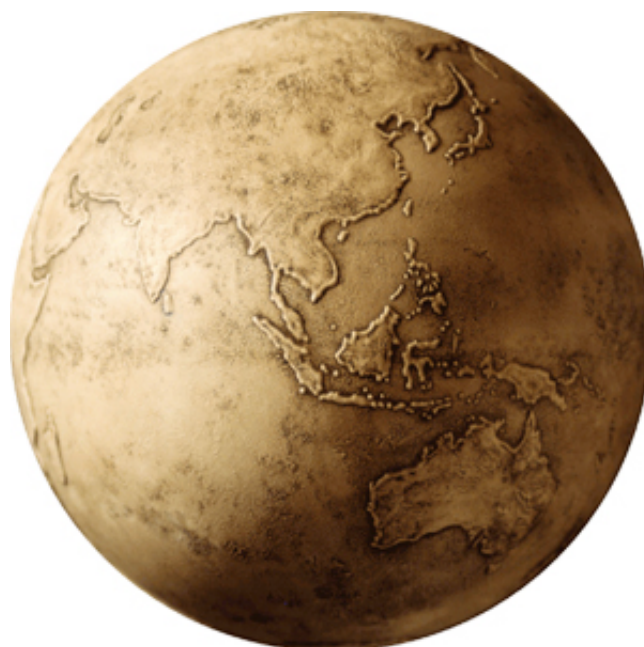


Conference on
Higher Education Pedagogy



February 10-12, 2016
The Inn at Virginia Tech and Skelton Conference Center
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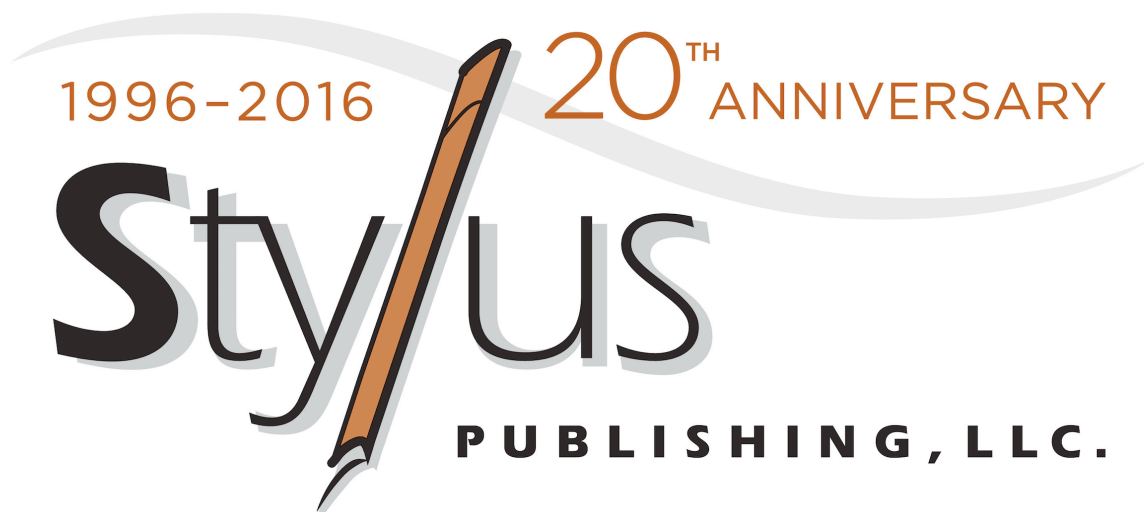
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Opening Keynote Address

Wednesday, February 10, 2016

8:45 – 9:45 am

Saundra Yancy McGuire

Center for Academic Success, Director Emerita, Louisiana State University

Teach Students How to Learn: Metacognition is the Key!

21st Century students come to college with widely varying academic skills, approaches to learning, and motivation levels. Faculty often lament that students are focused on achieving high grades but are not willing to invest much time or effort in learning. But most students resort to memorizing information just before tests because they do not have effective learning strategies. This session will focus on the importance of helping students acquire simple, but effective learning strategies based on cognitive science principles. Attendees will experience strategies that significantly improve success by transforming student attitudes about the meaning of learning.

Dr. Saundra Yancy McGuire is the Director Emerita of the Center for Academic Success at Louisiana State University in Baton Rouge, Louisiana where she formerly held the positions of Assistant Vice Chancellor and Professor of Chemistry. Prior to joining LSU in August 1999, she spent eleven years at Cornell University, where she received the coveted Clark Distinguished Teaching Award. Dr. McGuire has been teaching chemistry, working in the area of learning and teaching support, and mentoring students for over 40 years. She has delivered keynote addresses or presented her widely acclaimed student success and faculty development workshops at over 200 institutions in 41 states and six countries. Additionally, she has published her work in *The Journal of Chemical Education*, *American Scientist*, *Science*, *The Learning Assistance Review*, *To Improve the Academy*, and *New Directions for Teaching and Learning*. Her latest book, *Teach Students How to Learn: Strategies You Can Incorporate into Any Course to Improve Student Metacognition, Study Skills, and Motivation*, was released by Stylus Publications in October 2015.



Closing Keynote Address

Friday, February 12, 2016

12:30 – 1:30 pm

Brett Jones

Professor of Educational Psychology, Virginia Tech

Exploring Similarities Between Effective College Teaching and Jazz Composition

At first glance, you may see few similarities between effective college teaching and jazz composition. But good jazz compositions have many of the same elements as effective college teaching. In this presentation, Dr. Jones will describe some of these similarities in an effort to help you think about college teaching a little differently. You don't need to know anything about jazz or music composition to understand this presentation. You just need an open mind and the willingness to listen to some jazz. By the end of the presentation, you will understand the basics of a framework that can help you build on your strengths and shore-up any weaknesses that you may have in motivating and engaging students in learning.

Brett D. Jones, Ph.D., is a Professor of Educational Psychology in the Learning Sciences and Technologies Department at Virginia Tech. He has taught 24 different types of courses related to motivation, cognition, and teaching strategies, and has conducted workshops and invited presentations at several universities. He researches student motivation and examines methods teachers can use to design instruction that supports students' motivation and learning. In his new book - *Motivating Students by Design: Practical Strategies for Professors* - he provides readers with strategies they can use to motivate students intentionally through the design of their courses.



Wednesday

February 10, 2016

**Presentation
Sessions**

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

Wednesday
February 10, 2016
Session 1
10:00-10:50 AM

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

How Professor Ethnicity and Email Tone Impact Student Emotionality: Possible Insight into Classroom Bias

Denise Friedman, Nicole Tramell, Gina Borelli, Lauren Thomason, and Markia Beckwith
Roanoke College

Abstract: The purpose of this study was to examine effects of professor ethnicity and email tone on student recipient emotionality. Participants were randomly assigned to one of four conditions. After reading an email scenario, participants answered open ended questions as well as completed several questionnaires, including the PANAS, to evaluate their emotional response. It was hypothesized that the emotion provoking email would receive a more negative emotional response than the control email, that the emails sent by the American professor would have a more positive emotional response than those sent by the Middle Eastern professor, and the emotional email sent by an American professor would receive less negative affect than email received by the Middle Eastern professor. The results of a 2x2 between-subjects ANOVA did not support these hypotheses; the emails sent by the Middle Eastern professor provoked both more positive and more negative affect in participants than the emails sent by the American professor. Students may recognize that they have some bias toward the Middle Eastern professor and may have compensated with higher positive affect scores. Discussion of the results will include limitations, alternate explanations, and the importance of understanding bias at multiple levels in the classroom.

Emails are the preferred communication between students and professors in college today, but can be misconstrued (Byron, 2008). Wording and ambiguity of the emails may elicit negative responses, especially if the content of the email is perceived as emotionally charged. If there is a power dynamic and the authority is of a different ethnicity, this could also add to the emotional affect. Stereotyping and discrimination against professors based ethnicity occurs regularly (Bertrand & Millainathan, 2004). Research into these issues is necessary as email is a key professional communication tool (Brown et al., 2014).

With email, misinterpretation may lead to mixed emotions (Katoet et al., 2007). More ambiguous emails may cause more stress and anxiety because it is unclear what emotion the sender is trying to convey (Brown et al., 2014). Research suggests recipients often interpret emotions even when they are not intended by the sender (Byron, 2008), possibly because senders “lack awareness of their internal state but unconsciously ‘leak’ emotion to others” (p.322) or because the sender expressed a different emotion than they were truly feeling, leading to misinterpretation.

Emotionality felt is not solely dependent on the e-mail, but characteristics of the individual are also important. The ability to attend to social and status cues can lead to varied responses of anxiety, as can an individual’s unique initial stress appraisal. Individuals respond differently to e-mail stressors because of varied personality traits, as well as personal experiences and histories with quantity and quality of e-mail (Brown et al., 2014).

Discrimination against ethnic minorities has always happened in the workplace, even if that minority has the same credentials as someone in an ethnic majority (Bertrand & Millainathan, 2004). When it comes to discriminating against a professor based on his or her ethnicity, one reason may be in-group-out-group bias (Ruffle & Sosis, 2003). This bias has been tested and shown in hundreds of both psychology and sociology studies (Hewstone et al., 2002).

Currently in the US and other Western cultures, prejudice against Middle Easterns exists (Nosek et al., 2007). In a study examining fake job applications with a Swedish-sounding or an Arab-Muslim last name and identical credentials, Swedish-sounding names received about fifty percent more callbacks for a job interview (Agerstrom et al., 2007). Additionally, Agerstrom and Rooth (2008) found employers associated Arab-Muslim men more so than native Swedish men implicitly with negative attributes and had “an explicit negative bias towards Arab-Muslims,” associating them with low performing job attributes.

Before meeting a professor, students may judge them based on their name alone, making assumptions about ethnicity. Anderson and Smith (2005) had students view a syllabus of a Latino or a White professors’ fictitious class and rate the professor. Some professors had a lenient style teaching, while others had a strict style. Results showed White strict teachers were thought to be warmer than Latino strict teachers, and White teachers were seen as more competent overall than Latino teachers. This research shows students can discriminate against minority professors.

In the classroom, developing a rapport with students is important for learning (Grantiz et al., 2008). Discrimination, implicit or explicit, can interfere with this rapport and negatively impact interactions inside and outside the classroom. Students who feel more negatively about the professor are also likely to evaluate them negatively (Marsh & Roche, 1997). This study sought to examine one aspect of that dynamic by determining whether professor ethnicity and email tone effected student emotional response.

Method

62 students, aged 18-22 ($M=20.161$, $SD=1.611$), from a small liberal arts college in the eastern US participated. They were predominantly female (75.8%) and Caucasian/non-Hispanic (77.4%). Participants provided consent and were randomly assigned to one of four conditions where they read an email from a professor regarding class attendance, completed open ended questions on their feelings, manipulation checks, the PANAS, a personality inventory, the IAT, and demographics.

Results

A 2(email tone: emotional, control) x 2(professor ethnicity: American, Middle-Eastern) between-subjects ANOVA was conducted. There was no significant main effect for email tone on positive or negative affect, $p>.05$. A significant main effect for professor ethnicity on positive affect $F(1,55)=5.010$, $p=.029$ (see *Figure 1*), $\eta^2=.083$ and negative affect $F(1,56)=14.022$, $p=.001$, $\eta^2=.200$ (see *Figure 2*) were found. There was not a significant interaction effect between email tone and professor ethnicity on positive or negative affect, $p>.05$. The ANCOVA using IAT outcomes produced the same results. Initial open-ended feelings were coded (see Table 1). No significant differences on themed responses to scenarios were seen, $\chi^2(2)=1.038$, $p>0.05$.

Discussion

This study showed that no matter the type of email students received, the Middle Eastern professor was seen more emotionally (positive and negative) than the American professor. While not hypothesized, this could be due partially to social desirability (Krumpal, 2011). Their negative affect could have been their true feelings (as 20% of the self-report was accounted for by professor ethnicity vs. 8.3% of the positive affect), but they could have been trying to be politically correct and socially desirable, resulting in significantly higher reports of positive affect as well. After 9/11, this particular sample may be more likely to discriminate against Arab-Muslims (Nosek et al., 2007) as well.

Even more so interesting, is that when first answering the open-ended questions, participants seemingly viewed all email scenarios as negative, but when given the PANAS and actually having the emotion written out for them, they showed significant positive affect as well as negative. This continues to show how social desirability was most likely the reason why results showed a positive effect. As 75% of participants were Caucasian, this also supports an in-group-out-group bias for why Middle Eastern professors were viewed with more negative affect.

Implications for teaching and learning are strong as digital communication is common and responses to one form of communication can leak into other forms, especially when something is ambiguous (Bryson, 2008). If students are reacting more negatively to their professors due to bias/stereotyping, this matter needs to be recognized and addressed so rapport can be built. Medical schools are starting to work with students to recognize their implicit biases that may affect patient treatment (Miller et al., 2013). Perhaps we need to be having these conversations in our classrooms to enhance teaching and learning, but also to prepare students for the globalized world we live in.

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**Students' Grade Expectations in College Courses:
How Do They Vary Throughout the Semester and What's the Impact of Feedback?**

Jill Kearns Hayter, *East Tennessee State University*

Matthew C. Rousu, *Susquehanna University*

David Harris, *Benedictine College*

Adam Hoffer, *University of Wisconsin La Crosse*

Scott Houser, *Colorado School of Mines*

Katarina Keller, *Susquehanna University*

Becky Lafrancois, *Colorado School of Mines*

Olugbenga Onafowora, *Susquehanna University*

Abstract: Students often have unrealistic expectations for grades when entering into principles of economics courses. Unrealistic student expectations about grades can lead to many problems, including grade disputes and student evaluations. In this study, we examine students' expectations for grades in principles of microeconomics courses. We survey students at the beginning of the semester, midway through the semester, and a week before the end of the semester to predict their final grade for the course. The results from this study will provide professors feedback into several questions of interest. First, how accurate are students' pre-course grade expectations compared to the grades they receive upon completion of the course? Second, do students' expectations change as the course progresses? As students receive grade feedback, theory predicts their grade projections should become more accurate. Finally, this study assesses how the number of hours per week the student expects to study and gender influences the accuracy of students' grade expectations. To complete this study, nine professors at five different universities are providing our grade expectations survey to students in their principles-level economics courses. In total, we have data on 634 students. By having multiple professors at multiple universities implementing the survey, we can ensure that the results aren't specific to one professor or students at one university.

Literature Review

Students often develop unrealistic expectations concerning final course grades they receive in their college courses. Unrealistic grade expectations can yield severe consequences. Previous research has found grade expectations and course evaluations to be highly correlated (Heckert et al. 2006, Nowell 2007). Because professors' teaching effectiveness, especially for those untenured, is partially measured by student evaluations, grade expectations can play a crucial role in the promotion, retention, and tenure of faculty members.

In this study, we contribute to the literature by assessing students' grade expectations and what affects those expectations in principles of economics courses. More specifically, we ask students to estimate their final course grade at the beginning of the semester, midway through the semester, and a week before the end of the semester. Another contribution of our study is that we collect data from professors at five different universities ensuring results are not an artifact of a single professor's grading history or university's student composition.

Methodology

We collected surveys from 634 students in principles of economics courses across five universities during the 2013-2014 academic year. We used OLS regressions to explore which factors influence the gap between students expected grade at the end of the course and their final course grade. We also estimated a model examining how students' grade expectations changed over the course.

Data Analysis and Results

At the beginning of the semester, the mean grade expected by students was close to an A-. (GPA=3.59, where 3.67 is an A-.) The mean expectations dropped as the semester progressed and there was significant variation in expectations and changes in expectations across universities, which further supports the importance of data collection at multiple universities.

From the OLS regression results, we found that students adjusted their expectations more the farther their midterm grade was from their initial expected grade. We did not find differences by gender in the propensity to overestimate course grades. Our results provide evidence that men and women were equally likely to expect a higher grade than the one they actually received. However, for those who did overestimate their grade, we found male students overestimated by more than female students.

Discussion/Conclusion

While we think our initial results provide a good starting point, to extend and further strengthen our paper we are collecting data this academic year. There are three advantages from one more year of data collection. First, the additional data will more than double the sample size. A second advantage is the inclusion of more diverse types of institutions, such as, community colleges and R01 research institutions. Finally, we are also collecting information on student GPA as they enter the course to examine whether better students form more accurate expectations.

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Mind Mapping: A Creative Student Learning Strategy

Fran Cherkis, *Farmingdale State College*
Annemarie Rosciano, *Stony Brook University*

Abstract: There is a significant need for faculty to move away from the traditional teacher-centered educational approach and increase implementation of an active, student-centered, learning environment. Creating learning experiences that facilitate reflection, knowledge building, problem solving, inquiry, and critical thinking is vital. Using mind maps as an active learning strategy is an innovative technique to facilitate student learning. Students can illustrate a vision, exhibit their contextual knowledge and creativity, and make associations about a central theme during this activity. Mind mapping can be used for note taking, completing homework assignments, preparing for exams, analyzing, and reflecting about nursing practice. Mind maps can be executed in various curricula as an alternative learning experience.

Literature Review

Evidence supports that both mind mapping and cooperative learning are valuable active learning strategies for today's college students. The magic of mind mapping is that it is a whole brain alternative to linear thinking. Discussing one's ideas and having others react and respond within a group setting improves critical thinking, reasoning capabilities, intensifies learning comprehension, and academic achievement (Gillies & Haynes, 2011). More learning occurs when individuals learn with others compared to learning alone (Michael, 2006).

Collaboration, demonstration and a deeper understanding of the topic assigned are advantages of implementing mind mapping. Mind mapping has been found to be an effective strategy for adult learners and has been used in a variety of disciplines, including finance, economics, marketing, education, and medicine. Students 25 years of age or older are more likely to learn from their peers, have higher levels of motivation and cognitive involvement, all of which support the use of mind mapping in a learning environment (Rosciano, 2015).

There is limited research examining the value of using mind maps as an alternative to lecturing, creating the need to understand the usefulness of this strategy. In a study conducted by Rooda (1994), mind mapping was introduced as a learning strategy in a baccalaureate level introductory nursing research course. Results showed that students who used mind mapping had higher exam scores (84.4%) compared to students who did not use mind mapping (76.7%). Rooda (1994) concluded that students who used mind mapping were able to attain and recall a large volume of complex data. D'Antoni, Pinto Zipp, and Olsen (2010) studied the use of mind mapping to assist with the retrieval of information and critical thinking among medical students. One group used mind mapping and the other used typical note taking during class sessions. Results showed the successful use of mind mapping for retrieval of short term information and retention of new information. Boley (2008) found graduate nursing students who used faculty created mind maps as study aides scored higher on quizzes than those who did not use the mind mapping. This evidence supports the value of using mind maps in education. This visual and non-traditional technique of presentation can be used to learn, understand, and teach.

Objectives

Upon completion of the session the participants will:

1. Understand the purpose and effectiveness of mind mapping.
2. Synthesize a mind map reflective of the concept chosen by the group.
3. Use the criteria within the rubric to develop a mind map.
4. Evaluate effectiveness of the mind map activity.

Goal of the Practice Session

The participants will report mind mapping is a valuable tool for implementation in any classroom or on-line settings.

Description

Mind mapping offers a creative method of thinking and learning about course concepts. The presenter's will discuss their published findings of the effectiveness of implementing Mind Maps into one of the curriculum courses at their school. The presenters will proceed with the following to involve the audience and meet the objectives of the practice session:

- Present an overview of Mind Mapping as a visual thinking tool that can be applied to all cognitive functions, especially memory, learning, creativity and analysis.
- Share a Mind Mapping video to demonstrate the process for this strategy that involves a distinct combination of imagery, color and visual-spatial arrangement.
- Discuss about Mind Mapping is an effective teaching strategy that enhances the students learning experience.
- Break the participants into groups of 4-5. Provide the step-by-step guide for developing a mind map as provided by the presenters.
- Group participation to develop a mind map using the guide.
- Groups to present their work and share their feedback.
- All items required for the participants to complete this activity will be supplied by the presenters.

An example of a mind map classroom activity (this example was created by the presenting authors).



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Providing Video Feedback on Assignments

Ralph P. Hall, *Virginia Tech*
Mary English, *Northeastern University*

Abstract: High quality assignment feedback has been identified as an integral part of the learning experience. Research suggests that student engagement with feedback may be improved through the use of technology and rich media (Crook et al., 2012). Audio and video feedback are currently available models that may enable a more meaningful understanding of instructor feedback than written comments. Participants in this practice session will be provided with an interactive tutorial on how video feedback can be securely and individually shared with students via a Google Apps platform. The tutorial will focus on how to [1] create the video-feedback platform using SnagIt, Google+, Google Circles, and YouTube, [2] structure the *process* of providing video feedback, and [3] what to include in the feedback video. The practice session will share the experience of developing the video feedback platform and discuss the art of recording a feedback video that supports learning and challenges students to excel in their studies.

Literature Review

Contemporary research calls for assessments and feedback that are structured to support student understanding of concepts and to build students' self-assessment skills (Bransford, Brown, & Cocking, 2000). Assignment feedback that is of high quality has been identified as an integral part of the learning experience (Black & William, 1998; Ramsden, 2003). In fact, in a meta-analysis of more than 1,000 studies, Hattie (2009) found formative assessment and feedback to be two of the strongest influences on student achievement. Assignment grades and feedback can indicate quality of student work, level of achievement of learning goals, and direction for future study.

At the same time, students have reported a lack of satisfaction with the quality of assignment feedback. A common student concern is perceived discrepancy between the expected and actual grade, which may signal lack of details and clarity in feedback (Greenberg, 1990). Other key feedback issues identified include lack of helpfulness, disconnect between feedback and assessment criteria, lack of guidance, and lack of timeliness (Carless, 2006; Crook et al., 2012; Glover & Brown, 2006; Orsmond & Merry, 2011; Weaver, 2006). Further, research suggests that even when feedback is effective, some students may ignore it or give it limited attention (Carless, 2006; Mutch, 2003; Weaver, 2006). Such findings support the need for heightened focus and attention on providing effective feedback.

It has been suggested that student engagement with feedback may be improved through the use of technology and rich media (Crook et al., 2012). Audio and video feedback are currently available models that, according to early research, may enable a more meaningful understanding of instructor feedback than written comments (Thompson & Lee, 2012). The use of emerging technology such as Google Glass is one example of how students have been provided with video feedback on assignments (Hall, 2014).

Goals and Objectives

Participants in this session will be provided with an interactive tutorial on how video feedback can be securely and individually shared with students via a VT-based Google Apps platform. The tutorial will focus on:

1. how to create an integrated video-feedback platform consisting of SnagIt (a video screen capture program), Google+, Google Circles, and YouTube;
2. how to structure the *process* of providing video feedback, and
3. what to include in the feedback video, which can follow a rubric or be more organic and free flowing to capture insights, observations, or new ideas for students to consider.

Participants in the session will be invited to join a mock course and experience the video feedback from the student's perspective. This approach will enable participants to view both sides of the process and see how students can comment on a feedback video for additional guidance.

Note: While this practice session focuses on how to use SnagIt and Google Apps, participants should be able to apply the general approach to providing video feedback to any technology platform. In addition, while the process of providing video feedback was honed on classes of 10 to 20 students, it is believed that the approach could be scaled to larger classes by limiting the number of feedback videos and providing them to students on a rotating basis.

Description of Practice

Since 2013, Dr. Hall has recorded over 300 assignment feedback videos that have been provided to students in three different types of courses: a studio, a seminar, and a more traditional lecture-based course. The early feedback videos were recorded using Google Glass and shared directly on Google+ (Hall, 2014), which proved to be time consuming (due to the video download/upload process) and difficult to manage (due to the lack of video management features in Google+). Later, videos were created with a video screen capture program (SnagIt), and uploaded to YouTube, which greatly improved file management and sharing.

Given the exploratory nature of this effort, research on the video feedback process was undertaken to capture quantitative and qualitative data on both the video feedback process and its impact on the students. Early data from this research indicated the perceived value students received from the feedback and where improvements in the content and quality of the feedback videos could be made. Based on this student feedback, rubrics were introduced to help structure the feedback videos.

This practice session will share the experience of developing the current video feedback platform, which has evolved through multiple iterations and continues to evolve as new technology emerges, and the art of recording a feedback video that supports student learning and challenges students to excel in their studies.

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“Let All Voices be Heard:” Strategies for Engaging Deep Learning via Discussions in General Education Capstone Courses

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Abstract: One puzzling dilemma for an extroverted instructor is how to get the quiet and reserved students to talk. The introverted instructor who has expert knowledge in both curriculum design AND content knowledge strives to create comfortable ways for similar introverts to contribute their best to the discussion without being silenced by extroverts. How can the general education professor honor a student’s preference to take time before answering, or even to be a quiet observer in a capstone course? How does the professor manage the energetic verbalizers and facilitate a balanced student-to-student discussion? Participants will experience low tech flipping strategy which promotes community, reading compliance, content connection, critical thinking, creativity and project ideas.

This session consists three main parts including (a) an introduction to two methods and their current uses in capstone general education courses, (b) an in-depth experiential session, and (c) applications to the online environment and other suggestions.

One of the most puzzling dilemmas for the extroverted classroom instructor has to be how to get the quiet and reserved students to talk. Promoting discussion of the text often feels like a traffic control experiment where one tries to find that balance between discouraging the extroverts and dominant individuals while also encouraging the shy and quiet students to share their thoughts. But this is a required class for general education so how does the professor limit stress for those introverts and make sure everyone’s voice is heard?

As Susan Cain suggests in *Quiet: The Power of Introverts in a World that Can’t Stop Talking*, we know it’s not always the biggest talkers who have the best ideas! (Cain, 2012). Introverts are known as those who do not talk much in class, however there are often reasons that they self-limit in group projects that do not have anything to do with inability or desire to be quiet. Uncovering those reasons is certainly one step, but other task design issues can significantly minimize these personality differences in teams or groups.

What does the best team look like? How many introverts and extroverts should be in a group to maximize creative discussion? Team researchers are now advocating that the team resemble “...a’ motley crew’ when it comes to backgrounds, training, and thinking styles.” (Thompson, 2013, p. 5). Thankfully our classrooms often resemble this ‘motley crew’! Fortunately, talented professors and instructors can strategically create learning activities that help all students maximize creativity while maintaining accuracy and deep thought.

Description of the Experiential Portion

Conference participants will first experience a low tech flipping procedure and in-class teaching strategies to (a) foster student-to-student discussion, (b) promote deep discussion of assigned readings, and (c) thoughts about how this text informs their current life and future career. In the second experience, participants will create group assignments that honor all voice voices and cannot be completed by a lone genius. Each presenter will provide a brief overview of how the strategy has been applied to in-class and online discussions in order to meet general education capstone outcomes. One course is music and arts course open to students of all majors and the other is a required capstone course for the Organizational Leadership & Supervision major. Each course has common outcomes addressing deep learning, multi-disciplinary research and critical thinking.

Participants will have an opportunity to participate in this strategy as it applies to a common content topic typically address in capstone classes such as creativity, critical thinking and/or the importance of reflection in learning. Participants will read a short article. The presenters will guide the group in selecting significant topics for discussion and application. Participants will then prepare the FLIP ticket worksheet capstone students use to prepare for the in-class group discussion. The presenters will demonstrate the small team discussion procedures and foster the actual discussion of the FLIP ticket. Participants will use green ink pens to comment on, make notes and draw appropriate connections learned from the discussion directly on their own FLIP ticket worksheet. A verbal participation score will be determined by each individual regarding his or her own experience. Participants will be given a final thought exercise as an example of the critical problem solving exercise used at the end of the group discussion.

In the second experience, participant prior knowledge is again key to working on the assignment. Students work in CREWs (Collaborative Review and Extension Work groups) for exams and exercises, so participants will quickly engage in a short one of each. A discussion of how peer review works for this strategy will end this part of the session.

Participants will engage in a brief structured processing or report out experience to provide closure and prepare participants for follow up or future readings and/or projects.

Presenters will discuss challenges and opportunities which occurred over a number of semesters, necessary revisions and applications to the online discussion environment. In addition, suggestions for applying this method to other disciplines and grading will be addressed. Participants will receive a detailed handout, bibliography and sample forms. (See selective bibliography.)

Sessions Objectives

1. Participants will become familiar with a sequence of classroom strategies which have been successful in facilitating full class discussion.
2. Participants will experience the “FLIP” discussion event by selecting significant topics, comparing results with a small group of peers, rank order the topics, and then use text information to collaborate on a group question or problem to solve.
3. Participants will make various connections during the actual discussion including student to student similarities, pose questions for the presenters, reflect upon relevance of the text readings to themselves, and explore ways in which these topics may influence course project choices and methods.
4. Participants will discuss various adaptations and variations (theme and variations)
5. Participants will have an opportunity to ask questions and explore the evolution of solving teaching challenges over a period of time via classroom assessment techniques and course assessment methods.
6. If time permits, may have an opportunity to explore the various dichotomies inherent in this session such as (a) Two professors are acclaimed award-winning seasoned faculty – but one is a self-identified extrovert and the other an introvert; (b) General Education courses are thought of as courses for generalists-but these courses are also approved as capstones in the major; (c) Flipped learning requires out of class learning and in-class practice space; and (d) Being comfortable in the learning environment means different conditions for introverts and extroverts. We may also discuss how one solves teaching challenges via SOTL research, collaborating with colleagues and attending teaching conferences.

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The Natural History of the Teachable Moment: Exploring Practices that Enhance Profound Learning Experiences

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Abstract: Effective teachers want to make a difference in the lives of their students. They want to provide opportunities for learning experiences that are profound in nature and enhance students' movement from *knowing* course content to *realizing* such knowledge in a manner that transforms worldviews far beyond the college and university classroom. They want to create teachable moments. The biological domains of *development*, *ecology*, *evolution*, and *physiology* (DEEP) provide helpful insight leading to pedagogical practices that can further this important teaching/learning goal. In this session we will outline DEEP variables as they apply to the teachable moment, share pedagogical practices from our own and other research that connect to DEEP, and explore with participants' ideas for creating teachable moments within their courses.

Literature Review

The teachable moment can be defined as the opportunity for a profound learning experience. During this moment, any of several kinds of events can catalyze enduring, personal change. Teachable moments often appear unpredictable because the biological and phenomenological circumstances that converge to create them are not fully considered. It is, however, possible for teachers to reflect upon these circumstances in planning learning activities that can lead to teachable moments.

These are matters of mindfulness and focus upon contributing variables that are always before us. The teachable moment can be fruitfully understood by considering the interconnected biological domains of *development*, *ecology*, *evolution*, and *physiology*, known as DEEP (Greenberg, 2008). It is important to note that DEEP domains are highly interrelated in a complex pattern of ever changing influence on learning.

Development refers to both biologically programmed changes as well as individual experiences within one's lifespan. A common view leads many to believe that little affects development after early childhood, but Vygotsky and his followers demonstrated that mediated learning actually leads to development. A large body of literature supports the idea that opportunities to learn how to learn in concert with high quality mediation are potent at any age (Feuerstein, 1985). While it may be difficult if not impossible for teachers to become knowledgeable about each student's development, higher education students reported transformational learning occurred when they were engaged in personal reflection (Franklin, Dellard, et al. 2014; Taylor, Cranton, & Associates, 2012). Further, research demonstrates the feasibility of providing students with a repertoire of metastrategic knowledge from which they can develop and adapt personal learning strategies to overcome challenges in learning (Greenberg, 2014).

Ecology also impacts the teachable moment by means of both the physical and social environments in which learning takes place. Evidence shows that the aesthetics of the learning environment are significant, whether it concerns comfort within a classroom (Lei, 2010) or an undisturbed environment for online learning (Kirkwood & Price, 2005). But research also indicates that the social environment is a particularly powerful variable largely because of its bearing on the establishment of safety and trust amongst students and with the teacher (Holly & Steiner, 2005). While it appears that most teachers in higher education pay attention to these factors, this is not always the case; we were amazed at the lack of safety and trust reported by African American students at a prominently white university (Davis, Dias-Bowie, et al. 2004). In this study, for example, the African American students often felt hyper visible or invisible—both of which stood out to them and reduced the availability of teachable moments.

The domain of *evolution* emphasizes the transmission of biological and cultural information across generations. Only recently has affect, among the most ancient of these variables been implicated in emergence of a teachable moment (Haidt, 2012). Amongst the adaptive traits that have evolved in humans is a sometimes insatiable pursuit of information and narratives that enable them to cohere in possible cause and effect relationships. This points to adaptive behavioral traits that engage and integrate the perceptual skills of experience and the conceptual skills of argument to establish the most coherent narrative possible with the facts at hand. The world we experience is one in which it is impossible (except by theoretic retrospection) to disentangle the contributions of intellect from those of sense, as described by William James (1911). Thus, in order to enable profound learning experiences, the teacher needs to allow space for shared descriptions of relevant information prior to any explanation of course content (Greenberg N., Greenberg, K, Patterson, and Pollio, 2015).

Physiology, the fourth domain of DEEP, provides insight into the teachable moment at several levels. Certainly, acquisition of content and insight at a particular moment in time is framed and formed in conjunction with everything else the organism experiences. Organ systems including the brain are exquisitely balanced and integrated with memory as well as anticipated outcomes of actions. Controllable and uncontrollable physiological stress responses powerfully affect a diversity of cognitive functions (Greenberg, Carr, & Summers, 2002). Embodied cognition, in which sensations from the body participate in cognitive functions, also plays an important role in learning (Merleau-Ponty, 1962). Similarly, intuition involves access to cognitive resources of which an individual is unaware and typically precedes conscious reasoning (Haidt 2012).

Goals and Objectives for the Practice Session

In this session we will provide an overview of the four domains of the DEEP model which, in concert with each other and the uniqueness of the student can enable a teachable moment. We will connect these findings to examples of pedagogical practices that enhance the opportunity to reach more students more often by incorporating existential practices. Participants will then work in small groups to explore ways they can utilize such practices in courses they currently teach.

Discussion

This session models the practices we want participants to consider in their own teaching. Participants will be encouraged to enter the discussion throughout the session. After we present an overview, small groups will be encouraged to make space for all members to share ideas—with one member serving as a recorder, another as a reporter to the large group, and a third member as the facilitator of their dialogue. Participants will be given handouts providing in-depth information related to our model description, examples of application in higher education courses, and suggestions for reflection within their small groups.

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International Collaboration in Developing and Teaching an Online Course in Global Perspectives of Educational Leadership

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Abstract: Faculty in Educational Leadership programs in three universities representing the United States, Russia, and Pakistan collaborated to develop an online course designed to engage graduate students in addressing global issues while sharing the perspectives of their own contexts. The course will be offered online by each of the universities (Appalachian State University, Novgorod State University, and COMSTAT) as part of a program of study in the area of educational leadership. It is designed to heighten the knowledge and skills of educational administrators leading 21st century schools through the incorporation of diverse perspectives through interactions among graduate students representing each of the countries and their cultures. Development of the course addressed such aspects as the logistics of the online platform, language barriers, time zone challenges, and organizational structure of the country's educational systems. The course further addresses best practice and theory of adult learning, assessment, and communication across cultures. The session will address practical issues such as co-teaching, university policies, and faculty collaboration in both development and teaching.

Literature Review

Globalization is a ubiquitous concept within the world of economics, playing a major role in our contemporary society influenced by the soundness of major international businesses. However, its meaning remains elusive in the world of education, usually found only in vague mission statements and literature on "twenty-first century" students (Brooks & Normore, 2010). Yet, the core business of schools is to educate and prepare students to enter this global society, which makes clear understanding of the meaning of *globalization* extremely relevant to school leaders (Brooks & Normore, 2010; Easley & Tulowitzki, 2013).

The essential concept of *globalization* for educational leaders encompasses the ability to fully embrace and understand diversity, not only in terms of race, but also of culture, ethnicity, and social mores in a truly interconnected world (Dimmock & Walker, 2000; Brown, Whitaker, & Brungardt, 2012; Easley & Tulowitzki, 2013). It is not enough for preparation programs in higher education to simply add a course, offer more theoretical readings or require seminars, regardless of how provocative a guest speaker may be. Calls for higher education to respond to this challenge of preparing global leaders include the challenge to implement a much wider adaptation of programs, curricula and pedagogical approaches (Brown, et al., 2012). Dimmock and Walker (2000) caution that attention must be paid to the societal culture of diverse nations to shape the global leader's understanding of the nature of responses. Educational leaders must be mindful of how their own leadership styles, policies, practices, and decisions can create an environment in which subcultures can collaborate synergistically or become potential adversaries (Brooks & Normore, 2010).

Many leadership preparation programs do not tend to foster the development of truly global leaders who must stretch their understanding of world issues, economies, cultures, and societies beyond what they experience daily within their current settings (Brooks & Normore, 2010). While the school community may remain insulated from a global economy, there will surely be students who emerge from the school fully expecting to engage in a very different world for which they may not be prepared. The policies and practices of a global leader may change that.

Not only must the framework and curricula of higher education programs be changed but also the pedagogy so that graduate students in leadership programs are engaged in holistic learning experiences that will develop global leaders through cognitive, behavioral and attitudinal modes of learning (Brown, et al., 2012). For many universities and colleges, this may result in engaging only the students within their program to engage in these types of experiences, as they study from afar the cultures or societies of other countries, seasoned with the occasional short-term faculty-led study abroad program. However, the increased demand and complexity of living and working in a global society and economy require an even deeper interaction that may come from engaging potential school leaders in a truly global classroom. Technology advances in course delivery allow higher education to extend their distance education program offerings to bring the concept of globalization even closer to a reality (Woodard, Shepherd, Crain-Dorough, & Richardson, 2011). Simonson (2015) cautions that higher education must support a strong technology infrastructure for their distance education

programs to extend to a global presence, but it is truly the professors, instructors and teachers who will ensure a successful distance education program through major pedagogical shifts designed to advance global leadership.

Goals and Objectives

The goals for this practice session include the following:

- Participants will have the opportunity to develop an understanding of the concept of *global leadership* as it applies to education.
- Participants will have the opportunity to develop an understanding of the process for international collaboration in course development and teaching.
- Participants will have the opportunity to examine a distance education course module designed to engage graduate students from across the world.

The objectives for this practice session include the following:

- Participants will engage in discussions concerning the meaning of *globalization* within the context of their own discipline or field of study.
- Participants will engage in discussions regarding the feasibility of developing or continuing international collaborations within the context of their own institutions.
- Participants will engage in an examination of possible technology platforms, which may be appropriate within the context of their institutions.

Description of the Practice

Professors in educational leadership programs from each of the three universities collaborated to develop a course in leadership designed to allow students from these countries to grapple with global issues facing schools. Presenters will share the goals and objectives of the course, the syllabus, and the method of online delivery. Discussion will include insight into the logistics for international collaboration.

Discussion

The idea of international partnerships and collaborations is certainly not unique to this particular project. Faculty members have led study abroad programs, co-authored articles, presented at conferences, etc., for many years with colleagues from other countries. What is different about this proposal is the development of coursework, and potentially, an entire graduate program, that focus on the concept of global leadership by actually providing students opportunities to develop knowledge and skill in global classroom. The hope is the building of partnerships among our graduate students, which will result in long-term collaborations among our schools.

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Conversation: Using Digital Tools and Platforms in the Undergraduate Humanities Classroom

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Abstract: Humanities instructors are often encouraged to incorporate new digital tools and technologies into the undergraduate classroom. More engagement with technology, it is thought, may enhance student investment in humanities coursework, whether by connecting cultural materials to students' digital lives or by imparting marketable skills. But as many a failed "iPads-for-all" program has shown, technology alone does not enhance student learning; teaching technologies must be carefully selected and appropriately implemented. Most importantly, digital tools and platforms must support the core competencies practiced in the humanities classroom: critical reading and thinking and careful writing and revision. This conversation session will introduce attendees to a number of free, open-access tools and platforms that have been successfully adopted by humanities instructors across the curriculum and at all levels of college instruction, and will offer audience members the opportunity to share experiences and best practices with these and other digital teaching technologies.

Literature Review

While digital pedagogy has been of concern to instructors since at least the rise of the personal computer in the 1980s, the field has recently been invigorated by the proliferation of freely available web-based tools and platforms and by new work in the area of digital humanities. The following texts will inform our conversation about the role of digital pedagogy in the humanities classroom:

- Beetham, H. (2013). *Rethinking pedagogy for a digital age: Designing for 21st century learning*. New York: Routledge.
- Benmayer, R. (2008). Digital storytelling as a signature pedagogy for the new humanities. *Arts and Humanities in Higher Education*, 7(2), 188.
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Goals and Objectives

Attendees will be introduced to a number of free, open-source digital tools and platforms that support core humanities skill sets: writing and revision (expository, expressive, professional, and creative), evaluation and curation of cultural materials, and text and image annotation. Reed and Warnick will then facilitate a discussion about the advantages and pitfalls of using such tools in the classroom. The facilitators will offer examples from their experiences using these digital tools in their teaching, but the majority of session time will be spent in conversation with attendees, who will share their experiences, advice, and concerns.

The discussion will proceed from the assumption that digital technologies, when used correctly and in the proper proportion, enhance rather than undermine the learning potential inherent in the undergraduate humanities classroom. The facilitators may entertain questions and comments about Learning Management Systems including Sakai, Blackboard, and Canvas, but the session will not be allowed to devolve into a litany of complaints about such systems. The session also will not examine any one tool or platform in detail. Instead, attendees will leave the conversation session equipped with a new set of tools—which they may explore further depending on their own and their students’ pedagogical needs—and with basic “best practices” for incorporating digital tools into classroom activities and projects.

Description of Topic to be Discussed

This conversation session will focus on tools, platforms, and best practices for meaningfully incorporating technology into the humanities classroom. The facilitators will introduce attendees to a number of web-based tools that have been used successfully in undergraduate humanities classrooms, including Omeka, WordPress, Scalar, CommentPress, Genius, and Hypothesis. Audience members will also have the opportunity to recommend tools and platforms with which they have found success. Rather than simply listing tools, however (of which there are hundreds, with varying levels of utility and ease-of-use), discussion will focus on best practices for implementing digital tools into the undergraduate classroom. More particularly, participants will discuss and analyze which platforms and tools best support those skills that humanities instructors are ideally suited to teach: reading, writing, thinking, analyzing, communicating, presenting, etc.

Facilitation Techniques

Reed and Warnick will begin the session with a short slide presentation that introduces a number of digital tools and platforms well suited to the undergraduate humanities classroom. These will include platforms for presenting student writing (WordPress, Scalar, Medium), for curating digital exhibits (Omeka), for digital storytelling (Storybird, Sway), and for textual annotation (Genius, CommentPress, Annotation Studio). Reed and Warnick will briefly outline the diverse ways these tools can be used in the humanities classroom, providing examples from their own teaching experience. Audience members will have the opportunity to ask questions about the tools/platforms named in the presentation. Reed and Warnick will then open the floor for contributions from attendees who have used digital tools/platforms in their own teaching and wish to share experiences, both positive and negative. The conversation will follow the pattern established at THATCamps (The Humanities and Technology Camp) and other unconferences: audience members will be encouraged to contribute their expertise to the pool of collective knowledge. During the conversation Reed and Warnick will keep a running list of tool and platform suggestions generated by the audience; this information will be recorded in a Google document that will be shared with all attendees along with Warnick’s resource site for digital writing (<http://digitaltools.quinnwarnick.com/>). These resources will reduce the need for audience note-taking, thus encouraging a more lively conversation.

Conversation: Using Information Literacy to Transform Reading

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Abstract: This conversation will discuss an innovative reading curriculum model that mirrors trends in best practices in that it strives to teach reading and information literacy skills through a multi-disciplinary context with the support of reading and library faculty. This reading curriculum was created for a developmental education population, helping underprepared students gain skills early in their academic career to help them adopt and apply these skills into their college-level courses. The reading curriculum concentrates on the role library databases can play in offering a type of open-education resource (OER) content other than that typically associated with open-web materials. Lastly, this innovative curriculum combines best practices from various educational fields, including information literacy instruction, contextualization, project-based learning, and developmental education. Ultimately, this conversation will discuss how to incorporate these best practices of teaching reading and information literacy skills into any content area curriculum.

Literature Review

The workplace demands that employees analyze and evaluate information to solve problems. Unfortunately, increasing numbers of students are underprepared, and do not possess the skills employers desire, therefore, students must be taught literacy skills to locate and analyze complicated information, to solve problems encountered while reading, and to connect ideas and concepts (Gruenbaum, 2011). Ultimately, students need to develop a keen understanding of core academic habits (reading and information literacy), which will lead to greater retention and academic achievement if these skills are taught in context.

A well-designed reading curriculum that integrates reading and information literacy skills can increase student retention, improve grades, increase collaborative learning, and improve critical thinking by connecting concepts and skills from different disciplines. Additionally, the use of OER (open-education resources) from library databases gives students an opportunity to increase critical reading and research skills using relevant sources; this leads to increased confidence and skills needed when tackling academic texts and tasks in college-level courses and beyond. This curriculum addresses a gap in the literature which include little research regarding using library databases as OER materials to assist developmental reading students attain college-level literacy skills.

Lei et al (2010) argue that even though college students are expected to read advanced-level academic materials, they are often not equipped with the necessary skills to comprehend what they read successfully. The authors argue a variety of specific reading strategies must be explicitly taught to students to improve their success. Gruenbaum (2012) makes a similar case, arguing that students' difficulties with reading affect their ability to write and research effectively. Gruenbaum (2012) states students "must be taught the skills to locate and analyze complicated information, to solve problems they encounter while reading, and to connect ideas and concepts" (p. 111) in order to succeed in college and in their future professions.

Perin (2011) offers contextualization as an important framework for addressing college students' reading difficulties. Perin defines contextualization as incorporating reading instruction into "disciplinary topic areas" (p. 1). Arp et al (2006) discuss a similar trend in information literacy instruction in which library faculty collaborate with other disciplinary faculty to integrate their curriculum through various forms of co-teaching opportunities. These models have the benefit of offering students a deeper level of learning, supported through the additional faculty members involved in their learning process and the added time spent on challenging projects.

This curriculum fosters and models peer learning and teamwork among developmental students through project-based learning, while providing a better organized and integrated presentation of two academic skills, reading and researching, which are essential for academic success (Mazella, Heidel, and Ke, 2011). The curriculum also exposes students to the vast open-education resources of library databases and instructs them on how to navigate the plethora of resources successfully, as well as how to locate and analyze complicated information (Gruenbaum, 2011). Finally, this curriculum seeks to understand how facilitating student learning through a multi-disciplinary context,

which incorporates reading and information literacy skills, can assist students to utilize those skills needed to be successful.

