those sentence level concerns." Faculty explained that most of the new integrated courses were, in fact, built from pieces of previous courses. This additive approach produced courses that were, as one instructor characterized them, "helter skelter."

Descriptions of professional learning activities at all three colleges suggest the popularity of cross-training (i.e., reading instructors presenting to writing instructors and vice versa). As one instructor described it, "We took all the writing instructors and then I gave them a crash course in terms of reading. How they could take an existing activity, that they already did, and add a little more reading to it?" However, the experiences of faculty suggest that learning how to teach the other discipline is not sufficient; instructors are in need of strategies for teaching both subjects together. By contrast, faculty participating in collaborative student learning assessment reported its benefits in supporting their ability to integrate the two disciplines. One instructor described such efforts in her department, "We are collecting writing samples and doing a group grade. Then we look and make a strengths and weaknesses list. Then we use that list for faculty development." This grounded approach to identifying areas for instructional development appears to be responsive to faculty needs regarding how to support students in developing integrated literacy skills.

Discussion

Many colleges are looking for opportunities to improve outcomes for students referred to developmental English and reading, and increasingly they are integrating those disciplines. While this approach has strong theoretical underpinnings, there has been little documentation of how colleges and individual faculty members enact the reform. This case study analysis represents a foundational effort to catalog the process of integration, focusing on the professional needs of instructors and the professional learning opportunities which addressed those needs. Beyond the clear implications for researchers, practitioners, and policymakers with an interest in developmental English and reading, this paper has implications for a broader audience of educational reformers and scholars interested in creating professional supports for faculty embarking on instructional reform.

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Engaging Pre-service Teachers in Learning: A Comparison of Two Literacy Methods Courses

Jana Hunzicker and Twila Lukowiak, *Bradley University*

Abstract: This presentation will report the background, design, findings, and implications of a mixed methods study undertaken to improve pre-service teachers' engagement in learning in two advanced literacy teaching methods courses taught by one professor. Independent samples t-tests revealed that student engagement in learning increased significantly from the first to the second time the professor taught each course. Analysis of the study's qualitative data revealed that, although ultimately successful, the professor's intentional efforts to increase student engagement in learning were discursive and sometimes tacit. Findings suggest that a systematic process of data collection, analysis, and reflection can support a professor's intentional efforts toward improved teaching practice, especially when the process is self-motivated, collaborative, and ongoing.

Literature Review

From kindergarten to college, today's teachers must know their content and be able to teach it in ways that actively engage their students. In the United States, increased efforts to ensure substantial learning outcomes, including widespread adoption of the Common Core State Standards (ASCD, 2014) and performance-based, value-added assessments to evaluate teaching performance (AACTE, 2014; Darling-Hammond et al., 2012) make teaching in today's classrooms even more challenging. For those who teach – and those who prepare teachers – lifelong learning is a crucial aspect of teacher professionalism (Livingston, 2012). Day (1999) distinguishes between *restricted teacher professionalism*, which is "intuitive, classroom-focused, and based on experience rather than theory" (p. 5) and *extended teacher professionalism*, which involves locating teaching practice within a broader educational context, comparing teaching practices through collaboration with other teachers, and systematically evaluating teaching effectiveness. Lifelong learning involves both, but the inquiry-based efforts associated with extended teacher professionalism are more likely to result in improved teaching practice and increased student learning. In higher education, scholarship of teaching and learning (SoTL) is defined as "the systematic reflection/study of teaching and learning made public" (McKinney, 2007, p. 8). SoTL work is common in the social science disciplines, especially when college faculty are interested in improving their teaching effectiveness or increasing student learning within a specific course. One topic commonly investigated by teacher education faculty is student engagement in learning, or devoting substantial time and effort to the pursuit of academic learning and development (NSSE, 2013). Student engagement in learning can be evidenced in the college classroom by regular class attendance, following directions, and submitting assignments on time (Chapman, 2003), active participation in class discussions and activities (Rocca, 2010), and critical thinking, creativity, and problem solving related to knowledge and skills learned in class (Jones et al., 1994). Indeed, a positive correlation exists between student engagement during class time and student learning outcomes (Dunleavy & Milton, 2008; NSSE, 2013).

Methodology

The purpose of this study was to improve one professor's teaching practice toward the desired outcome of increasing pre-service teachers' engagement in learning. The study was guided by the question, is there a significant increase in student engagement in learning between the fall 2009 and fall 2010 semesters (the "old" literacy methods course) and between the fall 2011 and fall 2012 semesters (the "new" literacy methods course)? It was hypothesized that between the first two and second two semesters, higher order, student-to-student discussion and activities would increase and teacher-led instruction and non-higher order discussion and activities would decrease as a result of the professor's intentional efforts to increase student engagement in learning. The study employed a mixed methods research approach. Over four semesters' time, both quantitative and qualitative data were collected concurrently in the form of Instructional Practices Inventory (IPI) codes, anecdotal peer observation notes, the professor's written reflections, and ratings/comments from student course evaluations. Following data collection, Statistical Package for the Social Sciences (SPSS) software was used to explore the quantitative data (i.e., IPI codes) for statistical significance. The qualitative data (i.e., anecdotal peer observation notes, the professor's written reflections, and ratings/comments from student course evaluations) were then analyzed to explain and elaborate the quantitative findings.

Results/Findings

Independent samples *t*-tests compared the IPI codes for fall 2009/fall 2010 and fall 2011/fall 2012. For the comparison of fall 2009 IPI codes (n= 96; *Mean* = 4.57, *SE* = .10) with the fall 2010 codes (n= 96; *Mean* = 5.03, *SE* = .10), the difference was

statistically significant $t(190) = 3.19$, $p = .002$, 95% CI [.18, .74]. The effect size was small, $r = .23$. For the comparison of fall 2011 IPI codes ($n = 91$; *Mean* = 4.07, *SE* = .08) with the fall 2012 codes ($n = 88$; *Mean* = 4.49, *SE* = .12), the difference was statistically significant $t(177) = 2.99$, $p = .003$, 95% CI [.14, .70]. The effect size was small, $r = .22$. For both comparisons, the statistically-calculated means were greater during the second semester each course was taught, supporting the hypothesis that higher order, student-to-student discussion and activities would increase and teacher-led instruction and non-higher order discussion and activities would decrease as a result of the professor's intentional efforts to increase student engagement in learning. The statistical analysis was explained and elaborated with six qualitative themes: 1) awareness is supported by data and written reflection, 2) reconciling instructional values with reality may create internal conflict, 3) discontent can motivate efforts to improve instruction, 4) intentional efforts sometimes precede instructional rationale, 5) overcompensation can inform the process of instructional change, and 6) intentional efforts can result in fatigue. Analysis of the study's qualitative data revealed that, although ultimately successful, the professor's intentional efforts to increase student engagement in learning were discursive and sometimes tacit.

Discussion

The findings of this study suggest that a systematic process of data collection, analysis, and reflection can support a professor's intentional efforts toward improved teaching practice, especially when the process is self-motivated, collaborative, and ongoing. Other studies confirm that such self-directed, classroom-based efforts to improve teaching practice are perceived by teachers as meaningful and timely (Slepkov, 2008) which motivates them to persevere longer, especially when they believe they can achieve their goals (Thoonen, et al., 2011).

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Maximizing Discussion Engagement and Interaction by Design

Teri A. Herron, *Ashford University*

Abstract: As online instruction has grown and spread to all levels from higher education to K-12, many have begun to lament the loss of those elements considered to be unique the face-to-face environment. Chief among these losses is the engaging and lively in-class discussions that many of us remember from our own education. Oftentimes the potential for this type of discussion in the online environment is present but instructors and instructional designers may have difficulty tapping into it. Over the course of the past several years of design and development of online courses, both as a faculty member and as an instructional designer, I have devised a versatile and simple process for creating engaging online discussions which has proven to work in a wide variety of subjects regardless of the level of the course or students. The process may be undertaken in either a linear or cyclical format and is driven by a Socratic methodology of essential questions with which most educators are comfortable. By using learning outcomes to derive major content themes, and major content themes to derive essential questions, discussions become more engaging which in turn promotes more meaningful interaction.

Goals and Objectives for the Practice Session

This session is for educators and instructional designers interested in creating more robust, engaging, and interactive discussions that transform standard online asynchronous discussions into engaging interactive online conversations. After this session, attendees will be able to:

- Apply the Simple to Engaging Design Process for asynchronous online threaded discussion design.
- Evaluate the efficacy of the Simple to Engaging Design Process for asynchronous online threaded discussion design.

Literature Review

The asynchronous discussion has been in use as a tool in online learning almost from its inception. There has been much research conducted regarding the differences between student learning and satisfaction in face-to-face versus online learning environments; however, the more important debate must now center on how the online mechanisms employed can better facilitate student learning and satisfaction in online courses (Kalelioğlu & Gülbahar, 2014). Student behaviors in online discussions can be viewed and data gathered on postings and replies, but even greater knowledge has been gained from a deeper look at learner motivation as well as the influence of peer feedback in higher engagement and interaction rates. Motivation is highly influenced by the perceived competence of the learners as well as a sense of learner autonomy or agency in the process (Xie, 2013). Therefore, discussions which include appropriate resources to allow students to feel competent in answering complex questions, as well as those which target student goals and provide authentic assessments based on these are likely to be far more engaging than those which simply test content recall. While this is common knowledge to many faculty members and instructional designers, it is often difficult to create a focused, rigorous, engaging and interacting asynchronous discussion in traditional threaded discussion forums (Gao, Zhang, & Franklin, 2013). Thus the use of a simple and effective process for the creation of engaging online discussions across a host of disciplines is needed.

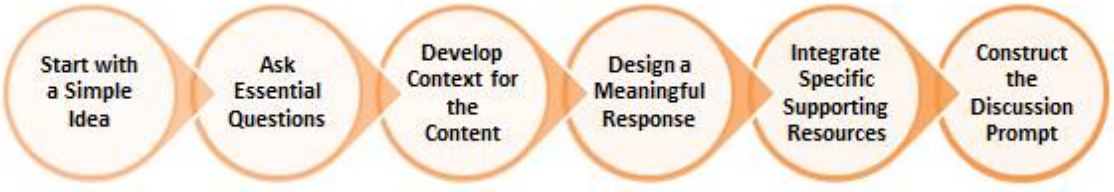

Figure 1: Linear Simple to Engaging Discussion Design (c. 2014, Teri Herron).

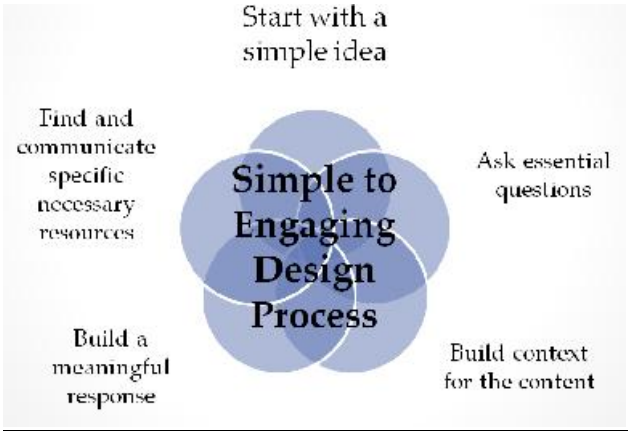

Figure 2: Cyclic Simple to Engaging Discussion Design (c. 2014, Teri Herron).

Description of Practice

After the introduction of the Simple to Engaging Design Process for asynchronous online threaded discussion design, participants will be asked to practice using the process for a variety of provided scenarios with course learning outcomes and discussion topics. Procedural issues related to interaction will be included to support and encourage greater participation within discussions. The process will then be discussed in terms of usability and potential implementation.

Discussion

The discussion will center on how and why the use of this Simple to Engaging Design Process helps to more easily create effective and engaging discussions. The discussion will also highlight the differences between interaction (a procedurally based process) and engagement (a content based process) in design. Participants will be asked to provide feedback and ideas on how the process could improve discussions as well as how the process itself might be improved. Examples of how the process has been successfully used in course developments will be showcased.

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Teaching for Student Learning: Adapting Any Classroom to Foster Deeper Learning

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Abstract: Just because students do well in high school we cannot expect that they will automatically do well as college students. Typically, students receive specific assistance in being better learners only when they struggle in our classes. Student success centers are not designed for those students who are doing well. The issue is whether "well" is anywhere near as what they are able to do. This session is designed to share recent evidence regarding how students learn with the intent of helping ALL students to be better learners.

This session is devoted to looking at how students best learn and then identifying ways to teach students the techniques that will assist them to more deeply learn the course material. Unfortunately, students do not engage in metacognitive processes and reflection to the extent they should. I am not blaming them because we, as faculty, are guilty of the same practices. That said, there are ways that we can assist students, and it is critical for students to become more effective at learning. For example, nearly all students use highlighting, rereading, and cramming for exams as regular learning strategies. All three of these techniques have been demonstrated to be ineffective in getting material into long-term memory and then keeping it there. It is important to share these findings with our students. That said, we must do so in a way that facilitates student learning rather than sounding like we are lecturing them on how they should learn. This session is designed to both show faculty which strategies are effective (and those that are not), along with strategies to facilitate the reception of this information by our students.

At the end of this session, participants will be able to:

1. identify specific research findings pertaining to effective student study techniques.
2. describe at least two methods that students currently use very ineffectively, and teach students how to use those methods effectively.
3. provide assistance to students at every level in a way that will increase each student's deep learning of course material.

The first 15 minutes of the session will be a lecture to set up a foundation for the material. Participants will then break into small groups for some friendly competition regarding who knows which student study techniques are the most effective. The final "phase" of the session will be a classroom assessment technique "muddiest point" followed by a group discussion of the muddiest points that have been surfaced.

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Creating an Active Classroom for the Masses

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Virginia Tech

Abstract: Growing evidence supports the effectiveness of active learning approaches for college level instruction. However, implementing active learning approaches in a substantive way becomes increasingly challenging as class size increases. To create time for an "active classroom" in which class meetings focus predominantly on in-class, group-based, active learning exercises, we are converting our introductory biology classes for science majors from a traditional lecture model to a flipped classroom model. This presentation will describe our experiences in creating an active classroom for classes of more than two hundred students, including the role of undergraduate teaching assistants in guiding student learning. Participants will complete a sample instructional activity and engage in a discussion of the benefits and challenges associated with implementing an active classroom.

Literature Review

Active learning strategies have been shown to improve student performance in several disciplines (Bond, 2010; Freeman, Eddy, McDonough, Smith, Okoroafor, Jordt, & Wenderroth, 2014). The flipped classroom approach allows for content delivery to be shifted ahead of class meetings (Hill & Nelson, 2011; He, Swenson, & Lents, 2012; Herreid & Schiller, 2013; Herreid, Schiller, Herreid, & Wright, 2014), thereby freeing substantial class time for students to engage in active learning exercises in small groups (Fefferi & O'Connor, 2013). Evidence also suggests that involvement of undergraduate teaching assistants may improve student learning (Crowe, Ceresola, & Silva, 2014). Our redesign of introductory biology courses for science majors is based on combining these and other research results to create an evidence-based approach to facilitating learning for a large number of students in an engaging, hands-on, minds-on format.

Goals and Objectives for the Practice Session

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

1. Identify active learning strategies to incorporate in their classes.
2. Determine if the flipped classroom model would benefit their classes.
3. Effectively utilize undergraduate teaching assistants in support of instruction.
4. Apply active classroom practices in their teaching.

Description of the Practice to be Modeled

This practice session will briefly summarize active learning strategies appropriate for classes of two hundred or more students as well as the evidence in support of incorporating such strategies. We will then share our approach to creating an active classroom before guiding participants through a sample narrated lecture and associated in-class activity. One or more undergraduate teaching assistants will share their perspective on the active classroom. We will complete the session by leading a discussion of the benefits and challenges of the active classroom approach.

Discussion Questions

1. What is an appropriate balance between the traditional lecture model and the active classroom model?
2. What are the challenges to implementing the active classroom environment in large classes?
3. What is an appropriate role for undergraduate teaching assistants in the instructional mission?
4. Should all classes be taught in an active format?

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A Call for Student Accountability: How Can We Foster Student Preparedness and Discussion in Class?

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Abstract: Higher education faculty hold high the ideals of learning-centered, cognitively-engaging classrooms. Yet the practicalities of classroom activity, including lack of student preparation and instructors' insecurities about instruction and assessment, can result in continued frustration for both students and instructors. This session will demonstrate ready-to-use strategies for making the ideal, practical. Teachers *can* create an environment wherein students take their reading seriously, where they come to class prepared for discussion, and where meaning is cognitively and socially negotiated. Instead of stifling student participation with instruction that "rescues" students from their reading, educators can use carefully planned and facilitated classroom discussion that requires students' powerful preparation – and ultimately – stimulates their powerful learning.

Reading scholars understand that an initial discussion *about* a text begins within the transaction *between reader* and *text* (Allen, 2011; Rosenblatt, 1978). As the reader negotiates uncertainty, he/she transacts with a text in such a way that internal conversation ensues. This conversation, however, is stilted – or perhaps not even started – if the act of reading is half-hearted or if it does not even take place.

Theorists from several fields help educators understand the process of learning, and an academic view of learning makes sense to higher education faculty: we recognize the beauty of constructivist learning, where knowledge is fluid, cognitively and socially constructed, both invented and discovered: "The constructivist perspective is that learning is a process of interpreting and organising information and experiences into meaningful units, transforming old conceptions and constructing new ones" (Golding, 2009, p.468).

So, while faculty are aware of the many benefits in using discussion in a classroom – developing critical understanding, building self-awareness, appreciating diverse perspectives, acknowledging a need for action (Dallimore, Hertenstein, & Platt, 2004), using democratic principles of recognizing everyone's right to be heard (Michalec & Burg, 2007) , negotiating understanding (Golding, 2009), refining students' "mental models" (East, 2009), to name a few – they are also just as intimidated by the challenges. When students have not engaged, for example, in the initial transaction and conversation with a text on their own, how can they carry on substantive discussions in the classroom? Sometimes, however, a lack of preparation is not the problem. Sometimes one's culture, understanding of educational roles (Culver, 2012), personality, or even the teacher's instructional choices can hinder discussion.

Out of these challenges have come some prescribed discussion protocols and techniques (Li & Demaree, 2010; Michalec & Burg, 2007; Quinn & You, 2010; Zhang & Stahl, 2011) that offer accountability for students and implementation guides for instructors as well as some general tips for classroom culture and approaches (Brooks, 2011; Culver, 2012; Dallimore et al., 2004; Michalec & Burg, 2007). The National School Reform Faculty website also provides a collection of useful protocols (http://www.nsrfharmony.org/free-resources/protocols/a-z).

The implementation, then, of discussion techniques is strengthened by clear roles for both the students and the teachers. Teachers must clarify their expectations for students' preparation (especially their expected reading "conversations") while being aware of their own perspectives about discussion and the expected outcomes. Nash, whose higher education emphasis is in student affairs, presents an interesting philosophy about *crossover pedagogy,* whereby he combines philosophical "genres" to approach teaching and learning that is based on developmental theory, constructivist theory, and positive psychology, to name a few (2009). The point is, instructors must consider their own assumptions about teaching and learning in order to be explicit, strategic, and creative in the ways they help students link their preparation to ensuing classroom discussions.

Objectives

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

1. Identify components of classroom practice that stifle (or replace) student participation.
2. Discuss instructional techniques that promote student *preparedness* (e.g., student accountability, peer responsibility, and the use of classroom time.)

3. Discuss instructional techniques that foster student *discussion* (e.g. inside/outside circles, four corners, standing meetings, Save the Last Word For Me, etc.)
4. Explain the role and purpose of formative assessment in classroom discussion.
5. Apply interactive discussion to explore a shifting focus from teacher to learner.

Description of practice to be modeled

Whole group brainstorming will initially engage the attendees in establishing some components of classroom practice that challenge active engagement, student preparedness, and effective discussion. Then the group will participate in a "Four Corners" discussion to offer solutions to these problems. A brief explanation of the literature review will provide a research-based rationale for using constructivist discussions to facilitate students' negotiation of meaning within and beyond classroom content. In order to deepen their understanding of techniques for classroom use, small groups of attendees will be given excerpts from various research articles (e.g., Golding, 2009; Michalec & Burg, 2007; and Dallimore, Hertenstein, & Plat, 2004) to engage in a "Save the Last Word for Me" discussion. A full group explanation of additional whole class strategies as well as ideas for assessment will conclude the session. Time for question/answer will be provided as well.

Discussion

As the purpose of this session is to celebrate the role and efficacy of discussion-centered instruction, the attendees will have ample opportunities to practice techniques that are easily implemented. The session will highlight strategic use of instructional techniques, depending upon how students should prepare for the eventual class discussion. Some techniques, for example, are more appropriate for problem/solution exploration, perhaps even before texts are assigned. Other techniques link pre-reading questioning and prompting to deep and thoughtful after-reading discussions. Still others are useful for having students navigate cognitive dissonance, while others promote a simple sharing of ideas. Helping attendees see the link between the instructor's learning goals, their expectations for students' preparation (along with the *students'* clear understanding of those expectations), and the technique that they choose to use will better prepare them for success during implementation.

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Assessment and Evaluation: The Complementary Pedagogical Tools for Improved Performance and Academic Empowerment

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Abstract: Examining contemporary methods of pedagogy; i.e., the online and hybrid techniques of teaching and learning, this paper addresses first of the two complementary tools of performance measurement: assessment and evaluation. As a qualitative inquiry, it begins with focus on three debatable practices: (1) the traditional evaluation technique of academic performance that centers judgment not improvement (2) the challenge of on-line instruction that restricts face-to-face intimacy of direct/instant interaction among traditional learners, and (3) meta-cognition (or self-awareness and self-control) as a crucial condition for improvement in one's performance. Bridging the gaps, this paper advances a three-step "Strengths, Improvements, and Insights" (SII) assessment for any academic environment, online or traditional. Representing process education (PE) institute's pedagogical research of over two decades, SII frames one of PE's five pedagogical concepts called self-development (Beyerlein, Holmes & Apple 2007). An interactive approach to improve faculty performance, the SII model offers specific techniques to improve performance for pedagogy as well a product.

Literature Review

Contemporary research suggests that academic performance of all students, regardless of their background, can be improved (Wenglinsky 2001). However, criticism that teachers often fail to assess the academic competency of students has been a consistent concern of academic scholars. The traditional concept of performance measurement focuses students' academic evaluation from a judgment perspective with expression of letter grades that range from "A" (outstanding) to "F" (fail). Assessment, as a critical complement to evaluation, supplements what Wiggns (1990) calls "authentic evaluation" with focus on task, content and evaluation. Thus, the purpose of assessment is improvement in quality with focus on improvement, not judgment (Baehr 2007). Emphasizing the feedback aspect, Stiggins (1991) suggests development of evaluation criteria with clearly defined attribute(s) of "improved" performance, and development and maintenance of a performance continuum to distinguish improvement over time. Astin (2003) also suggests nine principles of "good" assessment. Beyerlein, Holmes and Apple (2007) emphasize evaluation and assessment as a two-sided approach articulating strengths, improvements, and insights as a tool that can be used for self-assessment or assessment of others, including students.

Goals and Objectives

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

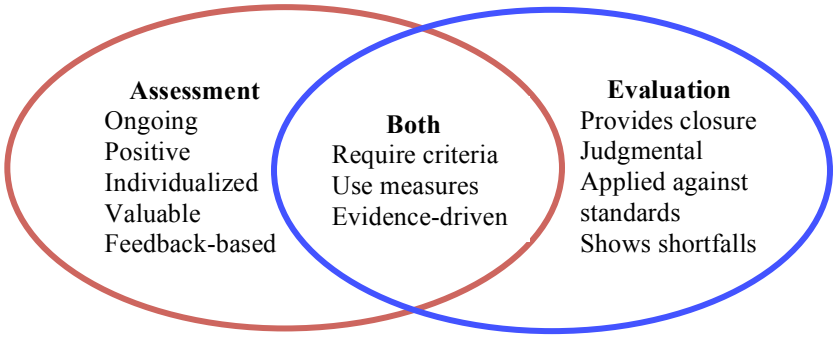
1. understand and differentiate assessment from evaluation, and identify each's significance regarding performance measurement;
2. comprehend the importance of SII model as an empowering tool to improve performance;
3. conduct assessment of a performance or product as well as a research study.

Description of Practice to be Exemplified

Assessment methodology, as prescribed by Process Education (PE) theory, involves four basic Steps (Apple & Baehr 2007):

1. Assessor's development of guidelines for assessment of a performance or product;
2. Designing of the approach to be used for the assessment by both, the assessor and the assesse;
3. Collection of data and analysis of the evidence; and
4. Reporting of the assessment to the assesse.

Assessment vs. Evaluation as Tools of Performance Measurement



Source: Sharon Jensen (2007), Faculty Guidebook, pg. 446

As qualitative and/or quantitative research inquiry, the SII model can be used in the planning, design, and evaluation of studies in education and behavioral sciences using virtually all conventional research and evaluation methods including descriptive, developmental, case study, correlational causal-comparative, true experimental, or Quai-experimental.

Discussion

Assessment facilitates transformation from teacher-centered paradigms to learner-centered paradigms. The purpose of assessment must focus on improvement based on certain criteria (Astin et al. 2003) whether for a performance or product. Obviously, mutual understanding and agreement between an assessor and assesse is a required condition for any assessment. It involves careful consideration of the evidence concerning an assessee's range of abilities, as well as the scale set by the assessor's abilities with improvement as the outcome. As pedagogical tool, assessment can also be conducted at course level, academic program level, and institution level.

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A Conversation about Rural Students in Higher Education: Considering Diversity and Inclusive Place-based Pedagogy

Amy Price Azano, *Virginia Tech*

Abstract: While rural students often represent a marginalized population, they are rarely considered in conversations about diversity. Rural communities face many challenges in education, including poverty, limited resources, educational inequities, and geographic isolation. About one quarter of U.S. students are educated in rural schools, yet – due to an urban bias in educational research and policy – relatively little is known about the academic attributes or challenges of this population once they arrive on a college campus. Moreover, the literature in rural education points to a dilemma for rural students: pursuing a college education at the expense of their community membership. Rural students tend to have strong ties to their sense of place, and yet rural hometowns offer little economic incentive for enticing their college graduates to return home after graduation. This issue of *outmigration* is a palpable one for rural "stayers" in a noticeable and notable loss of human resources in an already dwindling rural population. This conversation will give participants an opportunity to discuss the unique needs, strengths, gifts, talents, limitations, and barriers for rural students' sense of belonging and academic achievement in the college classroom and university environment. In doing so, participants might find commonalities across disciplines and geographies to better understand how universities might respond to the personal, sociocultural, and academic needs of their rural students.

Literature Review

Rural advocates argue that greater understanding of the experiences of rural students is needed (Arnold, Newman, Gaddy, & Dean, 2005; Coladarci, 2007) to address issues that influence their education. Often cited in the literature are funding inequities (Jimerson, 2005; Mathis, 2003), limited access to educational resources (Gibbs, 1998), and rural poverty (Johnson & Strange, 2005). Additionally, rural schools have strong community ties (Barley & Beesley, 2007). So, for many, there is a high-stakes decision to be made for students seeking academic opportunities: leveraging an education at the expense of leaving their community. Rural students on college campuses may, in some ways, feel that they have had to cash in their cultural heritage (Howley, Harmon, & Leopold, 1996) to pursue their college degrees. A critical pedagogy of place (Gruenewald, 2003) provides a lens for understanding how place contextualizes a student's sense of knowing and critically understanding the word and the world (Freire & Macedo, 1987). Place-conscious pedagogy addresses the needs of rural students (Azano, 2011; Brooke, 2003; Budge, 2006; Gruenewald & Smith, 2008; Haas &Nachtigal, 1998; Theobald, 1997). This is especially important in understanding the unique strengths and challenges of rural students pursuing postsecondary degrees.

Goals and Objectives

This conversation will provide participants with an opportunity to discuss the unique needs, strengths, gifts, talents, limitations, and barriers for rural students' sense of belonging and academic achievement in the college classroom and university environment. In doing so, participants might find commonalities across disciplines and geographies to better understand how universities might respond to the personal, sociocultural, and academic needs of their rural students. By discussing the unique needs of rural students, participants will (a) gain a better understanding of how a rural upbringing can contextualize the educational experiences for students, and (b) discuss place-based or other "what works" strategies to support student success.

Description

Rural college students often represent a marginalized population - many as first-generation college students and/or students coming from community poverty and geographic isolation. In this way, rural students represent a certain type of diversity; however, they are rarely considered in conversations about diversity or employing inclusive pedagogies. Discussing the unique challenges, strengths, weaknesses, gifts, limitations, and so forth of rural students in college classrooms allows for a much needed conversation about rurality and how college classrooms can better respond to students' unique needs.

Facilitation Techniques

The presenter will facilitate the conversation by (a) providing a brief overview of rural education and place-based pedagogy, (b) inviting participants to share their own sense of place, (c) sharing data about literacy rates and rural poverty, (d) discussing perceptions and images of rural community members in popular media, and (e) couching the discussion within the context of social justice and educational equity.

The presenter will ask:

- What are the challenges participants see in the classroom or in college settings generally?
- How might we think about place as a way of understanding the cultural and critical lens students bring to the college classroom?

This conversation will allow participants to develop a critical lens for understanding their rural students and how college campuses and classrooms can respond to the unique needs of this population.

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Conversation: Does Widespread Adoption of Quality Assurance for Online Courses Beg a Second Look at Face-to-face Course Quality?

Erin M. Berman & Charles Cosmato, *Radford University*

Abstract: The continuously steep growth trend in online learning has provided over a decade of conversation on online course quality (Allen & Seamen, 2013). As a result, much work has gone into developing specialized standards and programs of quality control. For example, a recent WICHE survey (2013) indicated that 85% of responding institutions had implemented some form of standards or best practices in their online courses. Quality Matters™, a faculty-centered, peer review process that is designed to certify the quality of online and blended courses currently boasts that it has trained over 23,000 faculty and instructional design staff. All this activity in online quality control seems to beg the question: What about face-to-face courses? In this conversation participants will weigh the value propositions and potential pit-falls of quality assurance programs for all higher educational experiences regardless of delivery modality.

Literature Review

The traditional view of academic quality as perceived expertise of the faculty and status of the institution has been scrutinized at least as long as the U.S. Department of Higher Education has used accreditation as the basis for Title IV funding (Houston, 2010). Yet, the same couple of decades of general academic quality scrutiny have produced visibly more standards, models, and processes for producing quality online education than face-to-face instruction (Endean, Bin Bai, & Ruo Du, 2010; Phipps & Merisotis, 2000; Shelton, 2010).

A decade into the online education quality assurance movement Shattuck (2014) assembled a comprehensive collection of current thought on the practices and processes of quality assurance for online education. However, this movement has left out the focus of face-to-face quality assurance. The push for quality in the face-to-face setting is equally well established, but standards of practice and models of quality improvement have not enjoyed a similar proliferation (Lumina Foundation, 2013, U.S. Department of Education, 2006).

Goals and Objectives

1. Describe the value of quality assurance in face-to-face higher educational experiences
2. Explain some of the barriers to implementation of a quality assurance program
3. Problem-solve solutions for overcoming barriers to implementation of a quality assurance program
4. Discuss overlapping quality concerns of face-to-face and online course

Description of Topic to be Discussed

In this conversation session participants will consider the value of quality assurance programs for all higher educational experiences, regardless of delivery methods. Specifically, facilitators will provide a foundation of knowledge concerning current quality assurance programs and trends. Next, participants will be broken into discussion groups to address the following topics:

- Why the trend is to limit quality assurance programs to online education
- Why is the modality the issue?
- In a world where QA is bleeding into more traditional modes how do we take what we learn and apply it to all educational experiences?
- In what ways can we protect innovative practice?
- Academic Freedom and quality- where is the line?
- In what ways can we maintain quality but supporting risk taking?
- Who are the stakeholders: Faculty by-in vs. Administrative by-in (conflicting levels of buy-in)

Facilitation Techniques

Facilitators will spend ten minutes laying the foundation for the conversations by addressing current literature related to quality assurance programs and trends in higher education. Next, participants will be asked to engage in a think-pair-share activity focused on addressing current issues regarding quality assurance in face-to-face higher education. During the debrief participants will be asked to share their ideas on the various topics and brainstorm possible solutions for overcoming obstacles.

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The Day After, and the Months Ahead: Conversations With Students Following Campus Violence

Megan Doney and Cynthia Wynne, *New River Community College*

Abstract: The class periods following a school shooting are the most difficult of an educator's life. Many educators are at a loss to know how to approach the incident with their students when information may be scarce and emotions are turbulent. In order to restore a sense of "normalcy" for the students' sake, they must often directly address students' immediate questions about safety, the shooter's motives, and the future, while also managing their own trauma and loss. However, the difficult conversations persist in the weeks, months, and years following an act of violence, as educators find not just their personal lives, but their pedagogies, transformed by the violent incident. Incidents of campus violence are devastating, and educators must create a new teaching paradigm that incorporates the psychological and cognitive aspects of the violent event. Both presenters are witnesses to a school shooting, and in this session, they will describe the different approaches they have taken to initiating conversations with students about their own choices and experiences on the day of the shooting. They will further share the ways in which their pedagogical approaches have shifted as a consequence of the shooting.

Literature Review

Most literature on school violence focuses on students themselves, and this is natural, given that they simply outnumber faculty, and their mental and physical safety assumes the highest priority after school violence. But the dearth of research on how professors must personally and pedagogically attend to the trauma of a school shooting indicates a significant gap that needs to be filled. Duffy and Mooney (2014) write that "To date there are no studies and no documentation on what effects witnessing a severe act of school violence has on a teacher's career." They further assert that "there are no first-hand narratives directly connecting the relationship between school violence and pedagogy." This conversation seeks to rectify that absence in a small way.

In her conference presentation on restorative justice following school violence, Mateer (2012) writes that "values of respect, inclusion, mutual care, truth telling, listening, and understanding" should inform such efforts in schools. Continuing, candid conversations with students about violence and its impact rebuild trust in a classroom where it was once broken in the worst way imaginable, and cultivates openness within the school community itself. As Hawdon and Ryan (2011) write, "solidarity emerges from the intense, collective rituals performed in the public and parochial realms that are specific to the tragedy." Conversations with students about professors' own experiences with violence are indeed intense, requiring professors to speak from their hearts, not from their areas of disciplinary expertise. They may risk derision from colleagues, resurfacing trauma of their own, and increased fear from students. We assert, though, that these conversations must happen in order to restore trust and reaffirm the shared nature of teaching and learning.

Palmer (2007) writes that "the courage to teach is the courage to keep one's heart open in those very moments when the heart is asked to hold more than it is able, so that teacher and students and subject can be woven into the fabric of community that learning, and living, require." We believe that in inviting students to difficult conversations about campus violence, we are opening our hearts to the possibility of transformation in the classroom, the sacred space that has been violated. Moreover, we believe that these repeated conversations will eventually assume more power than the incident itself, thereby offering the greatest transformation of all.

Goals and Objectives

Our goals in this conversation are:

1. To share our own stories as witnesses to a school shooting
2. To explain how we now discuss with our students what to do in the event of another active shooting
3. To explain how our teaching approaches have shifted as a result of the shooting
4. To offer other faculty different models for addressing these issues with their own students

Description of Topic to be Discussed

We are witnesses to the same school shooting, but we were in different places at the time and so our recollections, visual accounts, and physical proximity to the shooting vary. One of us was in a classroom with students when the shooting began, while the other was in a room of faculty cubicles. The former managed to flee with her students; the latter barricaded herself in the room as best she could. In the aftermath, we have chosen different approaches for addressing classroom and campus security with our students. We will discuss our choice of timing the discussions, what we share about our own experiences and why, how we now attempt to make our classrooms physically more secure, and how we tap into student veterans' expertise. We will additionally explore how the shooting has changed the way we teach, in terms of our student interactions, chosen pedagogies and course content, and how our own sense of purpose and potential has changed.

Facilitation Techniques

We will first ask participants to discuss, in pairs or trios, how they initiate sensitive conversations with students; these might include discipline-specific conversations about plagiarism or conversations about campus losses. Sharing these will offer the group a context for considering language, tone, content, and the use of personal experience in our student conversations. We will then use a combination of narrative storytelling to outline our own experiences with a school shooting and describe how we have initiated, and continue to incorporate, those conversations into our teaching.

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Thursday

February 5, 2015

Session 10

3:00-3:50 PM

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

Family Influence on First Year Students in Selecting Engineering As a Major

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Abstract: The purpose of this qualitative study is to describe the family influences on four first-year college students from Southwest Virginia and their choice to study engineering at a Research One Institution. The multiple identities theoretical framework guided this study. Data was collected through in-depth semi-structured interviews using a phenomenological design. Data analyses included open coding and generating of themes. Four themes emerged as the factors that influenced students' major selection: pre-college experience and academic preparation, academic interest, pressure or stress, and support. The findings contributed to the literature related to student choice to study engineering and their decision-making criteria. In addition, the findings have important implications for high school teachers and counselors.

Introduction

Increasing the number of engineering graduates has been a national concern in recent years in the U.S. However, the recruitment and retention of engineering students is a difficult task because the decision-making criteria are not well understood. Most students are unsure what major to select when entering college. Research is needed to further understand students' decision-making process in their major selection.

Literature Review

The conceptual model of multiple identities theory was used as the theoretical framework (Jones & McEwen, 2000; Abes, Jones, & McEwen, 2007). This conceptual model consists of three components: a core sense of self, significant identity dimensions (e.g., gender, race, and religion), and contextual influences (e.g., family background and life experiences). Social contexts play important roles in the development of specific dimensions of identity. In this study, we will focus on how family context influences students' major selections.

Previous studies have shown that family had a significant influence on students' major selection; for example, parental education, family income, and the family head's occupational status are associated with their child's major choice (Malgwi, Howe, & Burnaby, 2005). Students from families with low socioeconomic status (SES) were more likely to choose majors that would equip them for lucrative careers (Leppel, Williams, & Waldauer, 2001). Families in Southwest Virginia (SWVA) have relatively lower household incomes compared to other regions of Virginia (Parker, 2011). Whether students from this area have distinctive decision-making process in major selection is still unknown. Thus, this project was designed to explore how family influences students from SWVA in selecting engineering as their major.

Methodology

Phenomenological interviewing was employed for this study. Phenomenology assumes that through dialogue and reflection, the quintessential meaning of the experience will be revealed (Rossman & Rallis, 2011). It focuses on the lived experiences of people and how they describe their experience (Creswell, 2009).

A purposeful sampling method (Rossman & Rallis, 2011) was used in recruiting participants. The potential participants must be first-year, full-time students in the engineering program at Research One Institution (R1). We recruited participants through email and in-person during several required freshman engineering classes. Finally, four participants were enrolled with an equal number of males and females.

The data was collected through in-depth semi-structured interviews and a demographic survey. Interviews were conducted during the 2011 fall semester on the R1 campus and lasted 30 to 45 minutes. The interview questions included why students chose R1 and engineering, what factors influenced their decisions to select engineering as a major, and how family influenced their major decision processes.

Each interview was coded twice. First, the research team used an open coding strategy to identify the context of participants' responses and discussed themes. In the second round of coding, each interview was coded with the

themes definitions the research team categorized based on the literature. Finally, the coding results were member checked to confirm emerging themes observed in the data (Creswell, 2009; Rossman &Rallis, 2011).

A variety of actions were taken to establish trustworthiness and rigor of the research findings. An expert in the field of engineering education evaluated the interview protocol to ensure construct validity. The research team had critical discussions on the research questions, data collecting procedures, analytic strategies, and explanations of the data. The coding processes included peer review, member checks, and memo. In addition, researchers conveyed the findings to the participants for their review, extension, and elaboration.

Findings

Four themes emerged as the factors that influenced students' decisions in selecting engineering as their major: pre-college experience and academic preparation, academic interest, pressure or stress, and support. These themes were related to the multiple identities theoretical framework. Specifically, the students' background and support were reoccurring themes within their intrapersonal domain. Their pre-college experience contributed to their cognitive development while pressure or stress was integral to their interpersonal identity.

Conclusion

Our findings help to better understand why first-year students from SWVA choose engineering as their major. The findings have important implication for practice. Participants emphasized the importance of math preparation in high school and they mentioned the pressures of studying engineering. Academic advisors and guidance counselors could better serve students by providing assistance with selecting more appropriate advanced math courses to better prepare them for college engineering courses. Teachers can focus on exposing students to pre-college experiences, such as science fairs, internships, and cooperative educational opportunities within the technology industry. In addition, students from lower SES families need mentors to instruct their academic major choices.

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Research Skills as Threshold Concepts in Biology Graduate Education

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Abstract: This study explored potential threshold concepts within biology graduate education. Doctoral students, postdocs, and assistant professors (N=40) were interviewed about core competencies that students develop during graduate education and which they felt might function as threshold concepts. Using analytic induction and constant comparative analysis, categories of potential threshold concepts were created from transcribed interviews. Three potential threshold concepts included Primary Literature, Research Questions, and Controls. Findings extend the work of Kiley and Wisker (2009) into graduate biology education and lay the framework for future research to better understand the developmental trajectory of these threshold concepts.

Doctoral training in the biological sciences entails preparing scientists who can advance human understanding of the natural world by mastering disciplinary knowledge and tools and innovating within their domains. Extant studies of research skill may examine trainees' feelings of preparedness for conducting independent research (e.g., Austin, 2002; Golde & Dore, 2001) or analyze graduate programs by assessing their reputations or evaluating their external funding and publication rates (Mervis, 2000). Relatively little is known about the process of acquiring scientific expertise including how discrete competencies are acquired and how doctoral advisors or Ph.D. programs contribute to this process (Gilbert, Balatti, Turner, & Whitehouse, 2004). Finally, within higher education, studies of how biology student learn is limited to undergraduate education (e.g., Boyer, 2003; Brewer & Smith, 2011).
To begin to understand the developmental trajectory of doctoral students' research skills in the biological sciences, it is necessary to identify skills that are both integral to doctoral study and distinct from earlier acquired skills. As such, the purposes of this study are: 1) To identify core competencies expected of Ph.D. students in the biological sciences and 2) To identify which of these competencies may function as "threshold concepts" for Ph.D. students.

Literature Review

As students develop an understanding of content and skills within an academic field and become independent researchers, they acquire so-called threshold concepts (Meyer & Land, 2003), without which they can't progress (Meyer & Land, 2005). Threshold concepts are transformative; understanding them reorganizes students' cognitive connections within previously learned content (Davies & Mangam, 2005). Threshold concepts are irreversible and integrative, exposing the previously hidden interrelatedness between parts. Finally they are considered problematic in that they may be counterintuitive or not always accessible to students (Meyers & Land, 2003).
Scholars of graduate learning have established threshold concepts in biology that may even apply across STEM disciplines (Kiley & Wisker 2009; Timmerman et al., 2011). Yet further work is needed to differentiate among specific scientific skills that develop at different rates. Which core skills graduate students develop in biology and which function as threshold concepts is not yet known. This study therefore sets out to explore what skills students find to be transformative, integrative, and irreversible.

Methodology

We used a purposive sampling strategy to recruit participants through listservs resulting in 40 people (22 PhD Candidates, 16 Post-Doctoral Fellows, and 2 Assistant Professors) attending 23 different large research institutions and smaller colleges. Participants represented diverse fields within Biology. Interviews took place over the phone and in person using an interview protocol that allowed for exploration with open-ended questions. Analytic induction within an interpretivist paradigm (Erickson, 1986) and constant comparative analysis were used to understand how participants made sense of their experiences. Patterns and codes were derived from holistic and repeated reading of interview transcripts, notes, and the literature. Over the study, these assertions were adapted to match the data and a rationale was established with supporting literature. Only assertions supported by multiple participants were considered in the final analysis. We also searched for disconfirming evidence from participants and only assertions that account for confirming and disconfirming evidence were accepted.

Results

We derived three distinct threshold concepts: Literature Review (discussed here), Research Questions, and Controls. These concepts were distinguished from core concepts as being *transformative* (creates an understanding of research that is qualitatively different), *integrative* (connects disparate parts of research design together) and often *troublesome* (students couldn't just be told a concept to understand it).

Understanding how to use and critique primary literature is the first potential threshold concept. Students at first believed their role was to take in as much of the literature as they could, passively accepting everything they read. As students learned that each experiment and article is in itself an argument to be critiqued, they began taking a more active role. One student's later understanding was that "you can always find something wrong, it's much harder and… it shows you that you're doing better if you can also find the things that are good about a paper." Previously this student felt her role was only to find flaws in a study and only later realized there was a balance. Some students' previous conceptions in high school and college included a simplified version of science as a collection of facts meant to be memorized, and not a series of arguments based on evidence. This transformation can be seen as a shift from defining a concept in terms of properties to one defined in terms of relationships (Davies & Mangam, 2005). Through observing peers and mentors critique papers, students began to realize that studies have both strengths and weaknesses. Further, it was up to the reader and her own active analysis to determine whether a study's argument held. Many credited this understanding with improving their subsequent work because they were able to apply the same critical ability to their own research. One assistant professor noted that "once they start to be critical… when they understand the critique, then they're critical of their work."

Discussion

The findings from this study help advance our understanding of student research skill development in the doctoral sciences. While Kiley and Wisker's (2009) study of threshold concepts lays a framework for a general understanding of threshold concepts we advance the utility of threshold concepts in biology through increased specificity within the discipline. Further, these concepts are developed both from a convergence of student understanding and post doc and professor observation. This may then allow for the development of an assessment of skill development and the efficacy of specific practices intended to support them. These results of potential threshold concepts in the biological sciences converge with previous findings by Timmerman et al., (2011) and point to the need to better understand the developmental trajectory of these threshold concepts in order to create more efficient programs.

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Learning through Experience and Reflection: Helping Students Realize Their Potential as Change-Agents and Thought-Leaders

Laura Vernon, *Radford University*

Abstract: This presentation will (1) examine the increasing application of experiential learning and critical reflection to a variety of disciplines; (2) explore the benefits of experiential learning and critical reflection; (3) provide a framework for designing an experiential learning activity, writing a critical reflection essay prompt, and creating an assessment rubric based on the learning outcome; and (4) leverage partnerships to help execute the experiential learning activity. A case study will be presented as an example of how experiential learning and critical reflection can help students realize their potential as change-agents and thought-leaders. Active learning will also be modeled through interactive discussion, brainstorming, and free writing.

Literature Review

Experiential learning—first introduced 30 years ago by David Kolb (1984)—is proving to be a versatile and highly effective approach to achieving deeper student engagement, critical thinking, and workplace preparedness. Research shows that experiential learning is working well in diverse disciplines such as sports (Bower, 2013; Turesky & Gallagher, 2011), business (Hart & Mrad, 2013; Devasagayam, Johns-Masten, & McCollum, 2012), gerontology (Gugliucci, 2013; Gendron, 2013), environmental studies (Hansen, 2012; Meishar-Tal, 2014), and engineering (Chan, 2012; Ernst, 2013). It is also being used in online settings (Baasanjav, 2013; Beckem & Watkins, 2012) and in co-curricular clubs (Judge, Pierce, & Petersen, 2011). The amount of research published in the last few years further suggests that experiential learning is an appealing approach that is changing the way students learn and faculty teach for the better.

Goals & Objectives for the Practice Session

The purpose of this practice session is (1) to explain why experiential learning and critical reflection are high-impact practices that make a difference for students and faculty alike and (2) to explore how to incorporate experiential learning and critical reflection into the classroom and beyond, no matter the field or discipline.

By the end of this session, participants will be able to:

1. Explain the benefits of experiential learning and critical reflection
2. Design an experiential learning activity
3. Write a critical reflection essay prompt
4. Create an assessment rubric based on the learning outcome
5. Develop a plan for leveraging partnerships

Description of Practice to be Exemplified

This session will focus on helping participants understand how experiential learning and critical reflection can help students realize their potential as change-agents and thought-leaders in their professional, social, and civic lives. To demonstrate how this lofty goal is possible to achieve, the presenter will present a case study where English students studying the writings of Rachel Carson (author of *Silent Spring* and other books about the sea) engaged their campus community in a film screening about climate change, a discussion about the film's themes, a week-long challenge to reduce their carbon footprint, and a narrative writing project to showcase and celebrate the difference one person and one action can make. The presenter will also discuss the importance of engaging students in a critical reflection after an experiential learning activity is over in order to evaluate the success of executing the activity and to assess what students learned and how the experience changed their thinking. Moreover, the topic of leveraging partnerships will provide further discussion points. The presenter will model "active learning" techniques by engaging participants in free-writing activities and large- and small-group discussions and by facilitating brainstorming sessions where participants can help each other generate ideas for activities, learning outcomes, and assessment tools beyond the critical reflection essay. The information presented and explored in this session will be applicable to all disciplines and faculty ranks. It will be particularly beneficial for those who have little or no experience developing

an experiential learning activity, writing a critical reflection essay prompt, or assessing student learning through a reflection rubric.

Discussion

The case study to be presented is based on a model that focuses on three components of effective student engagement and transformative learning: experience, dialogue, and reflection. This model supports Kolb's (1984) theory that experience is a source of learning and development and that reflection is an important part of the learning cycle. Although not the main focus on the presentation, the case study will help shape the discussions around the benefits of experiential learning and critical reflection (e.g., change-agents, thought-leaders) and the different ways experiential learning and critical reflection can be integrated into a course or program of study in any discipline (e.g., panels, lectures, film screenings, internships, professional conferences, study abroad, applied research, service projects). The presenter will stress the point that experiential learning activities foster real-world understanding of disciplinary knowledge through hands-on learning activities. Oftentimes, partnerships are needed to help experiential learning activities reach their full potential. Therefore, the presenter will explore with participants the different ways partnerships can be found and leveraged (e.g., student activities, clubs, industry professionals, undergraduate research office, high-impact initiatives, community groups). The presenter will also provide examples of critical reflective essay prompts and rubrics that participants can revise to meet their needs. At the end of the session, participants will leave with a solid idea for an experiential learning activity and a plan to make it happen.

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Using project-based learning to motivate students to construct a meaningful learning experience

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Abstract: For 20% of class time, undergraduate students engage in an open-ended project that connects individual interest to course content in technology integration. Students choose a topic of their interest, document their learning process and newly gained knowledge via blog, design and develop a technological artifact related to Learning, Design and Technology (e.g., website, online magazine, video tutorials, and mockup apps) reflect and evaluate their final product from the perspective of an instructor and a student and present it to real world audiences. Thus, by allowing students to explore and invest time on their passions through project-based learning, 20% Project promotes higher levels of motivation towards learning, active knowledge construction, critical thinking, problem solving, creativity and an overall meaningful experience that will plant seeds for future exploration in the field of Learning, Design, and Technology. This presentation will provide an account of the 20% project and discuss the alignment of theory, learning objectives, activities, and assessment. We will share how students came up with their topics, managed to learn independently, designed, developed and presented their product to the community.

Goals

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

- Define project-based learning and 20% Project
- Identify core elements and theories underlying the implementation of a 20% project
- Recognize instructional strategies to support 20% project with college students
- Discuss and evaluate the outcomes of past 20% project experiences

Literature Review

Project-Based Learning (PBL) is an instructional strategy that engages students in a meaningful learning experience. According to Howland, Jonassen and Marra (2011), a meaningful learning experience is composed of five characteristics: (a) active, in which students interact with the learning content to build an artifact that represents newly gained knowledge; (b) constructive, in which students reflect and create meaning out of the gained knowledge; (c) intentional, in which students are aware of the learning goals, progress and project outcomes; (d) authentic, in which students design and develop artifacts that are context-based; and (e) collaborative, in which students collaborate with their peers to establish a learning community. Overall, designing and developing a meaningful learning experience is to provide students with a purpose, relevance, context, and an opportunity to put their knowledge into practice.

As for research on the PBL approach, Zafirov (2013) has found out students undertaking the role of a project designer, employing background knowledge into their designs and even exploring interdisciplinary studies. Furthermore, the outcomes of PBL experience include but are not limited to problem solving, critical thinking, self-directed learning and self-motivation. Accordingly, Bartscher, Gould and Nutter's (1995) research on Middle School students revealed that students with low motivation reported that PBL had a positive effect on their motivational levels.

The outcomes discussed on this presentation were generated through a Project-Based Learning approach to college students from a variety of majors. In order to illustrate this teaching and learning approach, we will showcase the implementation of a specific project called 20% Project that allows students to develop a product that is related to Learning, Design, and Technology and a topic the student is interested in. These outcomes indicate that non-traditional student-centered and project-based learning environments contribute to students' motivation.

Description

This paper reports the outcomes of Project-Based Learning and Teaching methods in an undergraduate-level course named Teaching with Technology. This course aims at teaching pre-service teachers how to efficiently implement

technology in educational settings through numerous activities wherein students learn, analyze, implement and evaluate a variety of tools and applications. One of the most popular and effective activities is the 20% Project, which counts for 20% of the final grade, allows students to take 20% of class time (and time outside of class) to pursue a topic of their interest within the boundaries of the course, In this case, students must create a connection between their passion and technology integration into education. During this 20% time, students brainstormed and conducted research on a topic of their interest. Students documented their opinions, challenges, found resources, strategies and decisions via blog, where they are able to keep track of their overall process from the original idea to the final outcome. This final product varied from a newsletter, handbook, manual, educational videos and mockup apps. At the end of the course, students prepared and conducted a presentation of their final products to both classmates and external visitors, followed by a Q&A session.

Participant interactivity

1. What are the benefits and issues of implementing a 20% project?
2. Which challenges could you predict in your own teaching environment? Can you come up with possible alternative ways of overcoming those challenges?
3. How can a 20% project be employed to integrate various fields of studies related to education?
4. What are some examples of assessment in a project-based learning approach?
5. What would you do differently to improve the 20% Project idea?

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Strategies for and the Benefits of Engaging Undergraduate Students in the Research Process

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Radford University

Abstract: This practice session will share faculty engagement experiences with undergraduate student research. Faculty from a variety of academic disciplines within the Health and Human Performance Department at Radford University will discuss their strategies and philosophies of engaging undergraduate students in the research process. Participants will hear success stories as well as some of the challenges regarding working with undergraduate students and research outside of the classroom setting. Selecting your research group, directing the research process, and communicating expectations will be the primary focus.

Literature Review

It is well documented that when faculty engage undergraduate students in high impact activities, such as research, there is a positive effect on the undergraduate student and faculty a like (Craney et al., 2011; Elsen et al., 2009; Hu et al., 2008; Lopatto, 2004; Nagda et al., 1998). Some of the positive benefits include: enhanced education experience, helps to recruit talented students, improves retention rates, provides clearer pathways into professions, enhances faculty professional productivity, etc. (Elsen et al., 2009; Hu et al., 2008; Lopatto, 2004; Nagda et al., 1998). Given all of the benefits of faculty involvement with undergraduate research it is surprising that more faculty do not routinely engage in this high impact practice.

Goals and Objectives

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

1. Recognize and identify the importance of student engagement through the undergraduate research process
2. Explain and apply several methods of selecting an undergraduate research team
3. Set clear objectives and goals for an undergraduate research group
4. Evaluate different approaches to engagement through undergraduate research projects
5. Identify both strengths, weakness, limitations and opportunities in engaged undergraduate research mentorship

Description of Practice

Participants who attend this session will learn about engaging with undergraduate students through the research process outside of the classroom setting. Several faculty members will share their experiences with forming undergraduate research groups in a variety of academic disciplines within the Health and Human Performance Department at Radford University. Each faculty member engages students through research in a slightly different manner. Although the methods of engagement might be different the intended outcomes; deeper learning, critical thinking, increased retention, improved productivity, professional development, etc. are similar. Participants will have the opportunity to share their thoughts and experiences with mentoring undergraduate research

Discussion

This presentation is based on several unique cases of how individual faculty engage with undergraduate students in the research process. High impact practices that engage students, such as undergraduate research outside of the class room setting, has been shown to increase retention and improve learning outcomes. Faculty who engage in undergraduate research benefit both professionally and personally.

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Professional Competence: More than the Sum of the Competencies

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Abstract: The organization, delivery and experience of higher education are rapidly changing through the widespread adoption of competency-based education (CBE). However, CBE maybe robbing the public of what we value most in professionals and the truly learned: the integrative overview and holistic perspective that are the primary hallmarks of professionalism. Myopic emphasis on exhaustive lists of competencies can focus learner attention on minutia and misuse valuable teacher/ mentor time to complete checklists. In this session, we will present the strengths and limitations of CBE in higher education, examine the challenges that session participants are currently experiencing, and provide strategies for scholars, instructors and administrators that will help them minimize the limitations of CBE to ensure a more robust curriculum and a higher-caliber graduate.

Literature Review

Competence-based education (CBE) has its practical roots in Taylorism, which approached performance improvement through the detailed observation and measurement of factory work (Morgan, 2006). The focus on ”competent job performance” was applied to education in the early 1970s by McClelland who successfully argued that education should stop testing for intelligence and start testing for competencies based on job analysis (McClelland, 1973). His CBE movement is still in place today, particularly at the college and technical institute level that trains and educates professionals for the healthcare system. Recent advocates claim that CBE is a positive movement away from curricula that are teacher-centric, norm referenced, process and time driven (Holmboe, Sherbing, Long, Swing, & Frank, 2010). Furthermore CBE is being recommended for higher education, medicine in particular, to improve public accountablity and transparency (Holmboe et al., 2010).
The theoretic basis for CBE resides in behavioral learning theory, derived from the epistemology of objectivism and supports a positivist epistemology of work. The central argument of behaviorism is that the internal processes of the mind are irrelevant and “the self is reducible to publically accessible behavior” (Hall, 1979, p. 268). Behaviorism is the study of performance only. It does not address the concepts that the right behavior can result for the wrong reasons, or that “fixed actions get varied results” (O’Connor & McDermott, 1997, p. 121), or that the contextual environment might impact both the individual’s performance and the perceived competence of that performance. Lum (1999) explains that the current arguments surrounding CBE are mistaking the methodology of CBE for the outcome – all educational interventions intend to develop competence. The shortcomings of CBE and alternative educational approaches are not entering the current discourse in higher education pedagogy.

Goals and Objectives

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. Therefore in this practice session we will discuss and explore the strengths and limitations of CBE and how the widespread adoption of this approach to framing higher education has affected all formative stages from selection to initial education, assessment, certification, licensure and continuing education requirements. We will locate CBE within the lived experience of participants in their educational and organizational contexts and will then examine and develop coping and amelioration strategies for the principal audiences affected by CBE: learners, educators, practitioners and consumers. Finally, we will identify the implications for related policies in accreditation, certification, and licensure. We hope that participants leave this session better prepared to engage in the current CBE discourse in their applied and scholarly environments. Better informed academic leadership at local levels will improve the experience and results in higher education.