Students participating in this curriculum and the traditional reading curriculum were given pre/post-tests assessing reading/information literacy outcomes. The tests were scenario-based and graded on a scaled rubric. Institutional data regarding completion rates and semester-to-semester persistence was also obtained. Creating this curriculum has provided developmental students a seamless college experience for the first semester of school that has led to higher post-test scores in reading strategies and information literacy as well as higher persistence rates when compared with the traditional reading course this new curriculum will replace. The courses piloting the new curriculum had a 77% persistence rate from Fall '14 to Spring '15 compared with the 72% persistence rate of developmental students in the traditional reading courses. Interestingly, students in the traditional course had 83% completion rates, but 11% of those students failed to persist, while the courses piloting the new curriculum had a completion rate of 72%, which indicates that even students who did not successfully complete the class persisted.

Goals and Objectives

This conversation will ultimately discuss how to incorporate best practices of teaching reading and information literacy skills into any content area curriculum. The conversation will begin with a brief discussion of our research and the problems we see students facing in every college class. From there, we hope to address the importance of a research, which utilizes open-education resources to facilitate critical thinking, synthesize, and reflection through a project based curriculum.

Description of Topic to be Discussed

This conversation will discuss an innovative reading curriculum model that incorporates best practices to teach reading and information literacy skills through a multi-disciplinary context. This conversation is extremely important because most students entering college are underprepared and struggle in their content area college classes. These best practices include active learning, contextualization, and collaboration, which assist students in attaining college-level literacy skills. Most importantly, this model curriculum can be applied to any content area course whereupon students will not only be more successful, but also more likely to persist and complete their college degree.

Facilitation Techniques

We will facilitate the conversation by modeling best practices. First, we will engage the audience through a mini Socratic Smackdown. We will continue to facilitate the conversation through active learning techniques, such as think-pair-share and a jigsaw. Through these activities, we will not only engage the audience, but also allow them to thoughtfully consider how they can transform their instruction and curriculum.

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A Conversation on Student "Resistance" in Multicultural/Diversity Classes: Reduce? Sidestep? Use?

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Abstract: Courses in and elements of multicultural/diversity education are ubiquitous across all degree programs, yet simply "taking a course" in something does not guarantee that students have learned or internalized the ideas presented in the course, and student "resistance" to ideas presented in multicultural/diversity education has been long been recognized, and shows no sign of diminishing. I hope to join colleagues from many disciplines in a conversation about ways we have found to reduce, sidestep, or perhaps even use such student "resistance" when we teach about multiculturalism and diversity. Participants are encouraged to bring one-page handouts on strategies they have used successfully, as well as unresolved questions and issues to share!

Literature Review

At the heart of Freire's (1970/1993) critical pedagogy lies his conviction that the learner's lived experiences must form the basis for teaching and learning. A basic tenet of constructivist psychology is that the knowledge that has meaning for us, which we use to interpret and act within our world, is knowledge that has been constructed upon and integrated with the prior beliefs and understandings which arise from our past experiences (Piaget, 1970; Vygotsky, 1978). However, the use of their own prior life experiences to shape their actions as adults can be problematic for what is still a majority of white, middle-to-upper-class college graduates (U.S. Census Bureau, 2013), since they will have to teach, work with, market to or otherwise interact with clients, students, and indeed neighbors and fellow citizens, who are increasingly diverse in socio-economic status, cultural background and home language. To address this issue, most colleges and universities require at least one course in multicultural education or diversity issues of all students who graduate, yet we all know that simply "taking a course" in something does not guarantee that students have learned or internalized the ideas presented in the course.

In fact, the phenomenon of student "resistance" to ideas presented in multicultural/diversity education has been recognized since principles for such education were first formulated, and shows no sign of diminishing (Banks, 2013; Garrett & Segall, 2013; Nieto, 2010). This resistance may arise from a number of sources, from a natural human tendency to believe that our own experiences are "the norm" and to resist changes in long-held schemas about how the world works (Piaget, 1970) to a often-unacknowledged fear (at least on the part of those of us who have so far benefited) that any major changes in the current status quo will be to our personal detriment. In order to teach courses on multiculturalism/diversity effectively, we must find ways to go over, under, around or through such resistance, to help students become open to changing long held views and explore the exciting potential of a society based on not just a tolerance of, but a respect for and even valuing of many kinds of diversity.

Goals and Objectives

I would like to join colleagues in a conversation about ways we have found to reduce, sidestep, or perhaps even use such student "resistance" when we teach about multiculturalism and diversity, whether in classes based on these ideas, or as parts of other classes in our various disciplines. I am hoping to draw participants from a variety of fields, since, as stated above, almost all degree programs now require such courses and I think that we can all benefit from ideas and approaches used by instructors in other disciplines, which we in our disciplines may not have considered.

Specific Topics

Obviously, I want the entire participant group to set and maintain the agenda of topics or questions that most interest us, but I anticipate we might end up addressing questions such as:

- 1) How can we broaden the concept of diversity to include, but move beyond the traditional categories of race/ethnicity and language?
- 2) How may we use personal narrative (our students', our own, and those in the larger social milieu) to "open the door" to considerations of the sources and effects of common practices in our society on various groups of diverse ethnicities, abilities, cultures, languages and socio-economic statuses?

3) How can we create a safe and respectful environment for both "mainstream" and "minority" students in our classrooms as we address such "hot-button" issues, since we know that people don't share or learn well when they feel threatened?

Facilitation Techniques

I will open the discussion with the above questions, and see where we go. I will also have ready to share a Handout briefly describing several instructional strategies and listing some resources I have used with reasonable success to encourage students at many levels to both share their own backgrounds and cultures and to become more open and empathetic to those from cultures and backgrounds very different from (and often less advantaged than) their own. If possible, I would like to contact potential participants prior to the conference to encourage them to bring Handouts on and share similar strategies and resources they have used, and in any case, I will set up a shared Google folder or similar shared-resource site where we can all post such things after our conversation, and also stay in contact for future conversation and possible joint work.

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Wednesday
February 10, 2016
Session 2
11:10-12:00 PM

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

Perceived Difficulties in Writing Research Papers among Advanced ESL Learners: An Action Research Study

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Abstract: Advanced level ESL students spend the semester meeting the demands of producing a college level research paper that puts their research, reading, writing, and paraphrasing skills to test. Writing a research paper focuses on, through the usage of critical thinking skills, the analysis and synthesis of the information gathered while reflecting the students' language skills, development of learner autonomy and recognition of information literacy (Lin, 2007) being the ultimate goals. In this action study, the presenter introduces the findings that exhibit the students' perceived challenges that stem from unfamiliarity with the research process and lack of language skills, perceived benefits in relation to their language acquisition and academic goals, and expectations as they move towards the completion of the research paper. The participants who have studied with the presenter during three academic terms are all high school graduates who are candidates for college admission. The data collected are provided in descriptive and analytical essays written by the participants, responding the presenter's exploratory questions. Results, which are presented in categories arranged based on the commonalities in participants' responses, reflected a wide range of aspects of the research and writing process that students had already been cognizant or became aware of in the course of the study; they also exhibited the need to equally concentrate on academic skills and language skills. In the light of the work done and the literature reviewed by the presenter, she will specifically itemize what has been working in the classroom, and what changes will take effect.

Literature Review

Lin (2007) describes an independent learner as the learner who goes beyond being a literate individual by understanding the value of information literacy (2007). An information literate student continues learning throughout life by enquiring to identify research needs, evaluating information, communicating that information effectively, and developing an insight into the issues surrounding the use of information. Our students come to us as well educated students in their native lands; however, their approach to learning can be passive and without the critical analysis in the learning process. When asked to choose a topic they are interested in, they do not know which topic they wish to look into. When they eventually target their topic, although assistance from their teachers is available (Lin, 2007), they need individual assistance to initiate the process of finding the material. The role of the teacher as the resource provider (Harrison & Killion, 2007) turns into guidance provider which may not be sufficient encouragement for students whose past educational experiences may be contributing negatively to their adjustment to their present educational style (Lin, 2007).

Kasper (1998) who taught content-based ESL courses uses a text that contains readings in ten different disciplines. His students are asked to choose a possible subject area in one discipline, such as environmental science. The subject area can be, as an example, greenhouse effect. He chooses this pedagogical approach claiming when students are invested in a learning experience with a subject that they are interested in, developing language skills takes a more natural and meaningful direction as they are evaluating information they actually wish to know about. The author's students who took part in this research consistently expressed their willingness to write about topics they have an interest in.

Alvarez's (2007) research findings also reflect the difficulties of students in terms of critical reading, which leads to difficulties developing and articulating original ideas. In her research, she looked into techniques that would help students with finding and evaluating sources.

Methodology

This study was conducted in the author's two 500 and 550 level reading and writing classes (i.e advanced levels). The 16 students in those classes were asked to write an essay on their research practices that they employ prior to writing a research paper and the writing process itself. Specifically, they were asked to identify and discuss the difficulties encountered during the research process, how those difficulties were reflected on their writing, their

expectations from their teacher in terms of their difficulties, and the benefits of writing a research paper. The author collected the data in essay format and the essays are analyzed to find common themes.

Results

Difficulties – Research

- Choosing academic sources is a challenge.
- The length of the content can be intimidating if it is long, and may be perceived as not trustworthy if it is short.
- Going to the library is simply not done although the students are familiar with library practices.
- They do not know how to incorporate material that does not support their thesis.
- Vocabulary is challenging.
- Research is very time consuming, and time is always a restricting factor.

Difficulties – Writing

- Organizing the introduction is extremely difficult. Forming the thesis statement is hard, especially if they are working on an assigned topic as opposed to a topic of their own choice.
- Combining the ideas in the sources with the student's own ideas is overwhelming.
- Conclusion becomes a repetition.
- Length of the paper is always a source of complaint which stems from all the difficulties listed above.

Perceived benefits

- Grammar is perceived to be the most problematic area in writing and they consider writing a research paper is good practice in grammar.
- Learning the writing format is good practice.
- Learning how to use in-text citations and how to format references makes them feel confident as they have never had to become familiar with this topic.
- Some students liked creating specific questions about a topic and looking for sources based on those questions.
- They become aware of the importance of academic vocabulary in writing.

Expectations in the classroom

- Students expect teachers to make corrections to their assignments as they consider the corrections the most significant way of improving their writing skills.
- One important suggestion was to have small assignments throughout the term focusing on sharpening research skills and getting familiar with writing format prior to producing a sizeable research project.
- The students feel quite strongly about being able to choose their own topic and expect to be permitted to work on a topic of their choice.

Discussion

My findings in this action research study bring to light concepts that have been dominating my classes or need to be emphasized more; such as, vocabulary skills, organization in writing in lower levels, small research assignments throughout the term, paraphrasing, trips to the library, enhancement of study skills, and presentations in the class by our former students. With a research paper assignment, a big reward for me is to see my students' ideas, opinions, and thoughts although it is a great effort for them to paraphrase and critically analyze what they read in their sources. A bigger reward is that they realize all their cognitive and linguistic resources need to be used. I believe the biggest reward for all of us is that they can express themselves without inhibition, and be critical about others' work.

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Developing Source Integration in Student Writing: An Interdisciplinary Lesson Study

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Abstract: We discuss the results from a collaborative SoTL project examining source integration in student writing in two general education courses: Freshman Composition and Business Communication. This study grew out of a common dissatisfaction in the ability of students to effectively integrate sources and their tendency to string quotes together in their writing. Howard and Jamieson indicate in the Citation Project that students struggle with source citation because they have not or are unable to understand the source material. Their findings echo Kennedy's (1993) research, which found that truly fluent readers engaged in more planning than the less fluent readers and they also used more reading strategies. Appropriate reading and writing strategies are needed to quote source material. Wells (1985, p. 63) asserts, "Where to incorporate a quote in text, how much of a passage to use, how to edit a quoted passage using brackets and ellipses, how to work a quote into text fluidly and coherently, and how (and whether) to introduce it, are all considerations beyond the abilities of basic writers, who need sufficient practice, feedback, and reading experience with quoted material to produce a research paper. . . ." An interdisciplinary team of five faculty members representing the library, writing center, communication, and first-year composition participated in a Lesson Study project to find more effective methods of helping students to develop their ability to quote source material. Our findings suggest that students can better integrate citations when they are shown how, practice, and reflect on how they use sources in their writing. The results indicate the importance of teaching the integration of sources separately from documenting sources. But as with any skill, students need many opportunities for practice.

Literature Review

Research conducted by Wells (1985) and Kennedy (1993) shows that basic writers are unable to demonstrate skills that are required to write a research paper using sources appropriately and ethically. Cooper (2007) states that the practice of patchwork research emphasizes the problem students have distinguishing between knowledge and information. Vardi (2012) points out that students' are challenged when instructors teach referencing from a plagiarism perspective as opposed through the lens of critical thinking. This notion of better connectivity between referencing and context is supported by the work of Stagg et al. (2013) who argue that because "referencing, like research and other academic disciplines, has often not been taught explicitly" the attitude of first-year university students toward referencing is that just of compliance. Owens and White (2013) conclude that in order to help students think beyond compliance and integrate sources responsibly and effectively the need to nurture source integration in student writing becomes even more urgent.

Methodology

Cerbin (2011, p. 105 italics in the original) describes lesson study as "a method through which teachers can build the kind of *pedagogical content knowledge* that could not only improve their own teaching but move the practice of teaching forward in their fields." The lesson study process begins with identification of a concept or procedure that students have difficulty mastering. For this project, we identified source integration as the concept we would like to examine. We developed a week and a half of lessons focused on developing the necessary skills for source integration. The lesson that was the focus of our study was designed for an hour and twenty minute class because the two team members who would use the lesson taught on this schedule. When the first instructor taught the lesson to a second-year business communication class, the lesson study team took extensive field notes on the students' performance/behavior during the lesson. The instructor also wrote a reflection on how she believed the lesson went. We debriefed on the strengths and weaknesses of the lesson using our field notes, student exercises, and student reflections. We used this information to revise the lesson. The revised lesson was taught by a second instructor in a first-year English Composition class. Again, the other team members took field notes of students' behaviors and reactions to the lesson, collected student exercises, and reflections. We used this data as well as the final research projects to analyze the overall effectiveness of the lesson.

Our lesson study took place at an open enrollment regional campus of a large urban university in the Midwest. The level of preparation and the skill level varies greatly among the students. To address the skill variation among the students, we developed a lesson on source integration that incorporated opportunities for application, feedback, and reflection.

Data Analysis and Results

We collected quizzes on what students knew about citation before and after the lesson. We also collected their practice paragraphs and reflections on their integration of sources in their paragraphs. Finally, we collected and analyzed students' final research projects for each course. The quizzes on source integration indicate that students knew they had to introduce a quote, but they were less sure about where to position the signal phrase. The practice paragraphs indicated students were continuing to work through the intricacies of source citation. Students' reflections on the quality of their practice paragraphs showed that they understood what they were supposed to do even though the paragraphs did not execute it well. In their final research project for their respective courses, we found that the second-year students seemed to struggle more than the first-year students in source citation. The difference in performance between second and first-year students may be due to differences in the writing assignments, amount of attention given to source citation in the courses, and to students' beliefs about the importance of citation in the course.

Discussion and Conclusion

Our lesson focused on showing students how to integrate sources into their writing. Our findings suggest that students can better integrate sources when they are shown how, given time to practice, and reflect on how they are using sources in their writing. The results indicate it is important that integration of sources be taught separately from documentation of sources. But as with any skill, students need many opportunities for practice. Instructors may need to revisit the instruction more frequently throughout the course.

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Practicum-Based Learning Environments: The Combination of Direct Instruction and Video Games

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Abstract: Direct Instruction is a widely used technique in the classroom because of its ability to be applied to any content area. However, it is limited in its ability to allow a student to perform the knowledge or skills they have learned. Instructional Gaming can provide a crucial bridge between learning and application. Using the concepts the researcher has developed in her dissertation research, this session will showcase a unique learning model that combines Transformational Play, developed by the educator and researcher Sasha Barab, and direct instruction to create a practical learning environment. The literature that supports this method will be discussed and specific lesson plans and techniques will be examined and demonstrated in order to give participants the tools to create practical learning modules of their own.

Literature Review

Direct Instruction is a popular teaching model that is used in most traditional based classrooms. Examples of direct instruction include lectures, case studies and demonstrations; its main purpose is to relay factual information to the learners. Chang and Fisher describe traditional classrooms as cookie cutter models, commonly used to quickly progress students through content areas (Chang & Fisher, 2001). “Mandl and Reinmann-Rothmeier (1995) classified the traditional approach as a “system-mediated learning environment” which implies that the learning is primarily a passive and receptive process” (Chang & Fisher, 2001). However, it is a common used model because it works in a variety of subject areas with fast paced timeframes. Application of the knowledge is normally discarded, even though it can help students understand complicated concepts easier. This is where the use of video games and simulations can provide direct instruction with the needed practical application, creating an optimal learning environment (Barron, 2015)

Sasha Barab described Transformational Play as a learning environment in which curriculum and play is combined to create a diverse learning experience. When students play, they become interested in the topic and gain satisfaction and intrinsic motivation when they complete the game. Using this technique in conjunction with the effectiveness of direct instruction can help instructors teach and apply critical concepts. Students learn the basics through direct instruction and then apply their knowledge in simulations and video games. Video games create learning environments backed by sound instructional theories by Bandura (social cognitive theory), Vygotsky (scaffolding) and Dewey (curiosity and interest). Video games create a model where students can learn, play and experiment, often with concepts and subjects that they would normally dismiss as uninteresting. Educators that are interested in using video games to create a unique learning experience can benefit from this easy to implement learning design.

Goals and objectives for the practice session

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

- Learn the benefits of both direct instruction and video games/simulations
- Identify theories that support the use of video games in education
- Identify several examples of video games that can be used in a variety of subject matters
- Create lesson plans that are both informative and practical
- Effectively combine direct instruction and video games into their lesson plans

Description of Practice

This presentation will focus on the concepts that I developed in my dissertation, *Comparison of a video game based learning environment and a traditional learning environment*. In my studies, I discovered that there is a need for diverse learning environments, especially in the STEM areas. My solution for this need was to create two learning modules; the first gives the student a solid basis of the content. The second allows the student to use their knowledge in a video game that contains elements from the lesson plan. Many video games are being created with instruction in mind. For example, MineCraftEdu has an entire dashboard for instructors to control the learning environment. Forums are devoted to lesson plans that address core standards and fellow instructors are available to

help with implementing them (TeacherGaming LLC, 2015). SimCityEdu has several different simulations that tackle complex issues in science, politics and pollution (Glasslab, 2014). Portal 2 has an add-on that allows students to create their own puzzles for their peers to complete (Valve Corporation, 2015). I want to facilitate discussion concerning the literature about what makes a successful learning environment. Then, I will show concrete examples of lesson plans and classroom setups that will allow for students to learn, apply, discover and grow. I will also showcase the learning modules and results I used in my research where I combined direct instruction about pollution and the computer game SimCityEdu: Pollution Challenge.

Discussion

This presentation is meant to inspire educators by showcasing the learning module I developed that combines direct instruction and application of knowledge through video games and simulations. When instructors are presented with the idea of using a video game to teach, they think of games that are only used as a reward. However, there are many video games that allow for application of complex and broad topics, many of them able to be customized to very specific learning goals. In my research, I took a group of students and presented the tough issue of pollution and energy management. They learned about the complexities of a city's budget, the different sources of energy, the concerns about job loss and the solutions for cleaner air. When they learned the basics, they were able to apply their knowledge in the game SimCityEdu: Pollution Challenge. The students witnessed their solutions and the consequences of their actions play out in real time (with sometimes good or bad results). This unique learning experience allowed them to think and reroute their decisions; their original thoughts about pollution control were altered as they started to ask tough questions. This presentation will emphasize on how to create scenarios where students will not only learn, but will be able to apply their knowledge and start to critically evaluate the material they are being taught.

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The Power of Reliable Rubrics: Promoting Equitable and Effective Assessment Practices through Collaboratively Designed Rubrics.

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Literature Review

One of the challenges of implementing performance assessments is achieving validity and reliability, as evaluating such work tends to be highly subjective. However, scoring rubrics can increase the credibility of the assessment by providing definitions for rating levels that should increase inter-rater reliability (Dunbar, Brooks & Kubicka-Miller, 2006; Hafner & Hafner, 2003; Jonsson & Svingby, 2007; Simon & Forgette-Giroux, 2001). The rubric or scoring guide can provide multiple raters with a shared understanding of the meaning of each classification through examples, non-examples, and detailed descriptions of behaviors for which to look in student work. Incorporating rubrics into the assessment process can also enhance student learning by playing a key role in the formative assessment process (Jonsson and Svingby, 2007). When students receive rubrics in advance of completing an assessment, they have a more accurate picture of the expectations for the final product (Petkov and Petkova, 2006). It is argued that feedback should be clear and specific (Hattie & Timperley, 2007; Shute, 2008), and referencing a rubric when delivering feedback can aid in this process.

Rubrics not only benefit student learning but can also illuminate strengths and weaknesses in instruction or in academic programs (Andrade, 2005; Powell, 2001). Song (2006) used rubrics to evaluate teacher candidates and claimed they assisted in the process of identifying weaknesses and targeting program changes.

Goals and Objectives

- a. Participants will gain evidence and insight into how rubrics can: help define success criteria for an assessment; and increase scoring agreement across raters
- b. Participants will learn about a model for: collaborative writing of assessment tools and rubrics and associated professional learning; introducing new assessment tools to other faculty; and piloting the new tools and testing the inter-rater reliability of the tools using a data management system (Tk20).

Description of practice to be exemplified

The session will begin with an activity that engages the audience in an evaluation process first without a rubric provided and then using a common rubric. Increased reliability will be modeled. This opening activity sets the rationale for investing time in creating and utilizing rubrics.

Presenters will describe their own context and the accreditation demands originally influencing the decision to form the interdisciplinary rubric writing team. They will then synthesize research on the use of rubrics in the assessment process, drawing from a number of studies conducted in higher education. They will also describe the Community of Practice (Wenger, 1998) theoretical approach to analyzing the professional learning that occurred amongst team members as rubrics were created and refined. Presenters will describe the process of how rubrics were written collaboratively, aligned to standards, and aligned to assessment tools. This process involved collaborative writing, peer revision, discussion, and negotiation of final products that would meet the needs of many teacher preparation programs. We will also describe how these tools were disseminated to other faculty members. Finally, the team will present strategies for analyzing the reliability of newly constructed rubrics and resulting actions. At the time of the presentation in Spring, we will be able to present inter-rater reliability data from the Fall 2015 semester. These data will be generated from the college assessment data management system (Tk20).

Visual data displays will help tell our story. Exemplars will be shared in the form of handouts such as the standards guiding rubric creation, the actual final products, and tools for inter-rater reliability exercises. The team will then discuss any next steps as a result of reliability analyses.

Discussion

Rubrics can be powerful tools for increasing the reliability of assessments, since raters all share a reference point for criteria and behavioral indicators for each possible rating. In addition, the rubric creation process itself can help

faculty negotiate their own shared understanding of what constitutes placement in each rating level as well as what their expectations are for the students in they teach. This adds equity to assessment processes when common assessments are used across programs. Finally, the use of rubrics in the assessment process allows for powerful feedback conversations with students in which instructors can reference explicit criteria to evidence why a student received a particular rating. This process can foster improvement and enhance the learning process.

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Urban Legend or Practical Pedagogy: Return of the Teaching Ninjas

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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. Building on CHEP 2015's popular "Are You a Teaching Ninja?" this year's game emphasizes research surrounding e-learning environments. The session will highlight evidence-based pedagogical theories that are easily adapted to both online and physical classrooms 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 online pedagogy, instructor best practices, and many generally held beliefs about students' learning abilities. A brief summary of foundational literature follows.

How can you best organize either physical or online classrooms to foster learning? Is it more helpful to students to delay feedback on assessments or provide immediate feedback (Shute, 2008)? What are the best practices for instructor feedback (Hart, 2012)?

When teaching online, what are some of the recommendations from research? Is it practical to encourage self-reflection in online courses (Means, Toyama, Murphy, Bakia, & Jones, 2010)? Can discussion boards effectively replicate in-depth critical conversations that are part of an in-person class (Rourke & Kanuka, 2009)? Should the tone of the content be formal or personalized (Clark & Mayer, 2011)? How much emphasis should an instructor put on a beginning of the semester introduction (Wilson, Wilson, & Legg, 2012)? For first- and second-year undergrads, is it best to design a course that favors experiential and self-guided learning (Kirschner, Sweller, & Clark, 2006)? Does listening to a lecture online stack up against listening in person (Kinash, Knight, & McLean, 2015)?

There are many theories regarding how students learn. However, what are the characteristics of "digital natives," and do we need to keep in mind their predilection for gaming, multitasking, and love of technology (Bennet, Maton, & Kervin, 2008)? Is the learning pyramid theory valid (Lalley & Miller, 2007)? Taking into account what we know about learning styles, is an online classroom the best method for plugging in to different student's learning styles (Bruyckere, Kirschner, & Hulshof, 2015; Lilienfeld, 2010)?

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 "Return of the 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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E-Portfolio: A Celebration of Learning

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Abstract: The e-portfolio is an electronic collection of student work that reflects academic and professional progress and accomplishments. E-portfolios facilitate accountability and autonomy, encourage students to take responsibility for their own learning process and to demonstrate progression toward competency. The aim of using e-portfolio is to keep students focused on the learning process. Reflection is an essential component of an e-portfolio. It facilitates students to build a deeper understanding of the progression of their learning through ongoing self-reflection. The reflective process of the e-portfolio can provide a connection between theory and practice, linking knowledge gained in the course with professional actions in the practice environment. Our collaborative e-portfolio project was initiated at the 2015 CIDER Innovations in Higher Education Pedagogy Conference. This Practice Session will explain how we accomplished the collaborative endeavor between Nursing and Instructional Technology in a virtual context and describe how our collaboration around core interests allowed us to transcend disciplinary, institutional, and geographic boundaries. We will also provide an overview of the use of e-portfolio as a teaching-learning strategy, compare and contrast two platforms and approaches to development, explain how it was implemented into a graduate nursing program, and engage participants in a discussion of how they might apply the e-portfolio teaching-learning strategy.

Literature Review

The E-portfolio is an electronic collection of student work that reflects academic and professional progress and accomplishment. It provides students a web-based structure to collect and store appropriate materials that establish a body of work representative of their learning over the course of program study (Green, Wyllie, & Jackson, 2014). E-portfolios facilitate accountability and autonomy, encourage students to take responsibility for their own learning process, and demonstrate progression toward competency. The essential aim of using e-portfolio "... is to keep students focused on learning rather than on individual projects or products – e-portfolios are part of the learning process, not a result of it" (Garthwait & Verrill, 2003).

Reflection is an essential component of an e-portfolio. It facilitates students to build a deeper understanding of the progression of their learning through ongoing self-reflection (Bhattacharya & Hartnett, 2007). Carbonara (2008) found that students' writing samples within the e-portfolio matured over time, with changes occurring along a continuum from restatement of facts to deeper understanding of course concepts. Findings from a study by Wang (2007) suggested the process of creating e-portfolios furthered students to develop technology-related knowledge, and also enhanced active, independent, and motivated learning. Thus, the reflective process of the e-portfolio can provide a connection between theory and practice, linking knowledge gained in the course with professional actions in the practice environment.

Portfolios are often designed to showcase student work and to provide a venue for collaborative assessment of student outcomes. Carbonara (2006) affirmed that dispositions toward professional growth change over time in a program of professional studies. As students demonstrated increased knowledge of instructional technology and showcased learning outcomes, the e-portfolios revealed evidence of increasing advocacy for the use of instructional-technology in their future profession. Additionally, Sanchez, Soto, and Gonzalez (2015) found the quality and quantity of feedback from faculty to students via e-portfolio have a positive effect on student work and students' perception of their work. The e-portfolio allows participants working toward a common cause to obtain a shared knowledge of interests, goals, accomplishments, and aspirations of one another, which reinforces the sense of a community and enhances potential for future collaborative work.

Goals and Objectives

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

- Describe the benefits of using e-portfolio for collaborative learning process
- Explain the process of implementing e-portfolio within a course/program structure
- Explore two e-portfolio platforms and approaches to competency-based learning
- Construct a plan for use of e-portfolio in the online learning environment through engaged discussion

Discussion

Our collaborative e-portfolio project was initiated at the 2015 CIDER Innovations in Higher Education Pedagogy Conference. The four of us met, making a connection around shared teaching and professional interests, during the various conference networking opportunities. Following the conference, we maintained contact and Bekir shared his e-portfolio with Cynthia and Sharon, who both teach in a graduate nursing program. After viewing Bekir's work, and through ongoing discussions related to the use and development of e-portfolios in education, we decided to engage in a project to implement the use of e-portfolio into the masters nursing program. We formally began our work in April 2015, meeting virtually at regular monthly intervals. We subsequently invited David to join us and determined we would document our process to present at the 2016 CIDER conference. This presentation will describe how our collaboration around core interests allowed us to transcend disciplinary, institutional, and geographic boundaries.

This e-portfolio Practice Session will first describe how we accomplished the collaborative endeavor in a virtual context. Next we will provide an overview of the use of e-portfolio as a teaching-learning strategy for graduate education. Following, we will compare and contrast two platforms and approaches to development, and offer online examples of each to session participants. We will then explain how the e-portfolio was implemented into the graduate nursing program, describe the decision points in the process, address lessons learned, and share student feedback. Finally, we will engage participants in a discussion to identify how they might apply the e-portfolio teaching-learning strategy to their own area of interest, consider possible external and internal barriers to implementation, and explore how the use of e-portfolio can enhance scholarship communities.

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Peace Talks: Using a “Dialogical Ethics” Framework to Facilitate Effective Instructor-Student Collaboration in the Undergraduate Classroom

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Abstract: At the 2015 CIDER conference on Higher Education Pedagogy, Abelson and Nelson (2015) discussed their intense and inspiring level of instructor-student collaboration, describing how they collaborate with first-year students in the design of particular assignments and even overall course design at the unit level. This practice session seeks to contribute to participants’ understanding and appreciation of such collaborative learning strategies by applying a ‘dialogical ethics’ model. The practice session will begin with a discussion of the dramatic philosophy of Kenneth Burke, which illuminates the grammatical, rhetorical, and dialogical mechanisms by which instructor-student collaboration fosters enhanced levels of student engagement in the process of education—including investment, ownership, and empowerment. Session participants will then be engaged in a facilitated, interactive exploration of how the Burke-inspired notions of (i) disparate grammars and recalcitrance, (ii) consubstantiality and irony, and (iii) dialogue and peace treaty might suggest productive avenues for greater instructor-student collaboration at the assignment-design, unit-design, or course-design level.

Literature Review

At the 2015 CIDER Conference, Abelson and Nelson delivered “Collaborative Course Planning in the Learner-Centered Classroom,” premised on the idea that involving students in the process of course design and assignment design will increase student engagement, and hence student learning. Abelson and Nelson described how they collaborate with their students in the design of assignments and even, to some extent, course design. Drawing upon Weimer’s (2002) influential work on learning-centered teaching, Abelson and Nelson offered correlations between her “characteristics of learner-centered teaching” and their own instructor-student “collaborative course planning.” At the same time, Abelson and Nelson acknowledged the challenges of engaging students in such collaborative work. According to Leamson (1999): “If it is true that many freshmen enter college believing that all schooling is a make-believe world, they will be, from the outset, at cross purposes with those of their teachers who see things quite differently. Disabusing students of their view of schooling as a game-like contrivance is a high priority goal” (p. 56).

Abelson and Nelson’s discussion of faculty-student collaboration, both its anticipated benefits and its obstacles, suggested parallels to my own “dialogical ethics” model of rhetorical engagement (Murray 2002), influenced by the dramatic philosophy of Burke (1973; 1984). Those parallels promised to usefully inform our thinking about instructor-student collaboration. Specifically, that model—and its related notions of (i) disparate grammars and recalcitrance, (ii) consubstantiality and irony, and (iii) dialogue and peace treaty—illuminates the grammatical, rhetorical, and dialogical mechanisms by which instructor-student collaboration fosters enhanced levels of student engagement.

Goals and Objectives

Participants should leave this session with:

1. A better understanding and appreciation of the learner-centered benefits of instructor-student collaboration,
2. A better understanding and appreciation of the obstacles of effective instructor-student collaboration,
3. Concrete ideas about incorporating assignment-level, unit-level, or course-level elements of instructor-student collaboration
4. Greater confidence about implementing assignment-level, unit-level, or course-level elements of instructor-student collaboration.

Description of Practice

Rather than describe a particular practice, this session will feature an interactive discussion of the *parameters* that inform the successful practice of instructor-student collaborations, be they at the assignment, unit, or course level.

The session will discuss three pairs of related considerations: (i) disparate grammars and recalcitrance, (ii) consubstantiality and irony, and (iii) dialogue and peace treaty. These three paired-concepts provide both useful talking points and structural parameters for the design and implementation of instructor-student collaborations. Examples of such collaborations will be provided (if necessary); however, the emphasis of the session will be on facilitating participants' generation of new (or extension of existing) course-specific collaborative practices.

Discussion

The traditional classroom (at least in its worst *The Paper Chase*-type caricature) can be seen as operating with coercively rather than collaboratively. Beginning on day one, the professor “goes over” the syllabus to inform students of what will be happening and what they will be doing, perhaps with the hope that students will “get on board.” If students do not “get on board” and share the same vision of the course, too bad. Generally, if student engagement, student success, and student retention are priority goals, this sort of approach can be a miserable failure. By contrast is the more genuinely “dialogical classroom.” Here, at least in theory, the instructor might bring *everything* to the negotiating table. In this model, the classroom is transformed into a “dialogue of motives” in which the disparate grammars of instructor and students do not continue to exist in an agonistic relationship but are brought into genuine conversation. According to Cullen (2012), “Choice is a key feature of learner-centered pedagogy. Learner-centered practices offer learners control over their learning and create a sense of relevance to learning tasks, thus supporting motivation” (p. 68). This means that students will be more invested in and more engaged in their own education, with both investment and engagement seeming to be prerequisites for maximal learning and success.

But perhaps most important of all, the primary benefit of the instructor meeting students at the negotiating table is that it makes the process fully transparent and promises a degree of good faith between both parties. Imagine if your students saw that you were in this together, with you instead of against you. None of what is being discussed here can guarantee that, but it does promise that more students will be more likely to view their education (or at least your class) in a different and potentially transformative way. As Abelson and Nelson state, students “will not achieve the greatest benefit until they understand that, as an active process, learning requires that they make decisions and take action.” Giving students more decision-making power, in any particular class, over what they do and how they do it can be a highly effective way to accomplish this goal.

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K-12 Technologies Invigorating Learning in Medical Education Classrooms

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Abstract: This session will allow educators to develop a toolbox of free educational technology tools that can be easily implemented in higher education classroom. During this interactive session the featured educational technologies will be demonstrated, a tutorial of how to set up each tool will be delivered, and how each tool can make learning more engaging and fun for both students and faculty. The demonstrated tools are for use in the lecture and/or small group classroom setting and can be immediately incorporated into the use into an upcoming lecture. The goal of the session is for educators to leave with a plan to use one of the tools presented.

Literature Review

Using interactive technology tools in K-12 Education has become more popular with the implementation of Chromebook Initiatives in school districts. As of 2014, over 10,000 U.S. School districts were using Chromebooks in the classrooms (Nilsson, 2014). By contrast, when students enter higher education, they are subjected to traditional lectures where information is delivered in a single directional style (Spence & McKenzie, 2014). Students entering higher education have become accustomed to using technology on a daily basis and it seemed an easy transition for professors to use these same teaching and learning techniques in high education lecture halls. Using educational technology tools to create interactive lectures can allow for learner-centered instruction that provides feedback for instructors to help guide teaching (Wessels, 2007). Interactive lectures that are learner-centered can help to stimulate interest and sustain attention of the students. It also allows for larger learner participation which can lead to a higher level of learning on the students' part (Rehman, Afzal, & Kamran, 2012).

Objectives

1. The educator will develop a toolbox of free educational technology tools that can be easily implemented in higher education classroom settings.
2. The educator will examine the use of educational technologies in the lecture/classroom setting and how it can make learning more engaging and fun for both students and faculty.
3. The educator will identify one educational technology presented and how they can immediately incorporate the use into an upcoming lecture.

Session Outline

Have group turn to a partner for a think-pair-share about educational technologies that they are currently aware of or ones that they are presently using in their classrooms. Set timer. Show effective use of timer. Share out ideas and currently examples of what is currently being used in classrooms. Use Padlet (padlet.com) to collect the responses of members.

Today's session will demonstrate how to incorporate education technology in the classroom/lecture hall by involving participants in each technology presented. There are no passive learners in this session! Many of the technologies shared are focused more on the K-12 classroom but are easily adaptable to the higher education classroom setting. Students will be able to engage with the material and the faculty member through the use of these free web-based educational 2.0 tools. Many of these tools allow for faculty members to collect information about student progress and inform their educational practices. These tools allow for student responses to inform faculty teaching.

Today's Meet (todaysmeet.com): Introduction of website how to use today's meet as a backchannel in the lecture hall. Set up the backchannel for today's session so participants can utilize backchannel to ask questions throughout session. Participants will see how to easily set up the meet and how to use the questions presented throughout the presentation.

Padlet (padlet.com): Return to Padlet wall from the APK portion of the presentation. Padlet is an online bulletin-board like wall to collect and organize thoughts. Easily accessible by all students and can have everyone collaborate simultaneously.

Plickers (plickers.com): Introduction to an upgraded version of clickers where the faculty device collects all the information. Allows educators to collect real-time formative assessment data without students having to have devices. Presentation attendees will be able to experience the use of plickers and answer questions using the software. Brief tutorial of how to set up the software and printing off the signs will be demonstrated.

Kahoot: (getkahoot.com and kahoot.it) Demonstrate the use of Kahoot by playing a kahoot in the presentation. Quickly answer questions, get the correct in the shortest amount of time to climb the leaderboard. Kahoot allows for students to participate in connected learning by competing to answer formative assessment questions using their own device in the classroom. [Short Term vs. Long Term effects of using Kahoot](#) A brief tutorial will be shared for how to immediately set up Kahoot for your next lecture!

Jeopardy: Demonstrate how to use a jeopardy template to engage students in competition among groups to review or introduce key materials heard in session. Student engage with one another to deliberate answers and challenge each other to think analytically. Presenters will share their experience with using Jeopardy in the lecture hall.

Participants are now charged with the task of thinking of one way to incorporate any one of the tools that was presented today in an upcoming lecture. A think-pair-square-share will be utilized to have participants come up with an action plan to use an educational technology.

Goals for think-pair-square-share:

1. Select one technology to try to incorporate into an upcoming session at your institution. *Remember to start small and only undertake one technology at a time. Build upon your experiences!
2. Describe what session you will be using the technology and how you will incorporate it into your session. How will this technology help to reach the objectives of your session?

Participants will share their area of study and how they can incorporate one of these techniques so all participants can help build upon ideas. All ideas will be recorded on a padlet wall so participants can revisit these ideas when returning to their respective institutions.

Revisit learning objectives for session and provide answer for any remaining questions.

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Conversation: Teaching About Intersectionality in Undergraduate Classrooms: Guidelines for Junior Faculty and Graduate Students

Adrienne Edwards, *University of Nevada, Reno*

Abstract: This conversation session will provide a forum where junior faculty and graduate students can collaborate to expand upon existing approaches and create innovative strategies for teaching about intersectionality in undergraduate classrooms. Although intersectionality is better known in articulation as a critical race feminist concept (Crenshaw, 1989), instructors from disparate disciplines have begun to value including an intersectional perspective in their undergraduate teaching. Given the increase in cross-disciplinary attention, more resources are needed to help instructors develop the pedagogical tools necessary to successfully provide stimulating and consciousness raising discourse and classroom activities about intersectionality for undergraduate students. Through facilitated small group discussion and collaborative exploration, attendees will share ideas, strategies, and resources for teaching about intersectionality. Attendees will be provided with handouts of scholarly resources and a template for a course syllabus that serves as a professional development tool that attendees can adapt for use in their courses.

Literature Review

Crenshaw (1989) introduced intersectionality as a critical race feminist concept to explain how race, class, and gender coalesce to create distinct life experiences for African American women that are characterized by marginalization and oppression. Since Crenshaw's classic article, scholars from various disciplines have paid increasing attention to the role of intersectionality in their fields. For instance, scholars from other disciplines such as work and employment (McBride, Hebson, & Holgate, 2015), engineering (Ro & Loya, 2015), and adolescent development (Fisher et al., 2015) have documented how race, class, and gender are inextricably linked and how that linkage impacts research and applied practice. Given the increasing attention that intersectionality is receiving from disparate disciplines, a conversation session is needed to provide junior faculty and graduate students with guidelines on incorporating the topic into their undergraduate courses.

While intersectionality is a burgeoning area of research, teaching about it can be a difficult and complicated process for instructors (Lee, 2012) as students sometimes resist intersectional pedagogy which usually involves the use of anti-racist and Black feminist discourse that challenges middle-class, mainstream, Caucasian ideals (Bhopal, 2002). Further, instructors are often challenged to process how their own interlocking social locations influence their teaching (Allen & Farnsworth, 1993; Few, 2007). In a similar vein, students' experiences of negotiating their own complex identities in relation to intersectional course content has been understudied (Ringrose, 2007); thereby, leaving instructors with few resources on helping students navigate and process intersectionality-related discourse. The pedagogical challenges produced by those gaps in the literature creates a need for a safe forum where junior faculty and graduate students can learn from each other about how to teach about intersectionality. Bringing junior faculty and graduate students together to hold a cross-disciplinary conversation may cultivate innovative strategies and fuel the sharing of resources to aid in the teaching of intersectionality.

Session Goals

Two overarching goals of this conversation session are: (1) to provide junior faculty and graduate students with an opportunity to co-create knowledge about how to integrate intersectional perspectives into their undergraduate teaching, and (2) increase participants access to pedagogical approaches and resources for teaching about intersectionality. Participants will be empowered to share the strengths and weaknesses of their prior intersectionality-related teaching experiences. Further, participants with willingness to but no previous experience in teaching about intersectionality will be able to brainstorm ideas with more experienced instructors. As a result of attending this conversation session, participants will be able to:

- Objective 1: Develop a course syllabus that includes intersectional content
- Objective 2: Develop strategies for encouraging undergraduate students to engage in intersectional analysis
- Objective 3: Navigate resistance and challenges from students on examining their values and biases
- Objective 4: Increase their awareness of the instructional biases that inform their teaching

Description

Foci of this conversation will include but are not limited to: (1) syllabi development, (2) engaging students in intersectional analysis, (3) sensitive and effective ways to encourage students to confront their biases, (4) consciousness raising activities (5) negotiating resistance from students, (6) the importance of actively practicing reflexivity when teaching about intersectionality, and (7) peer-reviewed articles, book chapters, and other scholarly resources. I will use thought-provoking questions as well as the sharing of nuances and caveats learned from my own teaching experience to help guide discussion. These topics will be broadly discussed so that conversations will be applicable to instructors from multiple disciplines.

Discussion

Feminist teaching approaches such as reflexive thinking, incorporating participants' perspectives, and feedback (Allen & Farnsworth, 1993) will be used to foster collaborative exploration among the presenter and attendees. Additionally, throughout the session, I will share my successes and challenges of trying to infuse teaching about intersectionality into my courses as a first year lecturer in the field of human development and family studies. The session will consist of three phases. In the first phase, I will share my strategies for teaching undergraduate students about intersectionality. I will use a course syllabus from an undergraduate family interaction course that I re-designed to include intersectionality as a guide for my discussion. In the second, collaborative exploration phase, small group discussion will be used to facilitate conversation. I will brainstorm ideas with each group about specific teaching strategies, ideas, and resources. In the third phase, small groups will share their ideas and provide opportunities for participants to give each other feedback and ask questions. Additionally, handouts of existing resources and a template for a course syllabus will be provided to attendees as tangible teaching resources that they can adapt for use in their courses.

Conversation: Inviting Introverts to the Table

Diane B. Marks, *Appalachian State University*

Abstract: It's an extroverted world. This conversation examines the assumption of the successful outgoing extrovert and the reality of the deep thinking introvert in educational practices today. Teachers need to understand the unique characteristics of the introverted learner and provide valuable and appropriate learning contexts for these marginalized learners to thrive.

Literature Review

It wasn't always this way. Up until the twentieth century, character was revered over personality. People were judged on the good deeds they performed when no one was looking. This all changed with the rise of big business at the beginning of the twentieth century. Suddenly, success was centered on being magnetic and charismatic. It was the "bosses favorite" who got the promotion, the humorous and engaging salesman who got the account, and the most persuasive presenter whose idea was accepted (Cain, 2012).

Students in today's classrooms are deemed successful if they are engaging, collaborative, articulate, and confident (Cain, 2012). Students who demonstrate introverted qualities like quietness, deep thinking, preference for individual work experiences, and who are emotionally reserved are perceived as less successful. Often these introverted students are labeled shy, antisocial, and as loners. Their natural inclinations are considered "wrong" and throughout their school experiences are pressured to be more extroverted in the classroom. With one in three students identified as introverts, teachers need to stop trying to change introverts into extroverts (Cain, 2012). Instead, teachers need to value, nurture, and encourage introverts to develop and contribute to their education in ways that are aligned with introverted characteristics and preferences.

Just as extroverted personality types have unique gifts, so do introverted personality types. Students who are introverted are not necessarily shy or anti social. Really, introversion has to do with energy and stimuli. Introverts are energized from within. They get their energy from their inner world of ideas, images, memories and visions (Petrelli, 2013). Introverts excel in independent or small group settings. In fact, Susan Cain (2012) writes that many of the greatest inventors and businessmen were introverts who worked alone or in partnership with an extrovert. Steve Jobs, Warren Buffett, Bill Gates, J.K. Rowling and Albert Einstein are some of the most notable creative and innovative introverts. The literature on creativity and innovation explains that creativity is increased when people work alone at first to organize and flesh out new ideas. Collaboration in the early stages of creativity can limit the outcomes. Small group collaboration after initial independent brainstorming is deemed the best way to solve a problem or create something new. If you have a problem to solve, analyze, or synthesize, then an introvert should be on the team.