Description of Practice to be Exemplified

We are comfortable with the competency-based perspective as it pertains to identifying desired learning outcomes and objectives. However, in practice, we find that CBE devolves into a checklist as our students evolve into

consumers of the checklist. CBE also introduces a single-minded focus and path into the chosen field of study that is counterintuitive to the spirit of higher education and makes promises (such as early exit from a program of study if the pre-specified outcomes have been achieved) that we may not be able, or want, to keep. CBE can also be viewed as introducing a positivist hegemony and we are curious as to whose agenda is CBE serving.

In this session, we hope to engage in a thoughtful dialogue on what CBE is and isn't developing in our students, our faculty, and our institutes. We want to bring together those educators and administrators who want to or are already implementing CBE into their programs, in order to examine their experiences, reveal the practical and hegemonic issues, and determine options for resolution.

Discussion

The session will begin with a brief overview and large group discussion of the strengths and limitations of CBE. Individuals will record their concerns/issues of CBE on Post-it ® notes, which will be organized into themes by the group. Pairs or small groups will then be organized around the themes and they will be asked to discuss:

1. Why is this theme an issue for higher education?
2. Who/What is it an issue for?
3. Who/What benefits from this approach?
4. What can be done to resolve or ameliorate this issue?

Finally, during the last 15 minutes, the small groups will present their findings to the large group. The organizers will compile all group work and return results to participants to support further practice application in their local contexts. If the degree of interest warrants, the organizers will continue to support this community of interest through the development of listservs and shared experiences.

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Twitter for Students and Scholars

Herta Rodina, *Ohio University*

Abstract: In less than a decade, Twitter has become one of the ten most-visited websites and is used world-wide by over 100 million people. Since most students and many faculty already have Twitter accounts for their personal lives, shifting the focus to the classroom and to the creation of a professional learning network (PLN) requires only a small amount of time and planning. By their very nature, micro-blogging activities can fit into any syllabus and are easily transferable to different courses, levels, and disciplines. Twitter's international reach allows scholars to connect directly with colleagues in similar fields anywhere, both asynchronously and synchronously. This access to information and interaction offers unparalleled possibilities for both student and instructor.

Literature Review

Given the relative newness of Twitter, recent modifications and improvements to its structure, as well as the quickly-changing nature of social media sites in general, the most up-to-date scholarship is available online. Insights from a variety of educator blogs as well as material from online databases and sites such as teachingprofessor.com, facultyfocus.com, educationworld.com, edudemic.com, and teachthought.com have guided me in creating classroom activities and developing my own PLN. The presentation will include a detailed list of resources.

Goals and Objectives for the Practice Session

At the end of this session, participants will be able to:

- Understand and use both basic and advanced features of Twitter.
- Create in-class Twitter activities that increase student engagement.
- Develop meaningful homework assignments with Twitter that extend the classroom beyond actual class time.
- Explore Twitter's potential for research in their own field.
- Create their own PLN on Twitter.

Description of the Practice

This is a two-part presentation. The first part focuses on Twitter activities that can enhance students' knowledge of and appreciation for the subject matter. I will discuss setting up an account, tweeting, following, searching, using hashtags, creating a class list, filtering for language and interests, refining searches, and translating tweets into English. I will provide several examples of individual and group microblogging exercises. All examples come from my third-year French conversation and composition class with its emphasis on the diversity of the French-speaking world, but the principles are easily transferable to other levels, languages, and disciplines.

The second part deals with developing a personal learning network (PLN). Even though participants will come from a variety of fields, the principles for creating a PLN remain the same. The session will demonstrate how to effectively identify which individuals and organizations to follow and how to organize a large Twitter feed so that the content is easily manageable. We will then examine ways to curate content and collaborate with other users both asynchronously and synchronously in order to make a PLN as dynamic and current as possible.

Discussion

This presentation is structured to integrate – indeed to encourage – questions, discussion, and sharing ideas throughout the session. Since participants' proficiency with Twitter will likely range from novice to expert, predetermined discussion topics would be counter-productive.

Taming the Online Beast: Conversations on Student Pet Peeves with Online Courses

Susan Bramlett Epps, *East Tennessee State University*

Abstract: As faculty we probably have strong feelings about online teaching and we certainly have pet peeves about our students. What if we were to ask our students what their pet peeves about us or our online classes are? (The student assessment of instruction at my own institution doesn't include a question this direct). And yikes! once we ask, what do we do with that information? Whether you are new to online or an experienced online instruction, come join the conversation and together we will discuss ways to 'tame the online beast.'

Literature Review

A recent google search for "Best practices in online teaching" turned up over 17 million hits. "Online teaching evaluation" got about 57,000 and "student perceptions of online teaching" came out at over 209,000. "Factors that negatively affect online learning" got a grand total of zero results. (Taking out the quotes the number was over 900,000 but that just pulled up anything that had the same words somewhere in the page or site).
The most recent survey of online education conducted by Elaine Allen and Jeff Seaman of the Babson Survey Research Group yielded some interesting statistics about online education over the last ten years:

- Almost 70% of chief academic officers reported that online learning is part of their long-term strategy
- 6.7 million students are taking at least one online course (although the online enrollment growth rate of 9.3% is the lowest of the report series).
- Less than half of the academic leaders agree with the statement that it takes more faculty time and effort to teach online (though the percentage has increased by a little over 3% in the last six to seven years).
- Almost ¼ of the academic leaders persist in the belief that learning outcomes for online are inferior to face-to-face courses (Allen & Seaman, 2013).

This data supports Kim and Bonk's (2006) argument that we may be facing a "perfect e-storm" with online education as we try to juggle technology, instruction, budgetary considerations and learner needs so it is no wonder the opinions about online education are mixed. While any of this information is worth conversation and discussion, we may be missing a piece of the puzzle.

If Lackey's (2011) findings that faculty who teach online are often given those assignments on short notice, leaving little time for design and development of a course are widespread, faculty may be more focused on course content than on "classroom" management issues. The student responses to my own informal survey of student pet peeves with online instruction and courses suggest that those factors may negatively affect how they experience a course. So, even though those of us in the trenches of online education are well aware of the plethora of information on best practices and evaluations, if we aren't aware of those other factors, what does that mean for the student experience with online learning?

Goals and Objectives

- Attendees will increase their awareness of the online experience from the student perspective
- Attendees will discuss how the factors our students would list as 'pet peeves' negatively affect their experience in an online course
- Attendees will develop strategies for addressing classroom management issues

Description of Topic to be Discussed

This session will include a discussion of student pet peeves about online courses and instruction, how these factors may negatively affect their learning experience, and what we as online instructors can do to address them.

Facilitation Techniques

The presenter will provide information from an informal survey of online students and a checklist of techniques used in response to the feedback. Following the brief presentation, the attendees will be asked to share from their own experiences with online students and courses how they have 'tamed the online beast.' Depending on the number of attendees, small groups may be used to encourage more conversations that will then be shared in summary with the larger group.

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Conversation: Discussion and Hands-On Exploration of Open Educational Resources

Anita Walz, Virginia Pannabecker, *Virginia Tech*

Abstract: Faculty seek high quality, curriculum relevant learning objects that they can use online or offline without undergoing copyright or fair-use related analysis. Students, in the interests of lifelong learning, want affordable, mobile and ongoing access to information resources beyond college. Open Educational Resources (OER) are one potential solution for both goals. Open Educational Resources are "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others" (Hewlett Foundation, 2002). They include a wide array of learning resources including but not limited to: textbooks, streaming video, simulations, images, case studies, course materials and full courses. This hands-on conversation session will provide an introduction to OER, hands-on experience finding OER, collaborative development of evaluation criteria, and a built-in community of practice where questions may be discussed. Participants will have access to librarians with expertise in course design, pedagogy, and copyright & licensing. (Participants are expected to provide their own computer or networked device.)

Literature Review

Wide agreement exists among academic leaders that open educational resources will save time in the development of new courses. (Allen & Seaman, 2012). Two groups within higher education, namely individual faculty and the administration have the primary decision responsibility regarding the adoption of open educational resources (Allen & Seaman, 2012). Awareness, "time and effort to find and evaluate learning resources" (Allen & Seaman, 2012, p. 24), and resource evaluation (Kazakoff-Lane, 2014) are consistently listed as the most important barriers by faculty to the adoption of open educational resources. "Not knowing where to look constitutes a barrier for time-challenged faculty and staff" (McKerlich, Ives, & McGreal, 2013, p. 91). Many libraries help faculty to identify and locate materials for use in their courses (Kleymeer, Kleinman, & Hanss, 2010) and librarians with expertise in instruction, licensing and copyright, search and retrieval, and course design have unique expertise to introduce and engage faculty regarding open educational resources (Bueno-de-la-Fuente, Robertson, & Boon, 2012).

Goals and Objectives

Based on the short presentation introducing the concept and potential applications of Open Educational Resources (to include both multimedia and textbooks), the participants will:

- draw from their teaching experience and reflect on ways to integrate OER;
- participate in hands-on discovery and preliminary evaluation of peer-reviewed OER; and
- discuss benefits and opportunities regarding using OER in course design.

Description of Topic

We will facilitate discussion regarding the value of Open Educational Resources, relative to faculty teaching experience. Typically available online, Open Educational Resources (OER) lend themselves to current course design practices such as inclusion of multimedia, interactive learning objects, customization, and use of modular components. Because of their flexibility, OER are suitable for active learning pedagogy in face-to-face, blended and online learning environments. The openly licensed nature of OER lowers barriers to course development by reducing faculty efforts in development of new materials from scratch, and by eliminating time needed in copyright compliance evaluation. OER also benefit students by potentially reducing the cost of course materials.

This conversation session will provide an introduction to OER, hands-on experience with OER, collaborative discussion of evaluation criteria, and a built-in community of practice where questions may be discussed. Participants will also have access to librarians with expertise in course design, pedagogy, and copyright & licensing.

Facilitation Techniques

This conversation will begin with an activity to identify participants' familiarity with OER. We will then provide a brief introduction to OER and open licensing. Following this introduction, we will facilitate a series of small group, hands-on OER discovery activities. We will conclude with a whole group discussion reflecting on how participants may go on to evaluate and use OER in their courses. (Participants: please bring your choice of computer or networked device.)

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Conversation Session: Active, Engaged Learning and Digital Representations

Marc Zaldivar, Dan Yaffe, and Emily DeNoon
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In this session, we seek to explore the connections between student engagement, active learning, and learning technologies. The phrase "TEAL," or Technology-enhanced Active Learning, has been well-established in academic realms. Active learning principles have, at their heart, a belief that we learn best by doing. Combining that together, we are looking for a cross-over between technology and instructional activities that ask students to do, to create, and to reflect. At Virginia Tech, in order to "Invent the Future," we must make exploration, innovation, and creativity key learning outcomes for our students. Active learning is also reflective at its core; not only do we ask students to do things, but also to think about what they are doing. In that act, we ask students to become thoughtful learners, in control of the direction of their own learning, while we as instructors change from "sage on the stage" to thoughtful managers of student learning. However, there are several key questions that should be thought through as instructional activities are being designed. In this session, we seek to lay out some central theories of active learning and student engagement, to discuss affordances of particular technologies -- ePortfolios, blogs, and digital storytelling -- and then to frame four central questions that the participants can discuss within their own particular educational contexts.

Goals and objectives for the conversation session

Thinking through an instructional design lens for developing activities and assessments that include and encourage active, engaged learning as outcomes. The conversation explores the connection between principles of active learning and student engagement and potential technologies that can be used to empower students to represent those principles.

Description of idea or topic to be discussed

Active learning pedagogies, combined with technologies that support communication, teamwork, reflection, and assessment applied to various educational contexts.

Facilitation techniques

The brief 10-minute introduction poses some definitions of active learning, student engagement, and the role of TEAL with it. It also poses four central questions to consider when designing instruction with active, engaged learning as one of the primary outcomes.

Four, small groups will be asked to discuss one of the four questions for 10 minutes. Then, in the remaining 40 minutes, we'll review the ideas that the small groups started in a large-group setting.

Thursday

February 5, 2015

Session 11

4:10-5:00 PM

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

Multi-grade & Multi-class Teaching Practices in Nepal

Chouhan Tara, Management Association of Nepal& Student Financial Assistance Fund Development Board.

Abstract: In Nepal, three types of instructional arrangements seem to dominate the instructional delivery: multi-grade, multi-class and mono-grade teaching. Multi- grade may be defined as teaching two or more age groups or grades together in the same classroom by the same teacher (NCED, 2003). Multi-grade teaching (MGT) does not address the situation created either by chronic shortage of teachers or by casual absence of intermittent teachers. In such a situation, a teacher may teach the students by combining two full size classes to meet the shortage of teachers or by placing students of two classes in different rooms by dividing his/her time between the two, leaving one class with some activities to do while attending to the other class. This practice led to the initiation of multi-class teaching (MCT) as a major instructional arrangement in the Nepalese context. Different situations were found existing in mountain, hill and Terai regions regarding the use of instructional arrangements. Sparsely populated areas of mountain region have a low number of students creating a problem of supplying teachers as per the number of grades. Most of the classrooms in hilly region are small like the classroom in the mountain region. But the class sizes are found larger compared to those of the mountain region. In the Terai region where classrooms are found crowded, both multi-grade and multi-class arrangements could not be used effectively. Thus the inadequate supply of teachers as per the fixed student-teacher ratio and inadequate number of classrooms has forced the use of combined teaching as a reality. Such variations observed in instructional arrangements demands a careful reflection on the education policy of the country as well. Variations were also observed in classroom management, delivery of instruction and classroom participation. Thus the need is there to identify some basic specifications and requirements for effective instructional delivery in both multi-grade and multi-class settings.

Literature Review

In 2003, the National Institute of Education, Sri Lanka, in their study, mentioned that "multi-grade teaching is an instructional arrangement demanding a situation where a school requires that children from more than one grade are taught together providing learning activities at an appropriate level for each grade, allowing all children to gain equal benefit from their learning experience."

In 1989, a study was conducted by the Asia Pacific Programme of Educational Innovation for Development (APEID) UNESCO Bangkok. The report mentioned that "multi-grade teaching is NOT an answer to meeting teacher shortage in the education systems, but a strategy to improve quality education in rural communities." Multi grade / Multi class teaching in Nepal. Nepal has made a commitment to provide "Education for All" (World Forum on Education for All, Dakar 2000). This meant ensuring access to complete, free and compulsory education of good quality by 2015. These commitments have served as an impetus for the government to establish primary schools in remote under-served and sparsely populated areas of the country. A study was thus conducted focused on analyzing the existing practice of teaching, to draw multi-grade/multi-class situation and teacher training programs. The study also reviewed the global concept of multi-grade teaching in order to draw the implications in the Nepalese context. In Nepal, three types of instructional arrangements seem to dominate the instructional delivery: multi-grade teaching (MGT), multi-class teaching (MCT) and mono-grade teaching. Multi-grade, defined as teaching two or more age groups or grades together in the same classroom by the same teacher (NCED, 2003). Multi-grade teaching does not address the situation created either by chronic shortage of teachers or by casual absence of intermittent teachers. In such a situation a teacher may teach the students by combining two full size classes to meet the shortage of teachers or by placing students of two classes in different rooms by dividing his/her time between the two, leaving one class with some activities to do while attending to the other class (Gupta,D., & Jain M., Bala, N, 1996). This practice led to the initiation of multi class teaching as a major instructional arrangement in the Nepalese context. Different situations were found existing in Mountain, Hill and Terai regions regarding the use of instructional arrangements. Sparsely populated areas of mountain region have a low number of students creating a problem of supplying teachers as per the number of grades (Hargreaves., Monteiro., Nguyen C., Sibli, M., & Thanh T. 2001). Most of the classrooms in Hilly region are small like the classroom in the mountain region. But the class sizes are found larger compared to the mountain region. In Terai region where classrooms are found crowded both multi-grade and multi-class arrangements could not be effectively used. Thus the inadequate supply of teachers as per the fixed student-

teacher ratio and in adequate number of classrooms has forced the use of combined teaching as a reality. Such variation observed in instructional arrangements demands a careful reflection on the education policy of the country as well (Little., A. 1995).. Variations were also observed in classroom management, delivery of instruction and classroom participation. Thus the need is there to identify basic specifications and requirements for effective instructional delivery in both multi-grade and multi-class setting (Sibli.,2003).

Results

The following lessons have been learned in the implementation of multi-grade/multi-class teaching in Nepal:

- As the practice of multi-class and multi-grade is strongly prevailing in the schools of Nepal, a scientific mapping of such practice is strongly needed in order to identify the exact number of schools with multi-class and multi-grade practices.
- MGT/MCT has been considered by majority of the teachers as an unwanted reality, on one hand and they are practicing it as a strategy to meet the problem of stop-gap teachers, on the other hand.
- MGT training proved to the teachers is found to be inadequate, on one hand and poor knowledge-base of the MGT trainers resulted into poor delivery of training with a little transfer of MGT techniques into the classroom. The basic requirements of multi-class teaching situation should be explored and adequate contents should be developed to address the needs of the teachers teaching in multi-class situation.
- As existing primary level curriculum is more subject based and grade oriented. Teachers were facing the problem of integrating the curriculum contents. Therefore a provision should be made for curricular adjustment in order to allow the teachers to organize and adjust instruction in multi-grade and multi-class settings.

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Academic Freedom Paradigm and the Contemporary Faculty Perceptions: *Are We There Yet?*

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Philliph M. Mutisya, James E. Osler II, *North Carolina Central University*
Andrew Kanu, *Virginia State University*

Abstract: Recognizing the general lack of empirical research regarding faculty satisfaction with academic freedom policies and practices, this quasi-empirical research study aims to examine faculty perceptions and attitudes concerning academic freedom and shared governance. As quantitative inquiry, it employs a one-point-in-time survey with eventual consideration as a longitudinal study. The sample population of 200 faculty members involves securing the opinions from higher education institutions including Historically Black Colleges and Universities (HBCUs) within the central-eastern USA. A combination regression/correlational technique including the novel Tri-Squared Test (TST) will be used for analysis (currently underway) to analyze the opinions and to develop institutional and Faculty Professional Development recommendations regarding academic freedom. The TST, a recently-developed mixed methods test and research procedure is designed to analyze, transform, and compare qualitative and quantitative data for education scientists. Findings of the study will provide useful new knowledge regarding academic-freedom-related assessment, feasible improvements, and insights thus allowing a generalizable and replicable model of empirical valuation of the existing pedagogical policies and practices.

Literature Review

Although an elusive term, "academic freedom" is an implicit principle of scholarly inquiry without fear of retaliation in its numerous manifestations including repression, job loss, legal action or imprisonment. Champions of academic freedom support open flow of information and inquiry by students and faculty members as essential to the mission of the academe. However, because certain truths may be inconvenient to particular groups; globally, the modern era beginning the 1940s has been increasing open to different connotations. In the United States, ***the American Association of University Presses (AAUP) has supported institutions of higher education to strive for and achieve the indispensable "academic freedom" or "free search for truth and its free exposition" (AAUP 1940). German scholars*** Hofstadter and Metzger (1955) articulated that two paradigmatic concepts influenced U.S. academia after the Civil War: "*lernfreiheit"* (learning freedom) and a student's freedom to study what and where he/she chooses. Michael Polanyi (1958), arguing against Soviet totalitarianism, claimed the structure of liberty as an essential basis for the advancement of science. More recently, in a 2008 precedent *Stronach v. Virginia State University*, a Federal court Virginia ruled that professors have no academic freedom as *all* academic freedom resides with the university or college. http://en.wikipedia.org/wiki/Academic_freedom - cite_note-Stronach-23 The district court judge held "that no constitutional right to academic freedom exists that would prohibit senior (university) officials from changing a grade given by (a professor) to one of his students. However, academic freedom has far-reaching consequences on pedagogical practices, which warrant a closer investigation of the phenomenon.

Objectives

While the targeted beneficiaries of this generalizable and replicable research study are the stakeholders of the academe in general, upon completion of this session, participants will be able to (1) understand the intricacies of the concept called "academic freedom;" (2) assess the state of respective academic environments with regards to policies and practice of academic freedom within their own academic institutions; and (3) obtain knowledge to make recommendations for feasible changes that likely will improve the existing policies and practices thereby refining the overall quality of teaching and learning.

Methodology

This quasi-empirical post hoc research study employs one-point-in-time survey using Likert psychometric rating scale and snowball technique with a sample population of 200 academic faculty members to test the research question "what is the level of understanding among academic faculty regarding academic freedom and shared governance?" A three-part survey is employed to test two hypotheses. Part I includes 12 questions to capture the

basic demographics. Part II contains 14 questions to assess the current level of collegiality at respondent's institution. Part III contains 13 questions to assess the current perceptions of faculty about the administration. In addition to measures of central tendency and variability frequency distribution, two hypotheses will help determine the correlational significance: (1) perceptions, and (2) attitudes regarding the concept of shared governance among academic faculty and administration. Accordingly, the three independent variables: collegiality, mutual trust, and transparency are tested against two dependent variables "perceptions" and "faculty attitude." The research study will be shared using a PowerPoint presentation.

Data Analysis

Data analysis will be conducted as a post hoc method using the recently-developed statistical analysis technique called the Tri–Squared Test (TST) that was first introduced in 2012 article by James Osler in Journal on Mathematics. On a similar research topic during two previous studies published in the Journal of Creative Education by Mutisya and Osler (2013) and the International Journal of Process Education by Mutisya, Osler, Bitting and Rotich (2014), the TST research methodology was successfully used to analyze the initial data for yielding valuable statistical inferences.

Discussion/Conclusion

This research promises to yield numerous valuable findings including correlational factors impacting gender, race, institutional status (public, non-public), and structure (research vs. teaching). Among the traditional constraints, apathy (i.e., faculty unwillingness for participation), fear of retaliation by faculty concerning tenure and promotion, and ideological differences remain a concern. Findings will help develop recommendations of strategic policy and procedural changes in the existing state of affairs that likely appear to improve the gaps. Irrespective of the outcome, the findings are anticipated to yield useful information for development of relevant strategies in determining the state of current pedagogical practices with regard to assessment of academic freedom-related strengths, feasible improvements, and insights. Additionally, the study allows yet another opportunity to test the utility of the relatively new statistical technique, the Tri-Squared Test.

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Learning on the Go: Design a Mobile Website for Supplementary Classroom Language Learning

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Congwu Tao, *Virginia Tech*
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Abstract: This practice session will discuss how to integrate the current web and mobile technologies to motivate and facilitate students' supplementary classroom language learning for reading comprehension. It will examine the related literature, summarize a survey on learning demands for the application of web and mobile technologies, demonstrate the design of the computer (both Mac and PC) compatible and mobile-device-friendly website and companion learning tools, as well as share how the fluid design technology can be utilized for language instructional design. It will also investigate the effectiveness of the mobile website for supporting classroom learning, and provide directions for future studies. Participants will gain hands-on knowledge on how to integrate web and mobile technologies and related tools to improve instructional design effectively for language learning, as well as other online course learning.

The second language acquisition (SLA) is an intensive and time-consumed activity, and the Foreign Service Institute (FSI) estimates that anywhere from 700 to 1320 hours of full time instruction are needed to reach a level of high fluency of a second language (Bialystock & Hakuta, 1994). Normally the formal L2 teaching is often unsuccessful because learners receive insufficient inputs in the target language (Cummins, 1998, 2000). The computer-assisted language Learning (CALL) have been explored by different scholars and the research results show that computers and related technologies can make an important contribution to the SLA process (Reeve & Nass, 1996). Especially the mobile technologies through numerous devices including mobile phones, iPods, tablet PCs, hand-held computers, PDAs, MP3 players, Smartphones and more (Beatty, 2013) can facilitate the learners to study FL at anywhere any time, so as to give them an opportunity to receive enough "input" in the target language.

Different scholars pay attention to different aspects of language learning via mobile applications. For example, Rosell-Aguilar (2007) explored the iPod, iTunes with podcasting for language learning and claimed that podcasting can help deliver online language learning anytime anywhere, with the right supplementary environment. Chen& Chung (2008) developed a personal digital assistant (PDA) for personalized English vocabulary learning, and the results showed that PDA could promote obviously the learning performance and interests of learners. Kukulska-Hulme (2012) used electronic dictionary in an mobile app for a study and the result indicated that the mobile dictionaries is time efficient and could help language learners acquire vocabulary and check verb conjugations easily. Hemmi, et al (2014) developed a mobile learning platform for remote supplemental language tutorial activities and conclude that the mobile platform has great potential when used in combination with shared web-space via increasing students' learning motivation and decreasing the uncertainty about their progress. In fact, past researches have analyzed mobile technology applications on language acquisition in general terms such as pronunciations, vocabularies, syntaxes (Petersen& Markiewicz, 2008; Al-Mekhlafi, Hu & Zheng, 2009; Abdous et al., 2012; Oberg & Daniels, 2012; Hsu, 2013; Wang & Xing, 2014), and the results indicate positive attitudes towards the mobile tools and suggest better outcomes in terms of language proficiency. But few of the current researches devoted to FL learner's reading learning and comprehension strategies in class and after class application of mobiles devices for FL learning. The technological know-how does not mean a pedagogical know-how. Careful design for a mobile website of the supplementary classroom language learning for learners' reading comprehension is meaningful and important.

Goals and Objectives

Participants in this session will learn the fluid design web technology and how to apply it in the field of education. Participants will gain knowledge on how to design and customize such a fluid website integrate the benefit of learning tools (software, tools and apps) to assist students anytime anywhere in supplementary classroom language learning for reading comprehension. This includes four major steps: 1) assess learning needs; 2) develop contents (designing courseware, gathering learning resources, developing software/tools/apps supported course materials); 3) website design and contents merging; 4)testing, evaluation and modification. The designed website for supplementary Chinese reading learning and features will be demoed, and how it could improve learners' motivation, learning efficiency, learning task authenticity, interaction and collaboration among peers, as well as meeting individualized learning needs will be discussed. After the presentation, participants will be able to apply fluid design technology in their own instructional design.

Description of Practice

I will first introduce the fluid design web technology and its application in instructional design. I will then conclude related theories and models to guide this kind of instructional design and then walk the participants through the four major steps of creating such a website and demo the features we achieved on the website, which includes: 1) interactive multimedia vocabulary flashcards with companion learning tools; 2) audios along with the texts; 3) texts reading comprehension supported by built-in Chinese-English dictionary tools; 4) authentic multimedia resources; 5) supplementary self-evaluation exercises; 6) sample teaching resources for teachers; and 7) a mini blog site for teachers to exchange and share. I will demo how courseware and materials are designed to be used together with learning tools to enhance students' learning and how they are organized and put on the responsive website. I will invite the participants to think useful learning tools in their area and share ideas how they could use the tools to equip students' supplementary learning with such a universal website. Tools and resources for fluid web design will be provided to audience.

Discussion

Despite the positive attitude in the literature of mobile technology and the high request we received in our survey, the study on how to apply these technologies to assist students' supplementary language learning on the go merging the benefit of learning tools in specific educational design is rare. Therefore, it is important to take an initiative to develop such a mobile website, locate the proper developing resource, solve the technical problems, and evaluate the result. We proposed different methods throughout the developing process including designing a mobile app in an effort to realize all the requested features before reaching to the current fluid design website, which is currently in use by UI Chinese learners (about 200), and students have given many positive inputs across features and designs on the website. We hope to extend the benefit of the website to multidiscipline and to work with versatile emerging learning software and mobile apps in the educational field. But we need to keep in mind that technology is not a panacea in itself, and it needs the teacher to harness it properly for helping learners to achieve the ultimate goal.

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Making Connections: Building Social Presence with Web-based Tools

Danan Myers, *American Public University System*
Jackie Mangieri Brown

Abstract: For nearly two decades, higher education has reaped the benefits of online learning, enabling adult learners who are unable to attend campus at a specific time an option to pursue their education via the internet. Increasingly, busy adults choose to engage in formal education via their laptop, tablet, or even their cell phone. Despite the convenience of being able to learn from anywhere, online learning has not been without its drawbacks. Some students report they feeling isolated and they miss the interaction with their instructor classmates. Garrison's (2007) community of inquiry approach states that purposeful development of a social presence can provide students with an engaging experience in the online classroom even similar to what may be experienced in a traditional bricks and mortar classroom. These efforts can increase student satisfaction and learning (Becker, 2012), which can in turn positively affect online class retention. This presentation addresses the issues of the necessity of purposeful development of a social presence in the online classroom to increase student engagement and retention. The presenters will synthesize scholarly literature of the Community of Inquiry and social presence. They will then focus on the use of a variety of specific web-based tools to increase social presence. The presenters will share classroom anecdotes of their own use of these tools and apps. Participants will explore specific tools including Wordle, Padlet, polls, meet-up rooms or live chats, Animoto, and video and screencasting technology.

Literature Review

The internet has opened up great opportunities for adults to attend classes who would not necessarily be able to. Soldiers in Afghanistan, working mothers, adults with disabilities, and many others are choosing the option to learn online. According to Allen and Seaman (2013), the number of students enrolled in at least 1 online course in 2002 was 1,602,970 out of a total enrollment of students in higher education of 16,611,710; roughly 10%. In 2011, the numbers rose to 6,714,792 out of 20,994,113; 32% of total students enrolled in higher education. However, one complaint students state for not continuing in education is feeling isolated, lack of interaction with instructor and/or peers, or the feeling of taking a correspondence course. The community of inquiry approach (Garrison, 2007) states that developing a social presence gives students that classroom experience in the online classroom. Further, Becker (2012) states that social presence increases student satisfaction and learning.