Many people believe that introverts do not make effective leaders. This thinking reflects a very narrow perspective of what an "effective" leader is. In schools today, teachers often assign leadership positions to students based on their outgoing nature. Introverts make exceptional leaders. Their ability to listen to ideas, passionately share their own well-developed ideas, and make real one-on-one connections with group members will inspire and guide groups. Maria Tartakovsky (2013) explains that introverts consistently prepare, are present, push themselves, and practice. Introverts also utilize their "down time" to reflect and restore their energy (Kahnweiler, 2013). Finally, introverted leaders use writing in numerous ways to both communicate, illustrate, and to clarify their ideas.

Another notable strength of introverts is their ability to create and maintain meaningful relationships (Fonseca, 2014). Introverts are able to develop meaningful relationships because they have a highly developed sense of emotional intelligence. With this characteristic and the four domains described by Goleman (2000), introverts have an earnest interest in the way the world works. They have the ability to identify what motivates people and demonstrate high levels of empathy, interest and support. Introverts will not have a lot of relationships but the few they have are strong and build on a solid foundation of trust, caring, and interest. Higher Education pedagogy needs to be inclusive of introverts and their learning preferences.

Goals and Objectives

In this conversation, I will briefly present the literature about the extroverted expectation, introvert characteristics as learners, and some specific strategies instructors use to meet the needs of these learners. The participants will then engage in a discussion about these topics and their experiences/understandings. Participants who attend this session will:

- Reflect on and discuss the prevailing assumptions of extroverted success (How do you perceive students who are active participants in discussions and who ask questions throughout the class? How do you perceive students who rarely participate in class discussions or ask questions in a whole class situation?)
- Share as both a learner and instructor/leader on assumptions and pedagogy (What assumptions do we have about “participation” in our classes? How can we provide a more equitable way to measure participation?)
- Understand the introvert as a personality type (What does it mean to be an introvert?)
- Discuss strategies to embrace, nurture, and support the strengths of introverted learners.

Description of Topic to be Discussed

Just mention the word introvert in a group and people cringe and exclaim, “Those people are SO shy!” Introverts can be shy but often are not. Introverts are energized from within and need significant down time to recharge their energy. Extroverts are just the opposite. They gather energy from others and feel energized when in the midst of a crowd. Educational environments are often set up for extrovert success. With thirty percent of Higher Education classrooms made up of introverts, what are some ways that we can accommodate and even highlight the unique strengths of introverts?

Facilitation Techniques

For this conversation I will identify 3-5 well-defined topics from the literature. I will work to establish a “seek to understand” atmosphere where everyone is invited to participate and numerous points of view are valued. I will make sure to facilitate the discussion in a way that allows a fair and equal opportunity to speak as well as asking probing questions to help participants form a depth of understanding of the topic.

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Wednesday
February 10, 2016
Poster Session A
12:00-1:30 PM

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

A Case Study: Exploring Students' and Lecturers' Experiences Pertaining to the Use of the Digital Technologies as a Mobile Pedagogical Device in Academic Writing at a South African University.

Paulinah M. Phahamane, *University of KwaZulu-Natal*

Academic writing is an area where most students struggle. The academic writing goes beyond just writing but includes thinking and writing, language aspects and identity formation. Often, students who face difficulties in academic writing can be students who have not grasped the required academic writing skills. An appropriate structural process of writing integrated within courses can help students develop their academic writing skills. Thus this case study undertakes a functional view on how mobile digital devices support students pedagogically to acquire the above noted academic writing skills across the disciplines. Students were engaged in normal assignment writing, using their mobile devices in small groups of five during the writing process. They drafted research projects or any other piece of academic writing assignment. Using mobile devices apps for effective writing, peer evaluation was employed to assess students' writing skills. The evaluation results were presented and discussed across groups to promote self- reflection and peer review amongst the groups. Preliminary semi-structured interviews were also conducted with students in Language modules. The students' views, writing outcome were collected and later evaluated. Data collected were analyzed qualitatively. The results show that integrating the mobile devices within a reviewed pedagogy incorporates digital mobile technologies writing apps. The pedagogical reviews involve student's academic writing development like peer-learning, face-to-face tutorials and continued student learning outside the classroom. Learning outside the classroom involves one-on-one approach to completion of the classroom assignment. Within this approach students watch a video lecture recorded during the classroom interface and work on a given assignment in their own time, pace and space. These approaches can adjust student learning styles to the use of mobile technologies in and outside the classroom.

A Structured Group Coaching Program for Mastering Anxiety in Higher Education: An Exploratory Study

Anita M. Knight, Fred Volk, and John Harrichand, *Liberty University*

The purpose of this presentation is to present a program used to help facilitate reduction of anxiety in students that is inversely correlated with academic success. Students pursuing higher education across a variety of declared majors are often times required to take mathematics pre-requisites before being able to take higher level discipline specific courses. However, recent studies have identified that more than 50% of entry level college students were unprepared for introductory college math courses (Stevenson, Clerkin, & Stephens, 2012). Contemporary changes in educational practices have incorporated technology into learning and new technologies, testing, and subject matter that is perceived as difficult- are all constructs that are commonly associated with anxiety. Respectively or in combination these constructs may create barriers to success in higher education. Subject related anxiety (especially math anxiety) has been associated with lower levels of learning mastery, lower levels of motivation, and higher levels of avoidance of completing required coursework thus sabotaging academic success. The resultant anxiety is associated with deficits in working memory; this means anxiety competes for working memory resources needed to fuel higher order thinking and problem solving skills (Ashcraft & Krause, 2007). The authors have implemented an open coaching/counseling group based intervention to assist college students with confronting these challenges to learning and mastering anxiety. Pre-tests were conducted to evaluate math anxiety and efficacy. The structured coaching/counseling system containing principles from cognitive behavioral therapy, solution-focused therapy, and some components of other theoretical approaches and was implemented using a curriculum from the School Counselor Resource series (Knight & West, 2010) with other value added strategies. These will be described and explained. Data from this exploratory/descriptive study will be discussed and strategies and techniques from the program will be provided with sample activities and implications for educators, counselors, and student services staff.

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A Study on Pro-Poor Targeting of Students and Scholarship Distribution in Nepal

Tara Chouhan, *Management Association of Nepal & Student Financial Assistance Fund Development Board*

Education is considered an important engine for the empowerment of the people on the one and socio-economic development of the nation on the other. Along with the introduction of multiparty democracy in 1990, constitutional and legal provisions put down greater room for equal opportunities recognizing right to education to all citizens irrespective of gender, caste, ethnicity, religion, economic status and geography.

Accessible Assessment: Making Assessment User-Friendly for Faculty Members

Katie Biddle, Ryan Cook, Jyotsana Sharma, Bethany Bodo, and Steve Culver, *Virginia Tech*

In order to meet accreditation standards and achieve desired student learning outcomes, faculty members are increasingly being asked to engage in assessment both at the classroom and program level. However, most faculty members are not formally trained in assessment procedures. By offering a variety of learning opportunities for faculty members, the Office of Assessment and Evaluation at Virginia Tech is making the process of assessment user-friendly. The tools and approaches utilized at Virginia Tech could be adapted and applied for use at other universities to streamline the assessment process and increase accessibility of assessment knowledge. Suggestions for teaching the basic components of effective assessment to faculty members include providing workshops that focus on development of an ongoing assessment plan and offering opportunities for one on one collaboration throughout the planning process. Development of manuals detailing common methods of measurement and analysis is suggested as is increasing accessibility of such materials by providing them in both paper and online formats. Other suggestions include creating a method for online submission and review of assessment plans and developing a repository of previous submissions that faculty members can easily access. The focus of these tools and approaches is on development of an assessment process that is aligned with accreditation standards and fosters a process of continual improvement within the classroom and/or program for which the assessment plan is developed.

Accurately Assessing Learners' Skills Using Cognitive Models

Roofia Galeshi, *Radford University*

Employing cognitive diagnostic modeling (CDM) to international datasets such as the Trends in Mathematics and Science Study (TIMSS) allows researchers to diagnose a population's skills and compare their mastery. CDM offers a tool for researchers and policymakers to acquire practical information for improvement by combining formative and summative assessments. This study has twofold aims of theoretical as well as practical implications of a particular CDM. It investigates the applicability of CDM, compares two existing software, and compares United States versus Taiwan eighth grade students in TIMSS 2007. The investigation indicated successful results from retrofitting of TIMSS to cognitive model in providing diagnostic skill mastery, sheds light on the types of skills these two countries differ in, and provides information regarding this two software. The percentage of students mastering identified skills varied from 68% to 90%. The results also suggested some improvement for fitting TIMSS to cognitive models, such as the increase in skill representation by increasing the test length to improve the fit.

Achievement Motivation and Emotional Intelligence in Assessing Student-Teacher Learning

T.S.Reena Ruby and V.Rajeswari, *Mother Teresa Women's University, Kodaikanal, India*

The aim of the present study is to find the relationship between achievement motivation, emotional intelligence and learning outcomes of the students. The present study was conducted under survey method. Sample of the study were selected using purposive cluster sampling technique which includes 350 special education student teachers from 12 Special Education Teacher Training Colleges and institutes from 7 districts of Tamil Nadu, India. Data from the selected sample was collected using Achievement Motivation questionnaire developed by the researcher which consisted of 25 items with each having two alternatives "a" and "b" with score of 1 for the positive alternative and 0 score for negative alternative and Emotional Intelligence Inventory by Cyberia Shrink (2010) has been adopted by the investigator for the present study. The original tool consisted of 75 items. This tool consisted of 35 items under five dimensions as emotion, understanding, intelligence, behavior and motivation which was modified and validated. The reliability coefficient was found to be 0.67. This tool is also a five point scale with the options always/often/sometimes/rarely/never with scoring 5,4,3,2,1 respectively for positive items and 1,2,3,4,5 for negative items. The tool includes 11 positive items and 24 are negative items. Quantitative analysis of data revealed that majority of the selected sample had moderate level of Achievement motivation. The result of the present study indicates that there is a strong relationship between achievement motivation and emotional intelligence which enhanced the learning of special education student teachers to a higher level.

An Exploration of Perceptions and Attitudes of Senegalese Professors Toward Learner-Centered Instructional Strategies in Agriculture Courses

W. Gichane, A. O. Abaye, J. C. Anderson II, T. Archibald, *Virginia Tech*
F. Gueye, *USAID-Education and Research in Agriculture (ERA), Senegal*

Assessments conducted by the U.S. Agency of International Development (USAID) showed major constraints in agriculture programs at higher education institutions in Senegal (Guilbaud, Abaye, Gueye, & Li, 2012). One of the major constraints was poor curriculum due to insufficient teaching and learning practices that left graduates without some key skills needed in the agriculture sector (Guilbaud et al., 2012). The purposes of this study was to assess the needs for using learner-centered practices and identify the challenges professors' face in terms of current teaching and learning practices at five targeted institutions in Senegal. Guided by Icek Ajzen's Theory of Planned Behavior (Ajzen, 1991), a survey was conducted to examine professors' teaching strategies, their attitudes toward learner-centered methods, social climate at the institution, and to understand their perceived confidence in effectively using these methods in the classroom. Findings revealed that the key constraints preventing professors from adapting learner-centered strategies into their classrooms included large class sizes, infrastructure, lack of materials, and training. They also indicated that their institutions provided few resources on learner-centered practices. Professors reported having positive attitudes toward learner-centered practices and felt little to no social pressure in engaging in other teaching techniques. Those that had some training in learner-centered methods agreed that there were many ways of teaching, yet nearly all the professors still used traditional teacher-centered methods of instruction. However, there were discrepancies between the pedagogical techniques currently being employed versus those techniques perceived to be most effective in the classrooms. Further qualitative research should be conducted to fully identify where the gaps between theory and practice are occurring and assess if learner-centered methods are being employed appropriately.

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Are They Integrating Content?: Using Pre- and Post-course Activities to Examine Undergraduates' Personal Meaning-making in a Service-learning Course

Rachel E. Wilson, *Appalachian State University*

Fink (2003) outlines six dimensions in his taxonomy of significant learning in higher education settings, one of which is integration (which encompasses seeing connections between content and personal beliefs, attitudes, and values). This study examines how undergraduates' ideas about course content and how it was connected to their personal ideas of the environment changed during a service-learning course. Service-learning is a pedagogy for learning through sensory experience while serving a community need, and uses reflections on the service experience as the way for students to make sense of learning. The instructor of the course built in activities into the first day of class and the last day of classes to encourage student reflection on their personal ideas of the environment, such as a personal concept map of activities that connect them to the environment and a drawing of their definition of the environment. Students were asked to bring their post-course activity materials to an individual oral reflection session with the instructor, in which the student saw both their pre- and post-course activity materials together and were asked to think about how and why their ideas about the environment have changed over time. Students' drawings and personal concept maps were analyzed qualitatively to categorize types of responses and then compared for the frequency of elements in categories in pre- versus post-course products. Results from two sections of the course show that students' concepts of the environment grew more complex and that the activities that connect them to the environment post-course included more than recreational and waste management activities. A comparison of the results of these different methods of pre- and post-course activities will be presented, along with a discussion of the potential of such activities to be used as tools for understanding how students are integrating content from their undergraduate courses.

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Assessing Students Made Easy: It's Just a Matter of Asking the Right Questions

David Chapinski, *Rutgers University*

My efforts in this paper involve elucidating class-room-based assessment designs and examples in college education that hinge off these three pillars. My approach is classroom and teacher-learner focused. The heart of my reasoning for subscribing to this arguably narrow classroom focus is that I believe that it is developmental teachers and learners who have the most to gain by reconceptualizing assessment practices. Conceiving teaching as improvisation implies one has adopted the socio-constructive view of learning. This perspective highlights the emergent and transformative nature of learning in socio-cultural environment at a New Jersey University. I begin with an overview of an assessment of 'life-long learning.' Next, I describe my research methods, then present the results of my study with a group of first year communication students in. I have involved replacing a couple of two-hour traditional face-to-face lectures with a blended learning approach involving a one-hour face-to-face lecture followed by material delivered exclusively online. My key contribution is to measure the impact of the experiment on students' learning by comparing students' performances using online quizzes that cover the material delivered using both face-to-face and online approaches, and other quizzes that assess the material delivered in the traditional face-to-face lectures. In our comparison, I control for students' characteristics and self-selection through student fixed effects. The pervasiveness of learning strategies as part of students' learning experiences in higher education is self-evident. I define assessment appropriately (i.e., assess-intervene-reassess) and use teams of knowledgeable constituents to create a centralized curriculum. It is my argument that there is value in program level assessment; it provides a snapshot of cumulative growth and development at the end of students' coursework. By only focusing on the course level, it is difficult to make inferences about what students know, think, or can do at the end of their academic program. Additionally, quality assessment should precede use of results so that changes are based on trustworthy data. Finally, it is my belief that non-profit universities cannot exert the same level of curricular control as for profit institutions such as Rutgers. Faculty from non-profit institutions would theoretically disagree with a standardized curriculum and I argue that it infringes upon that student's academic freedom.

Association of Multiple Mini-Interview (MMI) Scores with First Year Medical Student Success in Problem-Based Learning

Elizabeth Pline, Shari A. Whicker, Richard Vari, Sarah Fogel, and David W. Musick
Virginia Tech Carilion School of Medicine and Carilion Clinic

The purpose of this study was to determine whether there is a meaningful association between the multiple mini-interview (MMI) scores of students admitted to Virginia Tech Carilion School of Medicine (VTCSOM) and their subsequent performance during year one of the basic science curriculum, which relies heavily on Problem-Based Learning (PBL) teaching methods. The authors used student data from the matriculating classes of 2010 to 2012 (n=125). Interviewers provided an MMI score for each of these students during the interview process. The data set also included the students' highest MCAT score, undergraduate GPA, and demographic data. For this study, the authors correlated MMI scores with the first Integrated Case Examination (ICE) scores during year one and with ratings provided by PBL facilitators using the Sequenced Performance Inventory and Reflective Assessment of Learning (SPIRAL), a modified version of a small group scoring rubric. The authors analyzed the data using Pearson's correlation coefficient. We found significant positive correlations between 12 of the 14 SPIRAL factors and the MMI score, and between the MMI score and the average of the 14 SPIRAL factor ratings (0.325, $p < 0.01$). The authors found no significant correlations between the MMI score and MCAT scores, undergraduate GPA, student age, student gender, or ICE scores. Previous studies have reported on the MMI's predictive validity concerning student proficiency in non-cognitive aspects of learning and teamwork dynamics. Our findings lend support to the growing MMI literature in that the MMI model is associated with selected aspects of small group learning. The MMI is a valuable part of the admissions process at VTCSOM, as it supports the selection of students who may be more successful in learning activities involving group interactions. Other higher education programs may find the MMI to be a valuable addition to their admissions process for assessing applicants' non-cognitive skills.

**Autonomy Support and Motivation on an ePortfolio Project:
The Moderating Role of Culturally Based Learning Preferences**

Jacquelyn McCarthy Woodyard, *Virginia Tech*

Motivational supports, such as the support of autonomy, cannot be appropriately structured without consideration of the major factors influencing individuals' thoughts and behaviors (e.g., culturally based learning preferences). It is becoming more and more challenging for educators to effectively motivate students, particularly for learning tasks in which the control for learning is placed in the hands of individual students (e.g., learner-centered instruction). For this reason, it is necessary to investigate how knowing and assessing students' culturally based learning preferences can aid in the design of instructional tasks. This study aims to identify how students' perceptions of autonomy support on an ePortfolio project relate to their motivational beliefs including effort/importance, value/usefulness, and felt pressure/tension on the project. This relationship will be examined with particular focus on the investigation of the potential moderating role of students' culturally based learning preferences according to the eight cultural dimensions outlined in Parrish and Linder-VanBerschoot's (2010) Cultural Dimensions of Learning Framework (CDLF). Through this study, it is hoped that instructional designers and educators will engage in discussion regarding how to design learner-centered instruction, such as working ePortfolio projects, in a way that motivates students with various culturally based learning preferences in the most effective way possible. With the proper support in place for each uniquely oriented student, students can benefit from increased intrinsic motivation, therefore experiencing positive effects on various motivational beliefs and performance outcomes.

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Autonomy-Support: Examining Students' Perception of ExamSoft Feedback

Leah Parsons Simpson, *University of Kentucky*

ExamSoft, a computerized testing tool, has the ability to provide customized feedback to students about their achievement towards a specific competency or outcome. This study examines student perceptions of that feedback as a source of autonomy-support. Autonomy-support in a learning environment encompasses any action that increases a student's sense of autonomy. By providing choice and rationale, autonomy-support boosts students' interest, persistence, and satisfaction. The research questions the motivation for review of ExamSoft feedback by first year pharmacy students. In Fall 2015 all first-year students (approximately 140) enrolled in a college of pharmacy at a research university will be invited via email to participate in this survey research. By the time of the study, all students will have at least two months experience with ExamSoft. The goal of the survey is to uncover why students review ExamSoft feedback. It is predicted that students will review the feedback because they personally find it useful and valuable, indicating that ExamSoft feedback is autonomy-supportive. Data will be collected anonymously using Qualtrics. Data will be analyzed to see if there is a difference between the motivating factors for using ExamSoft. In addition, the data will be analyzed for correlations between demographic characteristics and motivation. This study is currently in progress; statistical analysis and results will be completed by the time of the poster presentation.

Big Classrooms, Big Camaraderie

Windi D. Turner and Oscar J. Solis, *Virginia Tech*

Large classes can be challenging for students and instructors alike. Often students feel as if they are a number and the instructor does not interact with students, but simply stands at a podium or in front of the class and lectures for 50 to 75 minutes. Instructors perceive that students in large classes are not highly motivated, satisfied, or engaged. Within a context where large classes are more frequent in higher education, it is important to consider strategies that will achieve the same outcomes desired in small classes. To accomplish this, careful consideration should be given to how instructors interact with students. The purpose of this study was to investigate pedagogical strategies that instructors teaching large classes can utilize to create positive student-instructor interactions. Both quantitative and qualitative data were collected by means of two discrete online surveys with undergraduate students enrolled in two large consumer studies courses at a large university. Feedback received from the first survey highlighted strategies that students perceived to build positive student-instructor interactions. This information was used by the researchers to develop the questions for the second survey. The results suggest that strategies such as self-disclosure (storytelling to relate to course material, disclosing instructor's personal stories, and sharing peer stories), caring leadership (fostering mutual respect, valuing students' opinions, and connecting the course material to students on a personal level), and making the class feel smaller (knowing students' names, utilizing general information about students as it applies to course material, and encouraging student participation) have positive implications for undergraduate students, faculty, the department, and the university. These findings underscore the important role instructors play in facing the challenges of large class settings and the effectiveness of positive student-instructor interactions as a tool for meeting the needs of the students and the institution.

Bridging the Two Cultures in Class: Natural Science and Literature

Victor Fet, *Marshall University*

I share an experience in teaching an undergraduate Honors seminar bringing together aspects of literature informed by natural science in the 1850s-1950s (“from Darwin to DNA”). The seminar first reviews modern principles of genetics and evolution, focusing on human species, as discovered by science and reflected in the dystopian literature. In the first section, we explore young H.G. Wells, the British “father of science fiction” (1866-1946), as he addresses human nature (*The Island of Dr. Moreau*) and the future evolution of a post-Darwinian humankind (*The Time Machine*). In the second, central section, we concentrate on eugenics (“betterment of human race”; precursor of modern *biotechnology*). We focus on the famous satire of Mikhail Bulgakov (1891-1940, a physician by training), *The Heart of a Dog* (1925), that brought Wellsian science fiction to Russia – a testing ground for “making a new human”. In the last section, we turn toward a Russian-American literary genius, Vladimir Nabokov (1899-1977). His unique case illuminates childhood emotional involvement with nature’s diversity and beauty, which formed and informed both the scientist and the artist. “There is no science without fancy, and no art without facts”, maintained the famous writer who himself embodied a synthesis of both. This multicultural and international seminar brings together work of scientists and writers from three countries (UK, USA, Russia). Our focus is on the nature of human species as explored by the naturalistic view in literature. Students are encouraged not only to read fiction and critical scholarship but to learn and discuss basic principles, facts, and mechanisms of modern science. Homework assignments include essays, scholarly paper reviews and digests of covered fiction. Contrary to a commonly perceived rift of the “two cultures”, this seminar bridges humanities and natural science.

Building an Interprofessional Teaching Academy for Learner-Centered Excellence

Shari Whicker, Elizabeth Pline, Sandra Dehart, and David Musick
Virginia Tech Carilion School of Medicine

As is true in most higher education fields, the future success of academic medicine relies heavily on the recruitment, development, and retention of faculty.^{1,4} However, faculty often do not feel supported in their roles as teachers.^{2,3} While clinicians may be comfortable within their clinical specialty “homes” (e.g. surgery, pediatrics, nursing, physician assisting) and participate in faculty development activities related to their given specialty, many lack similar home bases to foster their development related to teaching. It is clear that the clinical contexts throughout health professions education will vary. However, health professions faculty share the common need to educate future professionals and the pedagogical practices are consistent.

At Carilion Clinic, Virginia Tech Carilion School of Medicine, and Jefferson College of Health Sciences, we have developed a “for the faculty, by the faculty” academy focused on learner-centered teaching excellence via the development of our faculty’s skills as teachers, learners, and education researchers. TEACH (Teaching Excellence Academy for Collaborative Healthcare) is administratively led by a Director and administrative staff. However, the development of the Academy is facilitated through an active faculty steering committee comprised of representatives throughout each profession and their primary related disciplines.

TEACH offers 3 levels of membership, with increased benefits and responsibilities at levels 2 and 3. Academy benefits are developed and fostered within subcommittees focused on specific topics related to our mission. Each steering committee member also leads and/or participates on at least one of TEACH’s subcommittees which include: Education Research, Faculty Development, Journal Club, Membership, Mentoring, Recognition, Teaching Observations, and Technology&Innovation. Each subcommittee actively works toward fulfilling TEACH’s mission on a continuous basis. The TEACH model could easily be adapted for use within other higher education fields as an approach to bringing faculty from different disciplines together to develop and support one another in their roles as teachers.

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Comparing the Effectiveness of a Time-compressed Course to its Regular Semester Counterpart

Candice Benjes-Small and Laurie Cubbison, *Radford University*

In an effort to increase and speed up graduation rates, many universities are offering courses during breaks in between regular semesters. Due to time constraints, these offerings are accelerated. At our university, students spend 5 weeks in the time-compressed version of the full, 14-week semester. There have been numerous articles examining the success of the compressed format, most of which compares the examination scores and final course grades between the compressed format and regular sessions.

On the other hand, the literature on distributed practice supports the idea that true learning- learning that is remembered- occurs better under spaced practice. In a compressed semester, there is very little “down” time. The authors were also concerned about what had to be eliminated in one of our general education classes, Core 201, in order to accelerate it. Core 201 is a skill based critical thinking class. In the regular semester, instructors have more time to scaffold projects and give feedback via drafts and conferences. The 5-week version did not have those opportunities. The authors wondered whether students who passed Core 201 truly retained the skills intended by the class. Rather than simply looking at the course grades in Core 201, we elected to compare that to their performance in the subsequent course in the general education sequence, Core 202. Students need to use the skills from Core 201 in Core 202, so it is assumed that students who performed well in Core 201 and retained the knowledge would also perform well in Core 202.

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Connecting Primary Sources: The Essential Research Fit

Constance B. Williams, *City University of New York/Queensborough Community College*

Historically, the College Archives have been viewed primarily as a place that housed papers, documents, photos and materials preserved for “someday” use. Today, as the literature reveals, primary resources can reveal valuable information left undiscovered and unmentioned. Increasingly primary resources are digitized. Archives have a higher visibility when documents are easier to access. Online information may cause a researcher to delve further and search manually for documents that are only placed in a cabinet, subject file or Archive box.

A Cost-Effective Use of Technology to Facilitate Active Learning in a College Classroom

Christine H. Terry, *Lynchburg College*

Active learning classrooms have been shown to foster group learning and increase student engagement with important concepts. These classrooms typically contain both flexible seating, to more easily allow student

collaboration, and enhanced use of technology, to help students share ideas. However, many faculty members either teach classes that are too large to be accommodated by the dedicated active learning spaces on their campuses or there are not enough active learning classrooms to satisfy the demand. Portable document cameras are relatively inexpensive and can be used to foster an active learning environment in a standard college classroom. I will present various ways that I have utilized an IPEVO™ document camera in my lecture classes to encourage active learning. The camera can be used to present images, in real time, through the overhead projectors that are present in every lecture and laboratory classroom on our campus. This feature allows for students to easily give feedback on each other's work; students use the camera for class discussion of their concept maps, the results of think-pair-share discussions, etc. These presentations can be done anonymously, to engage students who may be apprehensive about presenting to their peers. This cost-effective use of technology can promote discussion, while allowing the instructor to facilitate group work in a traditional college classroom setting.

Creating Engaging Group Activities in a FlexTech Room: Designing a Student-centered Environment for Collaborative Research Literacy for First Year Students

David D. Carbonara, *Duquesne University*

This session will describe and invite discussion of this author's design (Folkins, Friberg, and Cesarini, 2015) of a classroom to create a collaborative and engaging environment for first year university students to experience research literacy. Our University wanted to create sets of classrooms (FlexTech) that promoted active learning, collaboration and small group activities. Activities such as think-pair-share and small group discussion are the new norm (Phillips, 2005). Students arrive in the FlexTech classroom after reading (Doyle and Zakrajsek, 2013, p.67) the materials for the week and are prepared to begin discussion of applications of the material. We eliminated the regurgitation of facts and jumped into collaborative discussion (Nam, 2014) of the concepts in the readings. In order to create exciting learning exercises, current topics from the field of instructional technology were presented to the students. Groups selected topics and began a process of finding, selecting and synthesizing scholarly resources. Each group created a research proposal to investigate uses of technology in classrooms. Thus, the students designed an experiment to gather data to answer the questions they created from the literature review. Data will be gathered in the spring semester, analyzed, and discussed. The physical structure of the room includes group areas that have glass table-tops on which to write using dry-erase markers and have a group computer behind a 42" LCD monitor to share documents with the class. Students can share their own computer-stored material through ClickShare devices. These devices permit the groups to view their own work on the group LCD screen and to share the information with the entire class. Thus, the room functions as a collaborative environment for students to engage in meaningful discussion.

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Descriptive Geometry Exam: Testing or Traditional Form

Tetyana Pryhorovska and Ivano-Frankivsk, *National Technical University of Oil and Gas (Ukraine)*

Traditional syllabus of descriptive geometry provides final examination, which consists of some problems. These problems cover, as usual, the most important topics of this subject. Educational institutions of post-USSR states often were accused of the falsifications of examinations results. To make impossible cheatings and to provide transparency of result, it was proposed to give an examination in a form of computer testing. This article discusses about appropriation of such approach, advantages and disadvantages of its usage, requires to the test base development.

Design of Flexible Learning Spaces for Collaborative and Seamless Learning

Diana Wu and Jihyun Woo, *Virginia Tech*

With the fast pace of digital technology changes, bridging learning experience with learning space that provides robust technology to support learning moves into focus in higher education. Today, instructors and students bring various personal computing devices to their classrooms and it becomes important to create opportunities for instructors and students to use various forms of technologies to meet pedagogical needs in teaching and learning. Today's students in higher education prefer active engagement in learning activity and desire to have learning experiences that are digital, connected, experiential, immediate, and social (Lomas, C. & Oblinger, D.G., 2006). In Summer 2015, School of Education at Virginia Tech renovated a multimedia learning space intended to incorporate newly introduced technologies not only to elevate collaboration and interaction in both face-to-face and blended learning environment, but also to promote seamless learning in class with respect to digitally access, present, capture, share, and save information. The learning space also designed to minimize the technology burden for instructors, remove the visual blind areas, support multi-directional communication among students, and maximize flexibility of space utilization for instructors and students. In this poster presentation, we will 1) present design-thinking approach for flexible learning space, 2) introduce contemporary technologies that support collaborative and seamless learning in face-to-face and blended learning context, 3) discuss design principles incorporated in learning space design and 4) report faculty and students' perceptions on their teaching and learning experience in this innovative learning space.

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Developing Global-Mindedness through Comparative Curricula

Kristen Tarantino, *The College of William & Mary*

Employers and external constituents want college graduates who are globally aware and can demonstrate intercultural competence. Colleges and universities must find ways to meet this demand through curricular changes that go beyond study abroad opportunities. These curricular changes tend to occur at the undergraduate level and focus on interdisciplinary style courses. The efforts to internationalize college campuses through curricular change have not aimed at graduate programming where course content is highly specialized. This study focused on a specific university where a course on Comparative Education was the only specific education course aimed at increasing graduate students' global or intercultural awareness. Thus, it was the purpose of this study is to identify whether participation in a Comparative Education course increases graduate student global-mindedness. Hett (1994) defined global-mindedness as "a worldview in which one sees oneself as connected to the world community and feels a sense of responsibility for its members" (p. 89). Participants completed the Global-mindedness Scale prior to the course as well as after the course, and statistical analysis were conducted using a paired samples t-test. Participant data also included written assignments and observations of in-class and virtual presentations.

These data sources were analyzed using the AAC&U value rubric for Intercultural Knowledge and Competence to determine the extent to which students displayed intercultural awareness and competence. Written and observational data were plotted through the duration of the course to look for increases or potential triggers in changes to student thinking. Results indicated the degree to which graduate students in the course changed in their global-mindedness, the role of reflection in challenging assumptions, and the identification of potential mediating factors such as previous travel or study abroad.

Development of a Concept Inventory Aligned to National Curricular Guidelines

A. M. Stevens, *Virginia Tech*; A. G. Briggs, *Beloit College*; R. E. Brennan, *Univ. Central Oklahoma*; J. Buchner, *Univ. Maryland*; R. Horak, *American Society Microbiology*; L. E. Hughes, *Univ. North Texas*; D. S. Katz Amburn, *Rogers State Univ.*; A. McDonald, *Concordia Univ. Wisconsin*; T. P. Primm, *Sam Houston State Univ.*; H. Seitz, *Johnson County CC*; A. C. Smith, *Univ. of Maryland*; S. B. Yung, *Sam Houston State Univ.* and T. D. Paustian, *Univ. of Wisconsin*

Concept inventories (CI) are tools that examine student understanding of critical concepts in a specific field and allow for the analysis of learning gains and commonly held misconceptions. In many fields there is a need to develop CIs with broad applicability that may be used to survey large numbers of students across institutions. A group of faculty from diverse academic institutions, with the support of the American Society for Microbiology (ASM), formed a task force with the initiative to create a CI for general microbiology. This poster outlines the process used for development of the CI, which is rooted in the principles of backward design. First, six core conceptual areas of learning derived from the national Vision and Change initiative were used by others to develop the 2012 ASM curricular guidelines (27 fundamental statements describing key concepts set as goals for student learning). From these fundamental statements, related learning outcomes were written for the CI. A true/false tool of 21 questions was generated; each question had a prompt for students to provide a written explanation of their answer. During spring 2015, students across the country completed this two-tiered assessment. The following summer between 300-500 student written explanations for each question were coded to identify the most commonly held student misconceptions for a particular fundamental statement(s) and the associated learning outcome. These misconceptions have been used to write distractors for a two-tiered multiple-choice concept inventory that will undergo a review process prior to implementation. Spring 2016 data will be used to validate the Microbiology CI (MCI) prior to final revisions and publication/release to the ASM community. The MCI will enable quantitative analysis of student learning gains on key concepts and provide a mechanism to permit faculty to better understand common student misconceptions so instructional materials may be designed to overcome them.

Development of strategies to sustain classroom technology reliability

Le Chen and Diana Wu, *Virginia Tech*

Today, classrooms in higher education are usually equipped with two types of IT technologies: instructional technology and information technology. With the growth of technology integration in teaching and learning, sustaining classroom technologies is in high demand with respect to supporting, maintaining, and updating these technologies. From instructors' perspective, technology reliability is one of the biggest problems with technology integration in their teaching. Numerous studies addressed the benefits and attributes of these two types of IT technologies in teaching and learning, while little research has been conducted to explore the technology reliability, a structured approach for technology troubleshooting, and instructor's perceptions on technology support.

The purpose of this study is to investigate three critical factors involved in instructional and information technology support that affect enhancement of technology integration in teaching and learning. Three factors include: technology reliability, efficiency of troubleshooting, and instructor satisfaction with technology support.

In this presentation, we will 1) explain technology reliability issues, 2) present an analysis of different types of troubleshooting along with some examples, 3) discuss the correlation between technology support and

instructor perceptions of technology integration in the classroom, and 4) recommend structured strategies to support aforementioned two types of classroom IT technologies.

Diversity in the Field: Being a Woman of Color As Faculty in a Counselor Education Program

Tiffanie Sutherlin, *Behavioral Sciences, Liberty University*

The research will focus on women of color in higher counselor education positions. There currently is literature in the field that directly focuses on the absence of women of color in our field and how this impacts the encouraged range of diversity. As counselors we encourage multiculturalism and are frequently learning different techniques and tools to prepare us to counselor diverse clients. Having women of color in higher education position not only helps to progress our field in a positive direction but also adds a different perspective when teaching. Much literature has been done that specifically looks at the recruitment and retainment process of women of color and how these techniques have been unsuccessful. The author will also include a literature review that offers the perspective of an African-American woman in a faculty position in counselor education. By adding this research listeners are able to learn of the different experiences and implications from a first hand perspective. The aim of this poster presentation is to highlight the growing diversity within the counseling field. It also allows for the opportunity to discuss a “touchy” topic, being race, in a respectful, educational, and appropriate manner. Multiculturalism is a growing topic within the field of counseling. Having the ability to discuss the research of different issues and/or concerns relating to race, diversity, or ethnicity proves how far we have come and are progressing within this profession.

Does Class Discussion Improve Student Satisfaction and Engagement?

Amanda Joyce, *Psychology, Murray State University*

Classroom discussion has long been thought to improve the quality of student learning (Barkley, 2009; Weimer, 2002), however, students often provide push-back to these types of active learning strategies (Weimer, 2002), preferring, instead, the traditional stand-and-deliver lecture environment. The purpose of this investigation was to determine if this push-back is merely anecdotal and expressed by our most vocal students, or if it could also be found in summative evaluations of a course and its challenge and engagement. Anonymous, end-of-semester, teaching evaluations were collected of 166 students in 5 sections of 3 unique courses in the Psychology department of a mid-sized Southeastern University during the 2014-2015 school year. Two course sections, one in the fall semester, and one in the spring, from two unique courses, were lower in student discussion, while the remaining three sections, one from each course, held during the fall and spring semesters, were designed to be high in course discussion. Students were asked to report on various aspects of their learning experience, including the overall quality of the course, as well as their engagement in the course and the challenge that the course presented them. Students' overall ratings of the high-discussion classes ($mean = 3.93, SD = .21$) were higher than their ratings of the lower-discussion classes ($mean = 3.85, SD = .21; t(164) = 2.44, p = .02$). Similarly, students rated the challenge and engagement levels of the high-discussion classes ($mean = 4.63, SD = .23$) higher than those of the lower-discussion classes ($mean = 4.25, SD = .35; t(164) = 8.41, p < .0001$). Results imply that while some students may voice their displeasure over classroom discussion, such discussion improves their overall satisfaction with the course as well as their engagement with the course and the challenge that it brings them as they learn.

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Does Student Mindset Impact the Effectiveness of Online Instructional Methods?

Alison L. Barton and Colin Chesley, *East Tennessee State University*

In the online classroom, providing meaningful active learning experiences can be challenging. One possibility is the guided inquiry, a method of introducing new material while using questions to guide students to think more deeply about the material. This method is likely most effective, however, when students are fully engaged in completing the activity. One characteristic that may impact levels of student engagement is their *mindset* (Dweck, 2006): The degree to which one believes intelligence is fixed or can grow. Those with a “growth mindset” are more likely to embrace learning challenges; thus, we predict that growth mindset students will engage more in a guided inquiry activity (i.e., provide fuller answers) and, as a consequence, learn more than their fixed mindset counterparts. Our study, to be conducted over Fall 2015, will randomly assign volunteer participants into one of two online learning experiences for the same content: A guided inquiry, or a video (a more traditional online instructional method). Prior to the learning activity, participants will complete a survey that includes a mindset assessment and pre-test of content knowledge. Once the learning activity is completed, a post-test of content knowledge will be provided. Preliminary data, as available, will be shared; implications of the impact student mindset might have on student engagement and learning in an online setting will be discussed, using preliminary data (if available) and/or available research on mindset and learning.

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Dyslexia, “Invisible Epidemic” Underdiagnosed, Overlooked and Hidden but Highly Toxic

Tyann L. Mosley, *Mercer University*

This practice session is to offer educators a clear definition of Dyslexia and its effect on students seeking post-secondary education. The aim is to increase educator’s awareness of the truths and myths about Dyslexia and how to better assist dyslexic students within the college setting. The conversation explores how Dyslexia can truly prevent students from seeking higher education due the majority of dyslexic students having lower rates of attending college, low self-esteem and higher anxiety when it comes to past and present educational history. Dyslexia can present with several other learning disabilities so can it easily be underdiagnosed, overlooked and hidden. Proper and early diagnosis of Dyslexia is essential to advancing dyslexic students to higher education. Assisting educators to develop an understanding about the “Invisible Epidemic” of dyslexic college students can bring about a change in the view of Dyslexia. Hopeful educators will be encouraged to use the reading, writing and assistive technology: An integrated development curriculum which includes the new assistive technology and innovated methods in the educational setting.

Engage Your Students in Learning-Exploring Evidence-Based Strategies

Daria Pizzuto, *Seton Hall University*

Student engagement is considered an immensely desirable condition that leads to student achievement. This paper identifies and explores four evidence-based prescriptions to foster student engagement in the college classroom: knowing your students; incorporating active tasks, relevant to students’ lives; utilizing technology; and employing challenging yet fun instructional delivery.

**Evaluation of Interprofessional Simulation Activities on Students' Collaboration Skills and Confidence:
Our 5 year Journey**

Susan Jones, Milena Staykova, George Steer, Chase Poulsen, and Sara Nicely, *Jefferson College of Health Sciences*
David Trinkle and Bruce Johnson, *Virginia Tech Carilion School of Medicine*

Developing interprofessional competencies in health care academic institutions is a multi-stakeholders' journey. Literature Review: The Institute of Medicine in a 2001 report, entitled "Crossing the quality chasm" encouraged interprofessional collaboration to provide safe and quality patient care. This initiative encouraged integration of interprofessional education into the healthcare curriculum. Literature also supports the use of peer coaching and simulation for the transfer of training from the academic arena to clinical practice. Our IP journey was over 5 years (2009-2014). The IP education activity grew from 40 to 350 students, 2 disciplines to 12, 1 college to 4, and 12 professors to 50. Methodology: A mixed method study was used to examine how interprofessional simulation activity affects team collaborating skills. A confidence rating scale 0 (low confidence) to 10 (high), was utilized. The qualitative evaluation is based on open ended questions. The study used a validated instrument, The Self – Efficacy Measure of Interprofessional Practice Competencies for Student. Analysis: Pre-survey means (8.1-8.2) were compared to post-survey means (8.2-8.7). A difference in the value of the means concluded that the confidence level increased after the simulation activity. The t -test=0.007 suggested a statistically significant difference between the means. The increased confidence level is due to the intervention (IP activity). Data suggested an increase in the IP confidence level for all students post IP Simulation Activity. Content analysis of the open-ended questions was congruent with the quantitative aspect. Comparison over the 5 years revealed a Mean score on the pre-survey of 8.1-8.2 and the post survey 8.2-8.7. The p-value over the 5 years ranged from < 0.001-0.01. Results: The IP simulation is a useful andragogical strategy leading to increased students' perceived confidence in providing interprofessional care. Discussion: Integrating interprofessional activity into a college curriculum is an effective analogy to increase peer respect and collaboration skills.

Exploration of Online Tools for Online Teaching

DHuo-Jin (Alex) Huang, *University of North Carolina Asheville*

Online courses have been extensively offered by most research universities in North Carolina, but the face-to-face in-class teaching is still paramount at UNC Asheville. However, the trend and need for online teaching may become a reality at UNC Asheville in the future. In order to prepare for online teaching, the presenter has been exploring online teaching resources, and beginning the development of several hybrid (blended) courses recently. It is noted that there are many free online tools that are effective for both online and in-class teaching. In this poster presentation, the presenter will introduce these online tools that are practical and useful for presentation, collaboration, online quiz and survey. The applications of these online tools will be illustrated. Additionally, the strategies for effective online teaching will be outlined and discussed.

Exploring Inviting Pedagogies: Integration of Formal and Cultural Education Practices in a Socio-cultural School Context to Education Retention

A. Agbomeji and O. Oluwatuyi, *University of Kwazulu-Natal (South Africa)*

This paper explores opportunities for integrating formal and cultural education in Lagos State Nigeria in ways that help learners acquire, build, maintain productive skills for sustainable livings and education school retention. Using an interpretive paradigm, I drew on the Bernstein theory of social practices pedagogy to guide the qualitative analysis findings. I described good practices in cultural education in Africa and Nigeria in particular which expand learning options for learners of diverse background. Integration of formal and cultural education by exploring inviting pedagogies is shown as capable of promoting educational practice-oriented knowledge, values, and skills learning which can significantly improve Nigerian education system which is currently too theoretical for addressing people's real needs. Such integration can maximize rural people's participation at various school educational levels,

government's poverty reduction interventions and enhance their chances for creating wealth and attaining sustainable livings. Challenges to be faced in bridging the gap between the two forms of education in Nigeria are highlighted and the way forward suggested.

Incorporating Field Based Experiences for Science Teaching

Leslie Whiteman, Trina Spencer, and Tracy Walker, *Virginia State University*

Research shows that social, psychological and cultural factors greatly influence students' motivation and ability to learn (Kim & Conrad, 2006; Palmer & Gasman, 2008). Student performance and achievement, especially in STEM areas, are related to motivational beliefs (e.g., self-efficacy) and availability of positive racial/ethnic role models (Cokley, 2003; Harris & Marsh, 2010). Negative attitudes can be changed by exposing elementary students of either gender to positive experiences in science. (Harty, Beall & Scharmann, 1985). Given the widening achievement gap for minorities in science, there is a critical need to increase the numbers of highly qualified teachers from underrepresented groups to nurture the nation's diverse populations. Information that could enrich the traditional curriculum could be extremely beneficial to teacher preparation programs, departments of education, and professionals in the field of science education that seek to enhance minority student performance. This session will discuss the outcomes of the incorporation of field-based experience in a preservice teacher preparation program for minority students for teaching science.

Increasing Beginning Teachers' Self-efficacy Through Continued Contact with College Professors: An Exploratory Case Study

J. Elizabeth Casey, *Huntingdon College*
Paula Schubert, *Limestone College*

Utilizing an exploratory case study (Cresswell, 2009), undergirded with sociocultural theory (Vygotsky, 1978), researchers in two southeastern states maintained contact with beginning teachers to determine supports needed when they leave the college classroom. Prior researchers have demonstrated that half of all teachers leave the field three to five years after they begin teaching (e.g., Darling-Hammond, 2003; Ingersoll & Strong, 2011). Smith and Ingersoll (2004) collected data from the Schools and Staffing Survey (SASS) and Teacher Follow-Up Survey (TFS) between 1999-2000, and analysis revealed characteristics of effective mentoring programs. Of note, the duration and intensity of mentoring programs was important (Smith, 2007). Other factors to effective mentoring programs included mentor/mentee match, mentor compensation, and mentor training. Smith and Ingersoll (2004) noted that "it is reasonable to expect that particular kinds of schools have more teacher attrition than others, regardless of the degree of assistance provided to new hires" (p. 684). Carver and Katz (2008) called for mentors to step in and assess new teachers when there are definitive problems with new teachers' methods. Students may suffer when effective teachers are not in place to instruct students in content knowledge through constructive pedagogy. After a review of qualitative data, researchers determined that contact with college professors post-graduation positively correlated with teacher-participants' self-efficacy at the one year mark. This study used data collected from researcher-designed instruments and the World Café Model (Brown & Isaacs, 2005). Pre/post surveys and written reflections were analyzed and coded (Strauss, 1987) to determine how to proceed as the exploratory case study moves toward a formative experiment (Reinking and Bradley, 2008). All studies in the literature review confirmed the need for mentoring new teachers. However, authors cited a need for more mentor preparation and/or experimental research. This exploratory case study may provide alternative ways to enhance beginning teachers' self-efficacy.

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Innovating Higher Education: Flipping the College Classroom

Jacqueline N. Robinson, *Mercer University*

The following presentation is intended to highlight the benefits of reinventing the traditional lecture approach to higher education through the utilization of the pedagogical concept of the “flipped classroom”. The “flipped” classroom concept has been widely accepted in primary and secondary education (Ash, 2012). Higher education institutions are being challenged to innovate instructional approaches and include use of modern technology to accommodate the changing population of students (O’Flaherty and Phillips, 2015). One answer to this challenge that has only minimally been considered in recent research is applying the “flipped” classroom paradigm to higher education. “Flipping” the classroom refers to the educator opting to preserve lessons/lectures that are traditionally done during class time for independent home use. In the flipped classroom format a one-hour lecture may become a fifteen minute video lecture viewed between classes by the student. Inversely the educator uses class time for more interactive instruction. Students will have time to engage in groups, ask questions about complicated concepts, and practically apply lecture material. The “flipped” model seems even more appropriate for use in higher education because it shifts the focus of learning from the educator to the student. The responsibility of learning material becomes the students rather than the focus being on an educator teaching material within a certain time frame. The flipped classroom seems to be a potentially effective means of training and producing competent future professionals across disciplines.

Intensifying Learning through Community Engagement

Shelly Pauling and Yolanda Savoy, *Stratford University*

The purpose of this ongoing study is to demonstrate the importance of exposing students to the community prior to graduating from an undergraduate health sciences program. These findings will allow professors to assess the benefits and weaknesses of extending instructional delivery to the community for learning enhancement. The benefits of learning through community involvement increase the “work ready” mentality of students and the skill set needed to be employable (Jung, 2011). It is also reported, the benefits of learning through community involvement increases social competence, perceptions of working with a diverse group of individuals and cognitive complexity (Powell, 2011). Those participating students have a greater appreciation for their chosen career path when exposure to the community occurs prior to graduation. Additionally, service learning and community engagement have increased students intentions to participate in future community service activities (McCarthy, & Tucker, 2002). Approximately 30 health sciences students at various stages in their program will participate in this study. Surveys will be distributed to all participants to rate their experiences from community involvement and engagement. Preliminary findings are indicative of community involvement providing students with an edge over other applicants seeking employment after graduation and learning objectives in the classroom are more enjoyable. This research finds that the use of andragogy approaches can improve the development of student learning and provide insight to students on the importance of community involvement and interaction.

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Interdisciplinary Collaboration in Higher Education between Reading and Language Arts and Early Childhood Education Programs: Learning Through Designing and Delivering Professional Development Presentations

Rose Mary Mautino, Julia Williams, and Jessica Martin, *Duquesne University*

Teachers today are faced with a multitude of developmental issues and students with reading disabilities that impact how children are able to succeed in a classroom environment. In addition, new teachers lack the experience and how to seek support to help them address such issues. The primary purpose of this collaboration is to model how teachers, and specialists need rely on each other for information and teaching practices as a team through professional development activities to enhance student learning (Kezar, 2005). 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, Sammon, 2006). Inglis, Miller & Reading specialist candidates are expected to learn how to provide leadership by helping and creating long-term staff development that supports the school’s literacy program. PreK-4 candidates are expected to have a firm understanding of typical and atypical early development as well as knowing how to collaborate with other teachers and specialists. It is the intent between the two programs to provide teacher candidates in the Reading Specialist Program and the PreK-4 Program opportunities to look at a broader scope of how developmental issues and reading disorders can impact optimal learning. Through the teaching method of inquiry and professional development practices, a model was created to allow the candidates to investigate various issues centered on reading disabilities and child development that would enhance the candidates learning. In addition, we used as a foundation the social learning theory to demonstrate to the candidates the value of collaboration for knowledge and methods of improving instruction (Kanter,1994). Both courses used the inquiry method to extract meaning and understanding of the objectives to be learned in the individual courses. As a cumulating activity candidates from both disciplines presented their inquiry based topic through a professional development format guided by adult learning theory.

Introducing Guide-Conspectus (G-Conspectus) - Efficient Tool to Learn while Practicing Note-Making

Olga I. Nosova, *Rappahannock Community College*

One of the main challenges for the online instructors is to find a means to overcome distance in order to reach and teach their students. In the asynchronous classes, largely based on self-guided independent activities, a carefully designed assignment plays a particularly important role. This presentation focuses on an advanced interactive and multimedia-enriched e-Guide designed not only to lead students through the text but also coach them on how to create a meaningful, logically structured and compressed outline/conspectus that would sum up all the essential information. The modernized print-based guide, named *Guide-Conspectus* (G-Conspectus), has been in field-trial for over ten semesters and turned out to be an efficient learning tool highly appreciated by the students. A number of specific features make G-Conspectus stand out and differ from the traditional guides. By asking specific questions, the instructor literally (never mind virtually) guides students through the text to direct their attention to the major issues and asks them to outline the essence of the content. Another function of the questions is to build a supporting structure, some kind of scaffolding, for the students’ own reading notes being typed in the provided frame. Other benefits of the personalized Guide-Conspectus result from its ability to mobilize students’ attention, to increase motivational status and to enhance learners’ perception of the instructor’s social presence in the class. A conversational style of the guide, with an emphasis on the dialog, adds to the engaging power of the assignment and allows the instructor to converse, lecture, explain, engage and guide students throughout the course. The Presenter intends to demonstrate the G-Conspectus assignment and share some helpful techniques used in its design. The session will also include discussion on pedagogical principles involved in asynchronous way of teaching online.

Is It Copying or Counterfeiting? Helping Students Understand

Peggy P. Quesenberry and Doris H. Kincade, *Virginia Tech*
Elizabeth H. Dull, *High Point University*

Our first memories of school include copying. We copied the alphabet from the board onto lined tablets, and the better we copied the higher the praise. Copying, as a pedagogical technique, seems inherent in school and continues into college, especially in the arts. We instruct students how to paint by copying the “old masters” or to act by studying classic theater (McKinnon, 2011). We teach historic costume and furniture styles by having students trace illustrations. In our design classes, we reward students who copy the best with the best grades. Computer software makes copying even more prevalent and seemingly more acceptable. Find something you like; click/copy/repeat. Then, suddenly in some classes, we ask for creativity, originality and threaten students with bad grades if they copy. Wait! Students are confused! They thought copying was good. Now it is bad? In our years of teaching and studying how students learn, we know copying is an effective pedagogy for learning (e.g., Neilson, 2006), especially for learning manual skills. However, we also want to encourage students to be innovative and creative.

To gain wisdom into this situation, we surveyed our alumni who work in design jobs, and asked “Do you expect employees to copy?” Everyone said YES! Copying is a big part of the design industry. This seemingly conflicting situation caused us to reflect on what is copying and when is it right and when wrong. We discovered that few alumni knew specifics about when copying became counterfeiting and thus an illegal business practice. In the past year in classes, we introduced the topics of copying and counterfeiting. After class discussions on the topics and readings on legal considerations, students are more aware of copying issues and are more open to being creative when needed and to use copying when appropriate.

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Learning in the Fourth Dimension: Beyond the Four Walls

Susan Jones, Milena Staykova, and David Halpin, *Jefferson College of Health Science*

The Institute of Medicine’s 2010 report, *The Future of Nursing*, called for increasing the number of baccalaureate-prepared nurses to 80% by 2020. To address this need, Jefferson College of Health Sciences (JCHS) offers an online program for associate degree nurses to return to school for their BSN. In 2011, an online survey was administered to JCHS’s students to evaluate the current RN-BSN Program. Survey results indicated lower scores for: use of technology, access to faculty and student interactions. A three phase quality improvement project was initiated to address the identified needs. In 2012, JCHS’s RN-BSN faculty and members of the Carilion Instructional Technology department collaborated to identify best practices in online education and to address areas for improvement in the use of technology. The use of Blackboard Collaboration was implemented in the online courses. Collaborate is utilized for online virtual: class orientation, office hours, student presentations, lectures, skill demonstrations, guest speakers, polling and assessments of knowledge. Student engagement is essential for satisfaction with online education. Blackboard collaboration is the key to the success of JCHS’s online education. The objective of this practice session: To provide online tools that participants can utilize to increase online student participation and course satisfaction.

Lessons from Kindergarten and Beyond

Kathryn Brandt, John Linn, and Elizabeth Dull, *High Point University*

Inspired by nineteenth century "pedagogical drawing" examples (Miller), design faculty have developed a new curriculum that successfully integrates handwork with computer software and other digital imagery while encouraging greater student creativity. Facing the need to make curriculum changes, faculty agreed that manual skills are important and need to remain in the course structure. Faculty also agreed that the traditional approach teaching 2-dimensional design first, then introducing 3-dimensional concepts needed to be reconsidered. Starting with the idea that our first experiences with understanding space and form are three-dimensional and holistic and 2-dimensional design is abstract, the traditional 2-dimensional first approach was inverted and 3-dimensional projects introduced in the freshman year. Students begin with 3-dimensional design assignments through the manipulation of blocks—Froebel's Gifts 5 and 6—which form the basic building components (Bosterman). Block constructions also illustrate a series of design organizational concepts (Ching), encouraging creativity and individuality. Design solutions are sketched in simple 2-point perspectives, photographed using smart phones, and finally drawn digitally in SketchUp. A foamboard white model (sketched, then drawn in SketchUp) of a simple furnished living space completes the semester's projects.

Sophomore students create 2-dimensional patterns using the simple geometric shapes in Froebel's Gift 7. Students work through Froebel's "Forms", then design their own sets of Forms used in later projects. Hand drawings are translated into AutoCAD® and Adobe Illustrator® in parallel studios. Adding to their understanding of 2-D shapes, students sketch patterns based on a single dihedral form (Home). Using Illustrator® the patterns are laser cut. The final project in this semester combines 2- and 3-dimensional requirements, hand sketches with software and is built to scale using laser cut components. This fully integrated project (hand and computer elements, 2-and 3-dimensional forms) allows the development of creative and highly individualized design solutions in lower division courses.

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Pedagogical Application of Business Intelligence Technology in Higher Education

So Young Kim, Gary Hughes, and Donna Ferguson

The past decade has shown improvements in the software technology in analyzing and summarizing students' outcome data. This presentation will discuss Business Intelligence (BI) solutions as innovative technology to process, analyze, and report student outcomes that will enable school leadership to implement practices that will greatly enhance pedagogical methodologies. We will present the power of BI in conjunction with data mining, exploratory, and predictive analysis to greatly improve educational decision and planning. BI, traditionally applied in the profit making industry, has emerged as one of the top-IT strategic priority in higher education due to the vast positive impact to enhance educational decision making (Chen, et al, 2012; Grajek, 2014; Guster and Brown, 2012; Kim and Hughes, 2016). This presentation will provide technical and procedural considerations in implementing BI infrastructure, and illustrate BI analytics / metrics samples developed in foreign language instructional settings. The benefits of BI will be discussed, such as effective reporting, actionable and meaningful information at all institutional levels, instantaneous identification of student outcome trend and status, and visualization of the vast amount of institutional data at (near) real-time. We will also emphasize that BI projects require institutional collaboration and cross-campus interactions with deep institutional knowledge, culture, and history, to adequately

incorporate an institution's values. Successful BI metrics / analytics, aligned with an institution's missions and values, provide an effective reporting / analytic tool to track, measure, and monitor students' performance on the direction of the institution's strategic and operational goals, to maximize student outcomes in the institution. The BI infrastructure will enhance the pedagogical decision making in critical aspects of student success, such as identifying at-risk students and providing timely interventions for students. In addition, the BI solution will give control to any decision making entities on how to analyze the data, without relying on IT professionals.

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Pedagogical Strategies: Addressing Anxiety in the College Classroom

Madeline Smith, *The College of William and Mary*

Given the performance-based culture which permeates the current higher education landscape, the need to address anxiety among college students as it pertains to the classroom setting is perhaps greater now than ever before. According to Khalaila (2015), multiple research studies have identified cognitive factors as a significant determinant of academic achievement. Further, while several factors of student anxiety are beyond the control of classroom instructors, it is evident that instructors can have a role in perpetuating certain forms of anxiety (Garcia & Pintrich, 1996). Alternatively, when anxiety impairs cognitive abilities, classroom instructors also have an opportunity to mitigate this issue. This discussion examines strategies for addressing various forms of student anxiety (i.e., test anxiety) from an instructional perspective. Such strategies include reconsidering approaches to assessment and implementing student-centered learning experiences (Fink, 2013). Recommendations are made on the basis of Fink's (2013) 12-step model for designing college courses to meet the needs of the 21st-century learner. The analysis also accounts for differences in learning styles and course-level requirements. Early interventions for anxiety and other forms of stress in classrooms typically yield more time for change over the course of the college experience (Ross, Niebling, & Heckert, 1999). Therefore, the pedagogical strategies discussed are designed to be adaptive to immediate implementation across the disciplines.

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Perceptions of International Student Towards Advising Relationship in the US Academic Settings

Shreya Mitra and James C. Anderson II, *Virginia Tech*

There are numerous young minds coming from all over the world in search of quality education in the US and the number is increasing every year (Lee & Rice, 2007). Unfortunately, many of those students are struggling in US academic settings because of unstable and inconsistent relationships with their academic mentors (Andrade, 2006), which most of the time is showcased as a cultural misunderstanding between the two (Stewart & Bennett, 2011). However, the same types of issues can exist between the advisor and student coming from the same cultural background. This study determines the factors that encourage or thwart the relationship between advisors and their international graduate students. More specifically, are cultural or cognitive differences toward problem solving present, which differences are more salient in defining the advising relationship. International students participated in a 1-hr semi-structured interview. The responses were recorded, transcribed, coded and analyzed for themes (Corbin & Strauss, 2008). Additionally, a reliable personality inventory called the Kirton's Adoption Innovation (KAI) Inventory was used to measure a dimension of personality as it relates to preferred style of problem solving. Since the mentoring relationship being explored is one of problem solving professional and academic tasks, it is hypothesized that this personality trait may be a contributor to the dyads perception of the working relationship. The KAI scores of the participants were compared to their interview responses to glean insights on the relationship between their preferred cognitive style and their satisfaction with the mentoring relationship. Findings show that there is a link between their cognitive style and their expectations from this advising relationship. The implication of this study lies in realizing the mentoring potential between the advisor and advisee, thus preparing future leaders to go back to their prospective countries with a quality education and the skills needed to impact society.

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Proximity Beacon Training and Learning: Applying New Technology in a Practical Context Using High Impact Learning

Charles Cosmato, William Kennan, Jacob Pillis, Julia Hurley, Kelsey Redmond, Sam Raines, Kathleen Degnon, and Katherine Patterson, *Radford University*

This demonstration blends two important threads of application and inquiry: proximity beacon technology and high impact learning practices (Kuh, 2008; 2014). Proximity beacons, often called by the Apple brand name 'iBeacons,' trigger various personal electronic devices (phone and tablets primarily) when in a specified range. The device contains a software application that senses the presence of the beacon and provides a notification that information is available, or performs a specified action (i.e., display a web page, play a video, dial a phone number, etc.). For example, a local business might use beacons to alert customers of sales or other special events. A person could carry a beacon, on a campus for example, and the phone could alert its owner that a person with specific skills or knowledge is near. Graduate students in a training and development course at Radford University were tasked with providing a proposal for training and a sample of the micro training to be delivered. The students conducted an initial client interview, developed a proposal for training based on micro and proximity training principles, created samples to demonstrate the technology, and pitched their project to city officials. This exercise provided a high impact practice experience of the first order. Students were required to take classroom learning and immediately translate that knew knowledge and skill set into practically applicable products designed to serve a real client in a

real situation. This demonstration focuses on both learning technology and high impact student learning.

Ready or Not, Here They Come: Training Graduate Teaching Assistants

Marlene Preston and Brandi Quesenberry, *Virginia Tech*

Teaching is not a gift that some people possess as a natural talent (Mistaken Beliefs about Learning to Teach, 2011). As a result, graduate teaching assistants (GTAs) require instruction on the various teaching strategies to manage the classroom and garner learning amongst their students. While some GTAs may begin their positions with an established teaching philosophy and a sense of what it takes to be an effective instructor of college-aged students, most new teachers will need guidance on how to be successful in the classroom.

Training new graduate teaching assistants (GTAs) to make a successful transition to the classroom as first time college teachers poses numerous opportunities and challenges. Although many departments employ GTAs within their programs, formal, continuous training is often limited. Thus, we will explore generalizable approaches to make initial—and continuous—GTA training effective.

As departments appoint GTAs to teach stand-alone sections or to lead lab/recitation sessions, the educational goals of the university, the department, and the course must be made known to the GTA.

This poster will address specific topics such as the importance of support and development for new and less experienced teachers, the use of lesson plans, grade norming, mentorships, and the need for continued training. Additionally, assessment of the training program from various stakeholder viewpoints will be addressed.

Research suggests that through strategic and long-term training, common teaching and grading pitfalls can be shared and managed as a teaching team (Fassett and Warren, 2011). Learner-centered teaching strategies can be discussed and modeled throughout GTA orientation and subsequent training sessions.

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Realizing Value: An Extension of Experiential Learning Design

Hannah Davis, Liza Dobson, and Tanji Reed Marshall, *Virginia Tech*

Extensive research indicates that students benefit from experiential learning opportunities. Course designs utilizing direct learning fall short if they fail to incorporate processing activities. Dewey (1897) asserts that education must be considered as a "continuing reconstruction of experience" with the purpose of transferring knowledge into practice. Higher education aims to accomplish that transfer of knowledge from classrooms to life beyond the institution. Instructional design must then incorporate elements that build enthusiasm and sustained involvement with content knowledge. The purpose of this qualitative study was to investigate the direct learning experiences of adults engaged in food production as a means for determining the content, context, and motivation for sustained involvement in an area of interest. We conducted semi-structured interviews with five adults involved in food production. Data analysis revealed formal and informal channels of knowledge acquisition, relationships and resources as methods of engagement, and perceived benefits to the individual and community. Our results provide evidence that a meaningful initial event serves as a catalyst for continued learning through self-directed iterations of action, reflection, reconceptualization, and experimentation. More importantly, we discovered an overarching concept of personal value that promoted long-term involvement and participation in food production. We

suggest instructional designs that include elements allowing students to realize value within and of the learning process in order to advance them from classroom success to long-term engagement. This includes creating space to acquire new knowledge through action, the opportunity to engage with resources and invested others, as well as providing opportunities for social and cognitive processing that highlight perceived benefits of participation. By situating students at the intersection of theory and practice, we not only allow them to acquire knowledge through authentic learning experiences. We give them the means for investing value and integrating efficacy into their long-term personal and professional domains.

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Reflections on Service Learning in Belize

Sarah Smidl, *Radford University*

Service learning abroad can provide students in health care professions an opportunity to develop new perspectives on health care, gain deeper cultural awareness and sensitivity, and enhance their self-awareness and development as people and future health care practitioners. In January of 2015, 10, second-year occupational therapy graduate students participated in an 11-day service learning trip to the rural district of Toledo, Belize. While there, they trained local health workers about basic health care and first aid, and assisted in conducting health fairs for adults and children in the villages. Before, during, and after the trip, the students followed journal prompts to write a total of eight journal entries, and 6-weeks after their return, students participated in a 2-hour focus group to reflect on and process their experiences. Qualitative data analysis discovered that all students believed the trip to be one of the most meaningful experiences of their lives. Though many had initial reservations about the cost, being away from family or significant others, and sleeping in hammocks in the villages, all students felt they had grown emotionally, spiritually, and professionally as a result of their participation. Students reported they had less judgmental beliefs about other cultures, and stated concrete ways they will incorporate their knowledge and experiences into their personal and professional lives.

Revisiting Coining and Proposing Ethicentrism, Related Words of Ethicentrism, Antithetical Words of Ethicentrism, and Synthesizing the Interrelationship of Ethical Relativism, Multicultural Competence, and Social Justice

Antoinette Petrazzi Woods, *Mount Aloysius College*

Revisiting coining and proposing ethicentrism, related words of ethicentrism, antithetical words of ethicentrism, and synthesizing the interrelationship of ethical relativism, multicultural competence, and social justice is essential because a gap exists in the extant scholarly literature. An initial poster presentation was achieved at the Association for Counselor Education and Supervision Conference on October 10, 2015 for educators and practicing professionals in counseling, psychology, and social work. This poster presentation aims to expand nomenclature, beyond the mentioned disciplines, for broader interdisciplinary pedagogy and praxis at the 2016 Conference on Higher Education Pedagogy at Virginia Polytechnic Institute and State University. This poster presentation introduces words, operational definitions, and conceptualizations to advance scholarly literature, multicultural proficiency, and social justice. Innovative conceptualization of the terminologies and processes is germane to leadership for culturally relevant pedagogy and practice that intentionally considers equitable and just practices for diverse disciplines, educators, and students. Albeit many professionals likely have encountered the processes in academia and other contexts, educators and practitioners did not have scholarly words that operationally defined and articulated the inequitable processes of ethicentrism and the multiculturally competent and social justice processes of ethical relativism.

Conversation: Revisiting Meaningful Learning Outcomes in the General Chemistry Laboratory while Being Mindful of the Practicality of Large-Scale Implementation

Colleen Taylor, *Virginia State University*
April Hines, *Virginia Commonwealth University/ Randolph Macon College*
Ashley Jordan, *Virginia Tech*

The course design to be discussed was implemented for a summer second-half general chemistry lab lecture with three sections of associated labs. Major changes were made in order to increase the level of learning outcomes from a performance prospective (Elger, 2007). The design was initiated in consultation with an undergraduate neuroscience major and a teaching assistant in a chemistry program from two institutions with common laboratory course components and practices. The major changes implemented included: (1) the recording of *general* laboratory procedures, eliminating laboratory handouts (2) the implementation of a performance grade (3) a requirement for Excel data manipulation in lab and (4) inclusion of two practical open-inquiry exams to replace paper tests. Rubrics were designed to assist in consistency and ease of grading for the teaching assistants. A survey after the course with an 88% response rate indicated the following: (1) 100% of the students believed the practical exams were more appropriate than the paper exams (2) 84% felt that not reading a handout during lab increased their ability to focus on what was going on in lab experimentally (3) 96% reported feeling more confident about performing under pressure because of their lab experience and (4) 82% reported an increase in their graphing and problem solving skills. With the overwhelmingly positive feedback from the survey and standard course evaluations one may expect that the students found the format easier than their previous experiences. Contrary to that assumption, 91% reported being challenged to a higher level than they had been in their previous lab courses. This design may provide a template for larger scale implementation of a more appropriate 100 level experience.

Saudi University Students' Attitude Towards a Culture of Peace

Aisha al-Ahmadi

The current study aims to explore the Saudi students' attitudes towards peace education. To achieve this goal, a surveying descriptive approach was used through a specially- designed application for measuring students' attitudes towards peace education. The application was applied on a random sample of 1353 male and female Saudi university students. It was clear that there was a statistically significant difference between the numbers of students' responses to all the items (a questionnaire for the attitudes towards peace education) in favor of one of two responses (agree or strongly agree). Data analysis pointed out that there were positive attitudes towards peace education for Saudi university students on three levels: human rights, disarmament and the means of gaining the skills of conflict resolution. It was also clear that females had more positive attitudes towards peace education than males. Students' staying abroad for more than six months and watching various Satellite channels were positively associated with the attitudes towards peace education. It was also clear that those who rarely travelled abroad had the same attitudes towards peace education as those who travelled a lot.

Student Engagement in a Project-Based Technology Integration Course: What Works and Why?

Mutlu Sen, *University of Georgia*
 YunJeong Chang, *University of Virginia, Charlottesville*

Higher education aims at cultivating independent learners who become lifelong contributors to society. Current college curriculum requires students to develop specific knowledge as well as in-depth higher order thinking skills (Sursock, Smidt, & Davies, 2010). To be able to reach this goal, college educators are recommended to design learner-centered environments to allow learners to become active builders of knowledge (Han & Bhattacharya, 2001). Project-Based Learning (PBL) has been commonly used in college classes as a comprehensive learner-centered instructional approach to engage learners in real-world context complex activities (Bransford & Stein, 1993), supporting the development of problem solving, critical thinking, analyzing and evaluating information, and effective communication skills (Duch, Groh, & Allen, 2011). This approach requires students to be actively engaged in the processes of constructing knowledge and making meaning (Mergendoller, Markham, Ravitz, & Larmer, 2006) and responsible for their learning. However, current college students are lack the abilities to actively engage in the course projects primarily due to lack of relevant prior learning experiences; prior to entering college, students were typically mediated externally via secondary school curriculum standards to prepare for college admission. With mixed methods approach, the study aims to explore college students' learning experiences and perceptions about a project based course that integrates innovative technologies to facilitate student engagement. We focus on (1) how students perceive project-based learning experiences, (2) how students define learning benefits and challenges during project-based technology integration course. The study has been conducted in technology integration courses at a large public university is designed with PBL approach to enhance college students' understanding about teaching effectively with technology. Students plan, design and develop multimedia learning resources as part of their learning outcomes, while the instructor facilitates those activities. Data will be collected through an online open-ended survey and in-depth interview and triangulated with project scores to understand their learning achievements and engagement. In the poster presentation, we will share students' perceptions and learning experiences in project-based technology integration course and discuss how those experiences influenced their understanding about technology integration.

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Student Perceptions of Applied Math Teaching and Learning in the Virginia Tech Summer Bridge Program

Stephanie N. Lewis, George Kuster, Brandon Bear, Matthew W. Grimes,
 Debbie Wilson, and Jill Sible, *Virginia Tech*
 Kathrynne McConnell, *Association of American Colleges & Universities*

The National Science Foundation (NSF) STEM Talent Exploration Program (STEP) Grant was awarded to Virginia Tech to help increase the number of undergraduates completing degrees in the math-heavy physical and quantitative sciences. College-level math problems require a deeper level of thinking as

compared to primary and secondary schools (Kajander & Lovric, 2005). The first-year of college is often the most stressful (Pancer et al, 2000) and results in lower retention rates (Parker et al, 2006). Learning communities that actively engage students contribute to their academic success during the first year (Tinto, 1999). An initiative set forth by the grant is the Summer Bridge Program. It was developed as a learning community that supports students through their college transition while providing real-world exploration of math concepts applicable across majors. In its fourth year, the program focus has been narrowed to provide students with college math preparedness and skills development through tackling real-world problems, exploring math concepts in their declared majors, and trying math concepts to the research process. The results of this refocus have been assessed both quantitatively and qualitatively. Pre- and posttests have shown that the Summer Bridge Program helped nearly all of the participants from the last two years to improve their math interpretation skills over the course of the three-week program; and for some, this carried over into improved academic performance in first-year math-inclusive courses. A survey of student perceptions revealed that students expect that solving real-world problems, group-based learning, and the autonomous nature of the program is better preparing them for college math. The success of the Summer Bridge Program has led to gains not only in student preparedness for college-level math based on GPA and reduced fail/withdrawal numbers, but also an increase in student interest in the physical and quantitative sciences.

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Student Perceptions of Feedback in the Writing Process for an Online Graduate Research Methods Course

David Marshall, Savanna Love, and LaRon Scott, *Virginia Commonwealth University*

Feedback and revision are essential elements in the writing process, and effective feedback has been linked to increases in student learning, writing success, and student motivation. However, much of this work tends to explore undergraduate settings, and little has been done to examine how this plays out in online graduate course work. Based on a review of the work of Homes & Papageorgiou (2008), McGrath, Taylor & Pychyl (2011), Wood (2012), and Weaver (2006), a framework was developed for providing students with effective writing feedback. This framework suggests that writing should (1) include both positive and critical comments, (2) be specific, (3) be timely, (4) be aligned with assessment criteria, (5) be related to the assignment, (6) be developmentally focused, and (7) should be both formative and summative in nature. Based on this framework, this qualitative study explores student perceptions of feedback in an online graduate level research methods course at a large public university in the Mid-Atlantic region. The primary deliverable for this course is a research proposal that is completed in three parts. Students receive instructor feedback, as well as rubric-based grades, and are allowed to revise each part of the proposal to improve their work. Semi-structured interviews will be conducted with a purposive sample of six students enrolled the course. Data analysis will identify emerging themes to learn how students enrolled in an online research methods course perceive the feedback they received on their writing and to what extent students feel that the feedback impacted their growth as writers. Our aim is to fill a gap in the literature by extending our knowledge of how feedback and revision impact student growth in writing by shedding light on the experiences and perceptions of students in graduate level and online environments.

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Student-Teaching Practice: An Important Step in Becoming a Teacher

Merita Hoxha and Vilma Tafani, *Aleksandër Xhuvani University, Albania*

As part of the process of becoming a teacher, teaching practice is considered by the student-teachers as a very crucial part of this process. Finally they have the possibility to make a connection of theory they have gained in the auditorium to practice and to what they are supposed to do as teachers. During this time student-teachers have to observe classes, discuss with their peers, mentors and tutors about student teaching practice, reflect on what they observe and do, prepare lesson plans, start teaching, deal with real classes and have responsibilities.

This presentation will focus on issues that directly affect student-teachers at our university. It will bring some insights, reflections and opinions of student-teachers, and also will present the results of a questionnaire conducted with 56 student-teachers of the Master Studies at "Aleksandër Xhuvani" University, Elbasan, Albania. In this questionnaire the student-teachers are asked about the problems they face during the teaching practice, the relationship between them, the mentors and the lecturers, and also some suggestions of the student-teachers to improve this process. The presenters will share ideas and discuss on finding ways to make this process more valuable and less stressful to student-teachers.

Supporting Student Learning with Undergraduate Writing Fellows

Laura Rose, Julian Farzan-Kashani, *University of Maryland, Baltimore County*
Mary Shuttlesworth, *Mount Aloysius College*
Kate Shannon, *Michigan State University*

Higher education is striving to improve student success rates and respond to the varying levels of students' preparation for college coursework. Gateway courses have become the focus of these efforts as "research demonstrates that meeting key academic milestones during the first year of college provides students with early momentum toward degree completion" (Education Trust, 2010, p. 10). This empirical data has led to academic transformation in higher education, whereby faculty are challenged to alter classroom pedagogy to engage students and facilitate individual student learning and success, while at the same time responding to a challenging fiscal environment.

As part of this initiative, a Writing Fellows program has been implemented in three introductory career courses at a mid-Atlantic University. This program utilizes trained students to help new psychology majors develop stronger writing skills in the discipline.

Seventy-two undergraduate students were surveyed before and after their participation in the program regarding their attitudes and beliefs about writing academic papers. Preliminary results indicated that after working with Writing Fellows, students felt more confident to request feedback from others and engaged in more prewriting before submitting assignments. Nonnative English speakers also reported greater understanding of how to plan for writing a paper after having worked with a Writing Fellow. Overall, students reported positive attitudes towards the effectiveness of the current writing initiative.

Findings from this study suggest that Writing Fellows programs can have a positive impact on college students' attitudes and behaviors towards written assignments. Additional follow-up will aim to address whether students' grades on written work also improved as a result of their participation in the Writings Fellows program.

Supporting Venues of Learning Within the Traditional Classroom and Beyond

Mason Ailstock, Huda Alazmi, Earl Cherry, Krista Gladish, David Hicks, Aaron Johnson,
Rachel Miller, and Jordan O'Donnell, *Virginia Tech*

Education is increasingly becoming an online function that extends beyond the traditional classroom. There are a multitude of Web 2.0 tools that support learning in flipped classrooms, hybrid classrooms, and distance learning venues. By utilizing concept mapping and automatic response tools in conjunction, instructors are better able to organize and assess student understanding than if using the tools in isolation. Additionally, using educational tools like the interactive whiteboard application, Educreations, allows educators to enhance instruction in the classroom and beyond. If instructors were to use Educreations, along with a concept mapping and automatic response tool pairing, they could achieve seven out of nine of the categories of student learning in *Classroom Instruction That Works: Researched-Based Strategies for Increasing Student Achievement* by Marzano, Pickering, and Pollock.

Taking College Teaching Seriously: An Online Community of Practice for Developmental Educators

Joyce Lindstrom, *St. Charles Community College*
Phyllis van Slyck and Robin Ozz

One of the most important topics for faculty in public higher education, especially at community colleges, is how to help developmental students succeed. Students requiring basic math and English courses are the most at-risk college students in public education today. They are most likely to drop out before completing a degree, and often before entering college-level courses. Clearly, there is a great need for in-depth conversation among all developmental educators about how best to serve these students. This session will highlight key attributes and benefits of a newly developed online community designed to enhance faculty pedagogy in developmental courses and increase student success. Faculty capture the teaching process digitally, revise their activities and assignments, and enhance their assessment techniques based on what they learn from each other. In this practice session you will be given a tour of this online community, and you will engage in several activities designed to emulate the experience of faculty participating in the project. An earlier pilot of this project demonstrated that improvement in faculty pedagogy is directly related to the success of developmental students. Our goal is to show that an online professional development community is "scalable" within and across campuses so that large numbers of faculty, including adjunct faculty, and students may benefit.

Teaching and Learning of Technology Education Programme in Developing Countries: The Paradox

Ivonne Uwaifo and Victor Uwaifo

Technology Education in African universities involves an effective interaction amongst the technology teachers, the students and the environment. The environment which includes workshop facilities enables the teacher to attain the stated objectives of the programme. These traits could only be attained if the teacher adopts an approach that effectively associates with the use of facilities. However, doubts have been raised over the availability and utilization of workshop facilities and effective management techniques needed for attaining competence in the programme. This study therefore was designed to determine the availability of workshop facilities, their frequency of utilization and the identification of management techniques needed for improving the teaching of technology education programme in the universities. To carry out the study, three research questions will be raised to guide the study. An instrument containing 208 items will be developed and will be used to obtain data from a population of 105 lecturers in ten universities offering technology education programmes in the south-east and south-south zone of Nigeria. Frequency count, mean, percentage and the National Universities Commission minimum recommended

facilities for the programme will be used to answer the research question. Based on the findings, recommendations were made for an improved optimization of the teaching and learning of the technology education in the universities in Africa and other developing countries.

Teaching at International Summer School in South Korea

Eunju Hwang, *Virginia Tech*

The purpose of this proposal is to share teaching experience at Hanyang University International Summer School (HISS), Seoul, South Korea. HISS is a 4-week program in July, 2015 and I taught *Housing, Family and Community* (3credits) which was about universally designed homes and communities for various families. Students taking the class assessed the designed environments and products with consideration for accessibility, adaptation, safety, and healthy life style. Life course and cultural perspectives on housing and communities were also discussed. In assessing families' needs and their living environments, I used *cultural competence*. According to the National Education Association (2015), cultural competence is defined as "an awareness of one's own cultural identity and views about differences." Using the approach, students completed 3 team projects on product analysis, universal design case study, and community walkability with various field trips. The team members were consisted of students from various countries such as the United States, Canada, Korea, Singapore, China, Malaysia, and Indonesia. In-class activities were also coordinated based on cultural competence. Similarities and unique approaches how countries addressed accessibility policies and demographic changes were discussed. The projects and in-class activities contributed to cultural competence and helped understanding their own culture. In the presentation, course syllabus, in-class activity rubrics, students' work examples, and students' feedback will be shared.

Teaching Concepts through Application: Using Case Studies in Higher Education

Mary Shuttlesworth, *Mount Aloysius College*
 Katherine Shannon, *Michigan State University*
 Laura Rose, *University of Maryland, Baltimore County*

Research supports the inclusion of case studies in facilitating student learning, especially in encouraging real-world application of concepts (Chaplin, 2009). Our goal was to determine if using case studies facilitates additional understanding of course material above and beyond lecture alone. To research this question, we divided 64 undergraduate students into two groups: lecture only and lecture plus case study. The case study used focused on a concept in psychology, failure to thrive (FTT). Lecture only condition students completed a 5-item pre-test on FTT, then listened to a 7-10 minute lecture and completed a 5-item post-test. Lecture plus case study condition students completed the same 5-item pre-test, listened to the lecture, completed a case study on FTT and ended with the same 5-item post-test. We conducted a 2 (lecture only and lecture plus case study) x 2 (pre-test score and post-test score) repeated measures ANOVA to determine the added benefit of the case study. The number of post-test items answered correctly did not significantly differ between conditions, $F(1, 63) = 2.61, p = .11$. However, the mean for post-test items answered correctly ($M = 4.81, SD = .401$) was higher in the case study plus lecture condition compared to the mean for post-test items correct in the lecture only condition ($M = 4.45, SD = 1.24$). Although we did not find significant differences between groups, results approach significance in the predicted direction, supporting use of case studies to facilitate student learning. Following completion of the lecture plus case study condition, students were polled for comments on the use of case studies. Several students ($n = 8$) commented that the case study was enjoyable and helped with application of the concepts.

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Teaching Dilemma Zone Protection with Simulation-based 3D Game

Qichao Wang, Montasir Abbas, and Lisa McNair, *Virginia Tech*

Dilemma zone is a region where drivers can hardly choose whether to stop or continue at the onset of yellow. One of the most commonly used dilemma zone protection system is the green extension system. The essence of this system is to extend the green when there are vehicles in dilemma zone. There are several concepts about dilemma zone and dilemma zone protection system. Without real-world experience, it is difficult for students to understand and memorize the concepts. It was found that the educational game can stimulate the student and improvement the teaching efficiency. Previous work (Kasaraneni et al. 2009) designed a game prototype using offline simulation data from a microscopic simulation software to illustrate the dilemma zone protection concepts. They found that the students want a more visual appealing game.

A simulation-based 3D game was designed to improve the teaching efficiency for the dilemma zone protection concept. The game can simulate traffic operation scenarios and collect users' gameplay data using refined 3D scenes. Vivid scenes attract students and multi-level design increases the appeal of the game and thus can stimulate students. Gameplay data collected from users can monitor students' responses and gather their understanding of the delivered knowledge.

An experiment was conducted to prove the effect of the game. 40 students contributed 608 game play observations with before and after quizzes scores for each of the students. The matched pairs t-test conducted in JMP showed a mean difference of 0.95 at 0.0051 significant level for the scores change, which indicated the game improved the students learning output significantly. Further analysis shows the "A level students" or the students with weaker understanding of the targeting concepts have more potential to benefit from the game.

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Teaching Educators to Research: The Teaching Scholars Experience

Sarah Henrickson Parker, *Virginia Tech Carilion Research Institute*, Tamika Auguste, *MedStar Washington Hospital Center, MedStar Georgetown University Hospital*, Jamie Padmore, *MedStar Health, MedStar Georgetown University Medical School*, Neil Weissman, *MedStar Health Research Institute, MedStar Health*, Peg Weissinger, *MedStar Georgetown University*

The delivery of high quality medical education, in both the classroom and the clinical setting, is essential for medical students, residents and fellows. However, evidence-based training for medical educators on how to be excellent teachers is minimal. This poster will describe the development and implementation of a 5-year-old program designed to teach medical educators to conduct scholarly research on education, the MedStar Health Teaching Scholars Program. This program was built based on Knowles' andragogical approach, facilitating adult learning through didactic sessions, with immediate and long term application. Through a 2-year, multi-session curriculum, students are taught to conduct research using qualitative and quantitative methods. "Students" in this course are seasoned medical educators. They may have extensive experience as educators, but are not researchers by background. At the end of their experience, they are expected to produce a research project of peer-reviewed manuscript publication quality. We have also integrated Wlodkowski's Motivation Theory into the design of each module, creating a protected environment in which both peers and experts give iterative feedback on an evolving project. Medical Education Research Certification (MERC) and Leadership Education and Development (LEAD) certification by the Association of American Medical Colleges is integrated into the curriculum. In this program, adult learners are taught research methods, qualitative and quantitative analysis, and given time to develop and execute their own medical education research project. Students, who are also educators, not only become informed consumers of the medical education research. We will discuss the development, implementation and lessons learned from the unique experience of implementing rigorous medical education research training into practice.

Teaching Writing-Intensive Courses: The Light Bulb Has to Want to Change

Melissa J. Himelein and Deaver Traywick, *UNC Asheville*

College writing instructors devote considerable time to developing innovative strategies for teaching writing. While strong pedagogy likely contributes to writing competency, to what extent are student attitudes toward writing also related to writing outcomes? For example, motivation and self-efficacy have been demonstrated to influence global academic success; are writing-specific indices of motivation and self-efficacy predictive of writing success? We surveyed a total of 157 students enrolled in writing-intensive classes at a small, public university regarding writing motivation and writing self-efficacy. Scores on the instruments, administered at the beginning of an academic semester, were then compared with students' grades on writing assignments completed over the course of the semester, as well as with writing self-efficacy and writing improvement strategies assessed in the final week of the semester. Both writing motivation and writing self-efficacy were positively associated with writing grades (in order, $r = .29, p < .01$; $r = .17, p < .05$), suggesting that attitudes did, directly or indirectly, influence writing success. Because writing motivation was also associated with greater engagement in specific behavioral strategies to improve writing ($r = .39, p < .01$), it seems reasonable that more motivated writers earned higher grades as a result of greater effort and initiative. One implication of these findings is that effective writing instructors must master not only best-practice strategies for teaching writing, but also techniques for enhancing student motivation to improve writing, for example, through the creation of highly engaging assignments or by demonstrating to students how writing might be relevant to their career goals.

**Ten Steps to Involving an Entire Campus Community in Service, Scholarship, and Partnership:
A Case Study of Sheltering the Homeless**

Kathy Stolley and Robin Takacs, *Virginia Wesleyan College*

What would happen if a college campus became a homeless shelter for a week? How would interdisciplinary pedagogy, scholarship, service, and partnerships be informed and extended? What would be the outcomes? January 2016 marked the tenth year that Virginia Wesleyan College has hosted a week-long on-campus emergency homeless shelter during our short Winter Session. Each year we make changes and improvements to this unique program and adjust to the changing needs of our campus guests. "Shelter" has become a VWC "signature," and part of the very soul of the College, offering a case study in the potential and power of combining service-learning, academic connections, campus and community. In addition to the immediate outcomes of sheltering the homeless for a week and engaging students with the issue of homelessness, Shelter offers a one-of-a-kind, one-week immersion experience without the students ever having to leave campus. It is truly interdisciplinary, touching all disciplines of the liberal arts, and ties directly to theory, practice, and scholarship. It shows encouraging quantitative and qualitative assessment outcomes, has led to student post-graduation career choices in service and humanitarian careers, and is described by campus community members including students, faculty and staff alike as a "transformative" and "life changing" experience. Myriad additional outcomes have been demonstrated including (but not limited to): building transferable skills; individual and campus recognitions; media attention for the college and for the social problem of homelessness; professional publications and presentations; community partnerships and; a 16-minute documentary video "Winter Shelter, On Campus: College Students Encounter Homelessness at Home," available at: www.vwc.edu/shelter and on YouTube. Our winter Shelter is unique, but also replicable on other campuses. This poster explains "Shelter" and provides "10 steps to repeat this experience on your campus."

The Effect of Mobility Devices on Massive Open Online Courses (MOOCs)

Oris Griffin McCoy, Diane Wilcox, and Sevinj Iskandarova, *James Madison University*

Massive Open Online Courses is a method that enables courses to be available to a large audience while following pedagogic principles using instructional methods. Wilcox, D., Griffin McCoy O. & Iskandarova S. (2015) mentioned in their previous research work that massive open online courses have limited instructional utility that rarely provide students with opportunities for interaction and feedback. This study describes challenges when using MOOCs on mobility devices, and also identifies new pedagogical approaches that should be developed on MOOCs for mobile devices users. Most MOOCs apps on mobile devices have missing features. Approaching those tools with iterative requirements can greatly develop web-based space accessibility via mobile devices. In this study the definition of mobile devices includes- smartphones, iPads, netbooks, laptops and other tablet devices. By adding new and upgraded features users are immediately able to use their mobile devices to access their course materials. The research is mixed methods sequential explanatory study (online survey & one-to-one interview). The online survey was administered to assess students and educators who are familiar MOOCs and MOOC apps for mobility devices. The results provided statistical evidence regarding the effect of mobility devices on MOOCs. The interview, the second step, provided more detailed information about the procedure that which features can be added to the mobility devices on mobiMOOC.

Reference

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The Effect of Prior Knowledge Priming on Student Learning in Medical Education

Shaadi F. Elswaifi and Krista Johansen, *Via College of Osteopathic Medicine*

Current medical education is fast-paced and requires learning large amounts of information in a short period of time. Often, new material is not readily connected to previously learnt content. If students cannot recall the previous information, a disconnection occurs between the new content and previously learnt material, thus decreasing efficiency and effectiveness of the overall learning process. Priming prior knowledge before introducing new topics may enhance learning efficiency and effectiveness by allowing students to recall and build upon the information they have already acquired. To measure the role of knowledge priming an integrated active-learning module that included topics from clinical medicine, microbiology, and pathology was delivered as part of the students' curriculum. The module had two components; a prior knowledge priming (PKP) portion and a case-based portion for the new content. The PKP portion was presented in a graphical interactive format. A few days after completing the module, students were asked to complete an online survey designed to gauge the efficiency and effectiveness of PKP. Results indicated that 80% of students felt PKP assisted their prior knowledge. Results also showed that 60% felt PKP added to their ability to learn the content while 12% did not; 63% thought PKP made learning the content efficient while 17% did not; and 64% thought PKP made learning the content effective while 15% did not. Results also indicated that 51% felt that PKP was challenging while 7.4% did not, and 82% felt that PKP helped them integrate the multidisciplinary content. Our results indicate that PKP contributed to student perception of the efficiency and effectiveness of their learning. We believe that implementing PKP activities are critical to surviving a fast paced learning environment and ultimately contribute to long term information retention. Studies are currently ongoing to determine the effect of PKP on student exam performance.

The Expected and Unexpected Benefits of Daily Quizzes on Student Success

Janie Sigmon, *York Technical College*

In order to be more proactive in helping students succeed in their science classes, the York Technical College Science Department implemented student success conferences with students who failed the first and any subsequent exams. It was determined from these conferences with failing students that though note-taking skills improved with counseling, study skills did not. Daily quizzes on material covered in the previous class were begun in the spring 2014 Introductory Microbiology classes. Students then were required to study smaller amounts of material more frequently (between class periods). The quizzes also served as an active learning experience because they were immediately reviewed and reasons for right and wrong answers were discussed. Expected benefits included increased student success with fewer withdrawals and failures (grades of D or F) in the “daily quiz” classes as compared to previous similar semester classes. Overall class GPA also increased. Review of the literature supports these findings in improved exam performance in psychology graduate students, undergraduate education majors, and undergraduate anatomy students. Another study shows fewer failures in freshman level introductory accounting classes. Unexpected benefits were increased attendance, decreased tardiness, and better preparation for the exams. Though the quizzes take time from class, increase the workload of the student, and increase instructor preparation and grading time, increased student success suggests that this is time and effort well-spent.