Short, Williams, and Christie (1976) define social presence as the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (p. 65). Garrison (2007) see social presence a little differently. He believes that social presence is how one expresses his or her thoughts and creates purposeful relationships with others in the online environment. Social presence includes "effective communication, open communication and group cohesion" para. 4).

According to Wang (2010), there are 8 ways to create a social presence in the classroom: welcome letter; personalized introduction that includes an image; responding to emails in a timely manner and using email to communicate with individuals, groups, and the entire class; frequent use of course announcements; active participation on the discussion board; synchronous office hours; using web-based tools to have fun engagement; and, end the course with concluding remarks and personalized best wishes to students.

One recent and effective approach to social presence is the use of web-based tools. Brandhorst (n.d.) states blogs, wikis and other social media is another dimension of communication that increases engagement for students. Meet-up rooms and hang-outs allow students to interact in real time student to student and teacher to student (Siemans, 2014). A study conducted by Borup, West, and Graham (2012) showed that the instructor's use of video increased social presence in the classroom. Recently, polls for anything from "what state should you live in" to "what's your hippie name" are popping up all over Facebook and people curiously click on them to take the poll; reporting back their results. Stafford (2014) states this is an effective way to increase interaction and engagement. Similarly, students are curious and want to participate to see the results they have as well as those of their peers.

Goals and Objectives

Participants in this section will review the importance of creating a social presence in the online classroom. They will then explore and engage in the use of web-based tools to enhance engagement. Some of the web-based tools that will be explored will include the creative use of video, Animoto, Wordle, Padlet, polls, and synchronous chats for teacher to student and student to student interaction. At the conclusion of the session, participants will walk away with new and innovative tools to increase social presence in their online classrooms.

Description

This presentation addresses the issues of the necessity for a social presence in the online classroom to increase engagement and retention. The presenters will synthesize scholarly literature of the Community of Inquiry and social presence. They will then narrow down the research to the use of web=based tools to increase social presence. the presenters will then share and engage the participants in the use of tools such as Wordle, Padlet, polls, meet-up rooms or live chats, Animoto, and video technology.

Participant and Interactivity

The presenters will share their knowledge of the Community of Inquiry's social presence as well as the use of web-based tools. They will further share products from their classrooms that have increased social presence. Finally the participants will have time to explore and engage in the tools presented.

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Employing Innovative Pedagogy in College Coursework to Create Opportunities for Family Involvement in Education

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Abstract: The purpose of this study was to increase positive home-school collaboration in early childhood (EC) programs through the use of altered books, an innovative pedagogical tool that was tested in three separate pilot studies prior to its use in college courses. Research has demonstrated that family access to quality healthcare, quality EC education, and positive home-school relations in the childhood years has a positive correlation with a) a child's reading ability, and b) lower rates of grade retention (e.g., Hart & Risley, 2003; Miedel & Reynolds, 1999; Ramey, Campbell, Burchinal, Skinner, Gardner, & Ramey, 2000). The number of activities families engage in increases a child's success in school. Promoting family involvement during early years can increase a child's success in school, and also increase self-efficacy of parents who may be uncomfortable involving themselves in educational approaches. Altered books can prepare preservice teachers to incorporate innovative strategies to increase positive home-school relationships, engage children and parents in art and academic conversations, and support the needs of diverse learners.

Review of the Literature

Substantial research supports family involvement in a child's education. When families are involved in early childhood (EC) education, research has demonstrated that the quality of education received can improve (Kreider, 2002). There are constructive outcomes for children when families are involved in the educational process (Bouffard, Little, & Weiss, 2006), including proper development in cognitive, social, and language areas. Comer & Haynes (1991) noted that the earlier parents become involved, the more powerful the effects. The Harvard Family Research Project (Kreider, 2002) established that certain processes, including informal connections and parental participation, can influence young children's outcomes. Furthermore, building relationships with families should not solely be for academic purposes (Sheldon, 2005).

Building collaborative relationships between home and school may be difficult for some parents due to past experiences with schools, unfamiliar cultural contexts, language barriers, and/or low self-efficacy related to beliefs about their ability to support the educational needs of their child. Parents' self-efficacy directly affects the amount of family involvement in the educational process (Waanders, Mendez, & Downer, 2007; Grolnick, Benjet, Kurowski, & Apostoleris, 1997). Parents may rely on the practitioner to take responsibility for instructional programs, unaware that practitioners desire and need parental involvement for the maximum benefit of children (Lopez, Kreider, & Caspe, 2004). Parents who feel they have the skills to assist with educational endeavors are more motivated to become involved in their child's education (Green, Walker, Hoover-Dempsey, & Sandler, 2007). If inservice educators have a way to bridge the gap between home and school, everyone benefits.

Methodology/Rationale

Altered books, the selected tool to promote home-school collaboration, repurpose old, damaged, or discarded books into works of art that can showcase early literacy skills. Three separate pilot studies were conducted to ascertain stakeholders' willingness to engage in an artistic component to enhance home-school partnerships. The first pilot study included EC educators in a professional development training in the potential of altered books, the second pilot study introduced parents and their children to the idea of altered books, and the third pilot study introduced altered books into an EC classroom.

Altered books were selected as an intervention that might demonstrate an effective way to enhance home-school relationships, while also promoting opportunities for diverse students to represent their cultural backgrounds. Altered books were viewed as an effective tool to promote academic dialogue between parents and their children. Upon conclusion of the pilot studies, altered books were added to education courses to instruct preservice teachers in the use and practicality of altered books as a home-school collaborative tool.

As school populations become more diverse, altered books represent an opportunity for educators to allow families to incorporate cultural aspects into their projects. Students from culturally and/or linguistically diverse backgrounds can be an asset to the classroom, but often, their cultural wealth is not utilized.

Addams (1908) wrote:

> I believe if these people [immigrants] are welcomed upon the basis of the resources which they represent and the contributions which they bring, it may come to pass that these schools which deal with immigrants will find that they have a wealth of cultural and industrial material which will make the schools in other neighborhoods positively envious. (p. 44)

Results

In all pilot studies, participants were excited about altered books and how the tool could be used to promote home-school partnerships. This enthusiasm carried over into the education courses; and preservice educators went beyond the components required of the course, spending time to take ownership of their books. Most preservice educators saw the potential of altered books as an opportunity for individual expression.

Discussion

Opportunities for art expression and family involvement to support the growing child are essential. Parents, educators, and children all benefit from a strong home-school collaboration; and when parents get involved in the education of their child, they are more likely to stay involved. Providing preservice teachers with ideas about how to engage parents in non-threatening ways in a positive, home-school collaboration is important, especially when considering the needs of diverse learners, students with exceptionalities, and parents with low self-efficacy.

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Hunting Dragons: A Cross-disciplinary, Collaborative Project Model for Faculty and Students

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Abstract: Folk literature from around the world is replete with dragons. This cross-disciplinary research centers on how and why human imaginations created stunningly consistent dragon lore across distant lands. The principal investigators are an evolutionary biologist, a social scientist, and a paleontologist. The hypothesis is that dragon lore was neither born purely of human imagination, nor based on dinosaur fossils, living reptiles, or vestigial human memory alone, but was engendered by logical observation of naturally occurring plant phenomenon. Ancient cultures had a common element on which to pin their collective thought: Carboniferous plant fossils. The research is grounded in a cross section of dragon folklore and correlated with fossil plants to reveal a unique perspective among the origin theories of dragon myths worldwide. Surveys (n=105) on human perceptions of the lycopod fossils are under analysis. The pedagogical model the project is following is the specific topic of this proposal. Topics include methodology on 1) setting goals and objectives for such a large project; 2) bringing faculty from diverse disciplines (biology, education, geology, archeology, literature) into a cohesive team; 3) bringing student researchers into the project; 4) structuring the project so that all stakeholders are contributing in meaningful ways; 5) working with community partners. Faculty are currently engaged in botanical, paleontological, human perception, and folklore research as well as in linguistic study, creative works, GIS mapping and statistical analysis of the GIS data. Students are involved at all levels of the project and have presented on the data.

Literature Review

Consideration of a topic from diverse paradigms often leads to deeper understanding, with the difficulty embedded in bridging the paradigmatic gap. For this research into dragon lore, that conduit is *Lepidodendron* plant fossils. For eons peoples around the world have created stories about dragons. The answer to how people from geographically distant lands and diverse cultures told stories of such similar beings has long been a scholarly pursuit. Explanations have been "limited by the amount of data available" (Dundes, 1965, p. 55). The word "dragon" was often used during the medieval period for all sorts of reptiles, especially large ones (White, 1954). Though it is plausible that human imagination could construct a dragon from sightings of a crocodile, snake, or lizard, this supposition does not account for the consistency of cross-cultural dragon attributes in regions that do not share reptile species. Other theories embraces dragons as an expression of latent human fears (Roheim, 1950), as imaginary figures created to embody the very real serpentine figure of the dance (Barnard, 1964), or as a metaphorical conceptualization of the rainbow and its connection to water and treasure (Blust, 2000). None of these ideas stands in opposition to our contention that plant fossils are dragon lore's catalytic agent. It is possible that all of these theories should be reinvestigated through this new cross-disciplinary lens in order to consider whether the data influence existing knowledge.

The pedagogical model that emerged as project work ensued may be helpful to others wishing to pursue collaborative, cross-disciplinary work in higher education. The benefits of collaborative learning situations are well documented in the literature (Johnson & Johnson, 1994; Barkley, Cross, & Major, 2005). Shimazoe and Aldrich (2010) identify several benefits to students and teachers in collaborative learning environments including the advancement of critical thinking skills and the opportunity for the instructor to act as a model for learning behaviors. This model also confers the opportunity to participate in a valid, real-world project, taking the advantages of problem-based learning one step further by allowing true collaboration among faculty and students (Savery, 2006). The "real" nature of the project puts the onus on students to construct and manage their work in a timely, responsible manner as they are valid stakeholders in the outcomes of the project.

Goals & Objectives

Participants will

- Interact with the fossil evidence
- engage in structured discussions related to the main topics of the presentation (see Description section).

- Work in small groups to reflect on and plan for how the pedagogical model might be used within their disciplines.
- generate critical feedback on refinement of the model.
-

Description of Practice

Introduction and focus activity: Fossil casts will be shared as well as images of lore and fossils. GIS maps of correlated data will also be presented. This intro will explain the purpose of the research and share some preliminary findings in order to give a common ground on which to situate the discussions. Participants will complete a brief written reflection on their interaction with the fossil casts.

Figure 1 Lepidodendron fossil

Main Activity: The pedagogical topics will be presented with time for individual and small group reflection after each, as described in the objectives for the session. These topics are 1) setting goals and objectives; 2) bringing faculty from diverse disciplines (biology, education, geology, archeology, literature) into a cohesive team; 3) bringing student researchers into the project; 4) structuring the project so that all stakeholders are contributing in meaningful ways; 5) working with community partners.
Conclusion: Presenters will seek critical feedback from participants in regard to the project's value to academia and how the project might be refined or enhanced.

Discussion

This research has evolved into an amalgamation of science and folklore from which neither part can be extricated without destruction of the whole. The research questions address issues relevant to both disciplines and emphasize that the giant lycopod fossils are the axis around which the research revolves. The following questions have guided the project to this point:

RQ1: In what specific regions of the world do giant lycopod fossils exist and how do the fossils correlate with dragon folklore?

RQ2: How do dragon folklore elements (e.g appearance, environment, behavior) exhibit a relationship with the lycopod fossil findings?

RQ3: How do the lycopod fossils help us understand why a variety of cultures world-wide created myths and legends about a similar creature?

The preliminary findings reveal lycopod fossils and dragon lore are closely correlated in several regions of the world. The student research opportunities provided by such a diverse topic continue to expand. At this point 13 students have been included in the project, along with 15 faculty and/or community partners. As the project gains momentum, faculty members and community partners whose fields have already been mentioned, deepen their involvement. This deepening opens new avenues of pedagogical investigation. Future investigation includes working with classroom teachers to use the findings to develop curricula for the sciences, social sciences, and literature studies.

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Using Mixed Methods to Conduct a Meta-Synthesis of the Literature: Moving from Words to Numbers

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Abstract: Any researcher launching a new project is faced with the task of trying to find a strategy to methodically analyze a body of literature and to draw conclusions about where there is the potential to make a contribution. We set out in this practice session with the practical purpose of providing a model about the steps involved in conducting the analysis for a mixed methods meta-synthesis of a body of empirical articles reporting on the outcomes of interventions designed to promote in- or out- of class learning. We use as an example, a project that was underway to catalog the positive and negative outcomes of college students' participation in extra-curricular activities. We will illustrate ways that qualitative and quantitative strategies were interwoven throughout the analysis.

Any researcher launching a new project is faced with the task of trying to find a strategy to methodically analyze a body of literature and to pinpoint where there is the potential to make a contribution. This has traditionally been done with the goal of identifying themes and conclusions and by applying an inductive or qualitative approach to summarize themes in the literature. Meta-analysis and meta- synthesis are both methods designed to analyze a body of literature by empirically cataloging the personal, cognitive, social, and professional outcomes of activities designed to promote learning and change both in the educational and health setting. Unlike the widely used content analysis, these methods are framed to answer specific research questions. Meta-analysis is a highly respected quantitative approach to synthesizing the strength of the effect sizes reported in the achievement of outcomes, but has the limitation of not being applicable to articles reporting on the results of qualitative analysis of the same set of outcomes. When approached using mixed methods, meta-synthesis has the potential to identify clusters of variables strongly and weakly associated to an outcome and derived through both qualitative and quantitative analytical techniques.

Two aspects of the standard definition of meta-synthesis have traditionally been used to situate it within the family of methods in the qualitative tradition. The first is the use of an inductive method to derive conclusions. The second is the framing of the method as a tool to systematically analyze articles reporting on qualitative research. Both of these qualities are evident in Thorne's (2008) definition of meta-synthesis:

> Meta-synthesis refers to research approaches that integrate the collective product of extant bodies of qualitative research findings using systematic, formal processes for the purpose of generating overarching inductively derived claims about the phenomenon of interest. (p. 511)

The specification of an inductive approach is what most strongly associates this method with qualitative traditions.

Several authors launched dialogue about ways that mixed methods can be used to systematically synthesize a body of empirical literature about qualitative and quantitative research on the same topic (e.g. Andrews & Harlen, 2006; Harden & Thomas, 2005; Sandelowski, Voils, Leeman, & Crandell, 2011). A mixed methods-mixed research synthesis is "a form of systematic literature review in which the findings of completed empirical qualitative and quantitative observational and experimental studies are integrated using qualitative and quantitative methods" (Sandelowski et al., 2011, p. 316). While each of these authors is a proponent for this as an innovative approach to systematic reviews, none has yet to illustrate how such a procedure might be systematically executed.

The purposes of this practice session are practical. We set out to provide a step-by-step model of the process for conducting a mixed methods meta-synthesis of both qualitative and quantitative research articles reporting on the outcomes of interventions designed to promote in- or out- of class learning. We use as an example, a project that was underway over the summer of 2014 to catalog the positive and negative outcomes of college students' participation in extra-curricular activities and led by Dr. Denise Simmons in the Myers Lawson School of Construction Engineering at Virginia Tech. We will illustrate ways that qualitative and quantitative strategies were interwoven throughout the project.

Literature Review

Systematic reviews have been associated with the evidence-based practice movement and as a response to pressure from policy makers and funding agencies for evidence to document the effectiveness of interventions designed to promote learning. They have been used to identify "best practices" or "what works" by cataloging the weight of the evidence that supports its efficacy to produce positive outcomes in learning and in career and professional development.

Systematic reviews have also been conceptualized as a strategy to evaluate the quality of the evidence that supports the effectiveness of an intervention. They can generate and apply a set of criteria to distinguish good-quality research from poor-quality research (Andrews & Harlen, 2006) and to systematically examine if the results and conclusions drawn by researchers are warranted by the data (Harden & Thomas, 2005).

Goals and Objectives for the Practice Session

Objectives of the session include to:

1. Review the definition of a mixed methods meta-synthesis and explain the uses it might serve.
2. Distinguish meta-synthesis from meta-analysis and content analysis.
3. Review two types of mixed methods meta-synthesis: exploratory studies that begin with an inductive emphasis and explanatory studies that begin with a confirmatory, deductive approach.
4. Provide a flowchart illustrating the steps in conducting the quantitative and qualitative analysis.
5. Illustrate ways that mixing of the qualitative and qualitative data can occur at each phase of the research
6. Engage the audience in a discussion of challenges faced in executing a mixed methods meta-synthesis and other analytical strategies that can be employed.

Practice to be exemplified

The practice we seek to exemplify is how to conduct a systematic review of a body of literature using mixed methods.

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A Conversation about College Teaching: Creation of a College Teaching Certificate

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Abstract: Tertiary education is under increasing pressures due to public cries for greater affordability, increased graduation rates, and more thorough evaluation of student learning amidst dwindling public funding. These pressures occur against a backdrop of substantial shifts surrounding new faculty careers in general and the practices of teaching in particular. First, although openings for faculty positions are on the rise, the glut of doctorates awarded contributes to fierce competition for those positions. Second, shifting student demographics result in teaching a student body that increasingly requires developmental courses prior to full college program enrollment. Third, the influx of technology into teaching, including online options, MOOCs, and flipped classrooms requires faculty to learn new and expanded teaching strategies. Unfortunately, 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). Those teaching in community colleges are particularly vulnerable as the minimum requirements for employment are typically a master's degree, which offer even less opportunity for classroom experiences as teaching assistants. As a result of these gaps in teaching preparation, our university created a College Teaching Certificate (CTC). Key features of the program include a blended learning format (Vaughan, Garrison, & Cleveland-Innes, 2013) 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). The intention of this conversation is to offer a review of our CTC, to facilitate a conversation about what others consider key features for good college teaching, to exchange best practices, and to create an ongoing network of professionals interested in the scholarship of teaching.

Literature Review

Barr and Tagg's (1995) seminal article on teaching and learning underscored the importance of focusing on student learning as the key outcome of a college education. Nonetheless, although good teaching practices are espoused in tertiary education, instructional training is scant in doctoral programs (Gappa et al., 2007). Doctoral student socialization emphasizes research over teaching, thus many new faculty are unprepared for college teaching. 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). Further, faculty find that research and publication are more highly incentivized in appointment and promotion criteria, resulting in teaching taking lower priority (Fox, 1992; Zubrick, Reid, & Rossiter, 2001). Claiming a different segment of the higher education market from large state research universities, comprehensive regional universities, liberal arts colleges, and community colleges embrace a focus on teaching. Yet, even these institutions are under pressure to bring in grant funding and to increase research activities (Boyer, 2007). And like their colleagues teaching in research universities, faculty at other types of colleges have little background or training on effective teaching practices. The demands on community college faculty in particular to increase college graduation rates and to focus on student success require well-honed teaching skills (Twombly & Townsend, 2008). There are no federal or state mandates requiring any type of teaching preparation for college faculty like those guiding K-12 teaching. The creation of the College Teaching Certificate was intended to help fill this gap in the field.

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 identify central concepts for developing good college teaching practices.
Objective #2: To discuss best practices for college teaching, in particular for different levels of student learners.
Objective #3: To identify strategies for planning curriculum and programs on college teaching.
Objective #4: To review curriculum mapping to assure learning objectives are obtained.

Description of Topic to be Discussed

The national focus on outcomes and the completion agenda often neglects the key element in the process, namely college teaching. On the one hand, we know that engaged learners (Lave & Wenger, 1991) and good teaching practices lead to improved student learning (Doyle, 2011). On the other hand, the lack of emphasis on learning how to teach in doctoral programs leaves new faculty members feeling unprepared for the central task of teaching (Austin et al., 2007). The message received in academics is that research is the coin of the realm for obtaining tenure (Fairweather, 1996), yet the demand for increasing graduation rates has put a spotlight on creating effective teaching strategies and to engage in deep learning activities (Wawrzynski & Baldwin, 2014). Having an opportunity to participate in a shared conversation around issues involved in college teaching can support faculty work. The goal of this session is to support faculty as learners regarding the topic of teaching.

Facilitation Techniques

The conversation will begin with a brief overview of the development of our College Teaching Certificate. A set of guiding questions will be provided for the audience to allow for maximum focus on the conversation about how to prepare for college teaching. Included in these questions will be a focus on common challenges faced teaching for the first time, strategies to employ to encourage student learning, and discussion on the role of the scholarship of teaching. 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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A Conversation about Utilizing Social Media in the Classroom for Educational Purposes: When it's justified and when it's just noise.

Courtney Vengrin and Tanya Halliday, *Virginia Tech*

Abstract: Social media has become deeply imbedded as a part of today's culture, extending to the realm of higher education (Blankenship, 2001). As educators it is our task to better utilize social media within our classrooms and present professional guidelines and actions regarding social media to our students (Joosten, 2012). As social media is a preferred form of communication amongst today's students, integrating this technology in to college classrooms can be a valuable method of enhancing educational experiences (Wang, et al. 2012). However, with so many distractions, is social media appropriate for your classroom? Which forms of technology and social media can help your students and which are unnecessary? How do you decide? We will begin the conversation by reviewing the popular forms of social media relevant to today's classroom and then discuss options for utilizing these technologies so that they enhance the learning experience. Popular examples will be provided and appropriate use of the available social media platforms will be discussed. We welcome contributions and examples from your own teaching practices. We believe that there is a time and a place for engaging your students in social media both inside and outside of the classroom. It is possible to utilize this technology without it being a distraction or detractor from your classroom setting!

Literature Review

Social media as well as a wide variety of technologies have become almost overwhelming in today's academic environment. When is it appropriate and when is it a distraction? This is one of many questions that today's educator must consider. It is all too easy to use social media just for the sake of using it with no real educational value. Students will pick up on this and either be distracted by it, or irritated that their professor is trying too hard to be "cool". Part of the drive to utilize social media in the classroom is to meet students where they are at (Jones, 2008; Joosten, 2012; Seaman & Tinti-Kane, 2013). Today's student speaks the language of social media, their spare time is spent on social media (Jones, 2008). In order to engage these social learners, it is necessary to at least consider social media as an educational tool.

Social media, when used properly can have a wide variety of benefits for both the students and the educator (Blankenship, 2011; Joosten, 2012). The use of social media can inspire creativity, engage typically quiet and reserved students, and promote conversation both inside and outside of the formal classroom setting (Blankenship, 2011; Joosten, 2012; Wang, Sandhu, Wittich, Mandrekar, & Beckman, 2012). Social media can also be utilized to engage students interested in continuing their education beyond the classroom (Wang et al., 2012).

We know that presently a majority of faculty are utilizing social media for personal purposes (Seaman & Tinti-Kane, 2013). However most do not feel that social media has a place in the classroom, although between 2012 and 2013 there was a marked increase in the use of social media within the classroom (Seaman & Tinti-Kane, 2013). It is important to consider the best possible uses of these social media tools and in which venues these tools should be utilized. It is important to consider the use of social media in a course during the design phase. Not every social media platform will work for every course.

Online classes offer a wonderful venue for utilizing social media. In an online setting an educator is typically much more removed from the students. Utilizing social media can help bridge this missing connection to your students (Blankenship, 2011). By engaging students outside of the traditional classroom via Facebook or Twitter, educators can enhance and continue the dialogue in order to reach a diverse group of learners that make up today's classroom (Joosten, 2012; Wang et al., 2012).

Out of classroom activities provide the main focus for social media utilization (Joosten, 2012; Seaman & Tinti-Kane, 2013; Wang et al., 2012). Providing engagement techniques to keep your students thinking about the topic beyond the scope of your allotted class time can be challenging. Using social media to share examples, discuss concepts, and add additional information can enhance learning both inside and outside of the classroom (Jones, 2008; Joosten, 2012; Seaman & Tinti-Kane, 2013). By engaging students where they are at we can further their educational goals and our classroom engagement. There is an appropriate time and place for utilizing social media, and each classroom and learning environment will vary with respect to which forms of social media are applicable.

Goals and Objectives

The overall goal of this conversation is to discuss how to use social media in meaningful ways to enhance student learning and engagement in the higher education classroom setting. Our objectives include:

- Review and analyze popular social media platforms
- Evaluate which social media platforms are appropriate for different curriculum
- Describe applications of social media in the classroom setting
- Discuss ways to integrate social media in to course design
- Work with participants to develop social media options for their specific needs
- Contrasts the benefits of social media with the possible issues that my arise
- Brainstorm solutions to real and invented social media issues that may arise

We hope to stimulate educators to consider new and innovative ways to connect their curriculum to the outside world through the outlet of social media. By sharing this information we will be able to help participants discover the options that social media has to offer.

Description of Topics to be Discussed

Topics to be discussed include but are not limited to types of technology that are appropriate for the classroom, pros and cons of utilizing social media in the classroom, ways to promote student engagement through the use of social media, ways to interact with a broader audience and model scientific engagement through social media. We will cover blogs, Facebook, Twitter, Instagram, and tumblr to start, but also leave space for participants to suggest additional social media sites that they have questions regarding social media and its educational purposes. We will also discuss the pros and cons of social media use in the classroom setting and consider issues that can arise and potential solutions to these issues.

Facilitation Techniques

For this conversation we will begin by assessing the audience's familiarity with social media and we will then present a variety of social media platforms for discussion. We will review the popular forms of social media relevant to today's classroom and then discuss options for utilizing these technologies so that they enhance the learning experience. Popular examples will be provided and appropriate use of the available social media platforms will be discussed. We welcome contributions and examples from your own teaching practices. We believe that there is a time and a place for engaging your students in social media both inside and outside of the classroom. We will allow for discussion of possible issues when using social media and have the group brainstorm solutions to these problems. We will utilize technology within the session and have participants interact with as many social media types as they wish during the session. At the end of the session we will make time for assisting interested individuals with creating their own social media accounts and determining which platform(s) fits their specific discipline and courses best.

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In One Ear & Out the Other: A Conversation about Memory & Learning in the Classroom

Donna W. Bailey, *University of North Carolina-Chapel Hill*

Abstract: Memory research is providing insights into the role of memory and learning. This conversation will focus on some of the recent research on the role of memory and learning. Participants will explore selected research, think about what they know about memory and learning, talk with other participants about the implications from the research provided in the session, and collaborate on a list of strategies that might be used in their classroom to enhance learning by leveraging an understanding of memory systems, their limitations, and the student's role in being metacognitively aware of how they learn.

Literature Review

Miller (2011) published an article in College Teaching describing recent findings in memory research. This article pointed out four key findings from the research that could be applied in the college classroom. First, short-term memory is mot as limited in some ways as once thought. Information that is "well structured, personally relevant, and rich in emotional and sensory qualities" fosters remembering. Secondly, as we have learned, attending to more than one area (multitasking/task shifting) may increase the load for working memory to a point where we lose information-processing abilities for all of the areas where our attention is focused. Thirdly, the research suggests that students need to be willing and able to focus on material, processes, and goals in class; otherwise, there will be no memory (Miller, 2011, pp. 121-122). Willingham (2009) stated this in the principle, "memory is the residue of thought" (p.54). Lastly, frequent testing fosters learning rather than inhibiting learning (Miller, 2011). Dunlosky, Rawson, Marsh, Nathan, & Willingham (2013) found that practice testing was a high utility technique that students could use to facilitate learning.

Other researchers have reported in factors that influence the role of memory and learning. To illustrate the diversity of areas studied, a brief summary of several articles is provided below:

1. Memory consolidation and storage is increased by associations in emotional and arousing events over neutral events (Nielson & Arentsen, 2012). This suggests active learning strategies that engage students with each other and the course material might lead to stronger and more lasting memory traces. ;
2. Comprehension from text is dependent on relations among and between elements in the text and the student's prior knowledge. The student uses both of these processes to understand a reading assignment (van den Broek, 2010). Designing or selecting readings to activate prior knowledge that includes concepts in the reading in logical sequences can strengthen understanding through elaboration and subsequent retrieval and use of those mental models.
3. Mindfulness training is demonstrated to improve GRE reading-comprehension scores and working memory capacity (Mrazek, Franklin, Phillips, Baird, & Schooler, 2013). Ambrose, Bridges, DiPietro, Lovett, & Norman (2010) explained this in the principle, to become self-directed learners, students must learn to monitor and adjust their approaches to learning (p. 6).
4. Contextual cuing fosters attention and retrieval of knowledge to enhance learning from PowerPoint presentations (Horvach, 2014).

Goals and Objectives

The goal for this session is to explore what we know about memory and learning and to collaboratively identify ways that the current research can be applied to teaching and learning in the college classroom.

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

1. identify current topics related to memory and learning;
2. explore questions about the practical implications of what we are learning about memory for their course; and
3. describe one strategy identified in the conversation that might be applied in your course to enhance learning.

Description of Topic to be Discussed

The teaching and learning literature has seen an increase in the number of articles and books about the role of memory systems and learning in the past few years. While there are new insights regularly that upset our current understandings, there are also implications that can be used when formulating instructional approaches in the classroom. For example, considering the increased cognitive load students may experience with complex concepts, we can consider breaking the content into smaller, sequentially ordered chunks with periods of practice interspersed in the class session (Cotes & Cotuá, 2014). Mindfulness is another concept that has been linked to enhanced cognitive functioning. These and other profile topics related to memory and learning will be explored in a conversational way to elicit a common understanding and recognition of strategies that others are using to enhance memory associated with learning in their courses.

Facilitation Techniques

Facilitation will be accomplished using the following strategies, a brief overview of the objectives, an individual written activity to probe background understanding, followed by paired exchange between participants, large group debrief, and a summary of what we have learned and an outline of strategies we have associated with memory and learning during our conversations.

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Friday

February 6, 2015

Presentation Sessions

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

Friday

February 6, 2015

Session 12

9:00-9:50 AM

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

The Impact of *College In High School* Programs on Future Academic Success?
A Longitudinal Study: 2007-2013

Karen H. Larwin and Patricia M. Sveth, *Youngstown State University*

Abstract: The current investigation investigates the impact of a College in High School Program that operates in NE Ohio. The data is drawn from a sample of students who have participated in the College in High School Program since 2007. Specifically, the investigation seeks to understand what if any impact the College in High School Program has on students' post-secondary aspirations, and whether these participating students are entering and graduating from post-secondary opportunities at a rate different from comparable students not participating in this program option. Additionally, data is examined to what effect variables, such as socio-economic status, discipline area, and demographic variables moderate student success.

There are a number of options for high school age students when it comes to earning college credit prior to high school graduation. *Transition credits* are available as part of summer school programs (sometimes referred to as singleton college credit opportunities), dual enrollment programs in which students are enrolled in college courses while still taking the required high school curriculum, advanced placements (AP) course offerings at the high school, and programs referred to as College In High School (CHS) programs (Bailey & Karp, 2003). Many college-bond high school students choose to participate in these early college opportunities because of the time and money savings that can result. (NCPR, 2014). Students can take classes during high school at reduced rates (or free of cost) that are counted towards their college-level degree completion.

Additionally, research has suggested that opportunities such as these can provided students with a much needed confidence-boost as they move on to their college career (Rosenbaum & Becker, 2011). While AP coursework is a popular option for many college-bond high school students, these earned credits are not accepted by every university and these courses do not universally prepare students to be successful on the required AP exams (Pope, 2013). And, while dual enrollment is one the fastest growing segments of options for the college-bond high school student to earn some early college credits, this option presents an expensive option for the local public school systems to absorb and often requires the high school students to travel to the local college or university (NCPR, 2014). However, more recently, a less expensive form of dual enrollment has been established: College in High School (CHS). With this option, student can take college-level classes in their resident high school building and the program delivery of these courses for credit is provided at a marginal cost to the local school district.

As more than 1.5 million high school students flock into dual enrollment opportunities, it is imperative to understand what impact these occasions to earn *transition credits* are having on students' post-secondary academic success (NCES, 2013, Rosenbaun & Becker, 2011). While research and federal data has tracked the impact of AP coursework, and the dual enrollment activities, no known research has looked specifically at the impact of the *College in High School* types of dual enrollment. The current investigation examines how participation in CHS, the number of courses completed while in CHS, the grade point average of participants in CHS is related to their later enrollment and their graduation from both undergraduate and graduate degrees. This data will be paralleled to comparable non-participating students from the same local school districts.

Methodology

Participants

Participant data is drawn from a three county area in NE Ohio. Participant data is drawn from students who participated in the College in High School Program from 2007 to 2014. This data was provided by the director of the local College in High School Program. The sample of participants includes $n = 1486$ students, whose ages are 15-19 years while in the College in High School Program. Students can apply to be in the program once they have completed their freshman year of high school.

Instrumentation

Data includes basic demographic information, grades in College in High School classes, information about high school graduation, post-secondary education, and post-secondary graduation. Data is includes information for comparable students not specifically enrolled in the College in High School Program. Student's admittance in the College in High

School program is established through an application process and the student's current performance in their high school classes.

Procedures

Data was provided for this investigation by the university overseeing the delivery of the College in High School program. Additional information is being requested from the participants in the program via a request to complete a Survey Monkey survey regarding their experiences in the College in High School program. This survey data collection is currently underway.

Results

Demographic results indicate that 13.7 % of participants are high school Juniors (11th grade) while 86.2% are high school Seniors (12th grade). Students complete anywhere from 1 to 26 college credit hours with the average credit hours being completed 6.16 (sd = 3.14). The mean grade point average for these participants is 3.85 (sd = .75).

Preliminary results indicate that upwards to 78% of the students participating in the College In High School program are continuing on to a post-secondary degree and 53% of those graduating from their undergraduate programs are continuing on to graduate school. Also, 25% of the students are remaining at the local state university that provides and monitors the College in High School programming. The areas of concentrations are presented in Table 1.

Table 1. *Area of Degree Concentration for College in High School Students*

Degree Area	Frequency	Percent	Degree Area	Frequency	Percent
Accounting/Finance	34	2.3	Engineering/Math/Physics	107	7.2
Arts	16	1.1	Health Care	72	4.8
Biology	69	4.6	Language	17	1.1
Business//Management	43	2.9	Social Sciences	50	3.4
Chemistry	40	2.7	Technology	11	0.7
Education	51	3.4	Undetermined	11	0.7

As indicated in Table 1., the majority of students who have graduated from high schools are entering the STEM disciplines (43.5%). Of the 227 of those entering STEM disciplines, 66 have graduated with their bachelor's degree, and 42% of these graduates are female students. Many of those who have not graduated are early in their formal college careers.

Discussion

The early results of this investigation provided strong evidence that the College in High School program can have support student success in the post-secondary aspirations and some promising outcomes for STEM disciplines. Additional analysis and full results of this program evaluation will be provided at the time of the presentation. The analysis process is expected to be completed in November 2014.

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Pedagogy for Engagement: Alternative Texts to Increase Civic Engagement and Knowledge

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Abstract: 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 resource investments. Research regarding the benefits of textbook alternatives is ambiguous, though some studies document increases in student learning. The current research explores whether the use of an alternative text influences students' feelings of civic engagement and knowledge. We explore the effects of assigning an alternative textbook as a supplement, using a quasi-experimental design, with survey data. We find a significant increase in student learning, especially for those students assigned a combination of standard and alternative texts.

Literature Review

Putnam's seminal work, *Bowling Alone*, sounded the alarm on a long-term downward trend in civic engagement in America (Putnam 2000). One potential avenue for addressing the generational decline in civic and political participation in America is to incorporate "pedagogies of engagement" which encourage students to develop political engagement skills and foster critical thinking about their democratic republic (Beaumont, et al. 2006). Much of the research on the efficacy of diverse pedagogical practices focuses almost exclusively on those activities that take place beyond the four walls of the classroom, and finds that service learning projects increase student engagement (e.g. Astin and Sax 1998; Schumer 2001). To be sure, projects of this magnitude require the investment of significant time and resources for proper development and execution (Birge, Beaird and Torres 2003). Resources, financial or otherwise, may limit instructors' ability to pursue, develop, and execute these high engagement pedagogies. Despite conflicting evidence (e.g. Huerta and Jozwiak 2008; Weiden and Phippen 2005), about the efficacy of alternative reading assignments on student learning and civic engagement, the incorporation of alternative reading assignments is one potential pathway for increasing political knowledge and engagement. There are limited studies that examine whether using alternative texts affects levels of student learning, and the results are conflicting. In this research, we test whether assigning an alternative to the traditional textbook will increase students' political knowledge and engagement more than assigning only a traditional textbook.

Methodology

We employ a pre and post-test quasi-experimental design to assess the impact of standard text, alternative text, and a combination of standard and alternative texts in introductory level courses taught at a public university in Southwest Virginia and a public, two-year college in Southern California. The instructors used identical texts (standard and alternative) and collaboratively developed detailed reading guides to aid students in active reading, note taking, and the retention of pertinent information. Using anonymous student surveys administered to students at the beginning and conclusion of the course, we analyzed measures of efficacy and knowledge developed by The Carnegie Foundation for the Advancement of Teaching (Colby, Beaumont, Ehrlich, and Corngold 2007). In our analysis, we employ independent samples t-tests to compare the sample means by condition for pretest and posttest measures to draw conclusions about where students begin and end with regard to the dependent variables. We then proceed to estimate three Ordinary Least Squares regressions. The OLS models allow us to control for other factors, such as sociodemographic characteristics, to determine if students' self-reports are significantly different by condition, independent of other possible confounding variables.

Results

Table 1.Comparisons of Means - Political Knowledge and Efficacy			
	Pretest		**Posttest**
Current Events Knowledge Scale			
Standard	1.65 (.81)		2.74 (1.01)
Standard & Alternative	1.94 (.75)*	2.83 (1.11)	
Foundational Political Knowledge Scale			

Standard	1.74 (1.05)	2.48 (1.19)	
Standard & Alternative	2.15 (.96)**	2.52 (1.29)	
Internal Political Efficacy Scale			
Standard	2.60 (.95)		3.22 (.99)
Standard & Alternative	2.90 (.96)*	3.57 (.99)*	
Note: *= p>.05, **=p>.01			

Table 2. OLS Regressions of Students' Self-reports of Foundational Knowledge	Foundational knowledge
Male	.18 (.11)
White	-.16 (.16)
Hispanic	.22 (.16)
Institution	-.29 (.13)*
Underclass status	-.02 (.12)
Other class requirement	.30 (.11)**
Posttest	.48 (.11)***
Standard & Alternative text	.36 (.13)**
Intercept	1.07 (.23)***
Note: * indicates p>.05, ** indicates p>.01, and *** indicates p>.001	

Discussion

The significant, positive coefficient for the Posttest variable indicates that students report feeling more internal efficacy, on average, at the end of the semester compared to reports from the beginning of the semester. Similarly, the significant, positive coefficient for the Text condition variable suggests that students who use a supplemental text report feeling more efficacy and engagement than students who only use the standard format text. As such, the model in Table 2 provides support for the research hypothesis regarding the use of a supplemental text and students' reports of engagement and efficacy. All students, regardless of assigned text, demonstrate an increase in political knowledge. Importantly, the use of an alternative text is associated with the largest increases in knowledge. The results of this study indicate the use of an alternative text is positively associated with students' knowledge. As an alternative to other pedagogical practices such as service learning, which require a substantial investment of resources, the use of alternative texts is a viable pathway for increasing student knowledge.

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Therapists' Emphasis on Self-care: Facilitating Long-term Self-care Techniques in the Classroom

Kendra A. Arsenault, *Virginia Tech*
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Abstract: Student burnout can be an overwhelming and likely aspect of a developmentally rigorous time in ones life (Maraoco & Campos, 2012; Szydlo, Sloan, & Shanafelt, 2010; McCarthy, Pretty, & Catano, 1990; Koeske & Koeske, 1991; Balogun et al., 1996; Schaufeli et al., 2002; Schaufeli et al., 2009; Dyrbye et al., 2010; Salanova et al., 2010). Students are expected to build knowledge through developing academic skills for success while receiving a variety of external messages: make the most of your experience, be flexible, have balance, stay focused, choose a career path. Yet, even adults can experience burnout personally and professionally and often lack the skills to cope (Guntupalli et al., 2014; Kihc, Pelit, & Selvi, 2011; Drybye et al., 2014). Alarcon, Edwards, and Menke (2011) provide valuable suggestions for tackling burnout: reappraisal of demands, increasing social support, and coping, all of which can be adequately understood through self-care. This presentation takes the concept of self-care, taught in marriage and family therapy training programs (Aponte & Carlsen, 2009; Newell & Nelson-Gardell, 2014), and applies it to the classroom. Therapist's self-care skills are instrumental in their emotional stability and continual investment in client burden and stress. Thus, teaching self-care techniques and incorporating them into syllabi, in-class activities, reflexivity, and career planning is a valuable classroom intervention for students.

Literature Review

Research suggests that most students experience burnout in some form during their collegiate career (Maraoco & Campos, 2012; Koeske & Koeske, 1991; McCarthy et al., 1990). Additionally, many professionals experience burnout and find coping with burnout difficult (Guntupalli et al., 2014; Kihc, Pelit, & Selvi, 2011; Balogun et al., 1996). To further refine and define the definition of burnout, Maroco and Campos (2012) administered three surveys (MBI-Student Survey, Copenhagen Burnout Inventory-Student Survey, and Oldenburg Burnout Inventory-Student Survey) to 1,570 students. They were able to narrow the definition of burnout to the more precise and concise: physical and psychological fatigue, as well as, cynicism and disengagement. Burnout is the result of six factors: assignment overload, outside influences, lack of personal motivation, mental and physical health, instructor attitude, and other (Cushman &West, 2006, p. 25). Facilitating and developing self-care techniques, such as, social support, coping, and psychological and emotional health have been seen as effective ways to mediate student burnout and have the potential to become stepping stones for handling personal and professional burnout in the future (Alarcon, Edwards, & Menke, 2011).

Goals and Objectives

The purpose of this presentation is to communicate the need for self-care work in an undergraduate students' classroom experience. Upon completion of the presentation, participants will be able to:

- Define and describe burnout and self-care
- Recognize the importance of self-care for students' personal and professional lives
- Reflect upon their own implementation of self-care routines in their professional and personal lives
- Develop innovative ways to incorporate self-care techniques into their academic: syllabi, classroom activities, and philosophy of teaching

Description

This presentation addresses the importance of self-care in the classroom through (1) research and empirical support regarding the phenomenon of burnout (2) practical interventions to guide the instructor toward a more reflexive, emotionally healthy environment. The presenters will begin with a reflexive activity to engage participants in an awareness of their own self-care practices. Then, the presenters will facilitate an informative, concise discussion about research on burnout and self care in undergraduate and professional atmospheres. Finally, the presenters will use self-care exercises and interventions to engage and educate participants about the importance of self-care and its

role in their academic: syllabi, classroom activities, and philosophy of teaching. The presentation will be given primarily using PowerPoint, discussion questions, and individual and group reflections.

Discussion Questions

As therapists, the presenters maintain a level of expertise and experience in practicing and educating others about self-care. Because of the importance of self-care the first author incorporated reflexivity practices, group discussion and activities, and assignments related to self-care into her course. The following discussion questions will be incorporated into the presentation to facilitate further understanding and implementation of self-care:

1. What barriers do instructors and students face in practicing and prioritizing self-care?
2. How can classroom instructors creatively collaborate with students to build syllabi that meet objectives and help manage student stress and burnout?
3. How can instructors integrate and apply self-care within subject areas and prepare for career specific stressors students may encounter?
4. What are negative self-care skills students utilize and how can they be addressed in the classroom?
5. How can classroom instructors aid students in accessing local and university resources for self-care?

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Peer to Peer Projects: Bringing Academics to Life through a Community-based Culture of Innovative Learning

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Abstract: Learning is not limited to the classroom. Indeed, developing the skills, motivation and passion necessary to become a true lifelong learner requires broadening the scope to include our lives beyond the classroom. One way to facilitate this process is through participation in a living learning community (LLC), where students integrate their academic and social lives. In this practice session, we present a collaborative student/academic affairs program that integrates six high impact practices, combining curricular and co-curricular activities, to create a culture and tradition of learning. Virginia Tech's Curie and Da Vinci LLC's consist of life, physical and quantitative science freshman and sophomores. The learning outcomes of these LLC's align with student affairs learning aspirations (leadership and curiosity) in addition to traditional academic STEM outcomes. Curie and Da Vinci form a First Year Experience program that includes semester-long "Peer to Peer Projects" -- envisioned, spearheaded, managed, and implemented by students -- on which the entire student community collaborates. This session will include a panel discussion with faculty and students representing all levels of project organization. Panel members will (a) discuss their experiences in relation to undergraduate research that assesses the project's learning outcomes and (b) solicit input from participants on their perceptions of the roles of student and academic affairs, with the goal of raising faculty awareness of the potential for LLCs to stimulate the very lifelong learning attitudes and skills that are prized in the classroom.

Literature Review

An integration of curricular and co-curricular learning through academic and student affairs collaborations is needed to create a seamless learning environment conducive to meeting the learning needs of undergraduate students (Banta & Kuh, 1998; Bourassa & Kruger, 2001; Kellogg, 1999; Kezar, 2003; Kezar et al., 2002; Sandeen, 2004). High impact pedagogical techniques that promote holistic, life-long learning, and long-term retention and transfer of knowledge to different contexts, are particularly important to student development (Halpern & Hakel, 2003; Kuh, 2008). Baxter Magolda (1999) argues that involving all types of educators, regardless of their campus roles, is needed to integrate the various domains of learning - cognitive competence, intrapersonal competence, interpersonal competence, and practical competence – and prepare college graduates for complex challenges of the 21st century.

Goals and Objectives

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

1) Develop strategies for more explicitly connecting academics to Living Learning Communities specifically or student affairs programming more broadly
2) Understand how to incorporate multiple high-impact practices into an academic/student affairs STEM collaboration
3) Understand how to frame assessment and evaluation work as undergraduate research
4) Develop strategies for fostering positive co-curricular collaborations with student affairs
5) Understand the significance of articulating and directly assessing student learning outcomes in addition to "counting" retention and graduation rates as indicators of success for STEM reform initiatives

Description

The Da Vinci and Curie Living-Learning Communities (LLCs) at Virginia Tech consist of life, physical and quantitative science freshman and sophomores, and are part of the broader inVenTs STEM community, which is designed to promote interdisciplinary collaboration between science and engineering students. These LLCs' learning outcomes align with student affairs learning aspirations, including elements of leadership and curiosity in addition to traditional "academic" STEM outcomes. Curie and Da Vinci combine to form a First Year Experience program that includes semester-long "Peer to Peer Projects" -- envisioned, spearheaded, managed, and implemented by students – on which all students collaborate and implement using cutting-edge technology in a residence hall-based design studio. This practice session will include a panel discussion with faculty and students about their learning

experiences in relation to undergraduate research that assesses the project's problem-solving outcomes using AAC&U VALUE rubrics. The panel will consist of faculty and students, including (a) undergraduate researchers, (b) student managers / coordinators who oversee the implementation of the project, (c) sophomore mentors who manage project teams and (d) freshmen who implement the project components. Panel members will (a) discuss the problem-solving assessment outcomes from the perspective of their role in the project (e.g., project implementation, successes and failures, lessons learned, and resulting impacts on student academic and personal growth), and then (b) solicit participant input on their perceptions of the roles of student and academic affairs, with the goal of raising faculty awareness of the potential for LLCs to promote student learning.

Discussion

This joint faculty-student led forum is designed to raise awareness of the innovative academic endeavors happening within Virginia Tech's LLCs to enhance student learning. The Da Vinci and Curie LLC's provide an example of a community-based, co-curricular program designed to shift how students experience "learning" from mandatory classroom assignments to a shared experience where students strive towards a common goal, struggle together to solve challenges, and celebrate their successes as a community. Students in this collaborative program (a) apply concepts from foundational coursework in a hands-on project, (b) learn cutting-edge, discipline specific technology, (c) articulate connections between coursework, activities, and leadership roles, (d) design, evaluate and implement strategies to achieve desired goals, (e) gain experience with communicating science to the public, (f) inspire youth to pursue STEM-related fields through outreach and service, and (g) learn to align their co-curricular experiences with learning outcomes from academic coursework and the Student Affairs "Aspirations for Student Learning". Projects are later used as study aids in student-run biology, chemistry and physics review sessions, and for educational outreach through venues such as Kids' Tech University at Virginia Tech. By integrating six high impact practices and combining curricular and co-curricular activities to promote a culture and tradition of learning, the Curie and Da Vinci LLCs demonstrate the potential for collaborations between the divisions of student and academic affairs to stimulate the very lifelong learning attitudes and skills that are prized in the classroom and transferrable to contexts beyond college graduation.

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Creating Narrative Spaces for Teaching, Learning and Engagement

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Abstract: Among many reasons, humans create stories to make meaning of lived experiences. The narrative process and how individuals tell and hear stories are diverse.. The sharing and recording of individuals' narratives can catalyze empowerment and reveal mutual strengths and vulnerabilities. By shaping common ground through subjective points of view and then connecting data to those voices, teachers and students can better contextualize learning and more deeply engage with local and global issues and ideas. We believe that as participatory researchers, teachers and learners, we can co-curate a place where our voices and values can expand a classroom experience past a data-point and leverage those experiences to interpret, challenge and more deeply understand the dominant narrative within disciplines, communities and cultures. Personal and national narratives often serve as "internal operating systems," shaping perspectives and guiding behaviors, for better or worse. Starting inquiry from a place of knowing within community is a critical component of the methodology of storytelling praxis. The subjectivity and authenticity of personal narrative—which roots expertise in the individual's voice—allows stories to break down the rhetoric and polarization that often divides groups and communities. Claiming personal voice for both articulating issues and naming assets is elemental in seeding a more civil, engaged conversation within local and global contexts.

Literature Review

We cannot move theory into action unless we can find it in the eccentric and wandering ways of our daily life… Stories give theory flesh and breath.

- Minnie Bruce Pratt, S/HE, 1995, p. 22

A narrative ecosystem surrounds us in personal and professional settings as well as local and global contexts (McQuillan, 2000). How do these stories influence individual behavior, and how are narratives influenced in turn by power and structures outside the immediate community? We would argue that stories are powerful because through stories individuals know themselves, come to know each other, and build a shared vision of the world. John Boswell speaks to the importance of constructing and "controlling" the narrative in democratic debate. From a social justice and participatory research model, understanding this structure and supporting community engagement in reclaiming voice and power through narrative is key (Boswell, 2012). Narrative is a crucial device for supporting deliberative ideals and the ways of knowing must be honored and more effectively incorporated into the meta-narrative of our politics and economy. Divergent stories within a community then become an interesting place to examine values' conflict and can be illuminating in understanding differences among positions of those held in the same communities. This conflict and incongruence is most readily felt among marginalized and oppressed populations, though transparency about the oppressive nature of these narratives is rare in academic, economic and even social literatures (Bonilla-Silva et al, 2008). The narrative praxis is rooted in dialogic inquiry within a participatory research framework. Engagement in this form of individual, classroom and community collaboration is grounded in the ideals of shared knowledge creation within a belief that expertise is found in all learners and teachers. Thus, learning is not a separate and independent activity, but an integral aspect of participation in any community of practice. Nor is learning dependent on teaching in the most traditional sense of that term. The most serious problem is in treating knowledge as some thing that people possess. Knowledge is created and recreated between people, as they bring their personal experience and information derived from other sources to bear on solving a particular problem. (Wells 1999).

Goals and objectives for the practice session

Facilitators will offer context and methods for using storytelling in the classroom to develop community, engage students, foster peer learning and teaching, create safe spaces for engaging in controversial and potentially divisive topics and support reflexive practice.

Description of practice to be exemplified

In practical terms, this session will include a participatory storytelling component, based on Roadside Theatre's Story Circle Guidelines. The roots of this practice reside in many places and peoples - most immediately in the work of theater artist/community organizer John O'Neal who developed a story-circle practice in the 1960s with the Student Non-Violent Coordinating Committee (SNCC) and his allied Free Southern Theatre, and refined his practice through his subsequent company, Junebug Productions. Through guided inquiry, the facilitators will lead participants in story circles with subsequent dialogue about the revelation of shared values or concerns, divergent perspectives, and emerging perspectives on others' view of the world. Additionally, examples of captured narrative work (video and audio) will be shared along with a brief overview of the tools and process used to create these digital artifacts.

Discussion

The narrative process honors the truth that each story, each person, brings wisdom to the whole. By starting from a place of honoring self-knowing, we find that learning and education occurs without fear of self-loss. We must continue to evolve our notions of Storytelling like other behaviors, to ensure our survival. Narrative is a place where indigenous and marginalized populations can anchor or challenges widely accepted data/information, rather than have others tell their story. We are all storytellers and gatherers. The key to building community in this context is to honor the individual narrative and provide context and space for sharing and knowing each other in this powerful medium and method. The classroom is an idealized place to practice this important community engagement and learning tool.

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Global Engagement Through Interactive Videoconferencing and Social Media

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Abstract: This session describes the successes and challenges of our First Year Seminar "Global Understandings. " This course provides freshmen with an early exposure to global learning and intercultural communication via interactive video and social media. The goals are to promote interest in global issues and study abroad, as well as to provide a direct contact experience for students who may not study abroad. Presenters will utilize presentation, discussion, polling, Q&A, writing, and sharing in dyads to help participants learn about our Quality Enhancement Plan (Global Learning), the goals and activities of the course, the extensive and politically delicate coordination among institutions; the rationale for and implementation of the various technologies; our methods of data collection; preliminary data on the impact on students, and lessons learned.

Literature Review

Educators across the academic spectrum are asserting that internationalization and globalization are critical for our students' and our nation's success (American Council on Education, 2011; National Education Association, 2010). At the same time, both active learning and technology are playing increasingly important roles in student learning (Beetham & Sharpe, 2013; Braxton, Milem, & Sullivan, 2000; Michael, 2006). In 2011, our university adopted "Global Learning" as its Quality Enhancement Plan for accreditation by the Southern Association of Colleges and Schools, and seeks three student outcomes: to develop globally competent knowledge, to cultivate intercultural competencies, and to foster globally competent citizenship (Appalachian State University, 2013).

Description of Practice

This session describes a course that provides first-year students with the opportunity to converse with their peers in China, Thailand, Viet Nam, and Mexico. Synchronous connections are made as a full group during class time via real-time interactive videoconferencing facilitated by the instructors. Although connection topics focus on four key topics—college student life, family, images and stereotypes, and success/heroes/values—course content also interweaves the history, geography, language, and customs of each country. More personal and in-depth asynchronous and synchronous connections are made out-of-class between pairs of students via social media on topics of their choice. Local (non-connected) classes and out-of-class assignments focus on cultural knowledge, intercultural competence, and global citizenship; data on these three goals are being collected via pre-course and post-course surveys, weekly journals, and project presentations. Results from the Fall 2014 courses will be shared.

Goals and Objectives

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

- Describe a way of connecting students internationally and a/synchronously via technology
- Articulate the technological capabilities and limitations of using interactive videoconferencing and social media
- Estimate the human, technological, and financial resources needed to initiate, implement, and sustain such a course
- Discover the impact of the course on students' perceptions of their own and other cultures
- Adopt/adapt data collection methods to determine impact

Discussion

While many institutions focus on international travel as a way to globalize the curriculum, our university also sought ways to provide authentic opportunities to students who may not or could not study abroad. It was clear from the first offering that Global Understandings would take on a character reflective of our faculty and our campus; and it would require a steep learning curve and several iterations of the course until the course was scalable. Now, after four semesters of implementation, the administrator/liaison with the international partners, the faculty teaching the course, and the technology support staff feel confident enough to present the endeavor to other campuses that wish to globalize their curriculum. Also at this point the teaching faculty feel confident enough to begin a more in-depth

systematic collection of data, and are implementing a SoTL project to determine students' gains in cultural knowledge, intercultural competence, and global citizenship.

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Supporting Early Career University Teachers: Group Mentoring to Build Confidence, Skills, and Community

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Abstract: University faculty are often woefully unprepared to begin teaching. While they often gain some limited experience serving as a GTA for one or more professors, more often than not, they acquire only minimal preparation to take on the many complex challenges of teaching independently. To begin addressing this concern, more than nine years ago we created a mentoring group consisting of early career faculty and more seasoned veterans who meet regularly to read and discuss pedagogical literature and to share what is going on in their classrooms. Modeled on similar experiments at other institutions, our learning community not only fosters the acquisition of useful teaching skills but also the self-confidence and sense of connection that is vital to faculty success.

Literature Review

Despite recurrent calls to better prepare faculty for the rigors of teaching undergraduates, many university instructors continue to enter the profession with little formal training in how to be effective in the classroom. While initiatives like the Preparing the Future Faculty Program have begun addressing this long-standing problem, too often the prevailing assumption remains that the expertise acquired through years of rigorous disciplinary training is sufficient to be a successful teacher (Gaff, Pruitt-Logan, Sims & Denecke, 2003). Indeed, many students leave graduate school not only with very limited teaching experience as a GTA but also the message that research contributions are much more important for career advancement than instructing undergraduates. The relative lack of proper training for teaching is exacerbated by recent changes in the academic landscape—growing calls for assessment and accountability, increased pressure to obtain external funding, and demands for higher levels of research productivity—that today's faculty typically face in addition to their teaching responsibilities (Austin, 2002).

To address this problem and begin providing early career university teachers with the knowledge, skills, and support they need to achieve success, some educators have begun experimenting with various forms of group mentoring (McMurtie, 2014; Huizing, 2012; Gaia, Corts, Tatum, and Allen, 2003; Cox, 2004; Darwin & Palmer, 2009; Boyle & Boice, 1998). Whether aimed at GTAs or newly hired faculty, these innovative mentoring programs attempt to foster a sense of community among participants, provide a venue for sharing successes and frustrations in the classroom, and explore techniques and approaches that promote effective teaching and learning.

Goals and Objectives

This practice session will highlight the experiences of a mentoring group for teaching that we organized nine and one-half years ago, a learning community consisting of early-career faculty and a small number of more experienced teachers (not unlike the experiment outlined in Cox, 2004). With ongoing financial support from the Center for Excellence in Undergraduate Teaching and the Center for Instructional Development and Educational Research, our group has met bi-weekly to explore together how effective teaching and learning takes place, to provide a safe place to discuss what's going on in our classrooms, and to offer emotional and intellectual support for each other.

Our learning community not only promotes the acquisition of useful teaching skills but also a sense of connection. Numerous studies have shown that one of the best predictors of whether a newly hired faculty member thrives at a new university (and wants to remain there) is the sense of community fostered within that institution (Rice, Sorcinelli, and Austin, 2000; Boice, 1993). Our group forges a sense of community around the issue of quality teaching, active learning, and student engagement. It provides a venue for participants to meet together regularly with like-minded colleagues who are also committed to the teaching and learning enterprise, but to do so in an informal, supportive environment in which no one feels that she or he is being judged or evaluated. We believe our experiment has not only been a successful in promoting the professional growth of and sense of self-satisfaction among our faculty but also that it is worthy of emulation.