The Invisible Student: Retaining Minority Males in Higher Education

Jill L. Wendt, *Arizona State University*

Disparities exist among minorities in educational attainment. The gap widens when examining access to higher education and persistence rates among minority males as compared to their white counterparts and minority females. The purpose of this action research study was to explore the impact of a reciprocal mentoring model between faculty and minority male students in an effort to examine the effects on student persistence and the students' academic experience. The researcher attempted to examine mentoring relationships, the process of reciprocal mentoring, and the effects on persistence and the students' academic experience for the purpose of learning about one another's perspectives. This study investigated minority male persistence within Chandler-Gilbert Community College (CGCC). Persistence was defined as a student who enrolled during the fall 2013 academic semester and continued at the same institution or transferred to another two-year or four-year institution working on degree completion. The author used a mixed methods design and used Critical Race Theory (CRT) as the theoretical framework by which to examine issues pertaining to minority male student perspectives and experiences. The results yielded eight assertions related to minority male retention and persistence. Keywords: minority males, community college, persistence, reciprocal, mentoring, retention, Critical Race Theory

The Relationship Between Faculty Attitudes, Perceived Barriers, and the Willingness to Teach Interprofessional Courses at our Institution

Kimberly Whiter and Susan Polich, *Jefferson College of Health Sciences*

Our College's belief in Interprofessional Education (IPE) is so strong that this approach to teaching is in our mission statement. Despite IPE being a pillar of our college, we have seen a decline in the number of full-time faculty willing to teach our undergraduate IPE-specific courses. The goal of our project was to identify factors that have led to a decline in faculty willing to teach our interprofessional courses. An electronic survey which included the “Attitudes Towards Interprofessional Learning in the Academic Setting” was sent to all full-time faculty. 42 (49%) of faculty responded. 92% of respondents reported never having taught an IPE-specific course. The majority of respondents reported they agreed/strongly agreed that interprofessional learning should be a goal of our campus (n=32, 76%). The influence to be

involved in IPE came mostly from their students' opinion of the IPE courses (n=16, 38%) over the influence of their peers and administration. The majority believed their workload was too high to teach an IPE course (n=26, 62%) and an IPE course was logistically difficult to teach (n=32, 76%). Eleven respondents (21%) believed that leadership for the IPE course was adequate. The primary reward for teaching an IPE course was reported as contributing to the education of students (n=15, 38%). Secondary reasons included the ability to increase their teaching workload (n=5, 13%) and receive overload pay (n=6, 15%). The vast majority of respondents had never taught an IPE-specific course. We discovered several factors that reportedly were involved in the decision not to teach the courses. The factors included faculty perception of the difficulty in teaching an IPE course, high faculty workload, student perception of the IPE courses, and the IPE courses' lack of leadership. Faculty perception might be changed through strong course leadership and modifications to workload calculations.

The Role of Gender in the Use of Electronic Asynchronous Weekly Board Review Questions in Osteopathic Medical Student Education

Richard P. Wyeth and James Powers, *Edward Via College of Osteopathic Medicine, Virginia Campus*

Several studies have evaluated gender-related differences in the facility and comfort of electronic content delivery in higher education, supporting both differences and similarities for men compared to women. These studies are less common in graduate or professional curricula and no studies are found addressing gender-based distinctions in osteopathic medical schools (OMS). Medical school admission requires undergraduate curriculum completion with significant science and technology. The authors hypothesized that OMS students would show no differences in gender-based use of an internally-developed weekly email based question-and-answer forum, available to all VCOM students – “The Weakly Bored.” At the conclusion of the 2014-15 academic year, a survey asked students to anonymously indicate their gender, MCAT scores, current GPA, and frequency with which they read the weekly forum question. Data were analyzed with analysis of variance, Student's t test, and presented as the mean \pm standard deviation or chi square for categorical data, as appropriate. Survey respondents (n=114) were identified as 43% female and 52% male, differing from enrollment data (which shows 54% female and 46% male, $p < 0.05$). Statistical differences were noted when comparing MCAT scores between females (25.1 ± 2.5) and males (26.3 ± 2.7 – $p < 0.05$), but GPAs were not statistically different, at 3.59 ± 0.30 (females) and 3.59 ± 0.32 (males). Likelihood of reading and answering the question weekly (prior to receiving the correct answer) was measured by a Likert 5-category scale, ranging from “always” to “never” for both questions. Analysis shows that males were more than twice as likely to read and answer the question compared to females ($p < 0.05$). Results of this IRB-approved study lead to the conclusion that male OMS students are more likely than females (potentially due to higher MCAT scores) to comfortably access electronic asynchronous board review elements, despite a similar GPA.

The Walk and Talk Protocol: Measuring the Effectiveness of Movement in Understanding and Retention of Class Material

Lynn S. Cockett, *Juniata College*

In his keynote address at the 2015 CHEP conference, Dr. Terry Doyle's discussion about how students can be ready to learn referenced the importance of exercise, citing the work of John Ratey and the findings regarding the neurotransmitter MBNA, which Ratey and others are calling “miracle grow for the brain.” In this discussion, Doyle mentioned that when his students are discussing class materials, he makes them walk rather than sit. This research is a direct outgrowth of that comment, and seeks to test whether or not the act of walking while talking about class material has a positive impact on learning. Students are broken into groups, and groups are randomly assigned to walking or staying in the classroom. When they return, students are asked to complete “one-minute essays” about the topic that was discussed. Further, bi-weekly quizzes are designed to ask similar questions about those same topics. This design will provide insight into whether the walking protocol has any effect on understanding material either in the short term or long term.

The research tests Doyle's implied hypothesis that movement impacts learning positively, and can be applied in any discipline where the instructional method involves discussion.

Towards a Validated Needs Assessment Process in International Contexts: A Case Study in Saudi Arabia

Mashaal Alqahtani, *Virginia Tech*

Since the 1960s, the landscape of needs assessment is well-established and easily accessed through the literature; however, the difficulties with literature identified in the context of internationalizing needs assessment. A significant contribution by Altschuld and Watkins (1995) suggest Three-phase needs assessment model as more detailed and formal process model to take place in organizational change and development context like business, community agencies, and government institutions. This model is a comprehensive focus, which includes systematic procedures and steps focusing on needs assessment process, makes a viable option for use in international context. Therefore, the purpose of this research is to explore how an existing Three-phase needs assessment model developed in the United State can be adapted and translated to fit local needs of the Saudi context; a more social/ritual bond culture in the Middle East. This study is a descriptive qualitative research design. Literature findings, expert's reviews, and following by open-ended survey are employed in this study to determine the potential of using the Three-phase needs assessment model by Witkin and Altschuld (1995) in Saudi Arabian context. The design of the study is chosen due to the nature of the object of study and the focus of the research questions. Findings of this study would contribute to the instructional design literature as the completion of this research would provide data would be used to build a theoretical framework for internationalization of needs assessment in eastern context as the findings would advance needs assessment literature. At a minimum methodologies and tools related to need assessment process would need to be translated to eastern context as it is assumed that existing methodologies would need to accommodate different cultural settings.

Transdisciplinarity and Community Outreach as Innovative Strategies of Teaching and Learning in Higher Education

Duduzile Mzindle, *Durban University of Technology*

The new approach to teaching and learning is a shift significant enough to be called a "paradigm shift". It requires prospective lecturers to be creative in implementing good teaching and learning practices within a broad and holistic interpretation of the new curriculum framework. This integrated approach to teaching requires the collapse of artificial boundaries between academic and applied knowledge, between theory and practice and between knowledge, skills and between the head, heart and hand. The article explored a challenge that was imposed to the student to apply one of their roles and competences in addressing problems they encountered during Work Integrated Learning (WIL). The purpose was to generate new insight and offer recommendations for improved practice. The investigator discovered that community engagement "ought to be" "needs driven" if lecturers want to make meaningful impact as change agents. This was revealed in a one day workshop that was undertaken in the institution in an attempt to make students reflective practitioners and as change agents which will assist them to move away from being restricted professionals to extended professionals. The objective of the workshops was to expose students to the innovative ways of the addressing issues which they may confront in their professional practice. This intervention has become a culture in the sense that it is done every year with the students. The issue of transdisciplinarity has become very prominent in the drive to execute this innovative strategy to teaching and learning in Higher education.

Using Digital Geography in the Classroom

Alex McDonald, Morgan Latimer, Daniel Newcomb, Jessica Sutherland, Sara Iler, Aaron Johnson,
and David Hicks, *Virginia Tech*

Digital geography has evolved significantly in the past few decades, much like almost all other technology. As usual, teachers are left with the unclear task of implementing this new technology in the classroom. Thankfully,

new technology lends itself to quick and easy learning. The applications grow simpler each day, and the teacher's task of bring this new digital technology into the classroom is getting easier. Programs, such as History Pin and iMapBuilder, give teachers easy but effective ways to help students learn with digital geography. While serving different purposes, the two programs use a similar approach to digital geography. Both programs combine different disciplines, namely geography and history, to form interactive, and genre-crossing tools. History pins gives any individual the chance to search the local history of an area, near or far. Any number of historical sources can be added by a user, and then searched by billions of other users around the web. Similarly, iMapBuilder allows any user to create maps on their own terms. Images, text, and many other things can be seamlessly added onto a map. Both projects blur the line between geography and other related domains. While History Pin may remain more influenced by history, and iMapBuilder similarly focused on the geography side, both inherently seek to combine geography with any other domain the user may choose.

Utilizing Flipped Classroom Methodology in Higher Education

Shatel M. Francis, *Mercer University*

The face of education has changed dramatically in the last two decades. Due to the influx of the millennial generation in higher education, professors are charge with developing new, interactive and diverse approaches to teaching and learning (Newton, 2006). Combined with technological advances is the pressure for elevated learning outcomes from administrators. Educators are expected to go beyond teaching traditional theoretical models, toward more problem-solving modalities. Topics such as professional identity, global/international trends, and service learning must all be covered within the same span of time that was allotted previously under fewer constraints (Shupe & O'Connell, 2005).

The flipped classroom method is a developing educational trend in which students are required to watch traditionally, in-class lectures at home (Milman, 2014). Lectures are then supplemented through individual and group activities, applied practice and reflection guided by the professor during class hours. This flipped method is the foundation of online degree programs across the world. Utilizing this methodology, besides reaching a wider audience, allows students and teachers the ability to integrate technology into course offerings, and provides fertile ground for dynamic interaction, critical thinking, and situated practice within the classroom. Attendees at this poster session will gain an awareness of the learning theories that lead to the historical development of flipped classroom theoretical frameworks, as well as, ways various student learning styles can be optimized through the flipped classroom.

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Wednesday
February 10, 2016
Session 3
1:50-2:40 PM

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

Collaborative Learning as Instructional Design to Increase Learner Achievement

Chaya R. Jain, Virginia State University

Abstract: As pilot of a multi-semester intervention research, this quantitative investigation tests the effectiveness of the theory that suggests group learning as a positive practice toward student academic achievement. With focus on the “effect” paradigm examining the outcome of the collaboration approach, this inquiry examines the cause and effect relationship among a group of students at a historically Black College and University (HBCU). It tests the research question, “Does collaborative learning help students’ higher academic achievement?” The population, a random assignment of a homogenous sample, includes 130 students. Conducted over the academic year 2014-15, the methodology involves comparison of academic achievement between experiment and control groups. The sample includes two identical sections of a liberal arts course with 30-35 students in each of the control and experimental groups repeated over two semesters. Data from six collaborative activities were analyzed using descriptive statistics and the t-test. Findings indicate control group’s academic achievement to be slightly higher than the experimental group’s. The presentation discusses the overall findings and inferences and opportunities for subsequent considerations regarding research design and approaches.

Literature Review

Grounded in constructivist epistemology (Bruner 1961, Dewey 1915, Piaget 1950, Vygotsky 1978), the group learning pedagogical approach inherently comprises collaborative and/or cooperative learner-centered activities that typically encompass construction of knowledge, discovery, transfer and structure (Johnson, Johnson & Smith 1991). Contemporary literature (Apple, Morgan & Hintze 2013, Bruffee 2009) also suggests group learning as an effective pedagogical technique that allows students to better engage in skills of writing, critical thinking and revision, all of which help foster self-growth (Jain & Utschig 2015). While group learning serves a means to increase learner interest that helps foster critical thinking (Bruffee 2009, Lai 2011, Trimbur 2009), collaborative and cooperative learning are two distinct approaches of learning. Lai (2011) explains collaborative learning as “mutual engagement of participants in a coordinated effort to solve a problem together” (pg. 2) while Paintz (1999) perceives it as a “personal philosophy, not just a classroom technique” (pg. 4). Further, that it assigns the control responsibility to participants. In contrast, cooperative learning allows the teacher to maintain structure and control of a classroom where participants are interdependent for the achievement of a task through individual contribution and accountability. Notwithstanding the positive aspects of either of these group learning approaches, Dillenbourg (1999) points to inherent learner dynamics and complexities involving group composition, task and learner characteristics.

Methodology

This quantitative *causal-comparative* pilot study tested the hypothesis, “*Collaborative learning results in higher academic achievement.*” For the experimental group which consisted of seven groups of up to five students in each group, the intervention involved collaboration among all five members of the group to solve a different, single problem each time. The control group participants were given the same identical problems, but without any group interaction. Operationalization specifics are as follows:

<i>Independent Variable</i>	=	<i>Mode of learning (collaborative vs. individual learning)</i>
<i>Dependent Variable</i>	=	<i>Academic achievement (academic grades A, B, C, D and F)</i>
<i>Controlled Variables</i>	=	<i>Duration of instruction, timeframe of instruction, and class size</i>

Data Analysis and Results

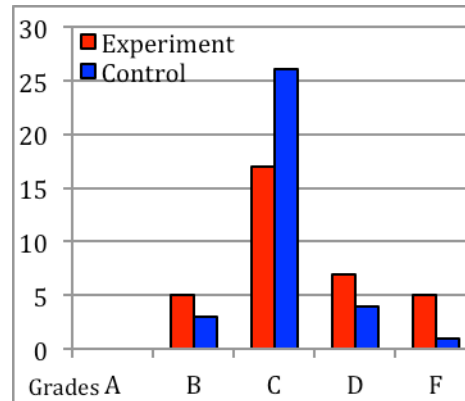
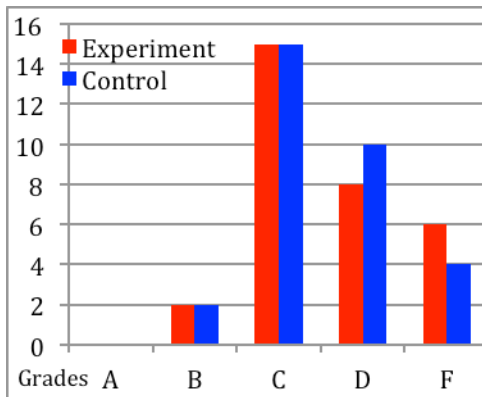
Table 1 provides a summary of the two comparative groups. Graphs 1 and 2 demonstrate the control groups’ academic performance to be slightly higher than those in the experiment group. Since the t-test’s calculated values for both semesters were smaller than t alpha values at .01, the hypothesis was rejected.

Table 1: Distribution of Research Participants

Participants	FALL 2014		SPRING 2015	
	Experiment	Control	Experiment	Control
Male	13	11	10	13
Female	18	20	24	21
Total	31	31	34	34

Gr 1: Fall 2014 Academic Achievement (N=62)

Gr 2: Spring 2015 Academic Achievement (N=68)



Discussion/Conclusion

Student grades for this study are based on the overall course performance; therefore, academic achievement is not specifically tied to the content addressed by the assigned group activities. Other observations and limitations include participant absenteeism; student reluctance to contribute to group discussion; expectation of additional reward for participation; personality conflicts within the participant groups; the “hitchhiker” problem and participants’ propensity to avoid negative assessment of peers. The findings suggest reconsideration of the approach; from collaboration to cooperation, to better ensure all participants’ individual accountability within a group to help improve all learners’ academic performance.

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Why Do Students Not Engage in Collaborative Learning Outside of Class?

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Abstract: Collaborative learning (CL) can be a powerful pedagogy. By encouraging learners to discuss ideas and develop a shared understanding of a problem, learning can be made more-efficient and more-powerful. However, most evidence for the impact of CL focuses on the classroom. We have developed an approach, termed Shadow Modules, which uses principles of CL to support student-directed learning outside of class. However, engagement with these CL activities is low, and so this study aims to identify student attitudes towards CL, and whether there is a link between views of CL and learning strategies (deep, surface or strategic). Using a mixed-methods approach we have investigated students' perceptions of CL, and potential reasons why they may not engage fully with such learning activities of their own accord. The data suggest that students are generally skeptical of CL, although surface learners to show a mild, but significant, preference for it. Student concerns of CL are mainly that it might lead to a reduced-efficiency of studying, or be distracting. Even though many recognized the benefits of CL, still this general suspicion of sharing learning activities was pervasive. These findings have implications for the management of student-study and revision groups.

Literature Review

A major challenge for Higher Education is engaging students in active learning, as partners in the learning experience, rather than passive recipients of knowledge, especially during student-directed learning (SDL) outside of the classroom. A well-established pedagogy to enhance active learning is Collaborative Learning (CL) where students work together to discuss and solve problems (Dillenbourg, 1999). CL has been shown to enhance student academic outcomes (Gokhale, 1995) as well as group skills, confidence and metacognitive skills. The key factor for CL is the ability for learners to discuss material with each other, engaging in dialogue that leads to each participant supporting the learning of their peer(s) (Mercer, 1996). Lee, Tsai *et al.* (2014) suggest that CL and SDL are mutually supportive of one another; both activities encourage learners to be self-critical, promote deep learning strategies and 'epistemic agency', a vital tool in their development as lifelong learners. Recently we established a new pedagogy that we have termed 'Shadow Modules'; student-led, student-focused study groups which run alongside formal taught modules, but are not part of the core curriculum (Scott, Moxham & Rutherford, 2014). A volunteer student Shadow Module Leader organizes either peer-taught informal classes, group-working sessions where students collaborate on a single problem, of a support-group through social media. The outputs of these activities may then be shared with the class as a whole, through Web 2.0 collaborative technologies (e.g. wikis, social media, Google Drive), even with those who did not participate in the activities. Scott, Mistry *et al.* (2014) report that students undertaking Shadow Module activities had a better module outcome than their peers. However, only c.20% of students in a module participate in the Shadow Module activities (although many more use the learning resources produced by the study groups, which are shared online). The study reported here aims to investigate potential reasons for non-engagement with potentially-beneficial CL activities outside of class. We have investigated students' perceptions of CL and SDL, in order to identify why engagement in CL activities outside of class is generally low. In particular we are interested if perceptions of CL and SDL are associated with either surface, deep or strategic learning styles (Entwhistle & McCune, 2004).

Methodology

A mixed-method approach was undertaken for the study. A survey of 527 undergraduates used the ASSIST questionnaire (Entwhistle and McCune, 2004) to reveal deep, surface or strategic learning strategies, also questions using a 5-point Likert scale, investigating students' liking for studying alone, in pairs/threes or in small groups. The survey included undergraduate students from all year groups and across 6 academic Schools. Semi-structured interviews were undertaken of 33 individual students. Questions focused on investigating students' own self-directed study activities and their views regarding CL and similar activities. Interviewees were drawn from three academic Schools and all academic years, although with a bias towards students in their first year of study. A Grounded-Theory approach (Glaser and Strauss, 1967) was taken. Quantitative analysis used regression analyses and factor analysis to identify correlations. Qualitative analysis used a constant comparison approach (Glaser and Strauss, 1967) to identify core themes within the transcripts.

Data Analysis/Results

Quantitative analysis suggests some correlations between student learning styles and attitudes towards learning. Students who exhibited a Strategic learning strategy showed a positive correlation with liking solitary study, and a significant negative correlation with pairs and group-based study ($P < 0.05$). Students who exhibited strong Surface learning characteristics also exhibited a positive correlation with group-based activities ($P < 0.001$), and significant negative correlation ($P < 0.05$) with preference for solitary study. Students showing strong Deep learning strategies exhibited a significant positive correlation ($P < 0.05$) with pair-based learning, and a significant negative correlation ($P < 0.01$) with group-based learning. There does, therefore, appear to be significant correlations, albeit weak ones, between learning strategies and preferences for solitary, pair-wise or group learning activities.

Qualitative analysis identified codes which clustered into four major themes. These themes were common across all ages, backgrounds and genders. Firstly, *students' predominant reported learning approach undertaken outside of class was solitary-study*. Predominantly, solitary learning activities appeared to be surface approaches of reinforcing knowledge and understanding (revising existing notes and filling knowledge gaps with additional reading), rather than deep-learning approaches of developing a holistic understanding of the subject and wider-reading around the subject. This may impact on their appreciation of CL, which indeed was identified in the second theme: *The vast majority of interviewees preferred studying alone to studying in pairs, three, small groups or large groups*. All but one interviewee cited learning in larger groups as their least favorite approach, the most common reason being that large groups would be 'distracting'. Thirdly, *CL was viewed with considerable suspicion by interviewees*. Almost none of the interviewees recognized any particular benefits to CL activity, aside from the ability to ask a peer the answer to a problem or specific question. None of the interviewees could express the benefits of a discursive approach to learning, or the importance of sharing diverse points of view, which are keystones of CL (Mercer, 1996). The concern that other less-engaged students might benefit from their input into a group activity was also a factor, suggesting that students are quite territorial of their learning activities. Finally, *students generally recognized the benefits of CL for filling-in gaps in knowledge and using others' understanding to supplement one's own*.

Discussion

Our work reported here suggests that students do recognize the potential of group-based learning activities, but do not readily engage in them of their own accord and are largely suspicious of them. Concern that they might not be as efficient in studying when working in a group is contrary to reported research (Lee *et al.*, 2014; Scott *et al.*, 2014) where CL has been shown to make studying outside of class more time-efficient. Surface learners are more likely to favor group activities, but deep learners, whom one might think would welcome discussion of ideas with peers, are not generally supportive of CL studying outside of class. These findings suggest that the reason there is low-engagement with Shadow module activities is because of limited understanding of the benefits of CL and the efficiencies of it. If student-directed CL activities are to be encouraged, therefore, then academic staff need to explain the potential benefits to students, and to provide some degree of supportive structure or guidance. Without this form of 'scaffolding', it is unlikely that student-directed CL will succeed or even occur.

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Infusion of Web-Based Apps to Navigate Online and Hybrid/Blended Courses with Nontraditional Preservice Teacher Candidates

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Abstract: As student populations increase at traditional Historically Black Colleges and Universities (HBCU), so does the demand for more online and hybrid/blended education courses. This presentation examines the instructional strategies of integrating web-based applications (or “apps”) to facilitate learning. Participants will engage in the use of guided instruction on how to implement apps to improve student engagement, student collaboration, time management, and to enhance the quality of a finished product.

Literature review

Following the growth of higher education over the past decade, one readily observes the growth of online education. The use of online, hybrid/blended courses as an effective teaching and learning tool has expanded on college campuses and especially for universities serving high minority populations (Sturgis, 2012.) Teaching is becoming a more challenging profession today as teachers endeavor to become more adept in the emerging knowledge surrounding the use of the new technological tools used by their students daily (Jung, 2005.) Teachers are expected to make learning meaningful and pragmatic rather than just delivering information to learners. As these learners are becoming more aware of new technologies, teachers must also become aware of strategies to implement them in the classroom, making the content more pragmatic and useful, whether online or face-to-face. Recent studies indicate steady enrollment growth among Institutions of Higher Education (IHE) including both four year and community colleges (Ashby, Sadera & McNary, 2011.) Accordingly, Allen & Seaman (2007), report during school year 2005-2006, course enrollment in online courses increased 10% while face-to-face courses increased 2%. In brief, online courses deliver 80% of course instruction with some online approach, which is most attractive to minority students because it offers the option of flexibility (Sturgis, 2012.) McClinton & Estes (2013) describes the challenges faced during the pioneering of online programs at a traditionally HBCU. One HBCU reported the hope of introducing online courses as a prospect for increasing student enrollment and university income (McClinton & Estes, 2013.) Bowes (2007) further posits that a faculty’s use of technology promotes teacher candidates’ use of technology.

The current trend is the integration of technology within the classroom. Preparing teachers to integrate technology within the classroom does come with its own complexities (Guzman & Nussbaum, 2009.) In another study, Wepner, Bowes, & Serotkin, (2012) explored the use of technology in teacher education programs. The study investigated three groups of stakeholders (university faculty and supervisors, cooperating teachers, and teacher candidates) with the aid of technological hardware, software and technology learning support, through training, modeling and mentoring. The result disclosed an attitudinal change toward technology, the significant use of technology and the need to know more about technology. Teachers can be informed and confident only when they are able to appropriately utilize new technology (Bowes, 2003.) As a result, strategies utilized in this presentation offer tips on how to implement web-based apps in teacher education programs with nontraditional students, those with the average age beyond 22 years. Researchers such as Hernández-Ramos (2005), posits that technology integration should be defined not simply as a question of access but rather as a tool both for improving educators’ professional productivity and promoting student learning.

Goals and Objectives for the Practice session

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

- Explore the use of the three most frequently used web-based applications to engage teacher candidates in navigating content in online and hybrid/blended courses.
- Discuss the current trends in the use of web-based application.
- Create a meaningful writing product with the use of iPads and web-based applications that can easily be implemented into many content areas.

This practice session will focus on the integration of web based apps into teacher education pedagogy. Participants will observe and practice strategies that build technological competencies and enter into discussion of the pros and cons of current trends. The final product will be created and designed by participants.

Description of the practice to be modeled

Attendees will participate in a hands-on application of a minimum of three frequently used web-based applications. Participants will observe demonstrations of strategies that connect with students, enhance the content, build relationships and are transferable during field study, for example, student teaching internships. Participants will be able to discuss the applications of these technological tools and will be guided through an easily adaptable process for infusion into online and hybrid/blended course activities. This trend is driven by the growing interest in technological instruction that motivates the new-age teacher to keep current with the new technologies used by their students.

Discussion

This presentation is grounded in the current research interests surrounding the integration of more technology into teacher education to meet the growing demands of our global society. A range of initiatives are already in place to strengthen this integration (Guzman & Nussbaum, 2009.) The main focus of this session is to make educators aware of the easily adaptable tools available for use that have the potential for effective application in online education. Web-based applications can provide a fun, creative, and collaborative tool for improving an educator's professional productivity and promote student learning.

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Culturally Competent Pedagogy: Inclusiveness that Extends Beyond Diversity

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Abstract: Institutional practices that go beyond merely securing the presence of diverse students are vital to enhancing the university experience of underrepresented populations. Consequently, this workshop will draw from empirical findings that emphasize cultural inclusivity as a method of cultural competence that extends beyond traditional institutional diversity. Presenters will provide various strategies for engaging in culturally competent pedagogy that will enhance the university experience of all students, including diverse populations.

Literature Review

National institutions of higher education have seen an increase in diverse student populations. On the surface these trends suggest increased institutional inclusion within higher education; however, underrepresented populations have described that university experiences continue to include isolation, exclusion, and institutional marginalization (Daniel, 2007). As a result, university practices that go beyond merely securing the presence of diverse populations are vital to enhancing the experience of underrepresented populations. Such practices include engaging in personal and professional self-reflection (Barrera & Corso, 2002), addressing issues of inequality (Johnson, 2006), and adapting inclusive practices that engage the varied perspectives of diverse populations (Gay, 2000). Research indicates that engaging in culturally competent pedagogy demonstrates multicultural understanding and is essential for creating an inclusive learning environment for all students, particularly students from diverse backgrounds (Ladson-Billings, 1995; Saint-Hillair, 2014). When educators engage in culturally competent pedagogy diverse populations experience enhanced university retention rates, graduation rates, and overall enhancement of campus life for all students (Howard & Terry, 2011). Thus, when postsecondary educators engage in culturally competent pedagogy they are employing strategies that enhance university inclusiveness beyond the mere presence of diverse populations. This workshop supports empirical findings that emphasize cultural inclusivity as a method of cultural competence. To highlight the utility of culturally competent pedagogy, this practice session will provide various strategies for engaging in culturally competent pedagogy that will enhance the university experience of all students, including diverse populations.

Goals and Objectives

This session has two primary goals. First it is designed to enhance participants understanding of culturally competent pedagogy that extends beyond diversity. Secondly, it will introduce participants to culturally competent pedagogy as a method for creating inclusive campus environments. Within this framework, this workshop will achieve four objectives: (1) Deconstruct the difference between diversity and culturally competent inclusiveness; (2) define culturally competent pedagogy and highlight it as a method of inclusivity; (3) engage in culturally competent pedagogy through self-assessment; (4) provide interactive examples of engaging in culturally competent pedagogy and how it may be actualized by participants.

Description of Practice

This workshop will explore culturally competent teaching practices that reflect inclusive learning environments to supports the learning of all students, including diverse populations. The focus of this workshop will be on inclusivity as a method of culturally competent pedagogy. Participants will evaluate their current level of cultural competence through self-assessment, explore culturally competent pedagogical strategies that enhance institutional inclusiveness, and receive models for implementing inclusive practices within their higher education practices. Overall, participants will enhance their understanding of culturally competent pedagogy and how to translate inclusive strategies into everyday teaching practices

Discussion

This practice based workshop will engage participants in interactive discussions on diversity and inclusiveness.

Participants will receive empirical support for utilizing culturally competent pedagogy. Each participant will experience interactive culturally competent pedagogical strategies for enhancing inclusiveness within teaching practices. Participants will explore cultural competence through self-assessment. Overall, this workshop will provide an opportunity for exploration around issues of cultural competence.

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Conversation: Essential Concepts in Educational Psychology

Todd D. Zakrajsek, University of North Carolina at Chapel Hill

Abstract: Educators at the post-secondary level are rarely taught the nuances of effective teaching and methods to create meaningful learning in students. In addition, the fundamentals of human memory, learning, and motivation are often poorly understood, if recognized at all. The ways in which these concepts come into play within various pedagogical strategies can at times seem very complex. In this session, fundamental concepts will first be very quickly explained, and elaborated upon, in a resource guide that will be given to all participants. Once a very brief orientating discussion is concluded, attendees of the session will participate in a series of activities designed to illustrate the concepts discussed. The overall goal of this session will be to help attendees to better understand some of the most important fundamentals of effective teaching and learning from the perspective of an educational psychologist. Concepts will include metacognition, scaffolding, multi-tasking, self-efficacy, mindset, self-regulation, GRIT, and intrinsic motivation. These terms may be familiar to many faculty members, but most do not deeply understand the subtle nature of these concepts and how to best facilitate them in the classroom for all students. This session will be about using active learning to better understand these basic concepts from educational psychology and how to apply them so that students are given a better opportunity for a meaningful educational experience.

Literature Review

Educational psychology is the field of study that has as its focus the process of teaching and learning. This area of study includes the student, the teacher, instructional methods used, human learning, the situation, and a host of other factors (Parankimalil, 2012). Essentially, it is the area of study that is directly interested in how people learn in formal and informal environments. This is not a new area of study. Approximately one hundred years ago, John Dewey (1915) was writing many books on the topic of education and psychology, with many principles still applicable today. The interesting, and sad thing, is that although many of the concepts Dewey proposed are still effective, many do not know of these concepts. How is it that a field like education at the post-secondary level does not seem to move more quickly to advance our own field.

Within the field of educational psychology there are many foundational concept, and understanding and applying these concepts would quickly advance learning for our students. In this session, we will learn more about many of the concepts that are studied regularly in the published literature. Concepts to be discussed will include metacognition, one of the most important areas of education. Metacognition is the extent to which one thinks about thinking, understand how thinking is done, and knows when one knows something. For example, Dunlosky, et al. (2013) have looked carefully at study techniques and the extent to which students know which techniques are effective. It is amazing how often students have no clue as to how they best learn. In this same field of student, Callendar, Franco-Watkins, & Roberts (2015) have investigated the extent to which students tend to be overconfident and overestimate their own performance. These researchers found that metacognitive accuracy could be improved. Other researchers have found that improved judgements improve learning (Dulosky & Rawson, 2012). And although difficult, researchers are looking at ways to measure metacognitive processes (Fleming & Lau, 2014).

Another area that is extremely important with respect to effective instruction and student learning is self-efficacy. The concept of self-efficacy pertains to the extent to which individuals believe it is possible to complete a course of action. This is particularly important when one faces difficulty. Imagine how little one would learn if each time difficulty or failure is experienced the individual gave up. Prat-Sala and Redford (2012) have demonstrated the importance of self-efficacy in the writing process and shown that improving self-efficacy improves written work.

Given the length of this paper, there is simply not space to go into each of the terms that will be included in this session. The concept overall is to introduce, discuss, and apply a variety of terms commonly used in educational psychology, with the goal of helping faculty to better understand how to construct learning environments for students that are conducive to learning. Mostly, the idea here is that simply knowing some of the basics studied by

educational psychologists, and the relative ease by which one can learn some foundational aspects of teaching, one can become more effective at teaching.

Goals and Objectives

At the conclusion of this session, participants will be able to describe and apply at least five concepts from educational psychology in a way that they report is more effective than they have done in the past. Participants will also be able to adapt and apply the active/engaged technique used in this session when teaching their classes on their own campus. Participants at the conclusion of this session will also be more aware of basic educational psychology concepts in general and the ease in which this topic can be researched in an ongoing manner.

Facilitation Techniques

This session will start with a brief 7 to 10 minute mini lecture. Following the lecture individuals will be given teaching and learning scenarios and tasked with identifying strategies that would likely be successful, given specific teaching challenges. This activity will be based on educational psychology terms, with the structure designed to better understand the concept presents. Very quick report outs will follow the work done in groups. I have used this technique in a variety of classes over several years and students have experienced great success with the strategy.

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Assessment for Student Engagement: Re-Thinking Your Course

Stephen Owen and Tod Burke, *Radford University*

Abstract: One challenging aspect of syllabus construction is developing the “right” mix of activities and their corresponding weights toward the final course grade. A seemingly simple task, it is one which has historically generated controversy as debates have emerged about issues such as the purpose of grading, desired outcomes of grading, and even the wisdom of issuing grades in the first place. This practice session will explore these issues and more, emphasizing the role of grading in the promotion of student engagement and challenging participants to develop a course-level assessment philosophy that can be applied in courses across a variety of disciplines.

Literature Review

Grading has long been a controversial issue in higher education. While the days of a midterm, final, and term paper as the sole basis for evaluation in a class are increasingly a thing of the past, debates about the appropriate role and construction of grading systems remain. Is grade inflation a concern? Some argue so, and that its results are pernicious and merit swift action (e.g., Slavov, 2013). Others argue that grades, themselves, are the problem within higher education (e.g., Kohn, 2002). While some have proposed alternatives to standard grading, such as self-grading protocols (e.g., Filene, 1969; Strong, Davis, and Hawks, 2004), the fact remains that at the end of a course almost all schools (with a small number of exceptions; see “10 Colleges...,” n.d.) require a single letter, perhaps with a “+” or “-” appended to it, to encapsulate a student’s performance in the course.

Grading is perhaps more scrutinized today, as it is sometimes part and parcel of assessment measures designed to gauge student accomplishment of course, program, general education, or institutional learning outcomes. While final course letter grades, themselves, rarely comprise assessment measures, the use of course-embedded assessment (e.g., Gerretson & Golson, 2005), in which class assignments are utilized for external assessment purposes, has the impact of shaping grading structures.

But what else can, or should shape grading? Even 25 years ago, Eble (1990) posed an observation that is still salient today: “The shift from grading to useful evaluation, from classifying and certifying students to teaching them, will begin when we recognize that grades are a peculiarly academic hang-up...nowhere else in society is such a long stretch of human behavior subject to such excessive piece-by-piece quantitative assessment” (p. 163). This session seeks to explore the transition Eble describes, yielding course-level grading and assessment structures that emphasize teaching rather than classifying, and in doing so promote student engagement with course material.

We start with Svinicki and McKeachie’s (2014) notion that “grades are fundamentally a method of communication” (p. 125). Grading structures should communicate the values of a course, in terms of what pedagogies, knowledge areas, skill sets, and levels of Bloom’s taxonomy (Anderson et al., 2001) are emphasized. The current generation of millennial students appreciate this communication, valuing grading structures that are clear and understandable, which provide multiple points of usable feedback, and which foster collaborative learning (Howe & Strauss, 2007). Taking student engagement (NSSE, 2014) as a core value, student assessment grading structures can also be designed to maximize the emphasis placed upon the most impactful pedagogies.

This seminar discusses the development of a course-based assessment and grading philosophy that translates to the allocation and structure of graded activities and assignments in a course. Doing so can enhance student engagement and foster strong student understanding of course goals, thereby empowering student success in the course.

Goals and Objectives for the Practice Session

The goal of this practice session is promote development and application of a course-level grading and assessment philosophy. Objectives include the following: (1) Review literature and perspectives related to grading practices; (2) Review principles of student engagement and how they shape course grading; (3) Develop a course-level assessment philosophy; and (4) Apply the above principles to a course of one’s choosing.

Objectives 1 and 2 will be presented through an interactive discussion. Objectives 3 and 4 will be presented through small group activities in which participants will model the practice.

Description of Practice

The practice of developing a grading philosophy requires first examining what it means to assess student progress in a course. After considering how grades are viewed by students, the public, and administrators, one question to be considered is whether faculty are “captured” by grades, and if so, how to break free to innovative grading structures that promote student engagement. After reviewing the principles of student engagement, focus turns toward a comparison of “traditional” and “engaging” grading structures, and the characteristics of each. Only after reviewing these concepts, including the role of course goals and desired learning outcomes, can attention turn to the development of a course-level assessment philosophy.

The assessment philosophy is intended to bring a teaching philosophy full-circle, and also to aid in syllabus and course construction. It first requires consideration and weighting of course goals, whether pedagogies, knowledge areas, skill sets, or levels of Bloom’s taxonomy. It then requires identification of the most engaging techniques to accomplish course goals, and documenting how the weights, strategies, and goals map together. This also facilitates dialog with students about the course, to help them (and, sometimes, us) better understand what to expect, and why, from the course.

Important to note is that the assessment philosophy is built from the ground up – starting with course goals and desired pedagogies and outcomes, rather than starting with particular styles or structures of assessment. This helps to ensure that, returning to Eble (1990), grading is truly about teaching students and not just about classifying them.

Discussion

In many ways, the assessment philosophy can be what pulls a course together, by defining the artifacts that best capture engaging educational practices. In our experience, this has been the case. We have heard instructors lament that a course doesn’t “gel” even when a new and seemingly effective pedagogical practice is introduced; while not always the case, sometimes the issue lies with how course-level student assessments are structured to produce the final course grade. Regardless, as higher education is increasingly called upon to defend itself, and as students increasingly demand articulable understandings of grading structures, development of course-level assessment philosophies serve us well on multiple levels.

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It Takes a Campus: Embracing Veterans through Common Reading Programs

Lisa Vassady, Alyssa Archer, Jennifer Resor-Whicker, *Radford University*

Abstract: In 2015 this mid-sized state university's library implemented a community reading event with an award from The Big Read, a grant through The National Endowment for the Arts. Organizers focused on Tim O'Brien's critically acclaimed work of autobiographical fiction based on his experiences as a soldier in Vietnam, *The Things They Carried*. The program took shape as a series of events and book groups that ran throughout the community and campus. The choice of work was designed to support student veterans through opening a discussion of issues faced by veterans, help community and family members understand veterans, and provide a forum for veterans and civilians to dialogue.

Organizers faced the challenge of introducing a book that could require a trigger warning in the population they hoped to engage in a pedagogically critical discussion. Support efforts to balance these concerns were multi-pronged. Partnerships included 1. an English Education professor who committed to training a group of education students to serve as facilitators of book discussion groups with an emphasis on sensitivity training to veterans' issues; 2. Director of the Military Resource Center who provided an overview student veteran characteristics and issues along with faculty training on Green Zones. The director also provided programming and served as a communication liaison with student veterans; 3. Counseling professionals who provided "safety net" services at events that might trigger difficult memories; 4. Multiple partnerships with faculty and staff who provided insights or educational programming in their areas of expertise.

Attendees will learn about the best practices for creating such a program within their own campuses and communities, pitfalls along the way, and ideas how to ensure that the program is an educational opportunity for all participants.

Literature Review

Common reading programs have been utilized by higher education institutions to build a sense of community, create learning opportunities, encourage student engagement on campuses, and open dialogues (Brown, 2014; Thorne, 2015). This sense of community, however, can be difficult to achieve, and depends on how many students are actively reading the book (Daugherty & Hayes, 2012). Some suggestions to build community include tying the book to in-class discussions and putting trained professors/facilitators in smaller out-of class group discussions to make the interactions more meaningful, as well as creating opportunities to engage through social media (Ferguson, Brown, & Piper, 2015).

We reviewed the literature for intersections between common reading programs and veteran issues, which was lacking. The literature on student veterans indicates that support services for student veterans, including faculty training, on college campuses is a fairly new endeavor (Kirchner, 2015). Research on this unique group of students is "slim and dated" (DiRamio, 2008). In an effort to navigate these uncharted waters, the organizers reached out on campus to create partnerships, finding experts for both creating learning opportunities and providing a supportive environment for those students and community members who, in talking with this, may have PTSD associated responses (Veraldi & Veraldi, 2015)

Discussion

Many campus stakeholders are interested in either organizing a campus common reading program or reaching out to student veterans. Both of these objectives can be challenging. Join a discussion of best practices for this endeavor.

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Using Place-based STEM Education for Preparing Teachers in Developing Countries

George E. Glasson, Johanna Cricenti, and Josiah Tlou, *Virginia Tech*

Abstract: 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. InnovATE helps agricultural education and training schools and universities in the developing world improve their curricula and strengthen human and institutional capacity. Recently, InnovATE hosted a workshop in partnership with Lilongwe University of Agriculture and Natural Resources (LUANAR) to introduce Science-Technology-Engineering-Mathematics (STEM) pedagogies, discuss opportunities for Open Distance Learning (ODL) and plan a certificate program for secondary school agriculture and science teachers. The workshop emphasized the importance of place-based STEM education for improving student achievement in science and agricultural education. Participants were introduced the U.S. Next Generation Science Standards (2013) and the rationale for preparing teachers to implement problem-solving and inquiry pedagogies in their classrooms. Inquiry-by-design pedagogies that engage learners in problem solving and design in STEM subjects were modeled within the workshop. The 5-E Learning Cycle (Engage, Explore, Explain, Elaborate, Evaluate) was discussed as a teaching model to engage learners in active learning using locally available resources. The importance of connecting STEM education to local community resources and fostering engagement opportunities for entrepreneurial and workforce ready skills development through experiential education was also explored. This session will hold a conversation to discuss the challenges and opportunities for utilizing place-based STEM education and pedagogy in international curricula and lessons learned and success stories will be solicited as part of facilitated discussion during the practice session.

Literature Review

With the recent development of the Next Generation Science Standards (NGSS), science education in the United States is focusing on the applications of science and engineering practices within the context of students learning to solve real-world problems (National Research Council, 2013). Further, proponents of the NGSS have identified integrated STEM education as essential to workforce and economic development. In addition to preparing students for the job market, place-based STEM education encompasses an indigenous worldview that focuses on the organic, culturally embedded development of critical thinking and on the sustainability of communities and environment. Place-based and community-based education in schools “provides a way for teachers and communities to prepare children to become participants in local problem-solving” (Smith & Sobel, 2010, p. vii). This place-based approach to STEM education was a central focus of collaborative efforts among teacher educators and elders in Malawi, Africa, to develop lesson plans using locally available resources to address ecological sustainability issues that were relevant to the community and culture (Glasson, Frykholm, Mhango, & Phiri, 2006; Glasson, Mhango, Phiri & Lanier, 2010; Glasson, 2010).

In Malawi, these issues included deforestation, water quality, charcoal burning, and sustainable agriculture. The teachers consulted community elders and identified local funds of indigenous knowledge and practices as resources in developing and teaching lesson plans. Inquiry and learner-centered strategies were employed that encouraged student dialogue and reflection, hands-on activities, role-playing, story telling, and engagement in the local communities. In learning about sustainability issues, connecting western scientific knowledge and processes to indigenous knowledge and practices was considered important for encouraging ownership and action by the teachers and students. This process of connecting western modern science with indigenous knowledge recognizes that students live in a hybridized world and cultures are naturally evolving. This process supports democratic ideas that promote participation and sustainability of the human and non-human environment.

Goals and objectives for the practice session

- I. Participants will learn about the rationale for place-based STEM pedagogies as applied to teacher preparation in developing countries.
- II. Participants will learn about the results of a planning meeting to develop a post-graduate teacher certification program for science and agricultural teachers in Malawi using place-based STEM education.
- III. Participants will have an opportunity to respond and share how place-based STEM education may be applicable to their own countries.

Description of the practice to be exemplified

Place-based STEM education is designed to improving student achievement and participation in science and agricultural education in developing countries. Participants will be introduced the U.S. Next Generation Science Standards (2013) and the rationale for preparing teachers to implement problem-solving and inquiry pedagogies in their classrooms. Inquiry-by-design pedagogies that engage learners in problem solving and design in STEM subjects will be modeled within the workshop. The 5-E Learning Cycle (Engage, Explore, Explain, Elaborate, Evaluate) will be discussed as a teaching model to engage learners in active learning using locally available resources. The importance of connecting STEM education to local community resources and fostering engagement opportunities for entrepreneurial and workforce ready skills development through experiential education was also explored. This session will hold a conversation to discuss the challenges and opportunities for utilizing place-based STEM education and pedagogy in international curricula and lessons learned and successes will be solicited as part of facilitated discussion during the practice session.

Discussion

In place-based STEM education, the classroom is enriched by each student's own journey and sense of place, culture, and language that they bring to the science classroom, modeling the hybridity they will encounter not only in their future careers, but also in the collaborative evolution of their holistically sustainable communities. Embracing an inquiry and critical thinking approach, place-based STEM education assumes the teacher and students are all learners in the classroom. The science teacher is a facilitator who orchestrates a collaborative environment that promotes learning that is problem-based, experiential, and reciprocal. In a place-based environment, each student brings the gift of their own perspectives and life experiences to the activity and discussion.