Participants in this practice session will gain a sense of the factors that contribute to a thriving teaching mentoring group, the many useful functions such a group can serve, and some of the challenges and pitfalls associated with launching and sustaining such a group. Our hope is that those who attend our session will not only be convinced of the value of teaching mentoring groups but also will be inspired to undertake similar experiments within their own institutional context.

Description of Practice to Be Modeled

We will model our session on the bi-weekly discussions that we have as a group. This format will not only provide those who attend with a sense of how members of our mentoring group interact with one another, but also allow ample opportunity for audience participation, feedback, and questions.

Discussion

Our positive experience with group mentoring of early career faculty over the past nine and one-half years is consistent with that of others described in the literature. Group mentoring builds confidence, skills, and a sense of community, all of which are essential for success in the classroom. We believe that wider adoption of this practice would benefit not only university teachers but also the students they have been called to serve.

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Conversation: Crossing Boundaries Between Formal and Informal E-learning

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Abstract: With the advent of Web 2.0, the internet became an environment where even those with limited technical knowledge could share information, ideas, and more. Learning opportunities via the internet range from formal credentialed courses offered by ivy-league universities, to informal how-to videos posted by individuals. This conversation session provides participants an opportunity to consider tensions between formal and informal e-learning within higher education teaching and learning. The conversation will begin with foundational information designed to offer an interpretation of tensions in e-learning. Participants will then explore formal and informal e-learning within their own disciplines, programs, and courses.

Description of Topic to be Discussed

The phenomenon at the centre of this proposed conversation session is the tension between formal and informal e-learning. Wright, Short, and Parchoma (2013) identify three learning contexts: informal learning (typically found in non-institutional settings), non-formal learning (typically found in workplace settings), and formal learning (typically found in regulated institutions). Learning online via Web 2.0 social media can be identified as having "informal, incidental, learner-initiated activities…delineated by absence of formal assessment" (Wright, Short, & Parchoma, 2013, p. 54). Institutional driven e-learning (typically hosted within a learning management system or LMS) tends towards formality "where learning is aligned to planned outcomes from an accredited curriculum and organized by a teacher who has a hierarchical relationship with students" (p. 54). Bunderup Dohn (2009) proposes adopting pedagogical strategies which transcend discrepancies in e-learning (and/or Web 2.0) environments in order to alleviate tensions that may arrive between formal and informal e-learning. These strategies would involve "boundary practice" (p.354) an approach to learning which "borders on and to some extent incorporates the practices of" both working life and educational settings" (p. 354).

Literature Review

The tension between formal and informal learning in e-learning can be envisioned as a form of boundary crossing, a notion from third generation activity theory (Engeström, 2009). Boundary crossing includes the interaction of two (minimally) interacting activity systems thereby extending the "complex interrelations between the individual subject and his or her community" (p. 55). In Figure 1, boundary crossing occurs when members of Activity Systems A and B engage in a shared object, sense-making (Engestrom, p. 55), which results in a new, potentially shared or jointly constructed approach to solving a problem.

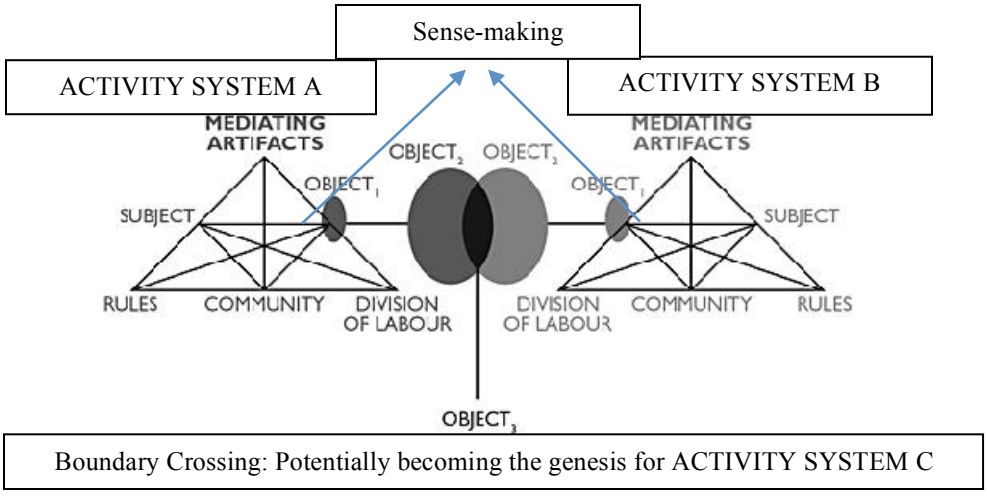

Figure 1. Two interacting activity systems for third generation activity theory. Adapted from "Expansive Learning: Towards an Activity Theoretical conceptualization," by Y. Engeström, 2009, in *Contemporary Theories of Learning*, K. Illeris (Ed.), p. 56, copyright 2009 by Routledge Press.

Table 1 provides an exploration of formal and informal e-learning as activity systems:

Table 1
Two interacting activity systems

ACTIVITY SYSTEM A		ACTIVITY SYSTEM B
Web 2.0	Mediating Artifacts	Learning management systems (LMS)
Learners	Subjects	Learners
Engaging with Web 2.0 for the primarily for purpose sense-making through informal learning	Objects 1 & 2	Engaging in an LMS based class primarily for the purpose of sense-making through formal learning
Online social norms; netiquette	Rules	HE policies and directives
Social media based e-learning	Community	Traditional HE learning
Participant driven	Division of Labour	Teacher driven
Object 3		
Sense-making through combining aspects of informal and formal learning, and potentially becoming Activity System C.		

NOTE: Adapted from "Expansive Learning: Towards an Activity Theoretical conceptualization" by Y. Engeström, 2009, in *Contemporary Theories of Learning*, K. Illeris (Ed.), p. 56, copyright 2009 by Routledge Press

In Activity System A (Table 1), items such as Web 2.0 tools may act as mediating artefacts. The subjects are learners, who in order to make sense of a shared problem (topic or issue), engage in informal learning activities, which are governed by online social media norms, including netiquette. The community within Activity System A is constituted of others with shared interests in the topic or issue, who wish to engage in a form of e-learning to advance their understanding. Labour (tasks involved to achieve this end) is divided among participants. In Activity System B, again the subjects are learners primarily engaged in more formal learning. Rules of governance are guided by higher education (HE) policies and directives. As members of a traditional HE e-learning community, here the division of labour (allocation of tasks) is primarily teacher-driven. The context for the proposed conversation session is sense-making through collaborative formal and informal learning, Object 3.

Goals and Objectives

The aim of the proposed conversation session is to generate ideas and approaches related to mitigating the tensions between informal and formal learning by adopting Bunderup Dohn's (2009) recommendation of a pedagogically informed approach to e-learning design.

Facilitation Techniques

The conversation would take an inquiry-based approach in order to elicit open discussion of the diverse perspectives and experiences of all participants. Guiding questions would range from gleaning basic contextual information to eliciting reflection upon tensions within formal and informal e-learning within these contexts. Practical applications this conversation may have for the participants will also be considered.

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But Seriously: A Conversation on the Promise and Perils of Humor in the Classroom

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Abstract: Recent research has demonstrated that the use of humor in the classroom can be an effective means of engaging students, building a sense of community, dealing with classroom management issues and better accomplishing learning goals. However, if employed without consideration, humor can actually hinder learning goals by being distracting, exclusionary or even hurtful. This conversation will explore participants' experiences with humor in the classroom, both as teachers and students, and link those experiences to scholarly literature. While teaching someone to "be funny" is beyond the purview of this session, and may be impossible, we can still identify shared themes in our diverse experiences that can help participants better employ humor in their own classrooms.

Literature Review

It has been over four decades since Gilliland and Mauritsen (1971) analogized teachers as cooks and humor as their spice; however, the appropriate use of humor remains a timely pedagogical topic receiving widespread attention, particularly in the present era of high-stakes testing. Torok, McMorris & Lin (2004) examine how, appropriately used, humor "has the potential to humanize, illustrate, defuse, encourage, reduce anxiety, and keep people thinking, even given such [high-stakes testing] pressures"; conversely, sarcasm is characterized as "brutal" and a "knifing form of wit" (Shade, 1996) with the power to demoralize, humiliate, cause resentment and wound students' self-esteem. Sidelinger (2014) suggests relevant humor can stimulate student learning and possesses a positive impact on instructor-student(s) relationships. Carver (2013) depicts humor, spontaneity, and increased student risk-taking as intertwined with enhancing a learning climate, improving satisfaction and increasing both teacher and student enjoyment. At the same time Carver warns not to view humor as tied to particular learning goals but, instead, as contributing to the overall learning climate. This conversation session explores the promise and perils of relevant research and practice around humor in the classroom.

Goals and Objectives

This conversation will employ constructivist pedagogy in order to bridge existing literature concerning the use of humor in the classroom with participants' experiences as teachers and as students. Drawing on participants' narratives, the group will identify potentials of humor in the classroom as well as pitfalls. Perhaps some of the identified promises and pitfalls will echo the literature or perhaps new facets of the use of humor will be identified. Once potential upsides and downsides of humor in the classroom have been identified, participants will discuss practices that allow effective teachers to better reap the rewards of humor and avoid common traps. At the conclusion of the session participants should have:

- Become familiar with some of the existing literature concerning humor as a pedagogical tool and object of study in the social sciences
- As a group, identified some of the potential benefits of incorporating humor in the classroom
- As a group, identified some of the potential downsides of incorporating humor in the classroom
- Within the group, shared effective practices or conceptions of humor in the classroom
- Engaged in reflection on their own use of humor and leave with an enriched sense of its potential as a pedagogical tool

Description of Topic to be Discussed

The use of humor in the classroom has been demonstrated to increase student attention (Wanzer & Frymer, 1999), reduce tensions both social (Carver, 2013) and physical (Alvarez & Bermejo, 2011) and this contributes to a positive learning atmosphere that increases teacher effectiveness. It is therefore not surprising that teachers that use humor effectively receive better course evaluations (Bryant et. al. 1980). Humor can wake up a class, keep attention focused and perhaps increase regular attendance (Wanzer et. al., 2006). Given the strength of this pedagogical tool, the dearth of literature on best practices is perhaps surprising. Humor, though, is a double-edged sword. Unartfully employed humor can be offensive, off-putting, or at the least, a distraction from the actual learning goals of a class

or course (Ibid.). As sociologist Gary Fine (1983) points out, humor is a complex cultural phenomenon that is embedded in patterns of social stratification. It can be used to speak difficult truths to power (Walker, 1988) or as a rhetorical tool of subjugation (Rossing, 2012). In plain terms, humor can be used to make social interactions, including the classroom, more domineering, awkward and unpleasant or more equal, liberated and fun. Obviously, any educational benefits accrue to the latter version. Despite the difficulties in addressing a topic made difficult by its cultural and social specificity, its potential as a pedagogical tool and ubiquity as a lived experience invite scholarly attention to its role in the learning process.

Facilitation Techniques

The conversation session will open with introductions from the moderators and then a quick icebreaker and participant introductions. The moderators will then briefly familiarize the participants with existing literature on humor in the classroom and link that literature to their own experiences as teachers and students. Participants will first be prompted to give an example of an effective use of humor and then an ineffective one. The moderators will facilitate the group's identification of the potential for humor in the classroom as well as pitfalls. Discussion prompts will include:

- "What positive learning outcomes have you seen accomplished with humor in the classroom?"
- "Have you seen humor detract from a classroom environment or learning experience?"

With an emphasis on what *to* do rather than what *not* to do, the moderators will encourage the group to find common themes in their positive experiences. When appropriate, the moderators will link the examples being discussed to existing studies concerning humor in the classroom. Next the group will consider strategies and practices that model effective use of humor. In other words, having first identified the benefits of effective use of humor, the group will consider how they or teachers they have observed achieved those benefits. Again, when appropriate the moderators will make links to existing literature. The session will close with a summation of themes and best practices developed by the group.

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Friday

February 6, 2015

Session 13

10:10-11:00 AM

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

Supporting Student Success in Hybrid Courses
Through Successful Completion of Readiness Activities

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

Abstract: Students are often eager to take hybrid and online courses, however they may not be prepared for the technology and web based expectations for the course. One solution may be to require students to complete specific Readiness Activities in order to evaluate their comfort level and competency using *computer hardware, specific software and programs.* The assessments provide information to the instructor, but also informs the student of their own abilities and skills they need to develop in order to successfully take part in the required activities. However, do these Readiness Activities actually prepare the student for things to come? We will present examples of expected Readiness Activities for our hybrid and online courses, as well as offer suggestions for RAA that may address expectations of your course. We will discuss our findings of the anticipated student understanding and preparedness for the online and face to face components of our courses.

Background

It is very enticing to want to take advantage of the flexibility afforded by hybrid courses. Students often can use such a course to fulfill requirements, and allow for them to work. Non-traditional students can fulfill their work and family commitments and squeeze in a class. Teachers can fulfill their commitments during typical work/family hours, and work on their class at another time of day. It's so "convenient"! Little constraints of time, travel, location, and even clothing. Primarily computer based assignment completion sounds so appealing. The whole idea of convenience is a pretty important goal for most people. However online learning can quickly become more than a student can handle.

Literature Review

After taking, and teaching, online courses, it became clear that having a computer and basic typing skills do not begin to make known the expectations for the online environment of any course. Xu and Jaggers (2011, p 20) comment on the fact that the online coursework may be difficult for some students to complete, therefore inhibiting their academic progress. We as instructors want to uncover any areas that may prove to be challenging for the student, otherwise it may take valuable days or weeks to resolve issues since there are fewer, or no face to face meetings. If a student is feeling lost and isolated there is little chance that they will have a successful experience in the online component of a hybrid or online course. Jaggers (2011 p 14) continues by saying that the student may feel that there is a limited availability of online support services.

The real question deals what the instructor can do to support and guide the student in order to make the online learning environment a productive experience for them. It is especially important to minimize the frustration level for the first time online learner. Our belief is that by eliminating as much confusion as possible and informing the student of the tools and skills they will need to complete the course, they will feel less in the dark and more connected and confident in their abilities. Kaur & Abas (2004 p 4) completed a survey regarding e-readiness in their e-learning environments. Their study focused on the ability of their tutors and students e-learning pathways for the purpose of knowledge for their e-learning education Programs (2004, p. 2). E-readiness, as reported by Kaur & Abas (2004 p 2), is defined as the capacity to pursue opportunities facilitated by the use of e-resources such as the internet. Some of the skills for becoming self-directed learners are the ability to work alone, persistence in learning, reading ability, competence in using a computer, word-processing skills and the ability to develop a plan for completing work. The analyzed data of the questionnaire resulted in "learners and enablers surveyed are moderately ready for e-learning, and that there are individuals who may need to be acculturated into the e-learning system before they can be said to be at an advanced state of readiness for e-learning (2004 p 6).

Methodology

Students who were enrolled in an online or hybrid course had access to the course via a learning management system (LMS). In the initial contact with the student, before the course begins, the students are assigned readiness activities (RA) to prepare them for the various LMS applications and additional embedded applications that the

student might encounter during the duration of the course. These RA are located in a tab titled "Start Here" along with additional information that will make movement through the online portion of the course much easier. These RA may include, depending on the course, a welcome video, a how-to tutorial or instructional video. In company with the how-to tutorials, the students were asked to then complete an activity using their knowledge gained from those videos. Students were also asked to contact their instructor using the email feature of the LMS along with opening and sending attachments. Blog and discussion boards were used for the students to introduce themselves to their classmates, with their responses written, or the video recording software Kaltura Media or Windows Media Player. Lastly, students submitted documents using anti-plagiarism software and completed an online quiz asking about the items they have seen while completing the RA activities.

Results

For a hybrid course, the RA activities delivered on the LMS were Contact your Instructor and the Discussion Board. The embedded items into the LMS are the remaining three items. The results shown in Table 1 demonstrate that there is inconsistency in the overall completion of the RA activities along with the irregularities between the institution provided activities and the external embedded activities. The results are that 3 out of 12 contacted the instructor, 10 of 12 completed the discussion board, 6 of 12 complete the CLEAR Audio Dropbox and 3 complete the CLEAR Conversation. Lastly, 9 out of 12 complete the completion quiz. The results show that the students who did not complete the readiness activities were unprepared for the weekly required assignments. Students in Spanish Composition and Conversation who did not complete the readiness activities were unprepared for the weekly required assignments.

Students of another instructor were in 4 classes, over 2 terms. These were students in 2 hybrid courses, Orientation to Deafness and History of Deaf Heritage who were not given the option to complete Readiness Activities. In those courses, there was a drop/withdrawal rate of 27%. In 2 subsequent terms, the same hybrid courses were offered, with Readiness Activities assigned on the first day of the term, with completion expected on the third day. In those classes, there was a drop/withdrawal rate of 6%.

The average final grade for the courses before Readiness Activities were used was 79%. The average final grade for courses that included Readiness Activities was 87%. At the end of the term, students were encouraged to complete a perceptions of teaching and learning evaluation. Of the 74 students in pre Readiness Activities group, 10 students indicated that they were unprepared for the extensive use of online assignments, 3 of those students pointed out that they were not sure if they knew how to submit assignments through the Learning Management System and often sent an email to the instructor to assure that the assignment was received on time.

Discussion

It was valuable information for instructors to know which students had difficulty with the Readiness Activities. The instructor had the opportunity to take a proactive approach with those struggling students. It was also valuable for students to know what they specifically needed to know how to do it.

Hybrid and online courses require the instructor to set the students up for success. Providing absolute clarity of expectations only benefits the student, and therefore allows the instructor to offer the additional support that is necessary.

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Cultivating Technology and Pedagogical Strategies that Influence Students' Innovative Thinking Skills

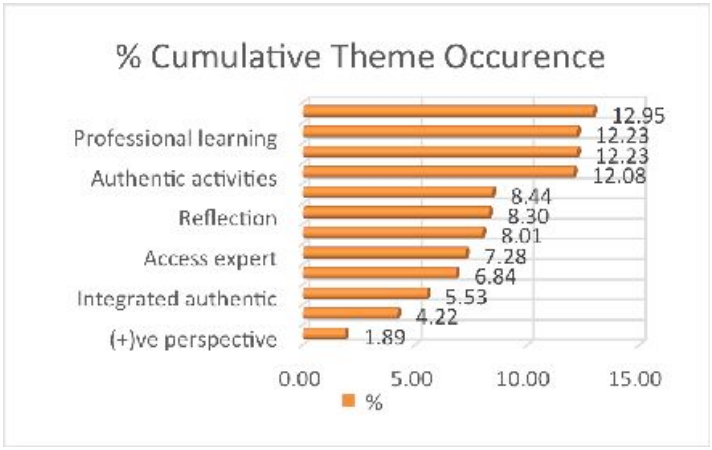
David Okoth, Vaishali Nandy, Julaine Fowlin, Catherine Amelink, & Glenda R. Scales
Virginia Tech

Abstract: Enhancing innovative thinking skills among engineering undergraduates is of critical importance to the national economy with nine in ten CEOs'and executives, agreeing that innovative thinking skills is essential for the continued success of their businesses and organizations (Hart Research Associates, 2013). In this paper, we report the efforts being made by undergraduate students to effectively use specific technologies that enable creative and innovative thinking skills development. The research and analysis of the data extracted from a focus group study fills a significant gap: that innovative thinking skills among undergraduates is a gradual process, as the students move from first year of engineering to final year of engineering that mirrors Kolb's model of learning style (Kolb, 1984). The findings of this study helps to understand and gauge how undergraduate students integrate classroom technologies with instructional strategies to develop innovative thinking skills.

Background

When students get into engineering classes; they are exposed to different teaching styles that expose them to learning content aimed at improving their psychomotor skills, metacognitive abilities, among other generic skills and abilities. The biggest concern for engineering professors has been setting up an environment that can enhance innovative thinking skills in the learning process. After instruction, students should re-enact or possess behavior that is clear evidence as the byproduct of learning. Student assessments and instructional evaluations are normally carried out in order to see behavioral pointers that indicate whether some of the pedagogical strategies are effectively achieving desired outcome. The College of Engineering in Virginia Tech has had a number of publications that looked into the use of technology in the classroom (Pokorski & Tront, 2013; Kothaneth, Robinson, & Amelink, 2012). The progression of inking in the classroom discourse is now being researched proactively. Inking in education has all the features traditional paper has and one poignant advantage, interactivity.

Figure 1. Cumulative percentage of theme occurrence throughout the focus groups.



Methods

This study is part of a larger Transforming Undergraduate Education in STEM (TUES) grant research project examining pedagogical strategies that engineering instructors use in teaching to facilitate the development of innovative thinking skills among engineering students. It has drawn considerable literature from past researches and theoretical discussions on instructional design, experiments, as well as longitudinal studies touching on how students learn with technology. There were three focus groups. First group, participants were drawn from a class that involved classroom technology. Second, participants were drawn from what would be considered a traditional classroom with no use of classroom technology tools. The last group, participants included a mix of both orientations. An hour long interview was conducted on separate days for each group. Themes, derived from ABETs EC2000 engineering criteria, are among the affordances identified to gauge the different approaches that different instructors took to foster innovative thinking skills.

Results

The research compounded the undergraduate's thoughts on whether they were leaning toward learning any kind of skill more so, innovative thinking skill. Word count for the operationalizing phrase of innovative thinking and technology revealed that FocusGrp1 used technology, tablet, and learning more than all the other groups. This is a clear indication that their professors' pedagogical approach involved more technology.
The students' cumulative negative perception about their class experiences was highest at 12.95% followed by 12.23% for both professional learning and authentic learning behavior. Other top ranking themes include authentic activities at 12.08%, multiple roles and perspective at 8.44%, reflection at 8.30%, coaching and scaffolding at 8.01%, access expert performance at 7.28%, authentic context at 6.84%, integrated authentic assessment at 5.53%, collaboration at 4.22%, and finally the positive perspective at 1.89%.

Discussion

While there is clear evidence of the differences in strategies used in teaching with the different focus groups, more data needs to be gathered to get a deeper understanding of the emerging themes. Doing so will also point to a most preferable strategy which undergraduate students in large classrooms perceive as the most effective integration of technology in their learning process. The perception, in retrospect seems to help them cultivate innovative thinking skills. There is need to involve more structure and tactics to cultivate the kind of lifelong learning skills for today's engineering student, there is indeed need for instructional design in large lecture classrooms. The desired goal is for the engineering student to improve their innovative thinking skills after an instructional delivery.

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ePortfolio: Introducing A Web-Based Tool for Accessing and Utilizing the Scholarly Evidence

Jessica R. Chittum and Jacquelyn McCarthy Woodyard, *Virginia Tech*
Lauren H. Bryant, *North Carolina State University*

Abstract: As ePortfolio becomes ubiquitous in higher education, access to empirical research on ePortfolio becomes imperative. During this session, we will explore a web-based tool (i.e., open-access website database) developed to support practitioners and researchers alike as they investigate and implement ePortfolio. In 2013, Bryant and Chittum found a lack of empirical evidence on ePortfolio published in peer-reviewed publications. Thus, we decided make the ePortfolio-based resources Bryant and Chittum (2013) identified accessible to others. Participants will have the opportunity to learn about the current landscape of ePortfolio literature (updated for 2014) and explore the web-based tool. We will discuss the usefulness of the website and request participants to suggest potential improvements per their needs. Overall, we seek to support practitioners and researchers as they identify and use scholarly literature when focusing on ePortfolio, thus practicing the science of teaching and learning.

Literature Review

ePortfolio use in higher education has dramatically increased over the past decade. Thus, as educators more and more utilize ePortfolio as an educational tool, and institutions and programs consequently devote resources and time to its use, it is important that practitioners have access to empirical research on the effectiveness of ePortfolio to inform their decision-making (Chittum & Bryant, 2014). Previous examination of the ePortfolio literature revealed that an accessible sample of ePortfolio-focused refereed publications fell into four categories (see Table 1; Bryant & Chittum, 2013a): (a) *empirical, affective*, including articles that presented data on students' affective responses to ePortfolio; (b) *empirical, outcomes*, including research that examined ePortfolio use and student outcomes (e.g., learning, motivation); (c) *descriptive*, including descriptions of how ePortfolio has been utilized by practitioners as well as papers that offered theoretical support for the tool; and (d) *technological*, including information on data and models on the structure, accessibility, and usability of ePortfolio platforms (Bryant & Chittum, 2013a; Chittum & Bryant, 2014).

Table 1
ePortfolio Research Distribution Based on Classification

Years	Article Type		*N*	% of Total Sample	% of Type (e.g., empirical)
1996-2012	Descriptive		50	42	–
	Empirical	Total Empirical	58	49	–
		Affective	40	34	69
		Outcomes	18	15	31
	Technological		10	9	
	Total		118	–	–

Note. From Bryant and Chittum (2013a, p. 191).

Within the *descriptive* category, strong theoretical support for utilizing ePortfolio was offered. These papers often cited potential for improved reflection, engagement, learning outcomes, and knowledge integration (e.g., Hartnell-Young, 2006; Heinrich, Bhattacharya, & Rayud, 2007; Peet et al., 2011). Although sound arguments, these papers are insufficient for justifying widespread ePortfolio use (Chittum & Bryant, 2014). Furthermore, empirical research of students' affective responses to ePortfolio are insufficient evidence, as some research suggests that students do not always prefer the instructional tools and pedagogical strategies that best support their learning (e.g., Steinberg, 1989).

Through previous research (Bryant & Chittum, 2013a), three important conclusions were reached: (a) the majority of ePortfolio-focused peer-review literature fit into the *descriptive* or *empirical, affective* categories; (b) although a dearth of empirical research on the impact of ePortfolio and student learning outcomes is available, few publications fell into the *empirical, outcomes* category (Bryant & Chittum, 2013a, 2013b; Chittum & Bryant, 2014); and (c) a great deal of those publications considered seminal works were difficult to find or locate in peer-reviewed venues (Bryant & Chittum, 2013a; Chittum & Bryant, 2014). Focusing on the latter, we have developed a web-based tool

(database) that enables researchers and practitioners to locate relevant ePortfolio findings that can help guide their decision-making.

Goals and Objectives

Following the session, the participants should have gained a working understanding of the current landscape of ePortfolio literature, the web-based tool, and the website's function. We will encourage the participants to become engaged in reflecting about the uses and potential of the web-based tool, and how it could inform their practice. Further, a goal is to obtain constructive feedback from the participants regarding the utility and function of the database. Overall, we seek to support practitioners and researchers as they identify and use scholarly literature when focusing on ePortfolio, thus practicing the science of teaching and learning.

Discussion and Description of the Practice

We previously found that there is a lack of empirically-validated research examining the effectiveness of ePortfolio as an educational tool (Bryant & Chittum, 2013a, 2013b; Chittum & Bryant, 2014). During several iterations of our search, we had particular difficulty in locating refereed and outcomes-driven publications, especially those authored by the leaders in the field (Chittum & Bryant, 2014). We posit that, as ePortfolio becomes ubiquitous, so too should empirical and peer-refereed research. Such research can then guide decision-making, planning, and implementation of ePortfolio, which is consistent with our institutions' goals in encouraging scholarship in teaching and learning.

The purpose of this website is twofold: first, to increase the accessibility of empirical, peer-reviewed evidence regarding ePortfolio's effectiveness; and second, to community-source database updates, thus giving researchers and practitioners a voice. The website includes (a) a search function that enables users to search by article classification (i.e., empirical, affective; empirical, outcomes; descriptive; and technological), author, year, publication, title, and keyword; (b) resources and information about ePortfolio (e.g., important links, general overview); and (c) an invitation to suggest peer-reviewed ePortfolio-focused refereed articles missing from the database. We will begin by presenting Bryant and Chittum's (2013a) findings and then discuss changes in the landscape of the literature since 2013. Then, the participants will have the opportunity to explore the web-based tool as we introduce and explore the main sections and uses. Participants in the session will have the opportunity to learn about and discuss the current state of ePortfolio research, actively explore the website, discuss the usefulness of the tool, and make suggestions to improve the website based on their needs. The session will be interactive, as we will engage the participants in first sharing what they know about ePortfolio, including their personal experiences, and then focusing on their wants and needs as we explore the web-based tool together.

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How to Get the Discussion You Want

Rosemary Logan, Larry Gallagher, *Northern Arizona University*

Abstract: Ever struggled to get conversations rolling in the classroom? This session will model an active pedagogical approach, "Send a Problem" while diving into some common discussion problems and solutions. What are your learning outcomes for the discussion? How does this match up with the type of dialogue you are after and your discussion approach? This activity utilizes Burbule's 4 Types of Dialogue (Discussion as: conversation, inquiry, debate, and instruction) and four active pedagogical approaches to framing discussions (jigsaw, pair-share, debate, fishbowl).

Goals and Objectives

The learning objectives for this session include modeling the active pedagogical strategy of "send a problem" while introducing participants to the following objectives:
Participants will be able to:

- Identify and method match discussion learning objectives, and types with active pedagogy discussion strategies
- Identify and structure the level or preparedness required for students in order to most effectively participate in a variety of discussion formats
- Identify and facilitate the manner in which they want their students to participate in the discussion
- Identify and facilitate the manner in which interactions will occur; establishing ground rules for engagement
- Set outcomes and expectations for what students should be able to do as a result of the discussion

Description

Research in higher education indicates that students learn better when they are engaged. "Simply put, the greater the student's involvement or engagement in academic work or in the academic experience of college, the greater his or her level of knowledge acquisition and general cognitive development" (Pascarella and Terenzini, 1991). This learning happens at the nexus of motivation and active learning (Barkley, 2010). Discussions are central to student engagement—their success or failure, for that matter, are pivotal in deciding the direction a class will take.