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**Conversation: How a Faculty Scholarship Community
Can Contribute to Your Pedagogy, Productivity, and Personal Well Being**

Stephanie Colbry, Amy Gratch Hoyle, Dawn Francis, Lisa Ratmansky, Alia Sheety, Michelle Szpara
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Abstract: Faculty learning communities have been defined as small, trans-disciplinary groups of faculty, graduate students and professional staff who elect to focus on enhancing each other's teaching and learning capacities. While this framework provides a helpful way of envisioning an engaged learning community, it is largely focused on improving pedagogy and praxis. A small, cohort-based faculty learning group at Cabrini College has envisioned a complementary model that shifts the focus to promoting scholarship in support of enhanced pedagogy and praxis. In this interactive session, the faculty from this cohort at Cabrini will lead a discussion about the interlocking impacts of this *faculty scholarship community* (FSC) on the institution, its students and the scholars themselves. Through guided inquiry and reflection, this session will offer participants an approach to developing FSCs on their own campuses that enables them to grow their scholarly agenda in ways that can significantly impact their teaching and learning. Participants will leave this session with a roadmap to develop or enhance their own FSC.

Literature Review

According to Wenger (1998) a faculty learning community (FLC) is a special kind of community of practice (CoP). Community of practice (CoP) refers to “any collectivity or group who together contribute to shared or public practices in a particular sphere of life” (Kirk & Macdonald, 1998, p. 380). Essential to all CoPs, including FLCs, is that through sustained interaction members develop a shared practice (Sheehy, Bohler, Richardson, & Gallo, 2015). What distinguishes an FLC is its emphasis on multi-disciplinarily and community in teaching and learning pursuits (Cox, 2009). According to Cox (2004), an FLC is “a cross-disciplinary faculty and staff group of six to fifteen members... who engage in an active, collaborative, yearlong program with a curriculum about enhancing teaching and learning and with frequent seminars and activities that provide learning, development, the scholarship of teaching, and community building” (p. 8).

Goals for FLCs include building campus-wide community, increasing faculty interest, and enhancing faculty collaboration across disciplines. The focus of these goals in most FLCs is on improving teaching and learning (Cox, 2004) with faculty reporting positive impact in their classrooms (Daly, 2011). Research indicates that participation in an FLC can also improve scholarly productivity, build stronger connections between students and faculty, and foster higher levels of collegiality in the institution (Daly, 2011). Daly (2011) notes that more research is needed to understand *how* FLCs support faculty members as learners and scholars. The work presented here adds to the literature and provides evidence regarding how this FLC, the Faculty Scholarship Community (FCS) at Cabrini College, has supported junior faculty members in their research, scholarship and socialization into the College community.

Goals and Objectives

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

- Recognize the significance of developing supportive and collaborative learning communities
- Define communities of practice, such as FLCs and FSCs, that contribute to innovations in teaching and learning
- Envision models of FLCs and FSCs that are applicable to – and meaningful for – their own campuses
- Create an effective plan for implementing an FLC/FSC and sustaining its robust productivity across its lifecycle
- Take away a roadmap to develop and implement their own FLC/FSC, or enhance their existing one

Description of the Practice Session

In this session the facilitators will develop a relevant conversational framework and lively conversational format by: 1) asking participants to reflect on and share what they consider the most effective and positive ways they have been supported as learners across their unique educational histories; 2) eliciting specific feedback from the participants to

assess the varied levels of experience with and knowledge of FLCs; 3) offering, based on this feedback, a brief, tailored mini-presentation describing both the array of types of FLC, as well as Cabrini College's own model of an FSC helping participants tease apart these two valuable forms of collaborative productivity; 4) sharing with participants information pertaining to the Cabrini FSC members' scholarly productivity gains over two years of on-going collaboration; 4) providing, through guided inquiry and reflection, an opportunity for participants to work together/talk together in smaller conversational groups to discuss the benefits of and concrete approaches to developing FSCs on their own campuses, that is, FSCs that enable them to grow their scholarly agendas in ways that can significantly impact their teaching and learning and their campuses' academic cultures. Participants will leave this session with a roadmap to develop and implement their own FLC/FSC, or enhance their existing one.

Discussion

As highlighted by Daly (2011), research indicates a potential for positive outcomes from the implementation of sustained, voluntary FLCs. At Cabrini, the faculty found this commitment to peer collaboration extended to FSCs. While the use of intentional communities of practice continues to be expanded across education, healthcare, and business contexts, there is opportunity to explore the impact of these communities on the levels of individual, group, and institutional productivity and innovation. The faculty of the Cabrini FSC will share with participants the ways in which their FSC reduced their stress, built positive accountability, offered opportunities for feedback and co-mentoring, provided trans-disciplinary collaboration, increased affiliation with the institution, grew institutional knowledge, and linked different cultures across campus (e.g. graduate and undergraduate, on-campus and off-campus groups). The presenters will share evidence for changes in their own practice, where the FSC was instrumental in initiating, maintaining, or shaping their published and presented works of scholarship as well as their teaching and learning. The presenters will empower participants to identify the action steps they can take to establish – or further evolve – their own FLC/FSC on campus.

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Conversation: Problem/project-based Learning with Big Data

Edward A. Fox, Mohamed Magdy Farag, Sunshin Lee, Xuan Zhang, and Richard Gruss, *Virginia Tech*

Abstract: In 2014 and 2015, a new senior capstone and a long-running graduate course in Virginia Tech's Department of Computer Science were revamped to focus on working with Big Data, through a combination of problem and project-based learning. These efforts were supported in part by a multi-university National Science Foundation (NSF) funded project, Computing in Context, on applying active learning to aid with courses that relate to other disciplines, while at the same time provide insights regarding computing. The 2014 undergraduate course, with 30 students, was on Computational Linguistics, aka Natural Language Processing, connecting English and Linguistics with computing approaches to working with text. The 2015 course, with 23 students, on Information Retrieval, had 7 teams that co-designed and then implemented a sophisticated search engine to manage tweets and webpages (provided by the NSF-funded IDEAL project), integrating a variety of advanced methods, several involving machine learning. Evaluations showed students in both courses liked the approach, and learned a great deal. In this conversation, there will be an exploration of how the pedagogy, Big Data, software, and hardware used in these courses might lead to similar success in other courses across the disciplines.

Literature Review

Big Data, which refers to data not easily managed with traditional databases (due to 3Vs: Volume, Velocity, and Variety (McAfee & Brynjolfsson, 2012)), has been of interest in many disciplines in recent years (Buhl et al., 2013). In the corporate world, there has been widespread use of Hadoop (Apache Hadoop, 2015), a framework that simplifies storing and fast parallel processing of data (Agrawal, Das, & El Abbadi, 2011), for managing Big Data. Since many Big Data applications also involve machine learning, it is common to use Mahout (Apache Mahout, 2015) together with Hadoop.

In the academic world, Big Data, connected with interesting projects, can provide added motivation to students (Blumenfeld et al., 1991). Likewise, project-based learning (PBL) can be highly motivating (Buck Institute for Education, 2015). Though there is some controversy regarding the suitability of PBL courses (Helle, Tynjala, & Olkinuora, 2006), they seem to fit well in areas involving working with information (Melin, Axelsson, & Wedlund, 2009). This has been shown in the Computing in Context project (Chung et al., 2015) and in our courses (Fox, 2014) (Kanan et al., 2015).

Goals and Objectives

The goal is to aid participants who wish to launch new courses, or to revamp existing courses, where PBL is coupled with working with Big Data. Objectives are to help participants develop suitable plans, and to help expand the community of educators who can share experiences about PBL and Big Data. The initial discussion will be on projects and/or problems that attendees find interesting (e.g., that connect with their research or fit with service learning opportunities) and which involve Big Data. Then discussion will address pedagogical approaches, including guiding students to approach hard problems by starting with simple but inefficient solutions and then proceeding sequentially with the aid of suitable scaffolding. Next, discussion will explore working on a sequence of small and then big data sets. Along the way, necessary infrastructure and other support will be discussed.

Description of Topic

The conversation will focus partly on pedagogical matters, building on the literature related to PBL, considering both approaches addressing problems and approaches involving projects. Likewise, there will be discussion, grounded in evidence and experience, of the challenges of working with (difficult to manage) Big Data, the use of real-life data (which often is noisy), and how to build and operate an inexpensive Hadoop cluster (we built one with 20 computers, with over 60 terabytes of storage, running free Cloudera Hadoop (CDH) software, for under \$20K).

Facilitation Techniques

Participants will help construct, for each of the disciplines present (which we hope will include the sciences, engineering, and digital humanities), lists to show where Big Data and PBL can work together. One list will be of datasets, another of challenging problems, and another of projects they face or would like to undertake. Those already involved in PBL will report on their experience, and brainstorm with the group regarding how their methods might expand to include Big Data. Those with Big Data will brainstorm, with the authors and attendees, on how to connect with PBL. Further, those interested in evaluation will suggest approaches to assess the resulting courses.

Acknowledgments

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Wednesday
February 10, 2016
Session 4
3:00-3:50 PM

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

Increase of Interest in STEM Field by Using Simulation

Robert Pawloski, University of North Dakota

Abstract: This paper briefly addresses findings of a simulation application designed and piloted at the University of Nebraska-Lincoln. The simulation application focuses on construction engineering and management education, aimed to train main concepts of a simple construction project to students with little or no construction knowledge. A sample of 73 high school students participated in test sessions and completed the simulation. The self-evaluation of both male and female groups revealed that the students’ interests in STEM fields had increased after participating in the simulation.

Literature Review

Higher education curricula have utilized simulation applications as a rich supplementary tool, but research demonstrating the effectiveness of these applications is lacking. In this study retrospective self-evaluations, a popular assessment method to control response-shit-bias, has shown the effectiveness of this particular simulation application in higher education. (Rokooei, et al., 2014, 2015). Simulation applications navigate students through different stages of a pre-defined project. Having involved in simulation scenario, students try to reach to project objectives. Students’ involvement in a visually well-designed environment results in students’ engagement (Goedert, et al., 2012, 2013 a, 2013b). Measuring other outcomes of simulation applications has resulted in gathering additional relevant data. Kimmons et al. (2012) showed that using simulation helped create students’ learning process which itself decreased the differences between gender-based achievements of male and female groups. Oliveira (2010) reported on an Electronic Communication course, in which, using technological tools as well as traditional methods increased the students’ interest in STEM Fields. D’Angelo et al. (2013) addressed the use of simulation applications for learning purposes and stated learning objectives in STEM fields can be achieved at lower cost and time using simulation. However, the relationship between interest in STEM fields and simulation applications incorporating gender factor has not been comprehensively investigated yet.

Methodology

Virtual Interactive Construction Education (VICE) Bridge is an archetype of a new project-based pedagogical that was designed, developed and tested from 2011-2014. VICE-Bridge was the first of six modules that were considered as a new approach to provide subject-based contents through a series of pre-defined projects. This project targeted students with little or no construction knowledge. VICE-Bridge consisted of a sequence of main activities that typically exist in a single-span bridge project. The simulation application put students in the role of a project manager, challenging them to optimize the cost and duration. Each main activity included a mixture of real videos, audios, animations and educational modules. After learning the core concepts of a particular activity, students had to estimate a relatively accurate amount of resources including material, personnel, and equipment. Each logical decision that students made, was previously animated and displayed on screen. Consequently, the actual cost and duration, as performance indicators, were affected by each decision. The effectiveness of simulation application was examined through two methods: 1: actual comparison, in which the participants’ performance during simulation was compared to their knowledge before the simulation, which was retrieved from a Pre-Quiz application, and 2: a retrospective self-evaluation of participants in the Post-Survey section, in which students compared their pre and post exposure situations and rated both groups on a five-level Likert scale.

Results

VICE-Bridge was tested by different groups during its development phase. As a target population of students without any construction knowledge, 73 high school students participated in VICE tests during summer 2013 to summer 2014, and completed three elements of VICE-Bridge including Pre-Quiz, main simulation, and Post-Survey. The sample group included 44 male and 29 female students. They rated if their interests had increased in any of STEM fields. A five-level Likert scale of Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree was used and, then quantified to values 1-5 respectively. Tables 1 and 2 show the percentage of each level for each field in each group of students.

Table 1: Percentage of each level for each STEM field in female group

	Science	Technology	Engineering	Mathematics
Totally Agree (%)	7	3	3	10
Agree (%)	17	38	28	24
Neutral (%)	52	38	45	42

Disagree (%)	14	14	14	10
Totally Disagree (%)	10	7	10	14
Total	100	100	100	100

Table 2: Percentage of each level for each STEM field in male group

	Science	Technology	Engineering	Mathematics
Totally Agree (%)	9	11	16	14
Agree (%)	27	39	32	20
Neutral (%)	43	34	32	38
Disagree (%)	16	11	16	23
Totally Disagree (%)	5	5	4	5
Total	100	100	100	100

As shown in Tables 1 and 2, the male group stated a higher level of agreement in STEM fields. In addition, female group reported a higher neutral percentage in all STEM fields. Table 3 shows the average and standard deviation of each STEM field.

Table 3: Standard deviation and mean of each STEM Field in both groups

		Science	Technology	Engineering	Mathematics
Female	St. Dev.	1.02	0.97	1	1.16
	Mean	2.97	3.17	3	3.07
Male	St. Dev.	0.98	1	1.08	1.08
	Mean	3.2	3.41	3.39	3.16

Discussion

The self-evaluation of VICE-Bridge participants indicate an increase in STEM fields. Obviously, in VICE-Bridge as a construction simulation, technology and engineering features were highlighted and, thus, the overall weight of these two fields was relatively higher than science and mathematics. However, in all fields both groups reported an increase of their interests after playing the simulation application. In addition, the positive (Totally Agree and Agree) percentage of each STEM field in male group is higher than corresponding number in female group. This project’s findings emphasize the positive role of simulation in increasing interest in STEM fields, although more research certainly needs to be accomplished in order to generalize these results.

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Learning from Mistakes as a Key Characteristic of Simulations

Aruna Weerakoon, University of Nebraska-Omaha

Abstract: This paper illustrates the results of two simulation applications designed, developed, and tested at the Durham School of Architectural Engineering & Construction, University of Nebraska-Lincoln. The first application was Virtual Interactive Construction Education (VICE), a three-year project to provide experiential learning of the main tasks of a construction project within a simulation. Project-oriented Educational Research Fostering Excellence in Cyber-infrastructure Teaching (PERFECT) was the second application developed using lessons learned from VICE. The main purpose of PERFECT was to present the topics of project time management through a simulated environment. A sample of 125 students including high school and college students participated in the VICE test. In addition, 60 college students played PERFECT. Analysis of data gathered showed that participants of both applications believed that learning from mistakes had been the main factor impacting their performance while playing the simulation. This characteristic should be emphasized in future simulation designs to improve their educational effectiveness.

Literature Review

Simulation applications have been used in higher education since the 1950s. Simulations are used extensively in aviation, medical science, and business because of their potential to mitigate risk, reduce cost and save time. Other fields like construction and project management are incorporating subject-oriented simulation in their curricula (Goedert, et al., 2012, 2013 a, 2013b; Rokooei, et al., 2014, 2015). Characteristics of simulation applications make them an effective supplementary tool in education. One of the main characteristics of simulations is learning through making mistakes. Loh, Andrews, Hesketh, and Griffin (2013) believed that encountering mistakes in the training process enhances error detection and improves situation control in future exposures. Ziv, Ben-David and Ziv (2005) presented a conceptual analysis on experiencing and learning from errors in Simulation Based Medical Education. According to their trainees' error management in a simulation increases the individuals' awareness of performance and promises a better performance in real life situations. Heh, Chang, Li, and Chang (2008) used a model to record procedural and measurement errors made by students in a virtual environment and showed its effectiveness. Aquino (2013) reported on a qualitative experiment in which it was shown that mistakes during a nursing simulation had improved students learning.

Methodology

Two simulation applications were designed, developed, and tested for effectiveness in higher education. The first application (i.e. VICE) was a simulated environment for construction education using a single span bridge as the pilot project that needed to be built during simulation. The main simulation consisted of a construction project's major activities. Students were instructed to order these activities by creating a work breakdown structure (WBS), and then, select the resources necessary for construction of each element of the WBS as if they were the project manager. The overall goal of the simulation was to optimize project cost and duration. To achieve this goal, students selected resources including materials, personnel and equipment. The animation responded to the selection by the player and actual cost and duration cumulated as a result of their decisions providing two performance indicators. Educational modules and real videos were embedded to improve the learning quality. The second application (i.e. PERFECT) was aimed to train project time management concepts. It was designed and organized in accordance with the PMBOK standard. Project time management processes were presented as different stages in PERFECT. The structure and elements of both simulation applications were the same. A Pre-Quiz, containing a set of questions about subjects presented in the simulation, thus establishing a baseline of content knowledge. After playing the simulation, students completed the Post-Survey section to evaluate their knowledge gained.

Results

VICE and PERFECT were tested between spring 2013 and summer 2014. Seventy-three high school students and twenty six college students played the VICE and participated in the Post-Survey section. They were asked to rate the impact of different factors on their performance while playing VICE. These predetermined factors included "Prior knowledge from experience," "Prior knowledge from classroom," "Instructions within the simulation," "Ask a Consultant feature," "Educational modules," and "Learning from mistakes." A five point Likert scale of "No help",

“A little help”, “Some help”, “Much Help”, and “Excellent help” was used to rank each factor. These levels were later quantified to values 1-5. Percentage of “Excellent help” in high school and college student was 35 and 32, respectively. These percentages were higher than corresponding levels for the other factors. As shown in Table 1, the average weight of “Learning from mistakes” in both groups was higher than other factors.

Table 1: Average weight of factors impacting VICE performance (out of 5)

Group	Prior knowledge from experience	Prior knowledge from classroom	Instructions within the simulation	"Ask a Consultant" feature	Educational modules	Learning from mistakes
High School	1.79	1.9	3.11	3	2.9	3.88
College	2.73	3.27	3.31	3.2	3.65	4.12

Similarly, two student groups of 30 college students (A: with and B: without project time management knowledge) rated the sources of impact on their performance while playing PERFECT. The “Excellent help” percentage for “Learning from mistakes” in Group A and Group B was 20 and 23, respectively. These numbers were higher than corresponding numbers in other factors. Table 2 shows the average weight of each factor in both groups.

Table 2: Average weight of factors impacting PERFECT performance (out of 5)

Group	Prior knowledge from experience	Prior knowledge from classroom instruction	Instructions within the simulation	Learning from mistakes
A	3.17	3.6	3.07	3.67
B	3.07	3.4	3.6	3.97

Discussion

The results from both simulation applications reveal that learning from the wrong decisions was an effective and robust factor in the learning process. Based on the results, the first highlighted factor that seemed so important to students was learning from mistakes, regardless of the students’ subject knowledge level. Overall, the average weight of “learning from mistakes” factor was higher than other factors in all four groups. This characteristic of simulations can be used in design and implementation of future simulation applications where advanced stages can use previous insight gained through making mistakes.

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Eliciting Effective Peer Feedback

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Abstract: Peer review is an educational technique that is finding increasing use across the curriculum. It has been shown to improve student learning, but most students, left to their own devices, provide a paucity of feedback that is not focused on helping the student author to improve. A good rubric can provide guidance. Such a rubric includes detailed criteria, to draw the students' attention to important aspects of the work. If possible, it includes an anchored scale—description of the characteristics of work meriting the highest to the lowest score on each criterion. Good peer feedback summarizes the work, assesses how well the work meets the criteria, and gives advice to the author on how to improve. Ideally, the process should allow time for multiple review rounds, so that the reviewer has a chance to assess how well the author has incorporated advice given in earlier rounds. Because peer review focuses students on gauging how well authors have met the goals of the assignment, they can learn more from giving reviews than from receiving reviews of their own work.

Literature Review

Peer review in higher education has been studied since the 1970s (Topping, 1998), but surprisingly little research has been directed at enabling effective peer feedback. A good deal of attention is directed to writing effective rubrics (Liu, 1995; Rhodes & Education, 2010), and one prominent use of rubrics is for peer review (Wyngaard & Gehrke, 1996). Wakabayashi (2008) studied effective rubric creation in the context of foreign-language education. Goldin and Ashley (2012) compared domain-oriented rubrics with rubrics that focused directly on the assignment done by students. One study (Min, 2005) examined training students to be effective peer reviewers. ELI Review (“Designing Effective Reviews :: Eli Review Teacher Development Series #2,” n.d.) provides a set of guidelines for creating effective reviews.

Session Goals

1. To demonstrate that students produce more effective reviews when they are trained in the technique.
2. To provide guidance for designing an effective peer-review rubric.
3. To show how a peer-reviewed assignment can be structured to give reviewers an opportunity to interact with authors throughout the writing process.
4. To demonstrate how students learn by reviewing, as well as by being reviews.
5. To outline a set of best practices that instructors can use to train reviewers.

Outline of Presentation

The session will begin by outlining the benefits of peer review in a variety of educational settings. It will then discuss characteristics of an effective review process: Reviewing should focus the reviewer's attention on what the author is supposed to do. The reviewer should demonstrate understanding of the author's work by being able to summarize it. And the reviewer should give the author advice on how to improve. A review should be constructive: it should be written gently, not confrontationally or cynically, so that it will not be painful for the author to follow the reviewer's advice.

A good rubric is essential to a good review process. It will include detailed criteria, to draw students' attention to important aspects of the work. The criteria should mention the goals and keywords of the assignment, so that students will focus on their goals in their reviewing as well as their writing. The rubric may call for reviewers to assign a score to various characteristics of the work. If possible, the students should be given guidance about the characteristics of a work that merits each score (or “level”). This is called an “anchored scale.” The instructor can help the students to visualize what a good review should be, by providing several models of good reviews for them to peruse.

It is sometimes helpful for students to contribute to the creation of the rubric by identifying features that they consider important, or by describing characteristics of an excellent, average, or inadequate piece of work. Involving students in the process increases “buy in” for the review process.

It is helpful for the process to involve multiple rounds of review. For example, the first round may be a planning round, where students describe the work they expect to write. Peers then give feedback on the plans. The next round can be a formative round, where reviewers provide advice on how to improve the work. A third round might be a summative round, where reviewers assess how well the authors modified their work in response to the advice. Students learn from being reviewers as well as from reading reviews of their own work. Several studies (Lundstrom & Baker, 2009) suggest that student actually learn more from being reviewers than they learn from having their work reviewed.

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. After going through the practices of effective rubric design, we will ask them to share, in small groups, effective criteria for an assignment that they might give.

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Student Evaluation Strategies: Success and Lessons Learned

David Sallee, Kevin Ayers, Peggy Ayers, J.P. Barfield, Laura Newsome, *Radford University*

Abstract: This practice session will share faculty experiences in the development and implementation of learning evaluation approaches with undergraduate student. Faculty from a variety of academic disciplines within the Health and Human Performance Department at Radford University will discuss how they develop and implement learning evaluations based on a variety of academic settings. Some examples of evaluation approaches for discussion include traditional evaluation techniques such as multiple choice / multiple response testing and essay testing. Additionally, less common assessment techniques will be discussed including conversational evaluations based on video and or one to one testing, hands on palpation based exams in a one to one and open classroom setting, team evaluation of blinded student case study reports to determine program specific learning outcomes and scenario testing requiring conversational reposes recorded on video. Participants will hear success stories as well as what we learned in implementing these strategies with undergraduate students.

Literature Review

The proposal is not intended to be a comparison or validation of evaluation techniques. The goal is to share practical experience with evaluation of learning in diverse settings. We want to share what we have learned with this hopes that others will gain from or combined experience. A comparison to literature seems inappropriate under this circumstance.

Description

The presenters will briefly share their experience with evaluation of student learning. Each member will share a specific technique or small group of techniques including lessons learned. An opportunity for audience questions and contributions will be available at the end of the presentation.

Here Be Dragons: Moving a Transdisciplinary Inquiry Project into the College Classroom

Lisa Stoneman and DorothyBelle Poli, *Roanoke College*

Abstract: For the last two years we have led a research project involving the search for a connection between plant fossils and dragon lore worldwide that is now known as the Dragon Research Collaborative or DRC (www.dragonrc.org). With a research team of approximately 15 students, we have investigated and reported on how and why human imaginations created stunningly consistent dragon lore across distant lands. Data have included visual perception surveys, student project evaluations, statistical analysis of GIS data, creative works (paintings, drawings, exhibits, fiction, and poetry), chemical analyses, and narrative analyses. The principal investigators are an evolutionary biologist and an English Education specialist. The pedagogical model the project engendered has evolved into a curriculum that will be used in a transdisciplinary course at our liberal arts institution. That course development, including rationale, syllabus, structure, learning activities, and assessments, is the topic of this presentation proposal. The presentation will include 1) developing goals and assessments; 2) bringing faculty from diverse disciplines (biology, education, geology, archeology, literature) into a cohesive team; 3) keeping the course student-centered; 4) course structure that challenges all stakeholders; 5) retaining real-world connection.

Literature Review

Consideration of a topic from diverse paradigms often leads to deeper understanding, with the difficulty embedded in bridging the paradigmatic gap. For our research into dragon lore, that conduit is *Lepidodendron* plant fossils with which we have correlated the dragon lore from geographically diverse locations, allowing us to make the supposition that plant fossils are dragon lore's catalytic agent. It is the emergent transdisciplinary pedagogical model that may be helpful to others in higher education. We have considered this term carefully and have intentionally chosen it over the more commonly used interdisciplinary or multidisciplinary. We make the distinction among these terms in that the transdisciplinary model transcends the disciplines represented within it to reach a new understanding that is inclusive, rather than simply the coordination of different disciplines that still retain their respective exclusive perspectives (Inch & McVarish, 2003; Lattuca, 2001; Newel, 1994, Wilson, 1998). The model also implies the use of collaborative (Johnson & Johnson, 1994; Barkley, Cross, & Major, 2005; Shimozoe & Aldrich, 2010) as well as problem-based learning (Savery, 2006), methods that are well-documented in the pedagogical literature. Current literature supports the need for such a convergent pedagogy in the higher education classroom. According to Scheff (2013), the dichotomous delineation of academic disciplines detracts from our ability to promote full understanding and the connection of disciplines "is a crucially important matter...far beyond the universities" (p. 184). Writing in a similar vein, Rives-East and Lima recommend that we provide our students with "new approaches to problem-solving, and even epiphanies about the value of other perspectives" (p. 105). The course design we have established meets this call to move beyond academic silos that restrict student engagement and on-going innovation (Stoneman, Poli & Dooley, in press).

Goals & Objectives

Participants will

- define the transdisciplinary pedagogy model through role play.
- engage in structured, reflective discussions on the course pilot and how their own courses may incorporate this pedagogy.
- work in small groups to brainstorm on the practical application of these discussions.
- generate and share potential challenges and solutions that may allow their immediate application of at least one model component.

Description of Practice

Introduction and focus activity: Role play variety of parts in a cross-curricular discussion; transdisciplinary fantasy game.

Main Activity: The pedagogical topic will be presented through review of the course syllabus, with time for individual and small group reflection as described in the objectives for the session. These topics are 1) developing goals, objectives, and assessments; 2) bringing faculty from diverse disciplines into a cohesive co-teaching team; 3) keeping the course student-centered; 4) course structure that challenges all stakeholders; 5) retaining real-world connection.

Conclusion: Application of the model to the classrooms of participants.

Discussion

This research has evolved into an amalgamation of multiple disciplines from which no part can be extricated without destruction of the whole. The following original research questions address issues relevant across disciplines and emphasize that the giant lycopod fossils are the axis around which the research revolves: 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?

Findings reveal lycopod fossils and dragon lore are closely correlated in several regions of the world. Reflection on the two-year project led us to acknowledge the unique pedagogy that has emerged. Though the pedagogical model is organic and dynamic, in order to move toward classroom application, we have constructed a structure we call the DRC Stepping Stones.

Stone 1: Find the overarching question for your project and ascertain whether it is worthy of deep investigation and how that research might begin.

Stone 2: Discuss your question with colleagues, students, the general public, taking in outside perspectives that will help ground your project.

Stone 3: Reflect on the people or organizations with whom you are already working, decide how they function within this project, and who else might add depth to the topic.

Stone 4: With the central question as your guide, create and implement goals, keeping in mind how you will assess your outcomes.

Stone 5: Allow the project to grow naturally within the central question framework, remaining open to extensions that may initially appear incongruent.

The student research opportunities provided by such a diverse topic continue to expand. At this time 15 faculty and/or community partners are involved, a museum exhibit is underway, a book chapter has gone to press, P-12 curriculum is being written, and a collaborative text is being written for the course represented in this proposal. The diverse representation from multiple disciplines continues to open new avenues of pedagogical investigation.

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Building Planes in the Sky: A (Surprisingly) Successful Approach to Designing An Interdisciplinary Core Curriculum

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Abstract: Designing a new curriculum brings a host of challenges: articulating goals and outcomes; developing expectations for resources, delivery methods, and common elements; and structuring outcomes assessment that accounts for differences in disciplines and course topics. Those issues are critical – and sometimes contentious – in an academic department. When a curriculum crosses department lines, the issues are compounded by faculty’s diverse expectations and experiences. Our college recently launched an undergraduate core curriculum built around interdisciplinary, integrative learning outcomes. As part of the core, students complete four *knowledge perspectives (KP)* courses, each taught by faculty located in a key discipline. While many of these courses already existed, faculty have substantially revised course structure, pedagogies, and assignments to emphasize process and inquiry. The first KP courses were implemented in fall 2014, and each of us has a leadership role in the ongoing process of developing course parameters, (re)designing and teaching courses, and assessing related core outcomes. Participants will explore strategies to engage interdepartmental faculty groups; parameters for inquiry-focused courses; and outcome-based assessment structures that “fit” diverse courses housed in multiple disciplines. Recognizing that many colleagues are on similar journeys, we will discuss lessons we’ve learned while building planes in the sky.

Literature review

Our practices are based in several strands of thinking: core curriculum goals and structure, effective course design, high-impact teaching practices, and strategies for faculty engagement. We offer a very brief overview of sources that inform our work.

Our new core curriculum is informed first by research suggesting that employers expect graduates to develop skills that go well beyond knowing 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). To ensure that students encounter these skills in multiple contexts and revisit them at increasingly complex levels, they are infused across the curriculum, a structure that calls on faculty to cross traditional disciplinary boundaries in planning and teaching (Gaston, 2015; Kuh, 2008a). To build a robust framework that seeks to balance core outcomes and discipline-based skills, we have incorporated principles of effective teaching and learning (Ambrose et al., 2010), backward course design (Wiggins & McTighe, 2005), and integrative design (Fink, 2013). In the classroom, our pedagogies increasingly feature proven high-impact practices – challenging classes, high expectations, and links among key ideas, information, and experiences – that are consistently linked to students’ ability to think critically and interact effectively in varied settings (Blaich & Wise, 2011; Kuh, 2008b). Finally, we emphasize faculty leadership and engagement in all of these processes (Rutz, et al., 2012).

Goals and Objectives

This practice session will focus on engaging faculty in designing, implementing, and assessing courses that seek to:

- *balance* inquiry with content;
- *integrate* college-wide learning outcomes and discipline-based courses; and
- *explore* non-traditional pedagogies and structures.

Using an interactive approach, facilitators and participants will approach the topics from multiple perspectives as designers, teachers, and faculty leaders. In particular, we will collaboratively:

- *Identify* critical components of interdisciplinary curricula;
- *Outline* parameters for course design that can apply to courses in varied departments;
- *Explore* assessment plans for these non-traditional designs;
- *Select* effective strategies to involve faculty from multiple disciplines;

- *Articulate* challenges, resources, and possible solutions.

Description of Practice

With curriculum revision well under way in many of our colleges, our session will focus on strategies and processes involved in developing an integrative, interdisciplinary structure. Following an exploration of trends, needs, practices, and models, our faculty group crafted a set of learning outcomes and a framework, outlined a timeline for implementation, and created a steering group. With that foundation, we committed to *build the plane in the sky* (Rosko 51, 2012): we're crafting specifics while we're launching the curriculum. This approach keeps us focused on what's working, using results of direct and indirect assessment each semester to tweak content, pedagogy, and faculty collaboration.

The session facilitators are all leaders in planning and implementation. We have been involved as department chairs who review and revise programs of study design; as faculty members who teach and assess core courses; and as facilitators of course design initiatives and assessment work. At the same time, we come from varied disciplinary and professional backgrounds, adding a range of perspectives that both challenges and enriches our work.

Discussion

Our new core curriculum, like those of many of our colleagues, challenges us to critically examine our practice. We're accustomed to designing and revising courses that reflect our disciplinary backgrounds, generally teaching on our own. This new context casts us, with our students, in the role of learners as we collaborate with colleagues in the complex work of structuring a college-wide curriculum, developing parameters for key courses that may be located in multiple departments, and designing and teaching courses. In this session, we will share our experiences over the past five years of planning and initial implementation, as well as our reflections on what we've learned.

Throughout the session, participants will interact with the facilitators and each other, sharing their experiences and applying the ideas in the session to their own contexts. Participants will develop structures and steps for curriculum revision and course design at their own campuses.

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Implementing a Transformative Learning Framework in Human Service Courses

Angie Mann-Williams, Eastern Michigan University
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Abstract: This practice session will focus on the transformative learning framework, guided by the work of Dewey, Friere, and Wiemer, for teaching and learning within human service courses. Participants will develop an understanding why this framework promotes critical thinking, engagement, parallel process, self-assessment, self-awareness, and professional socialization. Participants will actively engage with the panel during this practice session to develop ideas of how and why to implement this framework, or components of the framework, into their courses.

Literature Review

Education has the capacity to create transformation and growth. Such growth and transformation can remain in the classroom or expand to larger systems outside of the classroom. According to Dewey (1916), the student is at the center of the learning experience, learning results from conceptual changes that take place within the mind of the student learner, and learning occurs with authentic, real-world learning tasks. Building further upon the role of the student learner, Friere (1970) emphasized the learning relationship between teacher and student. Through classroom dialogue, students are encouraged to create and explore education with a teacher, thus fostering a view of the world as something they are able to change, which is an imperative skill for emerging human service professionals. The introduction of a shared learning relationship introduces the role of power within the classroom. Similar to Friere, Weimer (2002) abandons the conventional notion of professorial power and structure in the college classroom. Instead, it revolves around a student's ability to discover his or her own voice through the active learning process.

Goals and Objectives

Building upon the work of Dewey, Friere, and Weimer, participants in this session will be able to identify and explain the theoretical basis for utilizing the transformative learning framework, or components of it, for teaching and learning within human service courses. Additionally, participants will be able to identify why the transformative learning framework promotes critical thinking, engagement, and professional socialization in human service courses. Lastly, participants will translate pedagogical strategies into courses they are teaching with direct input from the panel.

Description of the Practice

Using a transformative learning framework for human services courses, a panel comprised of two students and a faculty member will discuss syllabus development, course implementation, mentorship, parallel process, and professional socialization as embedded components of the framework. The faculty member will discuss the theoretical tenets that are utilized to guide the transformative learning framework, specifically addressing pedagogical strategies and the rationale for implementing such a framework in human service courses. Students will reflect on their lived experience in terms of faculty-student collaboration for developing and grading assignments, mentorship, and professional socialization. Significant time will be spent discussing why the framework promotes professional socialization within the classroom that is translated into direct human service practice, which, according to Barretti (2004) has received limited attention. The discussion will focus on the rationale, or why, this pedagogical framework provides an opportunity for in-depth professional socialization and critical engagement. In sum, these objectives will allow participants attending the panel discussion to draw upon strategies embedded within the framework and integrate them into their pedagogical practices in human service courses.

Participant Interactivity

Aligned with the transformative learning framework, participants will be encouraged to interact with the panel during the presentation. As presented above, the panel will aim to support participants with connecting the

framework, or components of the framework, to their pedagogical practices through dialogic processing during the session.

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Student-Faculty Partnerships for Learning: Co-creating the Future of Higher Education

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Keaton Wadzinski, Jared Jones, and Blair McAvoy, ReinventED Lab
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Abstract: In this session, participants will explore the transformational power of student-faculty partnerships through an interactive, design thinking activity facilitated by trained student consultants. Part of a burgeoning national movement, student-faculty partnerships are defined as a “collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualization, decision making, implementation, investigation, or analysis” (Cook-Sather, et. al. 2014). Research on student-faculty partnerships demonstrates significant benefits for all participants; students report deeper engagement in courses and increased metacognitive awareness, while faculty report an awareness of students’ experiences that transform how they think about and practice teaching (Cook-Sather, et. al. 2014). The facilitators—undergraduate students, a graduate student and a faculty developer—will briefly introduce the concept and the research and share examples of successful partnership work at colleges and Universities, including their experience with partnering students and faculty at events ranging from a new faculty orientation, a design thinking workshop, and a course design institute. The majority of the session will be spent engaging in a collaborative exercise in which participants and student consultants develop ways to co-creating the future of higher education. At the end of the session, participants will consider how they may engage their own students as partners in teaching and learning.

Introduction and Literature Review

The literature on teaching and learning in the last twenty years has challenged higher education to move from an instruction-centered to a learning-centered paradigm of education (Barr & Tagg, 1995). Although the road to realizing this paradigm shift is long, colleges and universities have embraced the goal of providing students with engaging, active learning environments (Barkley, 2009; Bonwell & Eison; 1991) and, a little more reluctantly, adopted responsibility for assessing learning outcomes (Astin, 2012; Huba & Freed, 2000; Kuh, 2012; Maki, 2012). Parallel to the literature on active learning and assessment, a smaller, less headed chorus of voices has pushed the ideas of the learning paradigm further, challenging a central tenant of education: the roles of teacher and students. It asks: Typically teachers teach *to* students. What if they teach *with* students?

The idea of student partnership disrupts traditional understandings of the teacher-student relationship and advocates for shared authority in the learning sphere (Magolda & King, 2004; Cook-Sather, 2002). In *Engaging Students as Partners in Learning and Teaching*, Alison Cook-Sather, Catherine Bovill, and Peter Felten, challenge conventional models of student input in teaching such as end-of-the-year evaluations (2014). They argue that instead relationships based on respect, reciprocity, and shared responsibility lead to an authentic partnership, which “positions both students and faculty as learners as well as teachers.” In co-creating education “different but comparably valuable forms of expertise” contribute equally to teaching and learning (p. 7). The literature on student-faculty partnerships demonstrates the myriad ways students and faculty can collaborate, from designing elements of a course and assessing student work to redesigning curricula and developing research projects (Cook-Sather et. al. 2014, Werder & Otis 2010, Mihans, et. al., 2008). Students and faculty who work together to create educational experiences report enhanced motivation, increased learning, and heightened metacognitive awareness about pedagogical choices.

Piloting these partnerships in higher education comes with a set of challenges. In particular, it can be difficult to address the power differential between students and professors, which keeps students from being seen as having important insights about the process of teaching and learning. This practice session offers the opportunity to learn from an exemplary student-faculty partnership initiative co-created by a center for teaching and learning and a student-founded organization aimed at reinventing education. (For information about the student-faculty partnership initiative, see our website: <http://www.cocreateuva.com>.) The facilitators—undergraduate students, a

graduate student, and a faculty developer—will lead participants through an interactive experience that will model best practices for harnessing the transformational power of student-faculty partnerships.

Description of the Practice Session

After a brief icebreaker, the facilitators will introduce the concept and the research about student-faculty partnerships and share examples of successful partnership work in diverse contexts, such as new faculty orientation, design thinking workshops, and course design institutes (10 min). The majority of our time will be spent engaging in a hands-on design thinking activity in which participants and trained student consultants develop strategies for co-creating the future of higher education (30 min). At the end of the session, participants discuss how they may engage their own students as partners in teaching and learning in their courses and curricula (10 min).

Goals & Objectives for the Practice Session

This session is designed for instructors who wish to actively engage students in their classrooms by collaborating *with* students to facilitate learning experiences. Participants, who have completed the session, will have gained:

- a basic understanding of the concept, benefits, and challenges to student-faculty partnerships
- a first-hand experience working *with* trained student consultants
- an understanding of students as a valuable resource for making teaching and learning more engaging and effective
- concrete ideas for bringing student voices into the conversation about teaching and learning

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Conversation: The Benefits of Treating Students Like Adults in the Post-secondary Classroom

Elizabeth Long, College of The Albemarle

Abstract: Students in the classroom beyond the secondary level have one thing in common, barring some exceptions: they are legal adults. In spite of this fact, many instructors in higher education apply strict policies that treat students as anything but. This comes in the form of having rigid cell phone policies, forbidding laptops and other technology, and restricting all activities outside of what is being focused upon in class. This paper explores the benefit of teaching students something beyond the scope of reading, writing, and arithmetic: teaching students real world life skills through their own trial and error. It is rare that in a professional work environment, employees are forbidden from having cell phones, quickly Googling something of interest, or speaking to other employees. If educators allowed students these privileges, it would be much more likely that students would quickly learn their own limits rather than having those limits forced upon them. A student who looks down at his phone for several class periods in a row and does not take notes will inevitably not do well on the first test. As a result, he will adjust his habits for his own good, not for the purpose of adhering to arbitrary rules. This is not just something that educators should try as an experiment to test their students. Rather, allowing students to test their own limits is the responsibility of instructors at the post-secondary level. As long as an activity does not distract other students in the classroom, instructors should allow it. Doing so provides invaluable life skills that students can bring into the workplace and free range adulthood.

Literature Review

In *Cell Phones: Rule-Setting, Rule-Breaking, and Relationships in Classrooms* by Anita Charles, the author explores the clear issues with restricting access to cell phones and social media in the classroom. The main issue, states Charles, is the fact that these rules are routinely broken, causing the instructor to be more of a rule facilitator than an educator. Charles addresses how instructors can overcome this by expecting that rigid rules will be broken and negotiating these rules based on interactions with students allowing students earn trust and privileges through acceptable classroom behavior (Charles, 2012). In her research, Charles observed eight different classrooms across 3 different schools and found that, although there were varying levels of strictness on banning handheld electronic devices, ranging from limited use guidelines to complete bans, all of the rules set forth were broken. "Everyone basically texts all the time," is the title of her section on findings, and this addresses the fact that all set up rules were easily broken by students (Charles, 2012). The students who did not break the rules mostly chose not to do so because of deep rooted feelings about morals or manners, citing that they didn't text because it was "rude" to do so (Charles, 2012). Echoing my original hypothesis most effectively is the fact that, in Charles' study, students knew that any negative effects from failing to pay attention in the classroom would solely be the responsibility of the student making that choice. One student interviewed stated, "If it were me, I mean, frankly, I would just say kids can text all they want, not during tests maybe because you could easily cheat like that, but during class where there's no threat of academic dishonesty or anything. Because really the only one they're hurting is themselves" (Charles, 2012). Charles, overall, found that when students had a mutual relationship of respect with their instructors, they were less inclined to engage in distracting activities. When they did, they knew that anything they missed as a result of not paying attention was solely their fault, and they learned valuable lessons as a result their decision making. Another scholarly publication that echoes some of the same themes is entitled, *Classroom Management, Rules, Consequences, and Rewards! Oh, My!* By Julie Dean Mcintosh. Although this journal article deals with the specifics of the science classroom in younger students (middle grades and secondary), many of the same principles still hold true. Mcintosh cites the importance of establishing a rapport with students and not creating an intimidating environment. She states that teachers need to "...know when to call an incident a discipline issue. New teachers need to learn to pick their battles, if something disrupts the learning of others, then it is a discipline problem. New teachers can fall into the trap of trying to control everything in the classroom" (Mcintosh, 2009). Interrupting class to reprimand a student who isn't hurting anyone but himself by not listening is counterintuitive in every way and

shouldn't be happening, especially in the college classroom. When a student becomes disruptive to others, the instructor can and should step in. However, aside from this, the student needs to be personally responsible and not rely on the teacher to regulate him or her. McIntosh also makes mention of the importance of not treating students with the assumption that they will eventually do something wrong. Instead, instructors should make the classroom a positive place to be. "Make your classroom a positive place for students. Why would students want to go to a negative room...?" (McIntosh, 2009). This reiterates the concern in the original hypothesis that creating too many rules overregulates students and creates punishments for problems that may not even be an issue in the classroom. In her article, *Are Cell Phone Bans Worth the Trouble?*, Dian Schaffhauser asks the title question and answers it in a fairly neutral way. Following a districtwide ban, Garland Independent School District in Texas has now moved to a system in which individual teachers can choose their cell phone policies. While many have chosen to continue with the ban, some have found that allowing cell phones offers students more personal responsibility. Additionally, many instructors have found that cell phones can actually aid in classroom learning through certain free or low-cost apps and methods (Schaffhauser, 2014). According to Schaffhauser, "teachers are "tired of being the bad guy for hassling kids about (cell phones)" (Schaffhauser, 2014). Furthermore, this article lists benefits of not overregulating cell phones and other technology in the classroom. "Students can "self-direct" their learning, give lessons to other students in how to solve problems with video selfies, (and) view online videos that help them learn differently from the way their teachers teach" (Schaffhauser, 2014). This takes the original hypothesis to the next level. Not only should students be able to decide when it is appropriate to use technology in the classroom, but they should also be given the benefit of the doubt when it comes to knowing if their devices can actually assist them in the classroom.

Based on the scholarly literature available on this topic, it is clear that many still feel that a cell phone/technology ban is best for students. However, in order to allow students to learn to self-regulate their electronic device use, instructors should allow them to deem for themselves when to put the cell phone away and when it's okay (or even beneficial) to pull it out.

Discussion

Imagine walking into a meeting in a professional work environment for a meeting with colleagues. The person leading the meeting immediately stands up, looks at everyone very sternly, and says, "For the next hour while I am speaking, I want everyone's eyes on me. Do not pull out your cell phones. If you do, I will take the cell phone from you and you will be publicly ridiculed. Additionally, do not look at or speak to anyone else in the room while I am speaking." Most adults would immediately bristle at such a stark command from a fellow adult. Additionally, they would not want to listen to what this person had to say because they would have a negative attitude toward this person in general, and rightfully so. Also, they probably would be itching to pull out their cell phones at the mere mention of not being able to do so. In spite of this extreme example, this is exactly what instructors in postsecondary education do constantly—getting away from the "sage on the stage" model of teaching is exactly what is preached at most professional development conferences, and yet the intimidating, rigid attitude that comes from the strict policies of many classrooms makes instructors unapproachable at best and despised at worst. If we want to relate to our students, we need to meet them where they are and allow them the freedom to responsibly and non-distractingly live by their own rules in the classroom. It is hypothesized that doing so will foster a greater understanding of personal limits in the classroom, thus building a foundation for successful adult behavior in the future professional work environment. The following literature reviews support this claim.

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Conversation: Minority Professors and Student Microaggressions

Faedah M. Totah, Emily C. Williams, *Virginia Commonwealth University*

Abstract: Students treat professors differently based on their readable identity characteristics. Women, especially women of color, and those with minority identity characteristics such as sexual orientation, ethnicity, or disability, experience student microaggressions in a range of subtle and overt ways. While the research generally agrees that the classroom reproduces social stereotypes, it often fails to provide satisfactory ways to challenge discriminatory student behavior. Some scholars suggest capitulation, playing to the expectations that students have in order to receive better evaluations. Others expertly describe the problem without offering concrete methods for addressing inappropriate student behavior or the minority characteristic that led to the microaggression to begin with. Therefore, other than recognizing the challenge some instructors face in the classroom, the research does not include any concrete strategies for instructors or institutions to effectively deal with the issue of microaggression and incivility in the classroom. Our aim is to facilitate a conversation on effectively dealing with student incivility and microaggressions, while addressing the various identity characteristics that limit or enhance the proposed techniques. We will present and solicit ideas for ways to develop concrete institutional support for minority faculty.

Literature Review

A variety of studies have examined the ways that female instructors experience incivility as a direct result of their gender (Ausbrooks, Jones, & Tijerina, 2011; Alberts, Hazen, & Theobald, 2010; Louie & Tom, 2005). “Students tend to judge women professors first by their ‘gender performance’ and second by their teaching performance” (Baker and Copp, 1997, as cited in Messner, 2000, p. 458). Students hold different expectations for male and female professors and that the assumptions made about female professors are particularly limiting. Students expect their female professors to be friendly and nurturing, expecting both that women will be more compassionate and caring than men, and that their academic standards will be modified by this compassion (Dion, 2008; Louie & Tom, 2005). This dichotomy between being stern or authoritative and warm or familiar impacts the mode of address a professor prefers or by the way she dresses (Messner, 2000). The problem is compounded for female professors of color: “The white teacher’s aggressive prodding may be perceived by the students as intellectually challenging, while the same behavior by the African American teacher may be perceived as hostile and argumentative” (Alexander-Snow, 2004 p. 28). Heather Laube et. al. (2007) found that “the content of a course may further exacerbate this inequity (p. 95). Topics that challenge the dominant white, male, heteronormative culture, such as gender studies, African American Literature, or Islamic studies, may meet with additional resistance when taught by a woman of color. As Messner (2000) pointed out, administrative and senior faculty “advice [to women professors and/or professors of color] was to be rigorous teachers and to insist that their students use formal and respectful forms of address” (p. 457). These techniques might help, but they fail to address the real problem. So often, advice tends towards capitulation, preemptively explaining one’s credentials may head off disrespectful assumptions, but it can also suggest that the assumptions might be valid to begin with. Alexander-Snow (2004) advocated engaging with the difficult discussions as much as possible. Ideally, faculty might facilitate students away from disrespectful behavior and into truly challenging discussion, but the difficulty for minority faculty is that they may not always feel comfortable addressing microaggressions motivated by their personal identity. The fear of reifying stereotypes might pressure them into silence or limit the vehemence of their response.

Goals and Objectives

As a result of this session, participants will have:

- Identified types of incivility that act as microaggressions
- Gathered techniques for addressing microaggression in the classroom
- Recognized ways that these techniques still rely on privilege
- Brainstormed ways that colleagues and institutions can support a diverse faculty

Description of Topic to be Discussed

We will discuss student incivility where it seems to be motivated by a professor's identity. These kinds of incivility act as microaggressions or reminders that the student carries more privilege or social power than the professor, and thus feels free to challenge her/his authority. We hope to hear from our peers about their experiences with student microaggressions, both to demonstrate the support of a common issue, and to trade techniques for addressing classroom incivility. It is crucial to recognize that student behavior, even if it reacts to our identities, is not just personal, but is rather an example of larger societal discrimination against non-normative characteristics. Building off of the types of microaggressions that we face, we will brainstorm ways to challenge those underlying social stereotypes and stigmas. We believe that open discussion is the best way to teach our students to be better citizens. Finally, we want to discuss ways to gain institutional support, so that women and minority faculty are valued and supported and can share their techniques for addressing classroom microaggression.

Facilitation Techniques

We have a selection of possible scenarios to present to participants. We will ask them to determine how they might react in a classroom in the example situations. We will discuss possible reaction techniques, as well as the identity characteristics that inform our personal styles of intervention. In addition, we will solicit personal examples, and we will brainstorm ways to provide institutional support for faculty as they face the challenge of student microaggressions. Key questions include:

- How do we make students listen to what we say and not our bodies?
- To what extent is it our role to make students aware of their biases and prejudices?
- How can we address their biases and prejudices in and outside the classroom in a constructive non-threatening manner?

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Wednesday

February 10, 2016

Session 5

4:10-5:00 PM

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

Improving Higher Education in Africa Through Changing Behavior

Tiffany A. Drape & Rick Rudd
Virginia Tech

Abstract: The purpose of this qualitative study was to explore ways that higher education institutes (HEI's) could improve the quality of their curriculum offerings. Faculty at a regional conference in Africa participated in a daylong workshop aimed at addressing these needs and offering solutions that could be implemented immediately and long-term. Using the theory of planned behavior as a guide, participants discussed their actions, the target audience, the context, and the amount of time it would take to implement changes. A qualitative analysis was conducted using a codebook to analyze various pieces of data that included video clips and artifacts created by the participants at the workshop. Results from the analysis were split in two main themes, challenges or solutions. The main challenges included access to higher education, poor communication, and lack of preparation at the primary and secondary level of school. The main solutions proposed were to offer more training to faculty through mentoring programs and improving communication at all levels of the education pipeline.

Literature Review

Higher education has proven to be central to economic growth and development in the competitiveness of youth in an increasingly global society. For Sub-Saharan Africa (SSA), higher education plays a critical role in promoting technological advancement (or catch-up) and improving a country's ability to capitalize economically (Materu, 2007). With a population of 740 million people and 200 public universities, SSA has the lowest higher education enrollment ratio in the world at five percent (Bloom, Canning, & Chan, 2006). The theory of planned behavior states that attitude toward behavior and perceived behavioral control can shape an individual's behavioral intentions and behaviors (Fishbein & Ajzen, 2010). When this theory is applied to effort in education or in a career, the beliefs in question are mostly beliefs about the likely consequences of exerting effort in their field. Planned behavior also depends on commitment and intention (Ajzen, Czasch, & Flood, 2009). Faculty can encourage students to change the outcome of their education by slowly increasing their own commitment level, intentions, and attitudes in a positive way. The feedback loop is affected greatly once the small changes take place; it causes a positive ripple effect in behavior (Fishbein & Azjen, 2010).

Methodology

Data was collected from a daylong conference workshop titled, "Challenges for Higher Education in Africa." Participants from various universities and countries participated in the workshop, discussing best practices, and creating artifacts for transcription and coding. Data was transcribed using Atlas.ti© and analyzed using an open coding scheme and then a focused coding scheme to put open codes into specific subsets. Data was collected from two sources: artifact generation and video. Videos and artifacts were collected throughout the day. Both were transcribed and coded using an open coding scheme. The coding was then focused, using coding scheme based on the USAID framework (USAID, 2014). Two researchers coded the data for the purpose of inter-rater reliability (Charmaz, 2006). The main themes that emerged were: challenges and solutions.

Results

Challenges: Based on the artifacts, the two main challenges proposed by the workshop participants revolved around student access to higher education and the lack of communication through the educational pipeline. Students trying to prepare for admission to a HEI are often ill prepared due to an inconsistent curriculum during their primary and secondary education programs. This negatively affects their ability to access, apply, and be admitted and is the result of failed communication from primary to secondary to

higher education. Lack of communication causes curriculum to be inconsistent, diminishing the students' ability to prepare for admissions. Faculty need to work with other universities and primary schools to ensure future students are more prepared for admissions. Bridging the gap between the entities can begin by reaching out and building a relationship. Ensuring students are more adequately prepared before they enter the university can help faculty teach more effectively and serve a wider range of students.

Solutions: The main recommendation by workshop participants involved restructuring the hierarchy of the leadership of HEIs to include better training and mentoring for faculty. Mentorship needs to become part of the solution for both faculty and students. Programs that include mentorship can be more successful because of the open lines of communication between younger faculty and older faculty and also between faculty and students. Mentoring faculty members can increase their efficacy, promote professional development among departments, and can increase interdisciplinary work. Another recommendation sought to improve communication between HEIs and prospective students, primary and secondary education institutions, and industries was noted as the gateway to improving the quality and rigor of education from primary school through graduation from a university and could improve access to students wishing to attend.

Discussion

Based on the data collected and examination of the literature, the main challenges lie in communication and access to higher education. The main aim was to provide simple new constructs to improve the current situation and contribute to the overarching goal of HEIs using the theory of planned behavior. Providing a framework to creating a mentorship program between faculty and staff, and peers is one way that the quality of education can improve and will affect student learning and outcomes. Offering mentoring programs and giving faculty members the time, space, and permission to attend professional development trainings can serve to disseminate information and implement the training into their teaching to lead to a change their behavior over time. Improving communication at all levels of the educational pipeline will aide in improving the curricula from primary school through the completion of university and decrease educational gaps and barriers to accessing education. Further research could include evaluating how faculty implements their professional development training in their teaching or research.

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Working with Undergraduate Students to Heighten Cultural Awareness Through Reflective Contemplative Practices

Susan Musilli and Sara Olin Zimmerman
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Abstract: Instructors from two different disciplines collaborated to teach a preservice teacher education course examining the concepts of language and culture with the expectation that mindfulness-based reflective practice could enhance comprehension of course content and provide introspection for transformation. Two questions were studied: how to promote thoughtful reflection and how to effectively implement reflective journaling into a college classroom in a meaningful way. Twenty-seven student WordPress journals were analyzed through interpretive content analysis. By evaluating the journal posts, instructors were able to determine if the students understood course content and also gained valuable insight into students' cultural beliefs. The journals were effective teaching tools for understanding, and they also served as powerful assessment tools throughout the semester.

Theoretical Framework

Although reflective journaling has been used in education for decades, teachers may not know how to reflect, how to tie reflection to real practice, or how to find ample time to gain insight with journaling. Cochran et al., (2015) reviewed more than 1,500 studies published between 2000 and 2012 to provide a framework for teacher preparation research. One of the major clusters of this review was centered around, "the influence of coursework and fieldwork on learning to teach diverse student populations." Even though positive outcomes were reported from research with journaling assignments in preservice training such as cultural autobiographies (Haddix, 2008), writing school memoirs (Mueller & O'Connor, 2007), and discussing difficult diversity topics online (Merryfield, 2001), there was "little evidence of the profound shift in perspective that many instructors consider fundamental to becoming equity-minded/socially-just teachers" (Cochran, et.al, 2015). Haddix (2008) provided clear evidence that one course, even if effective, was inadequate to develop critical awareness of cultural differences. The challenge then becomes one of developing methods that encourage long-term teacher introspection.

Methodology

A Moodle website was designated for class content to enable students to access all assigned readings and videos prior to class meetings in a flipped classroom model. Collaborative class time was devoted to clarifying concepts, open discussions, and using and understanding reflective practices. The course began with a description and outline of course content and quickly moved into self-examination. During the initial presentation of the course, the instructors modeled the journaling process using both print and technology resources. Various contemplative practices were introduced to the class at the beginning and throughout the semester. Mindfulness activities were combined with traditional teaching techniques in an attempt to enliven students, enhance self-awareness, and to encourage both students and instructors to become more fully present. These activities included: breathing, walking in silence as a group, observing, handwritten personal journals to promote awakening the right-brain for creative purposes, role playing with hand-made puppets, small group conversations, coloring of mandalas, active listening, and the sharing of narrative based on the micro-cultural elements identified through the selected readings and reflection. The instructors emulated and encouraged a broadening perspective through weekly classroom practice.

Data Analysis and Results

To answer the research questions, 27 student WordPress journals were collected and analyzed through interpretive content analysis (Creswell, 2013; Krippendorff, 1980). The instructors methodically examined the text by counting the frequency of words, paragraphs, and sentences using NVivo software. Identified in student journal posts were reflections on articles, service learning, class activities, instructional strategies, and personal narratives revealing their cultural lenses. Students were expected to address issues that

surrounded cultural awareness, diversity and language. The instructors further analyzed responses to identify additional emerging themes of self-awareness, beliefs, values, and emotions. Instructor feedback was also coded for type and timeliness. In addition, the follow-up reflective posts by students in response to instructor prompts were coded.

In coding posts on self-awareness, many terms describing emotions were evident. When referring to their learning about immigrants, history, US laws and education, students used a variety of terms for their emotional responses including: *anxiety, scary, shocking, uncomfortable, liked, love, interesting, feel, and moved us*. The second most frequently coded area was in beliefs. The reflections ranged from posts about how to make their students feel *comfortable* and how to *create safe environments*, to being *uncomfortable* as a college student and becoming *anxious* about attending a class with two instructors from different disciplines. Further, students related evidence of scaffolding while comparing course content with other past and current courses, including topics of: children's literature, art, special education, and anthropology.

Conclusions

Perhaps most enlightening was the realization that while reflective practice may be a primarily qualitative form of expression, it may also be a powerful instructional tool when quantified to analyze student understanding of course content. Journaling with timely feedback provided a way for students to assess their course performance, their understanding of course content, and a way to analyze their own beliefs. In other words, instructors provided varying perspectives by linking beliefs to historical events, looking at events through additional and expanded lenses, and by providing readings that expressed voices from other cultures. The tracking, feedback and analysis were accomplished by using both individual student WordPress websites that allowed both student posts and instructor feedback and an excel sheet that the two instructors shared to record the dates assignments were completed and comments made by instructors. Since two instructors were reading and commenting on student posts the quality and timeliness of feedback were strengthened. Additionally, the instructors were continually reviewing and sharing their feedback with one another, reinforcing the necessity of positive, meaningful feedback to the students. By methodically replying to student posts using the most positive and appropriate wording, the instructors encouraged students to keep open minds and continue to examine their beliefs.

Traditional forms of assessment do not necessarily measure a student's understanding of diversity, their clear understanding of content, or how they interpret the world through their personal lens. The instructors hoped that by journaling, the students would reflect true comprehension of course content and develop an enhanced and sustained cultural awareness. The individual student reflections far exceeded the instructors' expectations. Since the reflections were linked to specific course content and readings, students had to include references, explain concepts, and contemplate the ties of historical events with current cultural standards.

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Developing Technology-enhanced, Pedagogically Sound Lessons for Blended Classrooms

Elizabeth Spingola and Denise R. Simmons, *Virginia Tech*

Abstract: Instructors often wish to change their approach to teaching a course, but tend to face several barriers that may include not having sufficient time and lacking resources to support any drastic change. We set out in this practice session with the practical purpose of providing a model of the steps involved in developing a course that blends aspects of a flipped classroom, lecture and active learning strategies. We will illustrate ways to use campus resources, the internet and web based learning management systems to develop technology-enhanced, pedagogically sound lessons for blended classrooms.

Literature Review

For the past few decades, there have been calls for re-engineering the curriculum and changing the pedagogy in STEM classrooms based, in part, on national workforce needs related to enhancing the preparation and increasing the number of STEM graduates (Fairweather, 2008; Freeman, et al., 2014; Singer, Nielsen, & Schweingruber, 2012). The answering of this call was partially initiated by the launching and substantial popularity of Khan Academy (Thompson, 2011). Khan Academy is an online learning environment where clips of lectures in a variety of subjects are posted for public access. This has inspired learners and educators at all levels to pursue knowledge in a different way than technology has allowed for previously. The classroom experience can influence the recruitment and retention of undergraduate students in STEM majors (Whalen & Shelley, 2010) and impact their preparation for the profession (Moore et al., 2000).

While instructors should strive for their students to achieve the highest levels of Bloom's taxonomy, many times students do not progress beyond the lower levels of cognition. Many instructors have started learning and practicing different pedagogies to encourage their students to push past simply rote knowledge and understanding to metacognition and the higher levels of Bloom's taxonomy (Prince & Felder, 2006). Two examples of these different types pedagogies include the flipped classrooms and blended learning classrooms. When implementing a flipped classrooms, the students receive reading material beforehand and come to the classroom prepared to discuss and further their knowledge (Department of Education, Office of Vocational and Adult Education, 2011). This type of a classroom puts much of the responsibility for rote knowledge on the students thus allowing for the instructors to facilitate deep discussion and employ active learning strategies during class time. As a result, students can engage in a higher level of thinking (Krathwohl, 2002; Department of Education, Office of Vocational and Adult Education, 2011).

Despite the advantages that flipped classrooms bring, many students resist this pedagogical change and even avoid classes taught in this style (Felder & Brent, 1996). To help bridge this gap, instructors have started to implement blended learning (Bourne, Harris & Mayadas, 2005; Shen, Wang, Gao, Novak & Tang, 2009). In this approach, students learn a portion of the course material outside of the classroom and receive a portion inside the classroom along with in-class activities (Osguthorpe & Graham, 2003). One way instructors have started to facilitate such courses is with the use of computer technology, which allows distribution of video-taped lectures and reading assignments before class.

Goals and Objectives for the Practice Session

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

- Distinguish blended learning from flipped classroom strategies.
- Develop activities and use technology to support a blended learning lesson.
- Recognize challenges faced and locate resources for redesigning a traditional course.

Description of the Practice to be Modeled

The practice we seek to exemplify is how to design a technology-enhanced, pedagogically sound lesson for a blended undergraduate classroom. The practice session will focus on a junior level course entitled "Construction Management". After a comparison of flipped and blended learning and brief introduction of the course's content, participants will practice turning one lecture-based lesson into a blended lesson. Participants will receive the

lecture slides and objectives for one lesson. We will use think-pair-share to develop creative activities that could be incorporated into the lesson. The session concludes with a discussion of technology's role in finding activities and distributing course content and challenges and best practices gained from redesigning the course. Designing a blended classroom can be time intensive and difficult, but the session endeavors to make this task less daunting.

Discussion

The course redesign was envisioned and led by one instructor preparing to teach the course for the first time. With the expertise of an instructional design team, the instructor and a graduate student not previously connected with the course discussed the objectives for the course redesign. Each course session was then reorganized into segments of defined duration for lecture, activities (e.g., discussion of a case study) and end-of-class debriefs. The review of lecture slides was assigned as homework. After a brief lecture, the students were paired, discussed a contemporary issue or case study pertinent to the lecture, and related those discussions to the session's objectives. The debrief enabled deeper thinking, critical analysis of opposing ideas and immediate feedback from the instructor.

Several factors made this project successful: existing, well developed lecture slides; a senior colleague's active support for the change; funds for a graduate student from engineering education; experienced instructional designers to help develop a realistic and robust course development plan, provide instructional strategies and guide development of course sessions; graduate teaching assistants associated with the course to develop activities; and the use of case studies and activities on the internet. Time was the main challenge to this project. The practice session includes lessons learned and helpful tips for instructors desiring to incorporate active learning in their classroom.

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Developing, implementing, and assessing a successful Inter-Professional experience.

Rachel Pittmann, Kari Comer, Shelley Brundage, *The George Washington University*

Abstract: The ability to work effectively in a team is a critical skill for today's health care professional. Effective teamwork leads to safer, better, and more efficient patient-centered care. In 2011 the Interprofessional Education Collaborative Expert Panel identified four competency domains for successful collaborative practice: 1) values/ethics for interprofessional education (IPE), 2) role/responsibilities, 3) interprofessional communication, and 4) teams and teamwork. Each of these domains contains specific core competencies.

The George Washington University (GWU) addressed teamwork development in student learning when we implemented two interprofessional education (IPE) exercises which involved 450 students in five professions: Medicine, Physician Assistant, Nursing, Physical Therapy, and Speech-Language Pathology (SLP). The goals for the 2nd exercise, developed from the Expert Panel's competency for communication were for students to: a) Use **effective communication** to facilitate inter-professional discussions and interactions that enhance person-centered care, b) **Express one's knowledge and opinions** to inter-professional team members with **clarity** and respect, c) Demonstrate ability to construct a person-centered plan of care that **incorporates key elements** from each discipline, and d) Employ an assessment tool to **provide feedback** about effective communication strategies used by peers.

The focus of today's practice session will be on the development of the spring exercise:

- a. how goals for each semester were selected,
- b. planning an extensive, large-scale exercise for 450 students on our city campus,
- c. how we assessed several components of the students' learning experience,
- d. the valuable lessons we learned that other programs can benefit from.

Proposal Literature Review

Despite the critical nature of interprofessional communication, opportunities to practice this skill are rare in schools of health professions (Pronovost & Vohr, 2010). This is very important because "learning to give and receive timely, sensitive, and instructive feedback with confidence helps health professionals improve their teamwork and team-based care." (IPEC Panel, 2011, p. 22). Therefore, the GWU IPE committee sought out a way to assess communication skills as well as student confidence in these skills both pre-exercise and post-exercise conditions. The planning committee developed a self-report Teamwork Skills Confidence Self-Assessment form, based on team effectiveness research (Anson & Goodman, 2014; Bolman & Deal, 1992; Hackman, 2002; Levi, 2014; Ohland, et al., 2012; Stewart, Manz & Sims, 1999; Sundstrom et al., 1999). The Speech-Language Pathology (SLP) students were given this assessment; along with skills and knowledge, confidence in one's abilities is a necessary component of successful therapy (Siegel, 1982). More generally though, from a pedagogical standpoint (vs. clinical), self-confidence is an important part of self-regulated learning and achievement and the results from this assessment show that participating in the IPE exercise significantly improved our students' confidence in their teamwork abilities by statistically significant margins.

Goals & Objectives

- The learner will recognize the importance of interprofessional communication in academic and healthcare settings.
- The learner will develop a greater understanding of the role of inter-professional education as it relates to student's development in teamwork skills confidence.
- The learner will understand how to select and design appropriate assessment instruments to evaluate the success of the experience.
- The learner will gain knowledge of successful approaches and less successful approaches to creating an interprofessional exercise on his/her campus.

Description

GWU's IPE experience involved a total of 450 students (33 Speech-Language Pathology) in the spring IPE activity. All of the students were in the first year of their respective academic programs at George Washington University.

The IPE planning committee consisted of faculty members from each of the professions represented in the exercise. The planning committee held multiple meetings to develop goals for the exercise, plan the exercise, including the development of a hypothetical case, the development of tools to evaluate student teamwork skills, and the creation of

an introductory presentation for the students to view prior to the exercise. A standardized patient case was developed in order to provide context for the teams' interprofessional interactions and to allow for each team member to add a unique contribution to the case discussions. The planning committee developed a self-report *Teamwork Skills Confidence Self-Assessment* form (discussed above) which required students to rate themselves on 20 teamwork-related skills (e.g., *respect and response to feedback, management of team's progress, etc.*).

The IPE exercise occurred in March, 2015. First, students worked in discipline-specific groups (all SLP's, all MD's, etc.) to interview the standardized patient and develop a discipline-specific 'problem list' using a specific inter-disciplinary tool. At the end of this portion of the exercise, the SLP students rated other SLPs in their discipline-specific teams using a rating sheet developed for this purpose. The SLP students then joined an inter-disciplinary team to collaboratively develop a patient plan of care. SLPs students received ratings of their effectiveness from their inter-professional colleagues at the conclusion of the exercise. The SLP students self-rated their teamwork abilities using the Teamwork Skills Confidence Self-Assessment prior to and immediately after the IPE exercise.

Our findings suggest that participating in a 4-hour IPE exercise raised our students' confidence in their teamwork abilities. This exercise introduced students to a common communication tool that can easily be used by an inter-professional team to improve patient care. This exercise also provided a framework that proved to be successful in increasing confidence in teamwork as well as an introduction to effective communication strategies that are critical in inter-professional care that can be applied in all inter-disciplinary settings.

In our presentation, we will discuss important take-away messages from this activity that other programs can use as they create their own IPE exercise including multi-disciplinary collaboration, the amount of time spent on developing exercise, the review and selection process for assessment tools, and the training of faculty representatives from each department.

Participant Interactivity

We will pose strategic questions during the presentation, when discussing particularly challenging aspects of the IPE planning process (ex. own experience with IPE, how to train facilitators, how to assign students to groups, how to obtain the necessary number of rooms to accommodate the activity).

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Space and Place, Safety and Risk: Designing a Classroom Climate for Transformative Learning

Brian Kelleher Sohn, The University of Tennessee, Knoxville

Abstract: In this session, the author will describe and model the use of a classroom climate framework developed through interdisciplinary research on classroom climate. The Space and Place Classroom Climate Framework (SPCCF) draws on work from adult education, higher education, and philosophy of education. Under the broad categories of safety and risk, instructors can create a classroom climate that supports students personally and academically in a way that meets the fundamental human experiences of space (freedom) and place (security). The author shares specific examples of framework application and anecdotal reactions from students.

Literature Review

Beginning with the work of the humanistic geographer Yi Fu Tuan (1977), the author compiled and categorized research from the fields of philosophy of education, classroom climate, and adult education to develop a framework instructors can use to plan their course climates to best confront the many challenges they face. Tuan's *Space and Place* presented the ways humans experience the world. His main theme is that space is freedom and place is security (p. 3). Yet agoraphobia, the fear of open spaces, and claustrophobia, the fear of being in tight places, help highlight the need humans have for a balance of freedom and constraint (p. 54). The SPCCF seeks to assist instructors on finding that balance within their courses.

I review here briefly some exemplars of research related to various pieces of the SPCCF. Course elements can be modified to create a sense of place and comfort. There are strong correlations between achievement and organization (Fraser, 2012). Learning-oriented goal structures, another element that can provide a sense of direction and comfort, are associated with higher levels of motivation (Young, 2003). To encourage risk, assignments must have some degree of openness and give students a sense of control (Fraser, 2012). Sharing authority can be scary for instructors, as can pushing students into a realm of discomfort (Boler, 1999). But it is more difficult still if students are bereft of any decision-making regarding course elements.

To students, safety means not being judged (Holley & Steiner, 2005). But a sense of place and safety can be enhanced with personal support, which can take the form of care (Noddings, 1992) or teacher confirmation (TC) (Ellis, 2004). TC, a construct composed of recognition, acknowledgement, and endorsement of students, has been positively correlated to cognitive learning, affective learning, and motivation (Goodboy & Myers, 2008). Humor is another way instructors can create a sense of comfort in the classroom. From the strength of relational connections in the course students can actively engage in the learning community. Instructor disclosure is a tool that, used properly, can lead to higher levels of participation, even among under-represented groups (Thomas et al., 2007).

Goals and Objectives

In this session, participants will be asked to use an SPCCF worksheet to analyze a current course they teach, plan two to three changes, and discuss benefits and drawbacks of the SPCCF and its implementation. My goal for session participants is that they see, through research and examples, the potential for increasing motivation and engagement for students and themselves. To ensure the utility of the session for all participants, small groups will be formed.

The Space and Place Classroom Climate Framework

The SPCCF is shown below. The two main branches are *Safety* and *Risk*, and the columns contain two main divisions of classroom climate over which instructors have control: course and person elements. Within each of the two main divisions are areas of classroom climate research.

General Goals	Place: Safety and Comfort <i>How can you make your course a safer and more comfortable place? Room decor? An online classroom forum? A clear and concise syllabus?</i>	Space: Freedom, Risk, and Discomfort <i>How can you make your course freer or more open, encourage more risk, stick with discomfort? Inclusion of personal reflective journals? Incorporating student interests?</i>
Course Elements	Provide Structure <ul style="list-style-type: none"> • Organization of Content • Task Orientation 	Provide Openness <ul style="list-style-type: none"> • Sharing Authority and Responsibility • Student-Generated Content
Person Elements	Support Students Personally <ul style="list-style-type: none"> • Confirmation • Humor • Care and Concern 	Foster Autonomy <ul style="list-style-type: none"> • Participation in the Learning Community • Disclosure • Self-Regulated Learning

Discussion

Students often fail to engage their entire being in the learning process. Freiburg (1999) noted, “Too many students are ‘tourists’ passing through rather than ‘citizens,’ active learners in the classroom” (p. 4). Johansson and Felten (2014) took the concern of school citizenry into the realm of academics and described the challenge of college students with a checklist mentality. The proliferation of certificates or badges can lead students to a view of college as an educational café, where portions of knowledge are dished out. In such an atmosphere, students and professors blame each other for the focus on attaining high grades rather than pursuing learning (Pollio & Beck, 2000). To combat the checklist mentality and shallow engagement, Johansson and Felten (2014) recommend that colleges provide more open learning opportunities, time for reflection, and integration of action into the curriculum.

Although classrooms are not empty expanses of desert or wide-open highways, they can possess a sense of security, constraint, openness, or chaos. In my courses, I use my framework to guide my planning. In the session I will provide a selection of examples of how I have applied the SPCCF and their research basis. I begin my seminar courses with introductions that go beyond names, majors, and places of origin. I design certain activities with highly structured guidelines and rubrics, and other activities that are open to creative interpretation. I provide personal support and challenge assumptions. I call on students to integrate their past experiences with present research to envision their future careers. These elements contribute to a sense of place and space.

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Assessing Cooperative and Individual Outcomes in Team Learning Structures

Chantel Simpson, Matt Spindler, *Virginia Tech*

Abstract: Cooperation consists of actions that support working or acting together for common purpose or benefit. Cooperative learning is one of the most successfully implemented methods of instruction and it is well supported by hundreds of validating research studies. Further, cooperative learning is widely used across the globe at all levels of education and in a wide variety of subject areas. However, assessing cooperative interactions and individual performance and learning within teams can be challenging. This session will introduce research based strategies for assessing cooperative interactions and individual performance and learning within teams. Participant activities will illustrate why the assessment of individual performance and learning within teams is critical and why the discussed strategies are effective.

Literature Review

Cooperative learning pedagogy is built on the theory of social interdependence. Social interdependence is one of the most fundamental and ubiquitous aspects of being a human being and it affects all aspects of our lives (Deutsch, 1949, 1962). Whenever two or more individuals interact, there is a potential for cooperation. However, asking or requiring people to work together does not ensure that their interactions will be cooperative. In fact, social interdependence theory indicates that cooperation only develops fully under certain conditions (Johnson, Johnson, & Smith, 2013). More explicitly, the literature indicates that social interdependence gives rise to the potential for cooperation when individuals share common goals and the outcomes each individual experiences are dependent on the actions of others to which they are connected (Deutsch, 1962; D.W. Johnson & Johnson, 1989).

Synthesizing the research surrounding social interdependence that took place over a thirty year period, Johnson & Johnson (2009), were able to modify and extend social interdependence theory. Based upon their research investigating the implementation of cooperation, Johnson and Johnson (2009) have posited that five variables mediate the effectiveness of cooperation: 1) positive interdependence; 2) individual accountability; 3) promotive interaction; 4) appropriate use of interpersonal social skills; and 5) group processing. The five mediating variables that have been forwarded by Johnson and Johnson (2005, 2009) have been framed as the five essential tenets for cooperation. Much of the research on Cooperation has been undertaken in educational and organizational settings where it has been utilized as an instructional and process facilitation strategy. It has been found that when cooperative processes employ structured group interactions based on the five mediating variables the productivity of each individual is optimized (Mader & Smith, 2009). Further, a robust literature demonstrates that cooperative efforts that appropriately employ the five tenets of cooperation are more likely to attain preferred outcomes, such as, greater achievement, more positive peer relationships, higher quality reasoning, and increased time on task. (Johnson & Johnson, 2009; Johnson, Johnson, Roseth, & Shin, 2014; Kunchenbrandt, Eyssel, & Seidel, 2013).

Various researchers have structured positive interdependence differently, however, the assorted structural divisions can be organized around three categories: outcome, means, and boundary (Johnson & Johnson, 2009). Table 1 contains brief descriptions of the three types of positive interdependence found within the associated literature. Within social interdependence theory, positive interdependence is conceptualized as a phenomenon that adds responsibility forces to group members' motivation. It is posited that group members feel responsibility to pull

Table 1
Positive interdependence structures in cooperative groups

Outcome interdependence	Includes goals and rewards. Goals can be real or imaginary (designing an animal).
Means interdependence	Subsumes resource, role, and task interdependence. Resource, role, and task ownership or responsibilities can be divided among group members. Care must be taken to ensure strong common goals or achievement will be stagnated.
Boundary interdependence	Includes the overlapping categories of identity (binds group together as one

entity), environmental (work location), and outsider enemy (shared negative interdependence with another group) interdependence.

their own weight and help to enable the work of other group members (Ding, Li, Piccolo, Kulm, 2007; Johnson, Johnson, Roseth, & Shin, 2014). Relevant research illustrates that the effect of responsibility forces are multiplied for each group member when there is group and individual accountability. Individual accountability, is created when individual member performance, outputs, and outcomes are assessed and reported to the group. With respect to individual accountability, as with positive interdependence, purposeful structure is critical for achieving more desirable results from cooperative arrangements. In fact, individuals are likely to reduce their contributions to the achievement of the group goals if individual accountability is vague or it is difficult to identify the specific contributions of members (Johnson, Johnson, Roseth, & Shin, 2014). Therefore, for cooperative arrangements to be more successful, structures should be included that support individual accountability and clear recognition of the effort that each member is contributing to the attainment of the common goal (Johnson & Johnson, 2009).

Goals and Objectives

Participants in this session will build their capacity to design, utilize, and evaluate processes and tools for assessing: 1) cooperative interactions within teams; and 2) the performance and learning outcomes of individuals within teams.

Description

Session activities will focus on assessment for three positive interdependence structures: a) outcome interdependence; means interdependence; and boundary interdependence. Participants will work on three guided case study exercises in order to explore challenges associated with assessing cooperative interactions and individuals within cooperative teams. The case study analyses will illustrate why specific approaches to assessing cooperative interactions and individual performance and learning are more successful than other approaches.

Discussion

Assessing cooperative interactions and individual performance and learning within teams is a progressive process that develops throughout a course of study, not just an accounting of outcomes at the end. For students in cooperative groups, the need for clear expectations and feedback on progress, as well as fair assessment protocols, is essential. Individual and collective assessments should be complementary and allow instructors to encourage individual achievement while promoting a culture of shared purpose and learning.

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Whole-Part-Whole Framework: Application in Higher Education

Kelly Dyar, University of West Georgia

Abstract: Learning environments require careful planning, and faculty are challenged to create learning environments for a variety of learners. Use of the Whole-Part-Whole framework can serve as an organizing structure for planning learning environments to meet the needs of diverse learners. In this practice session, the use of the Whole-Part-Whole framework will be explored. Application of the Whole-Part-Whole method to a selected concept within an undergraduate pre-licensure nursing program will be provided. After exploration of the Whole-Part-Whole framework, participants will discuss application of this framework to individual academic disciplines and settings. Lastly, this presentation will provide a framework for learning environment planning as well as specific teaching strategies for implementation.

Literature Review

Richard Swanson originated the Whole-Part-Whole (WPW) model in 1972, indicating this model can be used for program development and making teaching adjustment during live classrooms (Swanson & Law, 1994). The WPW model is described by Knowles, Holton, and Swanson (2015) as a practical methodology for use in designing learning environments. Notar and Barkley (2009) assert that students have greater ability to retain and transfer knowledge when concepts are grouped in a meaningful fashion. Meaning arises when the concepts are explained, which provides the foundation for future learning. Strickland (1998) suggests the WPW model can provide the educator with a framework for thinking about and planning instruction. The educator can combine a focus on isolated concepts along with exploration of the overarching subject material, and thus knowledge acquisition is both meaningful and strategic (Strickland, 1998). While primarily used by teachers, Knowles et al. (2015) assert the WPW model is simple enough to be used by learners to design individual learning experiences.

Using the WPW model, new content is presented through the first whole to integrate concepts presented through the parts. The learner forms a mental organizational framework, which aids in effective incorporation of upcoming content into the past knowledge base (Swanson & Law, 1993). Mental scaffolding, using advance organizers and motivation, are provided through the WPW model's (Knowles et al., 2015). Advance organizers are tools that help the learner connect new learning to prior learning, which can aid in creating meaning through learning (Cutrer, Castro, Roy, & Turner, 2011).

The first whole creates a framework to help the learner focus on the most important parts. This organization provides increased memory retention and retrieval when instruction is complete (Swanson & Law, 1993). Notar and Barkley (2009) describe the "parts" of the WPW model as learning the buttons on a video player. Each button is explored as necessary for function of the whole, and after each part is explored the learner returns to the whole. Strickland (1998) recommends focusing on the parts necessary for understanding the whole. To accomplish this, instructors must systematically highlight each part to form generalizations necessary for application to the second whole. According to Swanson and Law (1993), complete understanding occurs within the parts by linking them together to form the entire Whole. Learning then becomes useful. In Notar and Barkley's (2009) example of a video player, the user learns the function of each part, and is then able to successfully apply the knowledge learned to watch a video. Learning environments in higher education must have a climate conducive to adult learning (Knowles et al., 2015). Planning a learning environment with the WPW framework will allow for incorporation of prior learning to support the overall concepts necessary for mastery of new concepts and learner success. This framework can be used for planning an entire course, or individual class sessions or modules.

Goals and Objectives for the Practice Session

The goal of this session is to provide academicians with a framework to use in planning learning environments in higher education.

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

- Explain the Whole-Part-Whole Framework.
- Discuss usefulness of the framework for planning a learning environment.
- State teaching strategies useful in the Whole-Part-Whole framework.
- Identify one concept to which the Whole-Part-Whole framework could be applied.

Description of Practice to be Exemplified

Participants who attend this session will learn about the Whole-Part-Whole framework for planning a learning environment. An exemplar from the presenter's practice as a nurse educator will be shared to provide a practical example and demonstrate utility of the framework. The presentation will be limited to no more than 20 minutes, and selected teaching strategies (collaborative learning, problem-based learning) will be discussed as supports to the Whole-Part-Whole framework. Participants will be given time to work within collaborative groups to discuss concepts within their particular discipline and setting that could benefit from application of the Whole-Part-Whole framework.

Discussion

This presentation is based upon a learning environment project completed in partial fulfillment of course requirements in an education doctorate. The project was implemented in an associate-degree pre-licensure nursing program to teach the concept of burn injuries. Teaching strategies were planned to support the Whole-Part-Whole framework. Based upon implementation of the Whole-Part-Whole framework with practice, future considerations for higher educational research will be discussed.

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Leveraging *Reacting to the Past* to Create Student-Centered Classrooms that Empower Students and Faculty

Thomas Chase Hagood, Naomi J. Norman, *The University of Georgia*

Abstract: This practice session asks participants to consider Annie Murphy Paul’s recent question for readers of the *New York Times*: “Are College Lectures Unfair?” (Paul, 2015). Much research has been devoted to demonstrating how the lecture—when used alone—is a delivery mechanism that fails to produce the types of deep learning that many college faculty administrators, and yes, students, expect from the American higher education system. This is especially true for female, low-income and first-generation students. This practice session hopes to examine this question by modeling an active-learning strategy called *Reacting to the Past* (RTTP). The session will compel participants to reflect on how organizations, Centers for Teaching and Learning, and other similar instructional units can equip and develop faculty to utilize games to engage their students for deeper learning and spark the desire for learning that extends well beyond the walls of any single classroom or institution. In the first half of the session, participants will engage in an interactive discussion on the RTTP pedagogy as they consider the success of the RTTP program at The University of Georgia. Furthermore, the presenters’ will highlight their work in creating and implementing faculty development programming on course redesigns that incorporate the pedagogy, constructing faculty development partnerships, as well as contributing to regional and national efforts (i.e. various faculty workshops, four-day summer institutes, fellows program, national conferences). Participants will be encouraged to share their experiences, impressions and questions. With this foundational knowledge in place (there will be a Prezi available for pre-workshop review), the majority of the session will serve as a mini-RTTP game in which every attendee will land inside a game-in-motion and experience the pedagogy from the student perspective. Faculty participants will debate key ideas, rally around their fellow faction-mates, and cast votes to determine how the game would continue to develop.

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. (www.reactiving.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 & 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 & Eison, 1991). Furthermore, the design of hybrid and flipped classrooms and their 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). Finally, RTTP and similar active-learning approaches may prove to be touchstones of a new paradigm clearly championed by Fareed Zakaria in his *In Defense of a Liberal Education* (2015) and other higher education futurists.

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 integrate high-impact, active-learning strategies like Reacting to the Past (RTTP) in their courses. In the first half of the session, participants will engage in an interactive discussion on the RTTP 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. During the third segment, the locus of learning will shift to participants, as they will be asked to share their experiences, impressions and questions. Given the high-participation and de-centering aspects inherent in RTTP, participants will be pressed 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 UGA 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 RTTP and they have been quite successful. As one faculty participant from a recent CTL/RTTP development session avowed, "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 practitioners 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 RTTP. Hagood's training as an historian and his position as an Assistant Director for Faculty Development and Recognition in CTL and Norman's background in Classics and, serving as an Associate Vice President for Instruction—they both serve as Co-Directors of Reacting UGA—have made for a thriving collaboration and an effective pairing of colleagues. Hagood and Norman are excited to share their experiences with participants at the 2016 Conference on Higher Education Pedagogy.

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Conversation: Students and Professors Redesign Course Using 21st Century Pedagogy

Kanata A. Jackson and Nicoleta Maghear, *Hampton University*
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Abstract: This session discusses the results of purposeful steps taken over a period of ten years to redesign an undergraduate organizational behavior course from a 20th century design into one that utilizes 21st century pedagogy. The study involved 1200 senior undergraduate students from various disciplines. The course is offered in the business management program at a four year HBCU. The 360-degree methodology undergirded with Kurt Lewin's Theory of Force Field Analysis provided students with a theoretical framework for understanding organizational change and for contributing to the course redesign processes. Student feedback was solicited at the beginning, midterm, and end of each semester. Class teams conducted feedback sessions and recorded the information as part of the semester-end student authored journal. Each semester new suggestions were incorporated into the course. The evaluation process was repeated each semester. Traditional instructional practices (lectures, structured paper based exams, course textbook dependency) were incrementally discarded and replaced by project based learning activities and creative problem solving of global issues. The instructional paradigm shifted from teacher-focused to student-focused classes. Business leaders and community stakeholders helped with identifying desirable new age skills sets for employees. This study demonstrates how professors, students, and business leaders can collaborate to redesign courses that embrace 21st century pedagogy. Results revealed the following: Students enthusiastically embraced the 21st century pedagogy style; class attendance and punctuality improved; project based assignments had more academic rigor; class discussions were lively and participatory; professor-student interactions were more frequent and meaningful and professor evaluations were higher. University-wide usage of 21st century pedagogy by professors is an objective requiring a commitment to move the strategies "beyond lip service" to course redesign.

Literature Review

Scott McLeod, professor of technology and leadership issues, in his YouTube video asserts that, "teachers most often teach for the past fifty years rather than for the next 50 years (dangerouslyirrelevant.org). The shift from teacher-focused to student-focused requires a systematic change process. Kurt Lewin's 3-Step Change Process Model was the theoretical framework used by study participants to analyze the course redesign and the 360-degree methodology was used to systematically obtain input from students and corporate leaders. Bernard Burns (2004) conducted a comprehensive review of Lewin's theory and attests to its relevancy in the 21st century.

Tony Wagner (2008) interviewed over several hundred business and education leaders who identified seven survival skills students need: critical thinking and problem solving; collaboration and leadership; agility and adaptability; initiative and entrepreneurialism; effective oral and written communication; accessing and analyzing information; and curiosity and imagination. Further research by the Assessment and Teaching of 21st century Skills Consortium (AT21CS) organized skills, knowledge, and attitudes into four major categories: ways of thinking, ways of working, tools for working, and ways of living in the world (2012). Employers demand fewer people with basic skill sets and more people with complex thinking and communication skills (Levy & Murnane, 2005).

At the very foundation of the shift to 21st century, pedagogy is the appreciation for student participation and collaboration within the learning process. Studies found the importance of student-faculty collaborations as a key component in the teaching and learning process. Research by the National Survey of Student Engagement (NSSE) shows that "students must be challenged academically; experience high levels of purposeful, active and collaborative learning; enjoy quality interactions with faculty members around their academic work; experience the enrichment of such opportunities as well-designed internships, collaborative research with faculty members and study of other cultures and benefit from supportive campus

environments” (Pascarella, Seifert, Blaich 2010).

Astin (1999) reports that the interaction between the professor and student is the critical element in transitioning from a teacher-focused class environment to a student-focused class environment. Frequent interaction with faculty is directly correlated to satisfaction with college than any other type of involvement or, indeed, any other student or institutional characteristic. Students who interact frequently with faculty members are more likely than other students to express satisfaction with all aspects of their institutional experience, including student friendships, variety of courses, intellectual environment, and even the administration of the institution.

“If students are to be transformed during their undergraduate career then first universities need to transform themselves moving from the rituals of teaching to the mysteries of learning. We argue that the professional development of staff is the key element in that transformation” (Harvey and Knight, 1996). Faculty must lead the process in transitioning to 21st century pedagogy.

Goals and Objectives

The conversation will engage participants in:

- Discussions of the changing role of professors in moving to a student focused class and *involving students in the course delivery redesign*;
- Discussion of the pedagogical value of technology and project based assignments.
- Sharing 21st century instructional commonalities of group participants
- Develop “Bag of Tricks” for Who, What, Where, When and How strategies. Information will be summarized and sent to session participants electronically at the conclusion of the conference. Discuss the pedagogical value of technology.

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Conversation: Using Asana® to Facilitate Team-based Learning and Proactively Address Social Loafing

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Abstract: Learning activities that engage undergraduate research students in the research process, or at least realistically simulate the process, can positively impact their perceptions of research and its value in professional practice. Team-based learning is an active, engaged approach to learning where students work together in teams over the semester using course content to solve challenging problems while developing teamwork skills. One of the drawbacks to teamwork is having a social loafer as a team member. Another is the difficulty students experience with collaborating outside of class due to their conflicting schedules. Having teams work together in Asana®, an online workflow app, allows the instructor to monitor teams' progress and individual students' activity and contributions to team tasks and, when necessary, to proactively address social loafing. The app provides students an online "workspace" where they can easily collaborate away from campus synchronously or asynchronously. The decision to introduce Asana® into the course, and the outcomes, will be the starting point for discussing participants' interests in, concerns about, and experiences with technologies to support student learning in research methods and other courses.