Discussion, the focus of this workshop, is a key component of collaborative learning, one of the "pedagogies of engagement" (Edgerton, 1997, p. 32). Discussion is a common challenge in the higher education classroom. Various educators and researchers have written about approaches to engaging students in classroom discussions (Nilsen, 2010; McKeachie, 2011; Brookfield and Preskill, 2005; Burbule, 2003). In addition to the need to identify the type of conversation you are after facilitating one must also consider an effective method match with tested and effective active pedagogical strategies for discussion such as jigsaw, pair-share, debate, and fishbowl. Combined with effective strategies that build a sense of classroom community, students are better able to participate actively and take risks.

Description of Practice to be Exemplified

This workshop on discussion exemplifies the active learning strategy "send a problem" while also delving deeper into the practice of facilitating discussions. The workshop flow is as follows:

- **Introduction**: Facilitator frames session and introduces active pedagogy strategy "send a problem"
- **Activity**: Each participant group is provided with a manila envelope and a scenario. The scenario describes common classroom challenge with discussions (four different scenarios; one per group). Groups discuss this challenge.
    - Groups open the manila envelope to find a list of Burbules four types of discussions, a list of four active pedagogy discussion options, and a discussion planning guide

    - Depending on the scenario each table receives participants will identify an appropriate learning outcome, type of dialogue, and active pedagogy discussion option. They will then work through what elements are important to consider when framing the discussion (preparedness, participation, interaction, and results) and what they expect of the students. Participants complete discussion planning guide
- **Activity**: Groups place their solutions into the envelope and pass the case to the next group. The next group reads the scenario and completes a new discussion planning form. Once completed the problem is returned to the originating group. Groups discuss how the other group solved their scenario and any changes they might make as a result
- **Shareout**: Groups read their case and some of the main points of their discussion/takeaways
- **Debrief**: Facilitator reviews the student engagement technique of "send a problem" and discusses the importance of discussions to learning, and the importance of outcome/method matching.

Discussion

Northern Arizona University is piloting its first series of year round trainings for its faculty new to NAU. This highly engaging and participatory activity on discussion was piloted at the first of the monthly training sessions with the new NAU faculty. It was very highly received by the faculty. Of the 30 evaluations that were returns (36 total participants) the breakdown response to this activity was as follows: Essential for me (14), Very useful (12), Somewhat useful (3), and Not useful (1). Evaluations also indicated that faculty particularly appreciated that we not only "talked" about best practices in the classroom during this workshop but that we also modeled this practices from beginning to end. One participant described, "I appreciated the modeling of best practices as it makes the content better conveyed. Thank you for doing this!"

Discussions were selected as a topic of the new faculty training based upon feedback that many instructors struggle to facilitate effective and participatory discussions in their classroom. It became apparent during the planning phases that it is not only critical to student learning that we can create spaces for active and engaging discussions but that we also learn how to actually design for discussions.

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I Wasn't Trained for This! Collaborative Teaching to Implement Student-centered Pedagogy

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Abstract: Modern post-secondary faculty are increasingly challenged to implement student-centered pedagogy in their classrooms. The lack of training to do this is a considerable hurdle that must be addressed. We implemented a coteaching model that emphasizes learning to teach in the praxis of teaching and, through the use of a "broker" of knowledge about reformed teaching practices and education research, redesigned a significant portion of our course. Participants in this session will learn about our experiences with this novel model for collaborative teaching through the reporting of findings of an ethnographic action research study. The background portion of the session will be followed by a reflection activity that will help instructors identify personal goals for incorporating student-centered techniques in their classes and what type of collaborators can help them reach these goals. Finally, the group will engage in a strategy session to develop ideas for garnering institutional resources to support these types of collaborations.

Literature Review

Team teaching is increasingly common at the post-secondary level and the purpose of these collaborations is typically related to student learning outcomes (e.g. Wenger & Hornyak, 1999). In contrast, the coteaching model, where an experienced teacher and a novice teacher plan for instruction, teach, and debrief lessons together, is focused primarily on the development of teaching ability (Roth, Tobin, Zimmermann, Bryant, & Davis, 2002). Roth (2001) explains, "coteaching allows teachers to experience the classroom at the elbows of another practitioner" (p. 15), thus learning occurs in praxis. In higher education, opportunities for this type of coteaching are rare and experienced practitioners may not have adequate training in implementing reformed (student-centered, constructivist) teaching practices. Bouwma-Gearhart, Perry & Prestly (2014) examined successful collaborations in postsecondary STEM (science, technology, engineering and math) education improvement projects and found that these teams had members that could serve as "brokers of education research and theory" (p. 43). We implemented a coteaching model for our course where one member of the team played the role of a "broker" of knowledge about reformed teaching practices for the rest of the team.

Goals and Objectives

The primary goal of this practice session is to share our experience with others and motivate them to seek interdisciplinary collaborations for improving instruction on their own campuses. After engaging in this session, participants will be able to:

1. Describe successes and challenges of collaboratively developing and implementing student-centered teaching from multiple perspectives within the higher education context
2. Describe different roles in a collaborative teaching team and identify benefits of these collaborations

Description of Practice

We undertook the redesign of a significant portion of our course in summer of 2014 with the goal of incorporating student-centered pedagogy in the lecture portion of the course. This change was precipitated by: 1) a new lead instructor with an expressed interest in learning non-lecture based strategies, 2) an existing member of the teaching team with experience in teacher education and implementing student-centered pedagogy, and 3) the position of the course within an interdisciplinary minor that employs an innovative model for collaborative teaching within all courses. Additionally, our team includes a faculty member with significant prior experience with teaching the course and a graduate teaching assistant with prior teaching experience and subject matter expertise. These changes are currently being implemented (fall semester 2014).

Concurrent with the design and implementation of the new classroom activities, we are examining our practice by conducting an ethnographic action research study. Data sources include: fieldnotes and in-process memos, teaching reflections, artifacts, and classroom observations of instructor and student engagement. Our team met seven times throughout the summer to plan for the fall semester and then weekly during the semester. The lead instructor

initiated these meetings and took responsibility for setting the agendas. Prompted by the education faculty member, the lead instructor set learning objectives for each class session and these were reviewed by the team periodically throughout the planning process. Typically, the teaching team worked together to develop an idea for a classroom activity, with the education faculty member suggesting specific student-centered strategies and helping the team to adapt the chosen strategy to the particular topic.

Preliminary analysis of data from summer planning sessions indicates that: the team has good rapport, suggestions for student-centered teaching made by the education faculty member are welcomed and often enacted, the lead instructor values the structure of having team planning meetings to "keep her on track," historical knowledge of the course is useful in planning, and the education faculty member can provide input on planning student-centered activities with a low-level of subject-matter expertise. These findings inform our understanding of how interdisciplinary teams can function to improve post-secondary education.

In this session, we will describe our findings about the overall functioning of our team and its impact on student engagement. Additionally, each team member (lead instructor, collaborative faculty member, education faculty member, and graduate teaching assistant) will describe:

- Their role in the team, including how this role was determined/ negotiated and how they experienced it
- How they benefited from serving in this role
- Lessons learned from developing and implementing new student-centered learning activities

The background portion of the session will be followed by a reflection activity that will help instructors identify personal goals for incorporating student-centered techniques in their classes and what type of collaborators can help them reach these goals. Finally, the group will engage in a strategy session to develop ideas for garnering institutional resources to support these types of collaborations.

Discussion

Through no fault of their own, most faculty are underprepared to rise to the challenge of implementing student-centered teaching techniques. While professional development programs can help, we suggest that one semester of coteaching (Roth, 2001) with an education "broker" (Bouwma-Gearhart et al., 2014) is an impactful way to empower faculty to implement these practices. Teacher education faculty typically have experience in training new teachers to implement contemporary pedagogy in their respective disciplines, teach at the post-secondary level, and have research programs in teaching and learning. This makes them ideally situated to act as "brokers." The coteaching model also benefits them by allowing access to new educational environments in which to conduct research on teaching and learning.

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Leaders of the New School: Applying a Hip-Hop Studies Paradigm to the First Year Experience

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Abstract: Building on the popularity of hip-hop scholarship in the fields of education, sociology, and musicology, in this practice session we promote the strategic use of hip-hop studies in developing a first year college experience curriculum. We focus on three specific areas of transition to college life where we believe the insights gained through a hip-hop studies paradigm can help students better navigate the university, engage in self-directed learning, and succeed in their college experience. First, in acclimating to the diversity of a university community, we highlight hip-hop as one of the few arenas of popular culture that regularly engages with issues and representations of race/ethnicity, class, gender, and sexuality. Indeed, the sociological branch of hip-hop studies facilitates critical discussions that are both sophisticated and pedagogically accessible. Second, in adjusting to the demands of college level research, we argue that hip hop's foundational music practices mirror the academic process of generating new knowledge through investigation and literature review. In doing this, we reframe the craft of the hip-hop DJ/beat-maker as both a celebration of study-skills and an appreciation for building on past knowledge through primary documentation. Third, in developing an informed understandings of authorship and academic integrity, we engage debates surrounding hip-hop sampling as an entree to discussions regarding intellectual property, intertextuality, and plagiarism.

Literature Review

Over the past twenty years, hip-hop oriented curricula have gained currency within educational scholarship as the field recognizes the critical pedagogical work at the core of hip-hop performance and criticism. Analyses of the sophisticated rules and politics underlying hip-hop linguistic practices call for a re-valuing of Black vernacular traditions within the classroom (Campbell, 2005; Alim & Baugh, 2007). Hip hop has similarly been promoted as a means to innovative curriculum and pedagogical formations (Ibrahim, 2004; Weaver, Dimitriadis & Daspit, 2001). Whereas various educational researchers have forwarded the effectiveness of a hip-hop curriculum in teaching new media literacies and interrogating notions of knowledge production, composition, and plagiarism (Pennycook, 1996; Chandrasoma, Thompson & Pennycook, 2004), Sarah Wakefield (2006) is one of the few scholars to directly link hip-hop music production to the development of research skills. Emery Petchauer (2012) takes a comprehensive look at the role hip hop plays in college students' lives.

During this same period, the field of popular music studies has produced works exploring both the social importance of hip-hop culture and analyzing the musical structures and regulations surrounding hip-hop sampling. Among the most notable are sociological studies examining the politics of hip hop's racialized, gendered, and sexualized representations (Ogbar, 2008; Sharpley-Whiting, 2008), considering its role in shaping modes of identification (Harrison, 2009; Jeffries, 2010), and highlighting its innovation and continuity as a Black expressive tradition (Perry, 2004; Neff, 2009). In addition, scholars have examined hip-hop music practices within the framework of debates over intertextuality and intellectual property rights. These include analyses of the aesthetic sensibilities and structures through which hip-hop beat-makers turn consumption into production (Schloss, 2004; Williams 2013), as well as critical explorations of the politics of sampling (Schumacher, 1995; McLeod & DiCola, 2011). In applying a hip-hop studies paradigm to the first year college experience, we aim to capitalize on the vastly under-realized synergy between these strands of scholarship.

Goals and Objectives

As a result of this session participants will:

- understand how a hip-hop studies curriculum prepares first year college students to enter and build relationships within a diverse university community
- appreciate how hip hop's creative music practices model research steps of accessing, evaluating, and synthesizing existing scholarship
- recognize and continue to explore how hip hop can be used as an entree to discussions regarding authorship, intellectual property, intertextuality and academic ethics

- understand how hip-hop- and popular-culture-related curricula facilitate self-directed learning by engaging students with topics that are meaningful to their everyday lives.

Description of Practice

We showcase hip-hop studies potential to foster critical consciousnesses and nuanced understandings of difference—essential tools for navigating the diversity of a university—through a series of short presentations featuring illustrative examples and follow-up discussions. We outline the parallels between hip-hop music production and research through the framework of an exemplary undergraduate research project, which two of the presenters collaborated on (Harrison & Arthur, 2011). We explore understandings of authorship, intertextuality, and plagiarism by using hip-hop sensibilities and aesthetics to frame a series of discussions surrounding the nature of scholarship, notions of originality, ownership, and open-source culture. In each of these areas we reference past scholarship and, where possible, seek to connect works from different fields.

Discussion

Our practice session advances the idea of a broad hip-hop studies curriculum as an effective first year experience for incoming college students. We privilege the sociological value of hip-hop studies as a field which is attune to the limitations of binary understandings of difference. We insist that hip hop's modes of music production—namely, mining past recordings for material to re-introduce, re-imagine, and re-present—illustrate and celebrate effective research practices and priorities. Finally, we recognize hip hop's position at the forefront of a technologically savvy, youth-based remix culture; and use it to initiate conversations about authorship and academic integrity.

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Scholarly Teaching Academy: A Community Approach to Cultivating Teaching Excellence

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Abstract: The Scholarly Teaching Academy (STA) at Appalachian State University, a regional master's comprehensive university, blends a faculty learning community model of faculty development (FD) and a scholarly view of university teaching to support faculty committed to improving their pedagogy. Academy participants commit two years of intensive study to their own teaching and to the teaching of their colleagues in a faculty learning community. They will share their Teaching Excellence Plans (TEPs) and describe how their teaching practice is informed by participation in the STA. Examples of shared TEP components include the development of a scholarly teaching philosophy statement, redesigned courses and elements of courses, and data from student evaluations of teaching. Attendees will be invited to consider how a similar model might be enacted at their home institutions.

Scholars have documented a consistent theme of isolation among academics invested in scholarly teaching (Kreber, 2002, 2003; Shulman, 1993; Vogel, 2011; Weston & McAlpine, 2001). Graziano and Kahn (2013) elaborate on the "deep isolation" experienced by some faculty as a result of "heavy teaching loads and publishing demands," which can limit the likelihood of participating in FD. Too often, FD sessions provide short-term technical solutions (e.g., clarifying a syllabus, integrating mobile devices in class, fostering student participation), but do not offer sustained opportunities to examine and reflect on their "individual beliefs, experiences, and research regarding learning" (Layne, Froyd, Morgan, Kenimer, 2002).

The STA is designed to provide a sustained FD opportunity for small cohorts of faculty interested in pursuing teaching excellence through a scholarly teaching lens. For decades, scholars have heralded the importance of* sustained *FD (Camblin & Steger, 2000; Feldman, 1998; Graziano & Kahn, 2013; Hageseth & Atkins, 1988; Hubbard & Atkins, 1995; Hynes, 1984; Layne, et al., 2002). The benefits of sustained FD include increased student learning and satisfaction (Grubb & Associates, 1999), improved faculty performance as scholars, advisors, academic leaders, and contributors to institutional decisions (Camblin & Steger, 2000), increased faculty well-being and institutional quality of life, including opportunities for growth and career rejuvenation (Hageseth & Atkins, 1988; Hubbard & Atkins, 1995).

The STA marks a significant shift in FD at our Institution, consistent with our Strategic Plan, "Envisioning a Just and Sustainable Future." The Plan states, in part, "We bring people together in inspiring ways" and "Through engaged scholarship, we balance critical, creative and global thinking in a living laboratory, transforming theory into practice." A Learning Community (LC) is "an intentionally developed community that exists to promote and maximize the individual and shared learning of its members" with "ongoing interaction, interplay, and collaboration among the community's members as they strive for specified common learning goals" (Lenning, Hill, Saunders, Solan, & Stokes, 2013, p. 7). The STA is a faculty learning community (FLC) focused on Scholarly Teaching. The effectiveness of FLCs derives from the combination of the multiple perspectives provided by faculty across disciplines, a shared process, a safe space to support risk-taking, and the development of mentoring relationships (Richlin & Cox, 2004). Successful FLCs result in enhanced, deepened learning; pedagogical innovations; and supportive; ongoing relationships (Gannon-Leary & Fontainha, 2007).

Scholarly teachers are those who consult the literature to inform their practice and select and apply information to guide their teaching (Richlin & Cox, 2004). They conduct systematic observations, analyze outcomes, and invite peer review of their teaching. Allen and Field (2005) state that scholarly teaching is grounded in practice wisdom and developed through reflection on experience and on published research. Martin (2007) indicates that evidences of scholarly teaching include course development, course (re)design, observations of teaching, special teaching projects, teaching portfolios, samples of student work, and student and peer evaluations.

Goals and Objectives for the Session

(What should the participants know or be able to do after the session?)

- Articulate a rationale for scholarly-teaching-focused faculty communities.
- Describe strategies for cultivating collaboration and teaching excellence among faculty learning communities.
- Describe examples of results of a sample FLC focused on scholarly teaching.
- Identify potential collaborators for a Scholarly Teaching Academy on their respective campuses.

Description of the Practice to Be Modeled

- Providing a framework for developing a faculty learning community focused on Scholarly Teaching.
- Providing sample evidences of a Scholarly Teaching Academy faculty development initiative.
- Sharing examples of processes and outcomes of individual and collective work in our Academy.
- Brainstorming with attendees strategies for developing and sustaining Scholarly Teaching groups.

Discussion

The STA represents a critical transition in FD at our university. Over time, a critical mass of Academy alumni will influence programs and departments across campus. Other universities such as the University of Cincinnati have documented outstanding results from their long-term investment in FD. When combined or integrated with the overall university's strategic vision the "multiplier effect is astounding" (Camblin & Steger, 2000, p. 16). ASU's new strategic vision incorporates sustainability and the Academy's mission of enhancing faculty teaching and well-being. As we build a critical mass of knowledgeable, committed, scholarly teachers on our campus, we envision that those individuals will feel more inspired and that their energy and knowledge will propagate additional pockets of interest and inspiration in departments and classrooms around our campus and beyond.

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Effectiveness of Hand Made Models and Demonstrations in Anatomy Instruction: Should I Model or Not?

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Abstract: First year medical students arrive with a wide range of anatomic knowledge; most, however, are unfamiliar with Anatomy. In cadavers, it is difficult for the students to conceptualize anatomical features and structures which are not easily visualized or are understandable. To better describe such hard to envision features, we created three dimensional visualizations using large scale handmade models, made of readily available materials, and utilized them within the context of fifty minute lectures to clarify difficult anatomical concepts. The use of such models and their demonstrations helped 75-88% students conceptualize and better understand complex, not easy to grasp anatomical structures. Also, lecture attendance improved and students had a greater degree of satisfaction as echoed by their reviews. In this practice session the participants will learn how handmade large scale models and practical demonstrations can be used to engage students and lead to better understanding and conceptualization of complex anatomical structures and features. The participants will view various handmade models, they will discuss ways to incorporate models into their pedagogy, practice the steps for creating such models, practice delivery time management and learn skills to improve student comprehension, achievement and success in their lectures and laboratory sessions.

Literature Review

Lengthy didactic lectures without student engagement or participation no longer work. According to Robertson, Yun, and Murray, (2009) innovation is essential, methods other than traditional methods can improve the quality of teaching and learning in higher education, (Deignan, 2009, Gomleksiz, 2007, Pedro, 2005). Innovations necessitate investing time in learning and require more than mere facilitating an increase in knowledge in students (Van der Zee and de Jong, 2009). Only teachers, who get excited when their students succeed, are the ones who care enough to search for innovative ways to make up for the deficiencies of traditional teaching methods, (Wang, 2010). Innovations require plenty of active learning, non-traditional teaching strategies that will not sacrifice academic standards and simultaneously will result in enhanced student comprehension, achievement and success (Cianca and Lampe, 2010).

Goals and Objectives for the Practice Session

Upon completion and as a result of this session, participants will be able to:

- Identify teaching methods of the past that no longer work
- Observe demonstrations involving handmade models
- Visualize the use of handmade models, strategies and participant involvement that can immediately lead to clear understanding of complex anatomical structures and features.
- Acquire the ability to construct individualized models and demonstrations of their own volition
- Attain skills to improve student comprehension, achievement and success in their lectures and laboratory sessions.

Description of the Practice to be Modeled

This presentation addresses the issue of how to make the student, especially those with little or no prior anatomical knowledge, grasp and understand complex anatomical, structures, features and configurations within the context of a laboratory session or a fifty minute lecture. Using handmade economical models, I will physically demonstrate in a three dimensional manner the anatomical configuration of structures and features. I will then analyze, via a short question and answer session, the depth of understanding gained by the participants, especially those with little or no background anatomy knowledge. Then I will walk the participants through the steps and core essentials of how to utilize models and demonstrations to not only engage the students but to facilitate their instantaneous learning and grasp of difficult to visualize anatomical structure and features. Thus they will observe demonstrations of strategies that build engagement, instant and clear comprehension and lifelong remembrance. Participants will be encouraged to actively take part in my demonstrations using handmade models.

Discussion

As an educator of anatomical sciences, I have often wondered, while delivering content in a traditional, didactic approach, the degree to which students, especially first year students, are fathoming and learning the content being delivered. I have attended lectures by Anatomy peers and have been in student's seat. Slide after slide of power points has come across to me as another method of handing out study guides, especially when it involved difficult, hard to visualize, complex anatomical features, structures and their configuration. As the realization that traditional approaches were contributing minimally to student learning sank in, I decided to modify my own delivery of content and teachings to facilitate maximal student learning. Difficult concepts, such as configuration of pleura and thoracic structures, peritoneum and abdominopelvic structures were demonstrated, using transparent plastic sheets and sleeves; cardboard boxes; plastic bottles, condoms and balloon models. Students actively participated in these demonstrations. At the end of the lecture the students were surveyed on effectiveness of the demonstration using an audience response system. Demonstrations using inexpensive, easily reproducible models can be applied in any classroom setting; however, careful planning and rehearsal must precede their implementation since such demonstrations consume teaching time. Demonstrations, with active student role playing, of difficult concepts using models in a lecture greatly helped 75-88% of the students to conceptualize and to understand the arrangement of complex, not easy to grasp anatomic structures/features. Also, lecture attendance improved and students had a greater degree of satisfaction as seen in student reviews of the lectures, which revealed that such innovative demonstrations and the use of models were considered by the students an educative, entertaining, and meaningful experience. As one student commented, "We will never forget how, in your demonstration, students X, Y and Z were made to depict pelvic structures and how they modeled the configuration of the peritoneum over and around these structures. I feel like I have learned something for life and something worth emulating."

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Connected Learning, Connected Teaching: A Conversation About "Fit" Between Learning Outcomes and Pedagogy

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Abstract: Connected learning engages students in doing the work of their professional fields, from their first toe-in-the water experience through their internship and capstone work. In the process, students integrate classroom learning with professional experience to make meaning of both components. Our college recently launched a new undergraduate core curriculum that embeds our connected learning philosophy in college-wide student learning outcomes and in both major and core courses. Its structure emphasizes skills that cross traditional departmental lines and processes that require students to draw on cumulative understanding rather than content found in a single course. Our new core features connected courses that first engage students in understanding and applying four knowledge perspectives characteristic of key disciplines and then lead them to select among those perspectives to investigate and propose solutions to a complex problem. The first courses are taught by discipline-based faculty, while the second are co-taught by faculty from different disciplines. We expect that this curriculum will challenge students, who may be more accustomed to checking off requirements than to building flexible approaches to learning in diverse environments. We know that it challenges faculty to redesign existing courses and create new ones organized around college-wide learning outcomes and professional expectations, as well as to interrogate pedagogy and infuse high-impact practices that can realize the potential of this interdisciplinary, integrative structure. Recognizing that many of our colleagues have begun similar change process, our conversation focuses on the intersection between learning outcomes and teaching strategies: connected learning supported by connected teaching. We will emphasize effective strategies for teaching and course design and effective supports for faculty as they become familiar with and apply those strategies.

Literature Review

Our conversation draws on research and thinking related to connected learning, core curriculum structure, high-impact teaching practices, and effective strategies for faculty development. We offer a very brief overview of pertinent sources that inform our approaches.

Our work with pedagogy and student learning is grounded in the College's philosophy of connected learning. With roots in women's ways of knowing (Belenky et al., 1997), it emphasizes relating activities, concepts, and skills found in the classroom to the ways in which they will be put into practice: contextualizing knowledge. From the base of connected learning, we've explored expectations for new college graduates. Recent studies consistently suggest that employers place a priority on skills that cross disciplinary lines and require integrative thinking: communication, collaboration, critical thinking, problem solving, ethical behavior (see for example AAC&U, 2007; Gaston, et al., 2010; Hart Research Associates, 2013). Infusing these complex skills across the curriculum calls for pedagogies that go beyond discrete content. Often called high-impact teaching practices, habits such as structuring challenging classes, setting high expectations, and integrating ideas, information, and experiences are strongly and consistently linked to students' ability to think critically and interact effectively in varied settings (Blaich & Wise, 2011; Kuh, 2008a, 2008b; Rutz, et al., 2012). To apply the research on expectations and practices, we draw on principles and strategies for high-impact course design and faculty development including understanding principles of teaching (Ambrose et al., 2010), backward course design (Wiggins & McTighe, 2005), and integrative design (Fink, 2013).

Goals and Objectives

Through the process of this conversation, participants will:

- Identify high-impact teaching practices that support high-value student learning outcomes;
- Select teaching practices that match their institutions' learning expectations;
- Identify strategies and resources for course (re)design and faculty support in adopting new pedagogies;
- Apply colleagues' experience to their own efforts to revise curriculum and pedagogy.

Description of Topic to be Discussed

Curriculum revision is in progress at many of our institutions, whether focused on core curriculum, competencies, effective use of online platforms and resources, or programming that responds to new professional fields. As we find ourselves increasingly immersed in curricular possibilities, it is critical to be intentional about how we implement them effectively. Recognizing that many of our colleagues have begun change process, our conversation focuses on connecting learning outcomes and teaching strategies through strategies for teaching, principles and resources for course design, and supports for faculty.

The facilitators have been closely involved in this process as members of faculty planning and implementation groups, as department chairs reviewing and revising programs of study, as faculty teaching core courses, and as leaders of course design and pedagogical change initiatives. We will focus on two sets of courses that particularly challenge our pedagogy: knowledge perspectives, courses that emphasize practices characteristic of particular disciplines; and multidisciplinary courses that feature team-teaching and applying multiple perspectives to complex problems. We seek to discuss effective practices from similar initiatives, whether long-established or in progress, that can be applied in varied environments.

Facilitation Techniques

We bring varied and overlapping perspectives to the conversation, which will open with opportunities for participants to introduce their contexts, background, and interests in the topic. Discussants will describe the knowledge perspectives and multidisciplinary courses as opportunities for infusing high-impact teaching practices. Participants will suggest similar courses or initiatives from their campuses, along with specific teaching and professional development strategies they have found to be effective. The conversation will focus on generally applicable ideas, with a summary report-out for all participants.

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Raising our Expectations for International Involvement: A Conversation to Develop Strategies that Internationalize Teaching and Learning

A.L. (Tom) Hammett, Kurt Richter, and Johanna Circenti
Virginia Tech

Abstract: As our world gets increasingly getting smaller, the need to increase international content and experiences in our courses and the skills and confidence of our students to meet international challenges expand. Efforts to increase participation of faculty and students in international teaching and learning activities have taken many forms through overseas and domestic activities – many have not been successful. We seek to discuss and identify the constraints to and opportunities to increase international content and pedagogy. We will focus on examples from agriculture training and education (ATE) programs. The innovATE seeks to engage faculty in building ATE capacity overseas. This session will develop strategies to engage faculty in international education, both here and abroad.

Goals and Objectives

Identify the strategies and practices that best increase faculty international engagement
Compile methods to increase international opportunities for student learning
Examine challenges and barriers to internationalization of curriculum and pedagogies and how to best address these challenges

Description of the Topic

Many faculty are reluctant or unaware of opportunities to engage students in dialogue about international issues related to the course and that may be critical to their careers once they graduate. The key is to engage faculty and students and build their skills and experience respectively in teaching and learning using pedagogy that includes international examples.

Facilitation Techniques

Dr. Hammett will introduce the session with a short presentation to set the objectives for the session. We will use a short presentation to describe the topic, and set the agenda and objectives for the conversation. Dr. Richter will facilitate a short round table sharing of pedagogy. Then, small groups will be formed to facilitate discussion and maximize engagement. Dr. Hammett and Ms. Circenti will take notes, and prepare a summary of highlights and next steps, and feedback will be presented at the end of the conversation. The conversation will continue through our web-based knowledge sharing platform.

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Friday

February 6, 2015

Session 14

11:20-12:10 PM

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

Teaching to the Learning Preferences and Developmental Experiences of Student Veterans

Sharon L. M. Stone, *The College of William and Mary*

Abstract: Student veterans arrive at institutions of higher education with a unique mix of experiences and challenges (Black, Westwood, & Sorsdal, 2007; DiRamio & Jarvis, 2011). Due to high levels of responsibility and encounters with people much different from themselves, student veterans may also arrive demonstrating more complex ways of making meaning than students of the same age in the general student population (Stone, 2013, 2014). However, college educators still know very little about how military training and experiences affect the individual learning and development of veterans transitioning to higher education. Using a conceptual framework constructed from elements of self-evolution (Kegan, 1994), epistemological reflection (Baxter Magolda, 1992), and constructivist adult learning theories (Knowles, 1975, 1980; Mezirow, 1991), this interpretivist study examined how eight student veterans who were nearing or entering the developmental stage of self-authorship (Baxter Magolda & King, 2012; Kegan, 1994) experienced learning in the community college environment. Findings showed that the student veterans overwhelmingly preferred andragogical approaches, practical application, and active learning. They also expressed specific expectations of the instructor's role in the classroom as a leader and a coach. Understanding how student veterans view both the instructor and the learning process may help college educators improve retention and learning outcomes by tailoring their teaching behaviors to meet the needs of this growing student population.

Literature Review

Although the various branches of the military differ from one another in mission, history, and traditions, there nevertheless exist some underlying cultural values common to all five branches including primacy of the mission, regulation, discipline, and uniformity (Black et al., 2007; DiRamio & Jarvis, 2011; Volkin, 2007). Even without exposure to combat, basic training and the day-to-day military lifestyle "can be thought of as a one-way door to a different way of being in the world. Once you go in, you can never go back to the way you were before" (Black et al., 2007, p. 5). This affects how military recruits in the traditional college age range of 18 to 23 years are developing. In addition to military cultural values, the added responsibilities of leading people, managing resources, and learning to creatively solve complex interpersonal and operational problems propels many service members toward relying on their own internal foundations for making meaning (Stone, 2014). This is known as self-authorship (Kegan, 1994) and it encompasses epistemological, interpersonal, and intrapersonal development.

In a study that examined the relationship between development and learning in college students (Pizzolato, Hincklen, Brown, & Chaudhari, 2009), the authors posited that students' epistemological orientations have a direct impact on their expectations about what should happen in the college classroom. If they see knowledge as absolute and received (Baxter Magolda, 1992), they will tend to expect the instructor to be an expert not to be questioned; however, if they see knowledge as fluid and mutually constructed, they will expect to be included in the construction of that knowledge rather than simply lectured to (Pizzolato et al., 2009). And when there is a mismatch between what the students expect and what they experience, the resulting dissatisfaction may be manifested in lower grades, transfer, or leaving higher education altogether (Stone, 2013, 2014).

Methodology

The focus of this study was how student veterans entering or nearing the stage of self-authorship experienced learning in the college classroom. A survey that quantitatively measured self-authorship was administered to eligible Navy veterans enrolling in a community college. Those whose responses indicated appropriate progress toward self-authorship were interviewed according to the Wabash National Study of Liberal Arts Education first-year protocol to confirm their placement on the self-authorship continuum (Baxter Magolda & King, 2011). The final sample of four men and four women participated in a second interview that focused specifically on issues related to learning and the transition from active duty to college. Using a grounded theory method of constant comparisons, all interview transcripts were coded for emergent themes.

Results

The three major themes related to learning that emerged from the interviews included 1) preference for andragogical approaches such as hands-on learning and problem-solving; 2) teachers as leaders; and 3) instructor behaviors that created barriers to learning.

Discussion

The participants in this study preferred instructors whose teaching approaches validated the students as adult learners. This did not mean they universally preferred self-directed over teacher-directed instruction, a characteristic of adult learners noted by Knowles (1975). Ranae, Joe, and Abby all commented that some class content was more suited to teacher-directed approaches – especially if the material was particularly challenging for the participant. However, the themes of mutual respect, constructive criticism, and engaging discussion appeared in relation to every type of teaching approach. Above all, the participants did not like being "treated like kids," as Rusty said, or the feeling that Ranae described as being "in a nursery." These participants learned best in classrooms where the principles of andragogy held sway among the students as well as with the instructor.

The learning styles most preferred by the participants were hands-on learning and problem-solving, a preference that began in high school. In the Navy, they continued to learn through on-the-job training, problem-solving, and hands-on learning. The participants also indicated that they chose to begin their college experiences in the community college environment because they perceived it as a place where learners such as themselves could be successful.

The participants expected instructors to exhibit the same "command and respect" style the veterans had seen in military leaders. The instructor should have control of the classroom yet earn the respect of the students. Dictating to the class or demeaning students who asked questions were mentioned repeatedly as deterrents to learning. Participant comments in this study indicated that intentional faculty efforts toward beginning mentoring relationships with students would provide support for student veterans in their transition to the college environment.

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Assessing Learning to Improve Instruction: A Researcher-Practitioner Partnership

Hoori Santikian Kalamkarian, *Community College Research Center*
Laura Kalbaugh, *Wake Technical Community College*

Abstract: This session will describe a mixed method study of student learning in developmental English, reading and mathematics. This project, a partnership between faculty and administrators at two community colleges and university researchers, represents a unique attempt to measure the nature of student understandings in these disciplines for the purposes of refining instruction. The session will describe the assessment design process, preliminary findings, and examples of how assessment results will be used to inform curricular and pedagogical refinements at one college. In particular, presenters will highlight the use of student interviews as an assessment method and the qualitative information they generate about the nature of student understandings and misunderstandings.

Literature Review

The context for this project is developmental (i.e., remedial) education in community colleges. The phenomenon of low skills among college entrants has attracted increased attention in recent years but studies have tended to focus on macro-level variables such as grades, enrollment and persistence (e.g., Bailey, Jeong, & Cho, 2010; Scott-Clayton, Belfield, & Crosta, 2012; Southard & Clay, 2004) rather than the micro-level variables that could directly inform instruction (exceptions include MacArthur & Philippakos, 2013; Mongillo & Wilder, 2012; Stigler, Givvin & Thompson, 2011). Further, although colleges assess entering students for readiness, the tests used rarely provide the kinds of information that could inform instruction (Hughes & Scott-Clayton, 2011). Increasingly, colleges have implemented learning outcomes assessment, as documented in a 2013 survey of over 1,000 colleges and universities (Kuh, Jankowski, Ikenberry & Kinzie, 2014). Results showed that although institutions value assessment for the purpose of improving teaching and learning, regional and program accreditation remain the primary drivers for assessment, and national student surveys are the most common assessment tool (more common than portfolios, rubrics, and classroom assessments). This suggests the need for additional models of outcomes assessment that are focused on course or program outcomes and intended for refinement rather than accountability.

Methodology

The study is being conducted at two community colleges. Researchers and faculty collaborated on the design of a study that measures student proficiency on selected course learning outcomes and college readiness standards in remedial English, reading and mathematics. The project includes multiple assessment measures including researcher-designed assessments aligned with learning outcomes, standardized measures (e.g., Nelson Denny Reading Test), student self-efficacy ratings, teacher judgments, and student interviews. The measures were piloted with a small sample of students in April 2014 (n = 42). The full assessment will occur in November 2014 with an expected sample of 250 students in each discipline. Researchers administer the assessments to students outside of class time and provide a small incentive for participation, in the form of a retail gift card. Student interviews occur in a one-on-one setting with a small subset of test-takers. In the pilot, researchers conducted 12 interviews; 52 interviews are expected in the full administration.

Results

To demonstrate how features of this design generate findings that can be used to improve instruction, the session will highlight results from selected assessment measures. For example, Table 1 shows descriptives for the two text-based writing tasks used during the pilot English study. The first task asked students to read an article and write a summary. The second task asked students to read an article and write a persuasive essay. Tasks were scored across a number of dimensions including the use of academic words (Ac words), representation of main ideas, and overall assessment of quality. The scores identify students' difficulties supporting their opinions and identifying main ideas.

Table 1. Descriptives for Text-Based Persuasive Writing Task and Summarization Tasks

	Word Count		% Ac Words		% Main Ideas		Persuasive Elements					
							Position		Reasons		Elaborations	
Measure	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Persuasive	206.81	79.42	7.05	2.97	n/a	n/a	1	.00	3.64	1.39	9.57	5.56
Summary	236.30	75.30	7.84	2.43	35.42	.18	n/a	n/a	n/a	n/a	n/a	n/a

The session will also include insights on student learning from the oral interviews. For example, during the oral interviews from the math pilot, one student stated "I would break this down to extremely simple math. 10% of 100 is 10 t-shirts. There's 300 t-shirts, so 10 times 3 is 30. So 30% of 300 t-shirts is 90 shirts." This response illustrates how students draw on their intuitive number sense to evaluate the reasonableness of their answers and solve problems, even when they are uncertain of the correct procedure.

Discussion

These and other findings will provide context for a larger discussion on how departments and individual instructors can use information obtained through similar assessments to inform curricular and pedagogical decisions. Laura Kalbaugh, Dean of Academic Success and Transition Resources and community college math instructor at one of the project sites, will address how her college plans to use assessment results for refinement. The session will also include discussion of the assessment design process, including decisions about how to select which learning outcomes to assess, how to establish benchmarks for college readiness, and logistical considerations (i.e., the decision to hold the assessments outside of class time). These considerations will be highlighted to suggest how this study might be adapted to other contexts and led by practitioners.

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Encouraging Collaboration, Reflection, and Authentic Learning with WordPress

Carrie C. Bishop & Sherry A. Clouser, *University of Georgia*

Abstract: WordPress is a free, flexible platform that is being used by faculty and students in a variety of ways to address different pedagogical needs. In this session, the presenters will share examples of how faculty at the University of Georgia have configured WordPress sites to help their students accomplish course goals. Assignments discussed will include a basic class blog, a highly-structured class blog, collaborative group pages, live discussion, and ePortfolio. Participants will have the opportunity to develop ideas for using WordPress assignments in their classes.

Literature Review

Since the late 1990's, blogging has been a powerful method of sharing ideas, opinions, and resources (Downes, 2004). In education, blogs facilitate social constructivist pedagogies by encouraging student contributions, peer review, and commenting (Vygotsky, 1978; EDUCAUSE Learning Initiative, 2005). These activities contribute to students' sense of community and connections to peers (Pursel & Xie, 2014). Blogs also allow for authentic writing experiences, where content can be shared with student peers or broader audiences (Penna, 2011). There are mixed results regarding how structured blog assignments should be (Cameron, 2012), however clear instructions and expectations are helpful regardless of structure (Su & Beaumont, 2010).

Goals and Objectives

During this session, participants will:

1. Identify multiple features of WordPress, including individual and group static pages, individual and group blog pages, and near-synchronous and asynchronous posting;
2. Review sample WordPress assignments in several disciplines;
3. Develop ideas for encouraging collaboration, reflection and authentic learning by using WordPress in their own courses; and
4. Learn how to get their own WordPress site.

Description of Practice

In this session, the presenters will share five WordPress assignment examples and facilitate discussion of the components of each one.

Basic Blog: In this example, a graduate-level Health Promotions course, there is one blog for the entire class, and students share and reflect on their experiences related to the course. This is a low-stakes assignment where both posting and commenting are optional.

Structured Class Blog: In this example, for an upper-level English literature course, there is one blog for the entire class. Students are required to post and comment on different classmates' posts. The instructor also comments. Students are provided with a rubric and a detailed description of what constitutes an exemplary blog post and comment.

Group Website: In this example, a graduate level Health Promotions course, there is one site for the entire course. Students are divided into groups, and each group chooses a topic for the assignment. The instructor provides a template site for each group, and the students collaborate to complete the template for their topic. The final product is an authentic artifact that could be used in the field of Health Promotions.

Live Discussion: In this example, an undergraduate Journalism course, there is one site for the entire class. Students are divided into discussion groups and each group is given a discussion page on the site. At scheduled times during the semester, the students log onto the site and have a live, online discussion. For each discussion, the instructor designates a group discussion leader, and sends the discussion questions to the leaders prior to the discussion day.

The discussion leaders help monitor the discussions and ensure that productive and relevant discussion is occurring. Students are assessed an absence if they do not participate.

ePortfolios: In this example, a graduate course in Course Design, each student is given their own WordPress site to use as their portfolio for the course, based on a template designed by the instructor. The instructor also created a completed portfolio as an example, and students work through the semester individually to create content, collect resources, and post reflections.

Discussion Questions

1. What exactly is WordPress? A blog? A wiki? A content management system?
2. How structured does my WordPress assignment have to be? Should it be graded?
3. Do I have to use WordPress, or can I use other tools that are like WordPress?
4. Is a WordPress assignment right for my class?

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Can Guided Inquiry Be Done in an Online Setting?

Alison L. Barton, *East Tennessee State University*

Abstract: Guided inquiry is a teaching practice gaining popularity in the college setting, particularly within STEM classes, although it is a strategy that can be used across a broad spectrum of disciplines. Increasingly, courses are being offered online (asynchronously), which can present challenges for instructors seeking to help students become intellectually engaged, reaching deeper understandings of course concepts and the relationships among them. Guided inquiry may be one tool instructors can use to encourage students' deeper exploration of course material. The purpose of this practice session is to explore how guided inquiry can be applied in an online setting, with discussion regarding its benefits and challenges. Examples from social science classes will be provided.

Literature Review

Online courses are becoming increasingly common as university offerings to students (Maloney & Oakley, 2010); however, student engagement can be a challenge within an asynchronous setting (Robinson & Hullinger, 2008). Guided inquiry activities that follow the learning cycle model are becoming increasingly popular as instructional activities and have demonstrated fairly robust success for student learning and engagement, primarily in STEM-oriented courses (Brown, 2010; Eberlein et al., 2008). These activities are typically done in on-ground settings, dividing students into small groups. The learning cycle, however, is based upon Piaget's constructivism theory which asserts that learning occurs when new information is introduced (disequilibrium) that is then either assimilated or accommodated by the learner's cognitive schemes (Lawson, 1989) – largely an internal, individualized process. Further, guided inquiry questions can encourage students to think more deeply about course concepts, which helps students more effectively rehearse and code information to put into long-term memory (Willingham, 2010). The use of guided inquiry activities, therefore, may be valuable as an instructional strategy even when work is done remotely and individually, as often must be the case in asynchronous online classes.

Goals & Objectives for the Practice Session

Goal 1: Attendees will be able to articulate the underlying learning theories and models that support guided inquiry as an instructional strategy.

- Objective 1: Attendees will explore and discuss constructivism and its application within the guided inquiry process
- Objective 2: Attendees will explore and discuss information processing theory and its application within the guided inquiry process
- Objective 3: Attendees will explore, discuss, and apply elements from the learning cycle/5-E model of instruction

Goal 2: Attendees will learn about the educational strategy of guided inquiry

- Objective 1: Throughout the practice session, material will be presented to attendees using a guided inquiry process
- Objective 2: Attendees will identify the elements (many of which can vary) of a guided inquiry activity
- Objective 3: Attendees will explore the advantages and challenges of offering guided inquiry in an online setting
- Objective 4: If time allows, attendees will begin a draft of their own guided inquiry

Description of Practice to Be Exemplified

Guided inquiry, using the learning cycle, consists of a process of helping learners to first explore a concept, then to develop their own understanding of the concept, and finally to expand their understanding of the concept by applying the newfound understanding to a new situation (Marek, 2008). These three essential elements can be book-

ended by two additional steps: engagement and evaluation (Marek, 2008; Niederberger, 2009). That is, the learning task can begin with an activity or element that engages the learners, and the learning task can end with an evaluation of what has been learned. The steps of the learning cycle do not necessarily need to fall in order and may at times vacillate back and forth among steps as learners are guided along. This type of guided inquiry activity will be modeled to attendees as the information is presented – attendees will actively experience the guided inquiry process as they learn about the guided inquiry process. Although the learning for this conference will occur synchronously and in one place, attendees will explore and see examples of how the elements of the learning cycle can be incorporated asynchronously and completed individually by online learners.

Discussion

I learned about the POGIL (process-oriented guided inquiry learning) process when only teaching online courses; however, I saw potential value in the structure of such activities – particularly guiding students to build their own understandings of concepts, correct/adapt them if needed, and apply them to different situations. Because my courses are delivered asynchronously, I decided that doing these activities as small groups would be more cumbersome and frustrating to students than beneficial. The asynchronous guided inquiry activities I have developed for my social and educational science classes have generally met with positive reviews from students. Anecdotally, I have received several unsolicited remarks from students about how they better understand course concepts and their interrelationships after completing the guided inquiry activity. In one recent class where students chose either guided inquiries or discussions for the semester, those who selected guided inquiries performed an average of 1.5 grades higher on summative exams than those who participated in discussions. Finally, I give several workshops on campus about teaching and learning in higher education, and have redesigned some workshops to follow a guided inquiry structure. These have been very well-received and I perceive engagement to have improved for these seminars. I hope, therefore, that by including the method as the main educational strategy for the proposed practice session, attendees will not only learn about the strategy of guided inquiry but also experience its appeal.

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Teaching Faculty How to Lead in the University: Designing Programs of Faculty Leadership Development that Deliver Skill Training, Psychological Support, Network Access, as well as Targeted Knowledge

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Abstract: As the challenges facing higher education mount, many Centers for Faculty Development are now expanding their reach to help faculty in their roles as organizational leaders as well as classroom teachers. This presentation gives an account of 15 years of leadership development programming for faculty at the University of North Carolina at Chapel Hill and describes seven different faculty leadership programs. Each program targets a different faculty audience, has varied program elements, and addresses different educational and institutional objectives. Session participants will be introduced to a general framework that describes and defines educational needs, learning outcomes, and social supports that are required for effective faculty leadership development. A variety of program formats will be discussed in the context how they address specific needs of various faculty groups including: pre-tenure faculty, emerging faculty leaders, new and experienced department chairs and center directors, and leaders of faculty committees and task forces.

Relevant Literature and Conceptual Framework

Since Mintzberg wrote his classic *The Nature of Managerial Work* in 1973, Leadership has been seen not as a set of unitary set of activities but as comprised of diverse roles. For example chairing the academic department is an academic leadership position that can only be fully understood in a specific organizational context. (Tucker, 1993). On the other hand, academic leadership in general requires a series of social and emotional competencies that transcend any particular role. (Gunsalus, 2006) Supporting leaders long-term requires the provision of timely psychological support, effective social networks, self-awareness development, and institutional knowledge and an understanding of the broader issues and challenges facing a given social sector. (Lynton and Pareek, 1990) Finally, Leadership development programming for faculty also has motivational aspects and situational aspects that are related to both faculty career development and organizational development capacity. (Bland and Berquist, 1997)

Goals and Objectives for the Session

- Participants will hear an account of the creation and maintenance of seven different faculty leadership development programs for faculty at UNC-Chapel Hill since 2001.
- Participants will discuss a general template for assessing faculty needs and program formats that will meet those needs.
- Using the template, the group will discuss possible program designs for the needs and situations identified by participants in the session.

Discussion

In response to the increasing demands on the University at all levels, since 2001, UNC-Chapel Hill has steadily increased the availability of leadership programs for faculty across campus. Faculty take on many different leadership roles in the university and effective performance in these roles is critical to the success of the campus. These roles include, but are not limited to: chairing departments; heading centers, institutes, and programs; leading faculty committees and task forces, and playing significant roles in national professional organizations.

The challenges of leadership roles are varied and demanding and they include motivational aspects such as setting inspiring goals, leading groups, and defining an innovative vision. Leadership roles include personnel responsibilities such as supervising and evaluating staff performance; budgetary aspects including financial management and fundraising, technical aspects including operations, legal, IT, press relations, and so on.

Traditionally faculty members have had to learn on-the-job or through an informal mentoring process. While at Universities across the US, the Offices of Human Resources provide much of this training for staff, faculty seldom avail themselves of it because training often is targeted toward a corporate culture and the timing does not fit with

faculty schedules or demands. At UNC, faculty and administrative leaders decided to work to improve faculty leadership development through a series of targeted efforts within the academic side of the university.

First through the College of Arts and Sciences (donor funded) and then through the Office of the Provost using University funds, UNC Chapel-Hill has developed distinct yearlong programs for emerging leaders, new department chairs, pre-tenure faculty, new center and program heads, experienced leaders, and faculty innovators and entrepreneurs. Other units of UNC have also developed specialized programs focusing on leadership and career development for under-represented minority faculty and women in leadership roles.

Designing a successful program in each case requires a careful analysis of the target audience, defining the key needs of the group served, and crafting an affordable and effective learning design. Merely transferring pedagogy from the classroom or the wholesale adoption of corporate styles of training will not address the needs of faculty leaders or gain their voluntary participation. Given the degree to which faculty autonomy is valued and enacted in the university, effective leadership development programs must be relevant, voluntary, convenient, and rewarding for faculty to gain broad participation from faculty in leadership roles.

Session Description

This session shows how this process of assessment and design has yielded a series of successful but varied formats for different faculty groups. The presenter will discuss the design process, and then how each format has evolved with experience with the target group. Seven distinct programs for faculty leadership development will be described including programs that support: 1) early career faculty member self-awareness and self-management, 2) general group and organizational leadership skills, 3) strategic planning effectiveness for experienced leaders, 4) new chair development, 5) entrepreneurship mindset and skills, 6) learning about administrative systems for new leaders, and the delivery of a 7) comprehensive introduction to leadership for emerging leaders. These programs will all be described, differentiated, and analyzed in the context of developing a broad framework for understanding leadership education design for faculty. The presenter will provide a template for design of faculty leadership programs that takes into account faculty role, targeted competency, career level, and other situational factors, such as cost effectiveness, time effectiveness, and the institutional positioning of the sponsoring organization.

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Conversation: Is Conducting Class Outdoors a Romanticized/Impractical Idea or Good Pedagogy?

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Abstract: When the weather is nice outside, students might ask, "Can we have class outside today?" Often, college marketing materials display a group of students sitting and lying on a patch of grass or under a tree while being taught by a professor. One can't help but wonder, "Does anyone actually teach outdoors? Is it good pedagogy? Or is it just a romanticized, impractical idea used on brochures to attract prospective students?" This conversational session will begin with a brief presentation that introduces the topic to be discussed and previous research findings. Next, we will facilitate a conversation and decision-making process about conducting class outdoors.

Literature Review

At some time during their careers, college professors may be asked by students to hold class outdoors, especially if the weather is pleasant. This phenomenon seems to be reflected in college marketing materials in romanticized imagery that display groups of students sitting and lying outdoors while being taught by a professor. However, is having class outdoors good pedagogy?

Educators are often encouraged to discover and implement best practices in their classrooms; unfortunately, there is sparse evidence regarding the effectiveness of teaching outdoors, especially within higher education. Thus far, the literature (both peer-reviewed and non-peer-reviewed) regarding this topic has focused on the K-12 setting (Broda, 2007; 2011; Fägerstam, 2014). Findings suggest that the benefits of holding class outdoors include positive impacts on relationships between classmates and between students and teachers (Fägerstam, 2014), improved communication (Fägerstam, 2014), the potential for multidisciplinary learning, an enhanced sense of connection with surroundings (Beames & Ross, 2010), strengthened indoor teaching (Fägerstam, 2014; Shaw & Mills, 1981), improvements in behavioral conduct issues (Oliver, 2009), and student motivation (Fägerstam, 2014; Oliver, 2009; Shaw & Mills, 1981). At the same time, the literature also suggests that holding class outdoors has certain obstacles, including inflexible curriculum, safety concerns, lack of teacher confidence/experience holding class outdoors, inadequate school grounds, lack of student interest, student behavioral issues, and poor weather (Dyment, 2005; Fägerstam, 2014).

Again, the existing literature has focused solely on K-12 environments. To assist teachers in higher education determine if conducting class outdoors is a romanticized and impractical idea or good pedagogy, participants in this conversational session will be encouraged to visualize key elements of the issue, identify opposing points of view, and reach personal conclusions based on their experience and values.

Goals and Objectives

1. Summarize prior research investigating teaching outdoors.
2. Recognize promotion of teaching outdoors displayed through pictures on college marketing materials.
3. Analyze personal experience of teaching outdoors.
4. Synthesize the thoughts and experiences of teachers in higher education regarding conducting class outdoors.
5. Apply values to produce a list of the strengths, limitations, and appropriateness of having class outside.
6. Identify ideas of contention, weigh opposing viewpoints, critically evaluate arguments, and draw conclusions about conducting class outdoors.

Description of Topic to be Discussed

Having class outside is often displayed through pictures on college marketing materials. These images portray class outside as being intellectually stimulating, yet relaxing and organic. Perhaps these images have contributed to a romanticized idea of having class outdoors. But, is having class outdoors a good teaching strategy? Since the topic of having class outside in the context of higher education is not well researched, the authors hope to understand the

topic better by discussing the experiences and opinions of fellow professors. Through conversation, the authors hope to assess how professors perceive having class outside, if having class outside is a common practice, the strengths, limitations, and appropriateness of having class outside, and best practices for conducting class outdoors.

Facilitation Techniques

The session will begin with a brief (no longer than 10 minutes) review of the current research literature and non-peer-reviewed books regarding teaching outdoors. Then, participants will be engaged in a reflective discussion through a think-pair-share activity. Specifically, participants will be asked to share and relate their knowledge, experience, personal feelings/values about the strengths, limitations, and appropriateness of having class outside. Throughout the conversation, the presenters will make note of ideas to visualize key themes and opposing arguments. In the end, participants will be encouraged to identify ideas of contention, weigh opposing viewpoints, critically evaluate arguments, and draw personal conclusions.

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An International Perspective: A Conversation about Developing Globally Competent Teachers through Study (Teaching) Abroad Experiences

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Abstract: Colleges of education are under pressure to produce globally competent teachers through opportunities for systematic implementation of practices within authentic contexts. As part this process, there has been increasing support for cross-cultural engagement through participation in international field experiences. There are multiple benefits associated with such experiences; yet, questions remain regarding the impact when factors, including structure, duration, and locale, are variable. As a result, the proposed conversation will provide a forum for teacher educators to discuss and develop an understanding of the various issues that surround international teaching experiences for preservice candidates.

Literature Review

A primary challenge confronting higher education as we enter the 21st century is how to internationalize teaching programs to produce globally competent teachers (Childress, 2009). In a world that is increasingly interconnected, a limited number of students take advantage of such programs (Schneider, 2003). However, it is important that teacher educators continue to determine the most effective way to incorporate and highlight international teaching experiences into the curriculum to increase the likelihood their programs can produce teacher education candidates that have the knowledge, skills, and dispositions to work with diverse populations and be effective intercultural teachers in an era of globalization.

Traditionally, field experiences have been used to provide teaching candidates with the opportunity to explore the relationship between theory and action directly in an educational context. International teaching experiences extend traditional field experiences beyond the "customary" classroom as candidates enter contexts unfamiliar to them (Intolubbe-Chmil, Spreen, & Swap, 2012). While the specific objectives established for study abroad programs that incorporate opportunities for teaching vary from institution to institution, international programs often seek to help candidates develop academic proficiency while simultaneously addressing their ability to interact effectively and appropriately in cross-cultural situations. Additional goals associated with the teaching abroad experiences include: the development of global perspectives (Olmedo & Harbon, 2010); personal and cultural discovery (Willard-Holt, 2001); and eliminating (or diminishing) cultural stereotypes (Smith, Moallem, & Sherrill, 1997).

Research examining the impact of international teaching experiences for preservice candidates has revealed: improvements in reflection (Kissock & Richardson, 2010); personal and professional growth (Pence & Macgillivray, 2008; Willard-Holt, 2001); and greater appreciation for cultural diversity (Pence & Macgillivray, 2008). Further findings have shown that international student teaching experiences can promote cross-cultural sensitivity (Quezada, 2004). What is noteworthy, however, is that differences in programmatic structure and experiences have made it challenging to note the optimal characteristics necessary to expand teacher candidates' knowledge, skills, and attitudes to participate in a pluralistic, interconnected world. As a result, teacher educators must consider a number of factors (e.g. duration, role of faculty, coursework) to effectively plan and establish teaching experiences abroad.

Goals and Objectives

This conversation will seek to explore how to conceptualize study (teaching) abroad experiences for teaching candidates to maximize the impact on academic, intercultural, and global competencies. The primary goal associated with the conversation is to develop a collection of practices and considerations for faculty interested in developing study abroad experiences. Specific objectives to be achieved as part of this process include:

1. Participants will explore and share approaches for developing international teaching experiences that promote cultural awareness, reflective capacity, critical consciousness, and global competency.
2. Participants will consider how participation in international teaching experiences improves teacher preparation.
3. Participants will discuss the major benefits and new understandings identified by teaching candidates as a result of the international practicum experience.

4. Participants will engage in discussions to consider ways to prepare and develop faculty to lead teaching experiences abroad.

Description of Topic to be Discussed

Utilizing participants' experiences and current research on teaching abroad, this conversation will focus on the factors of programs/partnerships that can and should be considered within the planning and implementation of international teaching experiences. The following questions will form a foundation for the conversation:

- How can we view teacher education as a global experience?
- How do teacher educators help candidates understand the context and various experiences to develop global competencies? What tasks or assignments should be included in a teaching abroad experience?
- How can faculty best prepare (or be prepared) to take students on international experiences? What attitudes, competencies, and skills are necessary for faculty to successfully lead international experiences?
- What are characteristics of effective international education partnerships between teacher education programs? What support systems have proven valuable during teaching abroad experiences?
- What are the long-term benefits of international experiences on teaching and professional development?

Facilitation Techniques

The conversation will begin with a description of a recent teaching abroad experience led by the facilitator and the resulting outcomes on the participating students. Specific reference to the associated literature on the topic will be shared concurrently as the impact on the students is described. The conversation will proceed with an invitation for participants to share their knowledge of or experiences leading/participating in opportunities to teach abroad. The facilitator will ask follow-up questions as necessary to encourage dialogue and extend responses to address the qualities and characteristics of positive international teaching experiences as well as the common challenges associated with them. The set of guiding questions listed above will be used by the facilitator (as necessary) to allow for maximum focus within the conversation. The facilitator will gather information to create a list of practices and considerations for faculty interested in developing study abroad experiences that include opportunities for teaching. This information will be disseminated to participants after the conversation.

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