Literature Review

Team-based learning (TBL) developed partly as a reaction to evolution in the modern workforce. In many fields, the work environment has changed from a traditional office setting where workers congregate to complete their work to a distributed workforce where work occurs entirely, or to some degree, away from any centralized location (O'Neill, Hambley, & Chatellier, 2014). Team-based work models have become common in both distributed (O'Neill et al., 2014) and more traditional work environments (Calhoun, 2014). Employers seek college graduates who have developed teamwork skills and who can successfully work in team-based environments (Calhoun, 2014). Team-based learning is one approach that focuses on student activity, with approximately 80% of class time devoted to teams working together on activities that replicate real-world problems students will likely encounter once employed in their fields (Michaelsen, Davidson, & Major, 2014) and that help them develop the teamwork skills employers desire. Team members share a reciprocal accountability to each other, and to the instructor, for their individual task performance and the group's task accomplishments (Michaelsen et al., 2014). Evidence suggests TBL helps students develop teamwork skills, problem-solving, and decision-making (Michaelsen et al., 2014) as students grow into self-managed teams facing increasingly difficult problems designed to encourage learning and team development (Michaelsen et al., 2014). Both faculty and students identify social loafers in teams, those team members who contribute very little to their team's tasks yet benefit from their teams' successes, as their most serious frustration with TBL (Calhoun, 2014). Social loafers typically arrive unprepared when they actually participate in team meetings, produce incomplete and poor quality work or do not produce any work, generally miss deadlines, cannot be counted on, and disrupt the team's progress (Calhoun, 2014).

A driving force for the growth in the distributed workforce has been technology that allows workers to complete their work using mobile devices that do not tether them to their offices as their old PCs did (O'Neill et al., 2014). As the "cloud" (the Internet-based cloud computing network) grew, so did the number of workers who could work remotely (Miller, 2009). Mobile technologies that changed the way people work, and that digital natives who have grown up with and find essential to their daily existence, have stormed university classrooms, forcing instructors to reconsider traditional pedagogy and how to accommodate these new tools (Rellinger, 2014). Mobile technologies like smartphones and tablets using apps (mobile software applications) have the potential to support learning (Rellinger, 2014). Productivity management apps, created to support work teams, may be leveraged in courses to support team-based learning and collaboration in online work spaces outside of class (Miller, 2009; Rellinger, 2014).

Goals and Objectives

The primary goal for this session is to engage in a rich conversation about participants' ideas, concerns, and experiences related to using technology to support and enhance student learning, particularly team-based learning.

The secondary goal is to share promising technologies that participants are aware of and may have used in their classes, as well as disappointing technologies that did not support student learning when tried. An objective is to discuss concern and resistance to technology, receiving feedback and advice from colleagues on strategies for adopting new technologies successfully.

Description of Topic to be Discussed

The facilitator's experience using Asana® as a means to facilitate teamwork and team-based learning will be the springboard to the broader conversation. The conversation will focus on team-based learning and participants' experiences with incorporating technologies to support team-based learning or student learning more generally. Participants' hesitance or resistance to incorporating technology will also be a discussion theme. Participants' recommendations for technologies to try or to avoid, based on their own experiences integrating them into their courses, will be the final topic discussed.

Facilitation Techniques

The discussion would begin with a brief presentation sharing the facilitator's experience with using Asana ® to support team-based learning in the undergraduate research course. Next participants would be encouraged to share their thoughts, experiences, and concerns about incorporating technologies into their courses to support team work and student learning. Finally, the group would work together to generate a list of potentially beneficial technologies to consider for future use as well as a list of technologies that have not been successful or that are difficult to integrate. Facilitation plans would be adjusted to best accommodate the number of participants in order to maximize their learning experience.

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Thursday

February 11, 2016

**Presentation
Sessions**

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

Thursday

February 11, 2016

Session 6

9:00-9:50 AM

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

Effective Use of an Undergraduate Teaching Assistant Through Multiple Communication Methods Outside of the Classroom

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Abstract: There is much research documenting the impact that the use of an Undergraduate Teaching Assistant (UTA) has on student learning. However there are few studies that analyze the effectiveness of the teaching methods and communication approaches utilized by a UTA. This current study aimed to examine interactions and communication between the students and the UTA outside of the classroom. Six modes of communication and information delivery were made available. These modes included group review sessions, telephone calls, emails, text messaging, in person appointments outside of the tutoring center, and in person appointments made through the tutoring center. This paper describes students' thoughts on each mode of communication and discusses the benefits and limitations of each mode. It was found that the least utilized mode of communication was telephone calls while the most utilized mode was email exchange. Students rated email as the most effective avenue for receiving assistance with course content from the UTA, with meeting in person ranked just below, followed by text messaging. Students rated telephone calls as the least effective mode of communication. These results suggest that ease of communication can enhance the effective use of a UTA.

Literature Review

Varying approaches of the use of UTAs in the classroom have been previously examined. Not only do UTAs assist the professor with administrative duties in the classroom, they have also been proven beneficial in bridging the communication gap between students and professors (Stoecker et al, 1993). UTAs in the classroom serve the purpose of interpreting professor ideas and difficult material for students, while also relaying information about consistent curricular challenges to the professor (Stoecker et al, 1993). Adler et al (1993) showed that UTAs were effectively used in large lecture halls by dividing students up into small UTA led discussion groups. Student learning was increased by 15% over those students in large lectures that did not utilize the UTA in this fashion (Adler et al, 1993). Further investigation of students' experiences with UTAs revealed that a major obstacle is that many students do not understand how they can be individually helped by a UTA (Fingerson & Culley, 2001). These data prompted the investigation of alternate modes of communication between the UTA and students outside the classroom.

Technology and mobility are key assets for the current undergraduate student. An observer of a college campus will note that the majority of students heavily rely on mobile devices for prioritizing, organizing, communicating, and staying current on social and global events. Educators have begun to harness this technology as a pedagogical tool. Goh et al (2012) found m-learning, or mobile device learning, to be an effective pedagogical approach. Short message service (SMS), or text messaging, was used to deliver group message reminders to students about important course schedule information. The delivery of these text messages raised the overall class average (Goh et al, 2012). Wang et al (2009) also utilized this technology. In this study, students participated in text messaging with instructors thereby increasing student engagement in the learning process (Wang et al, 2009).

Our current study aimed to combine the previous research findings of effective use of UTAs with the demonstrated benefits of utilizing technology as an effective learning tool.

Methodology

In this study, 24 students in an undergraduate health course were assigned a UTA. The students were given 6 modes of interaction and communication with the UTA. These modes included group review sessions, telephone calls, emails, text messaging, in person appointments outside of the tutoring center, and in person appointments made through the tutoring center. The UTA received text messages, phone calls, and emails between the hours of 8:00 am and 8:00 pm and responded to all inquiries within a 24 hour period. Three structured UTA-led group review sessions were offered outside of the classroom. Finally, students met with the UTA by appointment both at the tutoring center and also at locations outside of the tutoring center. At the end of the semester, students completed

surveys that addressed their experiences with the UTA and allowed them to evaluate the effectiveness of each mode of interaction/communication.

Results

Surveys showed that students communicated most frequently with the UTA via email and least by telephone. Only one student reported utilizing the telephone for content review purposes. Students ranked email as the most effective mode of communication with the UTA, followed by in person communication and text messaging respectively. Students reported that email and text messaging were appealing modes of communication because of ease of use and promptness of responses by the UTA. Students responded that because their schedules were so busy it was difficult to find the time to schedule an appointment with the UTA and therefore the convenience of email and text messaging was very useful. One student replied that by utilizing email and text messaging, the student could receive assistance with course content without having to leave the dormitory, which is a benefit in the Ithaca climate. Those students that interacted with the UTA in person expressed that they were able to engage in a more in depth and thorough review of course content. Students who participated in in-person review sessions also reported utilizing email and text messaging correspondence for simple content questions or questions on course logistics. 8 out of 24 students responded that they utilized email and text messaging exclusively for contacting the UTA.

Discussion

This study demonstrated that undergraduate students found value in the availability of alternative methods of interaction/communication outside of the classroom. Since some students have very busy schedules and find making an in-person appointment challenging, having the option of receiving assistance via email and text messaging increased the likelihood for certain students to utilize the UTA outside of the classroom. However this study also showed that some students appreciated the option of making in-person appointments at the tutoring center or making direct arrangements with the UTA outside of the tutoring center. These methods of alternative communication with a UTA can be utilized with any course. The ratio of undergraduate students to UTA must be considered. The approaches in this study were feasible due to the small class size. Providing all methods of communication in this study may not be manageable in a larger class size if only one UTA were to be assigned. These approaches demonstrate effective use of a UTA by expansion of the availability of the UTA outside the classroom which may result in increased student learning.

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Is Your Peer (Pier?) Review Safely Moored or Floating Adrift? How Best Practices in Peer Review Can Enhance Student Learning

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Abstract: There is a significant body of evidence recommending the use of peer review in student learning. When designing and implementing effective practices, five dimensions of peer review are particularly important, namely: Curriculum Area/Subject, Objectives, Product/Output, Privacy, and Contact. Conscious application of these elements while designing peer review activities can lead to improved student outcomes and more effective use of instructor time and resources. Participants in this practice session will discuss best practices in the use of peer review, debate the various types and their relative merits and plan how to integrate peer review into their courses. Participants will come up with a simplified plan to incorporate peer review into their course and then model peer review techniques in the session to improve and refine their ideas.

Literature Review

Peer review is a very commonly used learning activity and it is one that is surprisingly complex. Little details in how the review is designed and carried out can make the difference between a successful exercise (Anewalt, 2005; Nicol, Thomson, & Breslin, 2014) and one that will not hold water (Bhullar, Rose, Utell, & Healey, 2014; Hamilton, Brunell, Tamm, & Arnas, 2006). To help navigate these murky waters, Topping described 17 dimensions that can be considered when creating a peer review (1998). While each of the dimensions may be more or less important depending on the context in which the review is implemented, these five dimension stand out as being of special concern: Curriculum Area/Subject, Objectives, Product/Output, Privacy, and Contact.

Curriculum Area/Subject is the discipline in which the review takes place. A paper in a creative writing course is not the same as a paper in an intermediate Spanish class or a technical computer science paper. The criteria they are evaluated on should be very different so that they reflect the material being learned and the goals of the class. The design for a peer review exercise needs to recognize and account for those differences.

Objectives are the purposes for having a peer review and these can be teacher-centric or student-centric (or both). One very common, teacher-centric, objective is to reduce the amount of grading an instructor has to do (Falchikov & Goldfinch, 2000; Sadler & Good, 2006; White, Morgan, & Fuisting, 2014). If students can produce grades and comments similar to what the teacher would, then some of that responsibility can be moved to the students. Other, more student-centric objectives include giving students practice in a professional activity (Anewalt, 2005), increasing the amount of feedback to the students (Nicol et al., 2014), and teaching the students how to evaluate (Sandvoll, 2014).

Product/Output is the material under review. Papers (Sandvoll, 2014; Tseng & Tsai, 2007), presentations (Anewalt, 2005), computer programs (Turner, Quintana-Castillo, Pérez-Quiñones, & Edwards, 2008), student created videos, etc. have different structures and purposes and are evaluated with different skillsets. Students will have various levels of experience evaluating these products and this affects whether the students need training before they engage in the reviews. While one can expect that freshmen have some experience critiquing an English paper, one can also expect that they have little to no understanding of how to review a computer program.

Privacy revolves around whether the reviewer knows who he/she is reviewing and vice versa. On one hand, anonymity can cause problems because students do not feel responsible for their work (Hamilton et al., 2006). On the other hand, knowing who is being reviewed or knowing who the reviewer is can lead to other problems. Cronyism or fear of retaliation could alter the reviews or scores given. These design issues must be considered.

Contact is how the reviews are carried out. This could be face-to-face, online or some of both. This dimension affects the immediacy of the feedback, how the person being reviewed can respond to the feedback, and, in general, how the reviewer and reviewee interact. This can change how personal or impersonal the reviews feel and how much the participants are willing to engage.

As stated, peer review can be a difficult sea to navigate. Understanding how the context of the review affects the outcomes can help instructors create review exercises that support the outcomes they want and that will be solidly anchored with sound principles.

Goals and Objectives

- Upon completing this session, participants will be able to:
- Evaluate the value of various dimensions of peer review
- Examine the use of peer review in their own classes and evaluate its effectiveness
- Plan for the use of peer review in their face-to-face or online classroom

Description of Practice

During the session, participants will discuss their use of peer review and how it is intended to and succeeds in enhancing student learning. Various methods for implementing peer review will be presented and analyzed for their various strengths and weaknesses. Participants will take part in group discussions on specific methods of peer review and how they can and should be used. They will develop their own plan for using peer review and then model the process with other participants to refine and improve their use of peer review. Participants will present their findings to the group.

Discussion

Discussion among session participants will encourage them to think about how they can utilize best practices in peer review in their courses. Participants will be encouraged to share their own ideas of the use of peer review and how they can be used to address their specific student learning needs. In order to evaluate how their use of peer review can benefit their students, participants will be encouraged to share their own ideas and challenges implementing and evaluating their use of peer review.

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Building Better Groups: Improving Collaborative Learning through Team-Building Activities

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Abstract: Collaborative learning involves a group of students working together towards a common goal. Increasing social cohesion within student groups can increase engagement, helping to maximize learning outcomes. Instructors can build social cohesion among their student groups with intentional, yet simple, team-building activities. This practice session will review the literature on cohesion, demonstrate team-building activities designed to increase cohesion, and allow participants to practice the activities in small groups. By learning, discussing, and practicing team-building activities, participants will gain skills that can immediately be implemented in any classroom.

Literature Review

Collaborative learning (e.g., active learning, group learning, etc.) is a pedagogical practice shown to engage students and increase learning (Carbrera et al., 2002; Prince, 2004). Since collaboration requires group interaction, understanding cohesion may help maximize collaborative learning's effectiveness. Cohesion is a multidimensional phenomenon involving social- and task-orientated processes that connect individuals to a group (Dion, 2000). Task cohesion refers to the extent group members share a common goal, whereas social cohesion is the degree to which group members like each other (Dion, 2000). Previous research found task cohesion to be an important predictor of group learning (Van de Bossche, Gijsselaers, Segers, & Kirschner, 2006). Stevens and Bloom (2003) found that social cohesion components were important to the success of cooperative learning projects, specifically determining group composition (i.e., who makes up the group) and developing students' social skills (i.e., strategies to increase productive group meetings). Many other researchers have also recommended team-building activities (e.g., icebreakers, group challenges, friendly competitions) as a means of developing these group social cohesion components (Caulfield & Persell, 2006; McKinney, McKinney, & Schweitzer, 2006; Oakley, Felder, Brent, & Elhadj, 2004; Stevens & Bloom, 2003).

Goals and Objectives

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

- Explain the importance of developing social cohesion among students in collaborative learning projects
- Identify reasons why groups become, or fail to become, cohesive
- Apply simple team-building techniques and activities in the classroom to build social cohesion

Description of Practice

This interactive practice session will be split into three interrelated sections: 1) importance of cohesion and team-building on collaborative learning, 2) guidance on how to initiate and moderate team-building activities, and 3) application of skills and activities learned in section two.

Before beginning the first section, I will lead the group in a short ice-breaker activity to demonstrate the effectiveness of team-building in the development of social cohesion. Following the ice-breaker, I will moderate a discussion on the challenges surrounding collaborative learning projects, specifically regarding the role of groups and why individuals sometimes fail to develop into a cohesive group. Subsequently, I will provide an overview of the research on collaborative learning and group cohesion, focusing on why cohesion and team-building are essential components to the success of collaborative learning projects. I will end the first section by highlighting the benefits and limitations of team-building activities. In the second section, I will demonstrate several team-building activities that can be performed in any classroom. I will only include activities I successfully implemented in my classroom. Thus, in addition to academic literature, I will use my personal experiences to illustrate what could go wrong and how to address it. I will conclude the session by splitting the participants into smaller groups and giving them time to practice one or two of the team-building activities with each other.

Discussion

This presentation demonstrates the ways team-building activities can be integrated into any class, regardless of the subject. But the presentation is unique because it is actually a team-building activity designed to teach the participants about social cohesion by building social cohesion among the participants. By starting with an ice-breaker, participants develop social bonds with each other that will help enrich the following discussion. Participants will not only learn about cohesion and team-building's role in collaborative learning, but will also be given the opportunity to discuss previous experiences and practice new techniques with peers. The session will equip the participants with the knowledge and tools to build social cohesion among their students, helping to improve their collaborative learning projects.

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Assessing Cognitive, Affective, and Psychomotor Domains with Digital-Game Based Learning

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Abstract: The effectiveness of digital game-based learning (DGBL) in the classroom can only be determined when appropriate assessments are used. Since this instructional trend started, digital games have been used in classrooms to enhance learning in cognitive, affective, and psychomotor domains, but little is known about the assessment strategies and outcomes in this implementation. This practice session used empirical data from teachers who have implemented DGBL (n=10) in classrooms in a wide variety of disciplines to inform about how students can be assessed in these three domains using digital games and other instruments. The goal of this session is to give teachers the tools to use digital games as assessments in multiple disciplines and domains, as well as inform the field about the actual effectiveness of DGBL, based on existing evidence. In addition, this session would help teachers identify the characteristics of digital games and assessments that best fit their instruction.

Literature Review

One of the most relevant issues in the adoption of digital game based-learning (DGBL) is determining how effective it can really be. Regardless of the negative perceptions that parents and teachers have had about digital games because of their connections with violent behaviors and obesity (Bourgonjon, Valcke, Soetaert, de Wever, & Schellens, 2011), there is evidence about the benefits of implementing DGBL in K-12 settings (Proske, A., Roscoe, R. D., & McNamara, 2014).

Positive outcomes of the implementation of DGBL include higher levels of engagement (Sabourin & Lester, 2014), increased motivation (Eseryel, Law, Ifenthaler, Ge, & Miller, 2014), strong correlations with persistence (Neys, Jansz, & Tan, 2014), and benefits in terms of social skills for gamers (Granic, Lobel, & Engels, 2014). Also, digital games can help teachers facilitate content and explain complex concepts and principles (Coller & Scott, 2009).

The assessment of DGBL has been carried out through the use of several instruments, such as surveys (You, Kim, No, 2015), pre and posttests (Papastergiou, 2009), questionnaires (Afari, Alridge, & Fraser, 2012), interviews (Baytak & Land, 2010), and observation protocols. While many instruments have been designed and developed for specific projects, there have been instances in which well known questionnaires and protocols like the Intrinsic Motivation Inventory or the Protocol for Classroom Observations have been used (Ventura and Shute, 2013). In some instances, teachers have used the embedded features of a digital game have been used as formative assessments to evaluate performance and progress through the game, as well as completion rates (Shute et al., 2009).

Description of the Session

This practice session will focus on teachers, administrators, researchers, and students interested in assessing the mastery of learning objectives through the implementation of DGBL. It will also focus on participants interested in implementing digital games in classrooms and in becoming more familiar with the effectiveness of this trend. By demonstrating this effectiveness, teachers will be able to make more informed decisions when deciding on using digital games in the classroom. The session will start with a brief introduction and current state of the literature in the field. For this session, data were collected from teachers (n=10) in different disciplines and it was qualitatively analyzed. The results of this session will be discussed and will show teachers how cognitive, affective, and psychomotor domains can be assessed through digital games, based on the data collected and other evidence in the literature. Then, a wide variety of strategies and tools per domain will be discussed and how they were actually implemented in the classroom, including outcomes, challenges, and recommendations for suggestion. The session will provide a model that can be followed by teachers to identify features in digital games that can allow them to assess knowledge in different domains, according to their discipline. Participants will be encouraged to share their own experiences implementing digital games, as well.

Objectives

At the end of this session, participants should be able to identify features in digital games that can be used as assessments in the classroom. Also, they should be able to evaluate the characteristics of digital games that can be effectively be used as assessments in each domain (i.e. cognitive, affective, psychomotor). Finally, they should be able to apply a model provided in the session to choose digital games according to their discipline and the domain that they would like to assess.

Discussion

The effectiveness of digital game-based learning sometimes is unclear because it is treated as a supplemental activity to instruction. This session will provide a model, based on empirical data that will allow teachers to integrate digital games in such an effective way that they can be used to determine through assessments if students have meet the learning objectives. By integrating digital game in instruction, teachers have the opportunity to use the affordances of DGBL to their fullest potential and foster 21st century skills in students by using technology-bases assessments. The use of digital games as assessment can enhance critical thinking, creativity, and decision-making skills in students. Also, preparing students with these innovative assessments develop in them skills that make them more competitive and prepared to today's challenges.

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Integrity in the Classrooms Without Policing or Punishment

Tay Keong Tan, *Radford University*

Abstract: My university's Honor Pledge mandates that all students are to hold themselves and others “to the highest moral and ethical standards of academic integrity and good citizenship.” Studies have shown that cheating behavior and academic misconduct are commonplace in colleges and schools (McCabe, 2012; and Gallant, 2008). I have caught students in my classes for cheating, plagiarism, and forgery of attendance records in the past. 1. How can I, as an instructor, do in my classroom to safeguard the integrity of the learning experience? 2. Just as learning analytics and the science of teaching can improve instruction, what evidence-based pedagogical practices can help build integrity? 3. How can I foster honest learning among my students without resorting to Draconian methods of policing and punishment? I have conducted a pilot study, sponsored by Radford University's Center for Innovative Teaching and Learning, during the Fall Semester 2015 to answer these questions. The outcomes is a set of teaching and testing strategies that prevent malpractice and build integrity, including course requirements, assignment design, test administration and teaching approaches.

Literature Review

We are a university that uses honor codes to ensure academic integrity. Like many smaller colleges with a sense of community, most students and faculty members know one another well and have a strong sense of identity and belonging. The code is part of the identity and ethos of the college or school. It is supposed to “encourage a culture of fairness and integrity, promote individual and collective responsibility, and foster strong bonds of trust between students and faculty.” (Charles Lipson, *Doing Honest Work in College*, 2008, p.32). Yet, many problems exist in its implementation.

In the honor system, we the faculty and students take responsibility upon ourselves, individually and collectively, for maintaining ethical standards and the honor code. How can we make it a reality in our classrooms?

Carol Dweck’s Growth and Fixed Mindset studies – the belief that intellectual ability is not fixed but it can be developed by learning and practice. Brain changes result from effortful learning, rather than in-born fixed intellectual capacity. Does this theory only apply to competence? What about character? Dweck’s research (2003, 2007 and her 2006 book, *Mindset: The Psychology of Success*) does not specifically address ethical competence, but do her ideas apply? Do students interpret ethical failure as the result of insufficient effort or ineffective strategy?

Objectives and Goals

The session will present preliminary research findings and seek feedback and ideas on the following questions:

1. What can instructors in their classrooms do to safeguard the integrity of the learning experience?
2. Just as learning analytics and the science of teaching can improve instruction, what evidence-based best practices can build integrity?
3. How can we foster honest learning without resorting to Draconian methods of policing and punishment.

Description of the Session

This highly-participatory, facilitated session is designed to provide a time and space for teachers and researchers to discuss the intellectual, theoretical and instructional issues relating to the topic. How can teachers and researchers comprehensively and pragmatically address all the risks and responsibilities of managing the honor system in a course? It is hoped that the discourse will offer insights and solutions for educators to shape their classroom practices and curricula.

Process of Facilitation and Presentation

How will the conversation proceed? – The session will be carried out in 3 stages:

1. Introduction of the session objectives, results of my own study in Radford University, and the topics for small group discussion (15 mins)

2. Have the participants (3-4) at each table or small group discuss among themselves a designated set of questions. Write down key ideas for a representative to present (30 mins)

3. Presentations and plenary discussion of the key ideas and wrap-up summation. (15 mins)

Examples of small group questions are:

While there are many ideas on how to promote honest learning and uphold an honor system, questions persist on how best to really put them in practice:

- Are these ideas and strategies proven to work?
- Will these work in a certain classroom and university context?
- What would an instructor have to invest to make the honor system work in her class?

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Strategies for Developing Systems Thinking

Hannah H. Scherer and Rachel Seman-Varner, *Virginia Tech*

Abstract: Many of the challenges we now face as a society require complex solutions that cross disciplinary boundaries and take into account multiple perspectives. How do we as educators prepare students to think in this way? Participants will be introduced to the components of systems thinking (e.g. boundaries, reservoirs, feedback, resilience) through an interactive activity and learn about strategies for enhancing systems thinking in undergraduate courses. A list of existing resource collections will be shared with participants to encourage further exploration and incorporation of systems thinking into their own courses.

Literature Review

Many of the challenges we now face as a society require complex solutions that cross disciplinary boundaries and take into account multiple perspectives. These challenges can be addressed in undergraduate courses by considering systems of varying scale and complexity. In her seminal work *Thinking in Systems*, Donella Meadows (2008) defines a system as “a set of elements that is coherently organized and interconnected in a pattern or structure that produces a characteristic set of behaviors” (p. 188). Viewed in this way, a systems thinking approach can be used either conceptually (e.g. Meadows, 2008) or through modeling based on quantitative data (e.g. Ford, 2009). Students, however, are challenged to consider the dynamics of a system as a whole (Raia, 2005) and instructors need support in order to develop materials that effectively teach these ideas (Kastens, Baldassari, & DeLisi, 2014). Promising strategies for addressing these challenges include scaffolding student development of mental models (Sell, Herbert, Stuessy, & Schielack, 2006), asking students to account for initial and boundary conditions in their descriptions of a system (Raia, 2008), and increasing instructor pedagogical content knowledge (Sell et al., 2006).

Goals and Objectives

The primary goal of this practice session is to encourage and equip faculty to enhance their teaching of systems thinking in undergraduate courses. This session will be relevant to instructors in a wide range of courses, particularly those that include (or have the potential to include) interdisciplinary topics of societal relevance. After engaging in this session, participants will be able to:

1. Explain the ways in which researchers approach complex systems.
2. Implement strategies for teaching systems thinking effectively.

Description of Practice

The ideas and activities presented in this practice session build upon previous experiences. The InTeGrate project (Interdisciplinary Teaching about Earth for a Sustainable Future) is an NSF STEP Center that supports the development of undergraduate teaching materials that address interdisciplinary grand challenges. Development of systems thinking is a prominent design principle for InTeGrate materials, including *A Growing Concern: Sustaining soil resources through local decision making* (Fortner, Murphy, & Scherer). Through the development of this module, Scherer gained valuable experience in how to design materials to promote systems thinking. Based on this experience, she presented a webinar for new InTeGrate authors in which guiding principles for teaching systems thinking were developed (Scherer & Caulkins, 2015). Finally, Scherer and Seman-Varner (2015) presented an interactive workshop on developing systems thinking for earth science educators.

In the first part of the session, participants will experience a jigsaw activity in which they consider the components of a complex system and their interactions. The activity begins with a large-group session where participants will brainstorm potential elements of a familiar system, an institution of higher education. They will then form “expert” groups to further consider characteristics of one element of the system. Finally, groups with one representative from each expert group will map out interactions between different elements of the system. Through this process, they will be introduced to common systems thinking concepts, such as flux, boundaries, reservoirs, and feedback.

In the second portion, participants will “debrief” the activity and learn strategies for developing their own activities. First, in small groups, they will consider (1) the role of prior knowledge in their experience of the activity, (2) potential points of confusion for students, (3) how they could adapt the activity for a system that is relevant to their own course, and (4) how the activity could be situated within the context of other material. We will share the following strategies for developing activities and assignments:

1. Consider how systems thinking is used in your (inter)disciplinary context
2. Define learning goals related to both content and process
3. Scaffold systems thinking concepts along with other concepts
4. Incorporate the use of systems language explicitly
5. Identify potential points of confusion and plan for how you will break them down.

Finally, we will share online resources with participants to help them learn more when they return to the classroom and get to the hard work of planning to teach systems thinking.

Discussion

Systems thinking is crucial for the current generation of students who will be tasked with providing solutions to the complex, global problems we now face. With the InTeGrate project this was a major challenge, even though it was one of the aims of the project (Kastens et al., 2014). Teaching systems thinking effectively does not come easily and requires instructors to give students opportunities to wrestle with complex, open-ended ideas in a manner that is effectively scaffolded. This practice session is just the tip of the iceberg!

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Changing Expectations in Higher Education and the Fundamental Basics of Teaching and Learning Efficacy

Chaya R. Jain and Andrew J. Kanu, *Virginia State University*,
Philliph M. Mutisya, *North Carolina Central University*

Abstract: The past two decades of teaching and learning have been perhaps the most transformational and challenging for students and educators alike. Students are increasingly mindful of learning options including the traditional face-to-face (F2F), hybrid and online mediums. In turn, educators endeavor to meet the contemporary learners' needs by continually upgrading their teaching skills and the overall pedagogical efficacy. Given this scenario, the question arises: "what are the basic enduring tools and techniques to ensure teacher efficacy?" The purpose of this interactive practice session is to present a balanced student-centered educational approach called process education (PE) that focuses four fundamental basics of pedagogical efficacy irrespective of the shifting pedagogic paradigms.

Literature Review

The purpose of education, inherently, is to develop competent and confident learners. However, shifting pedagogic paradigms often challenge teacher efficacy. In testing the conceptual theory of teachers' sense of efficacy in influencing student learning, Ashton, Webb and Doda (1983) found that teachers' sense of efficacy is faced with continual challenge from multiple threats and situation-specific transitions (pg. 28). Bandura (1994) argued that a strong sense of efficacy not only enhances human accomplishment and personal well-being in numerous ways, but also helps accomplish a desired outcome. Bridging the gap, this presentation discusses the PE concept which suggests that any learner (teacher or student), irrespective of current *ability*, *can improve his or her performance* (Beyerlein, Holmes & Apple 2007, Redfield & Lawrence 2009).

Objectives

1. Describe the key concepts of process education teaching and learning efficacy
2. Discuss strategies for implementing each of these concepts
3. Model concepts and practices through interactive participation
4. Offer resources for further research, professional development and ongoing practice

Description

The four-pronged PE model of learner and teacher efficacy includes: (1) Learning to Learn (2) Facilitation (3) Assessment, and (4) Mentoring (Apple, Morgan & Hintze 2013). Initiated by Dr. Daniel Apple in 1992, the PE philosophy is grounded in strong self-motivation principles. It requires rational, emotional, cognitive and social energies to realizing any learning and growth educational goals; particularly significant academic success, for learners and teachers alike. The following provides a brief description of each of these four concepts:

1. **Learning to Learn:** draws upon the theory of performance and metacognition. It focuses on improvement of learner performance and self-growth by strengthening identity, learning skills, knowledge, and ability to address life challenges to increase level of performance in new and more difficult situations.
2. **Facilitation:** refers to the process of faculty letting students do the learning and support the learner developing key supporting learning-processes like information processing, reading, writing, team learning, research, problem solving, communication and utilization of technology.
3. **Assessment:** is a mindset and a set of practices that incorporates the Strength, Improvement and Insight (SII) model of performance with focus on improving one's own (or others', i.e., students') next or future performance. In contrast to evaluation which focuses on judgment, the purpose of SII is to emphasize continual improvement in performance through reflection and assessment.
4. **Mentoring:** refers to a broad range of developmental relationships including those between teachers with teachers, students with students, teachers with students, and students with outside professionals. Mentoring requires adherence of certain conditions including servant leadership without expectations of anything in return (Leise 2007). Mentoring is not befriending, managing or parenting, but a planned

activity to enhance growth goals of a mentee (Jain, Apple & Ellis 2015). The relationship is voluntary for both parties. The fundamental focus of mentoring is the purposeful empowerment of a mentee through the development of key transferrable processes and learning skills while the learner is learning and performing.

Figure 1: A Basic Model of Teacher and Learner Efficacy



Process Education's philosophy is based upon the premise that any person can seek to improve any performance, create own challenges, and serve as a leader and mentor to others. Further, that one can take control of one's own destiny through self-assessment and self-mentoring to facilitate self-growth. Its holistic principles help transform the teaching and learning challenge in to an opportunity for empowerment. However, these PE principles also require strong self-motivation and sustained emotional, cognitive and social energies that force the desire for and commitment to realizing a particular goal even when facing a very difficult learning challenge.

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Conversation: Emerging Technologies, To Use or Not To Use?

Szu-Yueh Justine Chien, University of Wisconsin- Plattville

Abstract: Learners in the 21st century are called digital native (Prensky, 2001), Millennials (Howe & Strauss, 2000), or the Net Generation (Oblinger & Oblinger, 2005; Tapscott, 1998). Younger generations growing up with various emerging technologies are highly involved with various digital literacy activities. Therefore, it is believed that they are naturally proficient with emerging technology tools. Educators also set up high expectations that younger generations will develop skills and competences they need to become global citizens and lifelong learners with the help of emerging technologies. However, research has indicated that there is a big gap between digital natives' in-school digital literacy practices and out-of-school digital literacy practices. Technology integration has become a critical issue in the 21st-century classroom. Educators are eager to know what the best practices of technology integration are and how they can integrate technology to help digital natives create meaningful learning instead of distracting them from learning and constructing knowledge. In this conversation session, I will present my students' thoughts about technology use in classrooms first and then have a discussion with the audience about technology integration in different types of classes and in different fields.

Literature Review

Technology integration means that technology resources and technology-based practices are assimilated into individuals' lives (Technology in School Task Force, 2003). Each individual will use technology tools in their work settings, educational settings, or in their daily routines. Each individual will also use technology to meet personal needs or to collaborate with others for different purposes. Therefore, educators and learners will be able to use numerous technology tools to construct knowledge and create meaningful learning and teaching. A technology-enhanced environment will encourage learners to be more engaged in learning activities (Hannafin, 1992; Hannafin & Land, 1997). According to Hannafin and Land (1997), an ideal computer-enhanced learning environment should integrate five foundations: psychological, pedagogical, technological, cultural, and pragmatic. Even though it is challenging to integrate all five foundations, educators should still consider these five foundations during the instructional design process. A well-established computer-enhanced learning environment will encourage learners' active learning. Considering using emerging technology tools as scaffolding tools, educators found that learners were more engaged in cognitive activities (Sharma & Hannafin, 2007). Reeves (2011) also indicated that it is problematic with the focus on delivery modes when educators want to effectively integrating technology into their instruction. In addition, since the use of technology is an unavoidable trend, it is significant for educators to consider different ways of using emerging technologies to help learners construct knowledge and further create meaningful learning.

Goals and Objectives

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

- 1) value students' perspective of using emerging technologies in their personal learning
- 2) evaluate advantages and disadvantages of integrating emerging technologies into their instruction
- 3) design activities/ projects/ assignment with the aid of emerging technologies for their classes

Description of Topic to be Discussed

Technology integration is an essential element in the 21st-century classroom. At the same time, it is also a debatable issue for educators in different levels. The benefits of using emerging technologies are salient; however, the drawback of using technologies is also a major concern. We need to create a technology-enhanced learning environment; nevertheless, how can we create a meaningful technology-enhanced learning environment? When college students are asked not to use technology tools in class, they complain about it. It is because technology is actually a part of their daily life. Everything they do is probably strongly connected with their technology devices and software programs. However, research has pointed that digital natives seldom use emerging technologies for learning (Ng, 2012; Waycott, Bennett, Kennedy, Dalgarno, & Gray, 2010). They might be not aware of the

possibilities to use emerging technologies for educational purposes or they were not proficient with emerging technologies as others expected. Therefore, in this conversation session, I will share the data I collected from my dissertation project to lead the discussion about the potential and possibilities of using emerging technologies for educational purposes in higher education settings.

Facilitation Techniques



I plan to use several pictures drawn by my participants to initiate the discussion of technology integration. These pictures will tell the audience what college students think about emerging technologies in the 21st-century and how they felt when they were in the technology-enhanced learning environment. Starting from there, I will guide the audience to think about the benefits and defects of using technologies. Furthermore, we will work on creating possible activities/ projects/ assignments with the aid of emerging technologies.

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Conversation: Should Health Science Education be part of the STEM Education Discussion? Is so, what might the dialogue look like?

Robert Pawloski and Gayle Roux, *University of North Dakota*

Abstract: The past decade has been ripe with policy discussions, incentives for research, and calls-to-action in a multitude of programs K through 20 and beyond that have been aimed at fulfilling the need for academics and professionals in the fields of Science, Technology, Engineering, and Math (STEM). However, too often healthcare occupations are either overlooked or consciously excluded. It is imperative that health and medical sciences be at the table as STEM appears increasingly to be a catalyst for reform in educational policy and curriculum revisions needed to prepare our 21st Century workforce. This Conversation Session seeks the input of administrators, educators, researchers, professionals and other interested participants to join in our quest to establish strategies for ensuring the perspective of health science education is appropriately represented.

Literature Review

Judith A. Ramaley, past director of NSF, is said to have coined the acronym STEM for Education in the disciplines of Science, Technology, Education, and Mathematics (TIES, 2015). In the decade and more since, a wave of reports, legislation, calls to action, and declarations of commitment have been initiated as part of efforts to maintain U.S. global economic competitiveness and to provide appropriate education and opportunity for the workforce of the 21st Century. A major challenge for these efforts is a lack of an agreed-upon definition of what comprises STEM and whether to discuss STEM education jointly with STEM occupations. Coordinating efforts at institutions of higher education and within statewide strategic STEM plans would seem logical. However, differing definitions that exclude large fields such as health science are hindering comprehensive progress (Koonce, Zhou, Conley, Hening, & Anderson, 2011).

In 2012 the Bureau of Labor's Statistics' Standard Occupational Classification Policy Committee formed their workgroup to explore STEM with the purpose of making recommendations to the Office of Management and Budget. This workgroup's membership came from: from the Department of Labor, Bureau of Labor Statistics and Employment Training Administration; the Department of Commerce, Census Bureau; the Department of Defense, Defense Manpower Data Center; the Equal Employment Opportunity Commission; the Department of Health and Human Services, Health Resources and Services Administration; the Department of Education, National Center for Education Statistics; and the National Science Foundation, National Center for Science and Engineering Statistics (Standard Occupational Classification Policy Committee, 2012). In their 2012 classifications recommendations for the purposes of collecting, calculating, analyzing, or disseminating data, Health Occupations was one of two subdomains included under the Science- and Engineering-Related Domain. From this, one may infer that Health Occupations is considered a STEM occupation. The question might be asked, should it follow that the preparation for a student to enter a STEM occupation should be considered STEM Education?

However, controversy still exists. A February 2014 blog posting pleaded the case that "Including health care as "STEM jobs" is a huge distortion, and thus health occupations should not be validly considered a part of the S in STEM. This argument is countered on the Change the Equation (CTE) website: "STEM advocates beat the drums for more engineering and computer science talent, but the demand for STEM-savvy professionals in health care often fails to make it into the STEM discussion. Yet the healthcare industry is suffering from much—and perhaps more—of the talent shortage touted in other fields (Rosen, von Zastro, DeBreux-Watts & Gordon, 2015)."

CTE further argues: "STEM and healthcare are not mutually exclusive." However, they claim that the oft-cited NSF's Science and Engineering Indicators do not take into account the healthcare workforce. Furthermore, a 2014 Census Bureau report classified healthcare jobs as non-STEM occupations. Note the absence of healthcare occupations on the interactive graphic at <http://www.census.gov/dataviz/visualizations/stem/stem-html/>. This underrepresentation of healthcare in STEM policy, legislation, and initiatives may have serious impact on the ability to educate students in these highly skilled fields to meet the increasing demand for new healthcare professionals. The rapid aging of the U.S. population as well as the increasing large numbers of the healthcare workforce reaching retirement amplifies this demand.

Goals and Objectives

This Conversation Session proposes the following goals and objectives:

- Develop awareness of the need to consider healthcare as a STEM occupation as the nation and states frame their efforts to strengthen and build new more inclusive STEM career pipelines.
- Identify examples of how various institutions and healthcare professions have addressed the issue of healthcare in STEM – or not.
- 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 focus around the noticeable absence of healthcare from discussions about STEM workforce and education efforts. Participants will be asked to share their concerns, strategies, or approaches that they bring from their respective disciplines, professional organizations, workplaces, or institutions in various regions around the country. Opposing opinions or non-opinions will also be welcome to the conversation.

Facilitation Techniques

The session will start with ten minutes of sharing by the two facilitators, a healthcare professional and a STEM Coordinator. They will briefly share their perspectives on the topic with a few PowerPoint slides followed by conversation instructions to the participants. A soft, easy to manage football with an interesting icon will be used to *hand off the ball* to the first person that wishes to give initial comment. After a limit of four minutes, the first participant will then seek another person who wishes to comment, and hand off or *pass* the ball to the next participant. At appropriate points, visual queues from facilitators will indicate to the participant the time remaining before next *turnover* is to occur. Every effort will be made to give all participants in the room a chance to comment. Facilitators will record comments/issues/best practices on a flip chart. A brief time will be reserved at the end to summarize and bring closure. The summary will be made available through electronic media.

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Effectiveness of LCT in a Large Undergraduate Course

Ming Li and Jennifer Lawrence, *Virginia Tech*
Yu Qin, Peng Lu and Xiaohui Zhang, *Sias International University*

Abstract: The purpose of this study was to examine how the Learner-Centered Teaching (LCT) model could be used in a large undergraduate course in a central China university. We hypothesized that students would perceive a sense of empowerment, interest, and success in the LCT model. Group work and rubrics were used throughout the new model to facilitate learning. The participants were 156 sophomores enrolled in a College English course. We observed that student participants had a significant improvement in perception of empowerment, interest, and community (but not success) in post-test scores ($p < 0.01$). There was also a statistically significant improvement in their scores ($p < 0.01$). In conclusion, the LCT model is welcomed by undergraduates and the LCT class is more interesting than the traditional lecture class.

Literature Review

In the traditional lecture class, the students always identify the teachers' instruction as the most important factor in their learning (Ruohoniemi & Lindblom-Ylänne, 2009). They consider learning to be something that has happened to them and the teacher makes it happen (Nilson, 2013). In his book *Learner-centered teaching: Putting the research on learning into practice*, Doyle (2011) pointed out, "It is a bit ironic that the more 'helpful' a teacher is in terms of giving students answers or solving their problems, the less students actually learn." (p. 9) The Learner-Centered Teaching (LCT) model works to correct this problem because "the one who does the work does the learning" (Doyle, 2008). In the LCT model, the learner does much more work and plays a more active role in the learning process than in the lecture course. (Doyle, 2013). Research also gives us proof for this new idea that the brain is like a muscle that gets stronger with use; learning prompts neurons in the brain to grow new connections, so the learner is the agent of his own brain development (Mogensen, 2012). Although the LCT model is not the predominant one in current higher education in the U.S., it will certainly be the direction (Doyle, 2013).

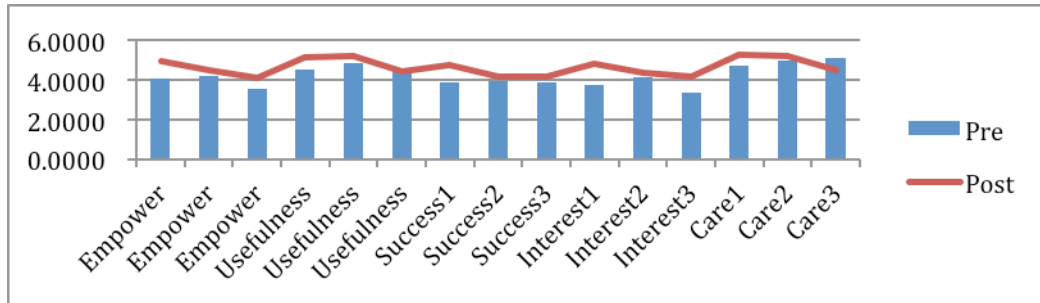
Methodology

The student participants were sophomores majoring in business management, computer, and physical education. They were enrolled in a College English course at a university in central China. Of the 178 students, 156 participated (87.6% response rate). The professors administered the pre-questionnaire during the second week of the semester and the post-questionnaire by the end of the semester (the thirteenth week). After the first survey, the student participants were randomly divided into small 6-person groups to do presentations together with a guidance rubric. Statistics did three paired T-tests.

Data Analysis and Results

In the first questionnaire, students indicated that they did not have high scores in empowerment ($M_1 = 3.55$, $M_2 = 4.05$, $M_3 = 4.2$), interest ($M_1 = 3.35$, $M_2 = 3.71$, $M_3 = 4.1$), and success ($M_1 = 3.84$, $M_2 = 3.84$, $M_3 = 3.9$). Based on the data, we used group work and rubrics to support the LCT model in class. The results of paired samples *t*-tests demonstrated that all the students showed statistically higher improvement in three of the five components (empowerment, interest, and community.) ($p < .05$; see Figure 1.) In addition, there was a statistically significant improvement in the students' scores ($p < .05$).

Figure 1. *Mean Comparisons for the five components on the Pre- and Post-Questionnaire*



Discussion

The statistically significant improvement in the students' perceptions of empowerment, interest, and community indicated that the LCT model was practical and effective in learning. We suggested the two strategies, group work and the rubrics, used in the LCT model that worked well for the students' English language learning. Thus, students perceived more community in class. However, the above perceptions were seldom achieved in the traditional lecture class.

Although there was improvement in key areas mentioned above, the students did not perceive success even if they had succeeded as their score showed. This difference between the final results and the hypothesis indicates that it is a crucial challenge for teachers to help the students build a growth mindset. There is more space for exploration of the LCT model in the large undergraduate course.

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Thursday

February 11, 2016

Session 7

10:10-11:00 AM

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

The Most Important Predictors for College Students' Online Searching

Qiang Hao, Bradley Barnes, and Robert M. Branch, *University of Georgia*
Ewan Wright, *University of Hong Kong*

Abstract: This study investigated the most important predictors of college students' online help-seeking behaviors. 203 students from a large university in southeastern United States participated in the study. The online help-seeking behavior this study particularly focused on was online searching for help seeking. Ten-fold cross validation was used to select the most significant predictors from eight potential factors, including prior knowledge of the learning subject, learning proficiency level, academic performance, epistemological belief, interests, problem difficulty, age and gender. Learning proficiency level, epistemological belief, academic performance, and problem difficulty were selected as most important predictors for online searching. The study provides guidance on targeted training of online searching and instructional designs involving online searching.

Literature Review

The continuous expansion of higher education accompanied stressors to the infrastructure of higher education, especially in terms of the resources and supports an individual student can get. Teaching and learning in future are likely to rely heavily on the Internet and other forms of technologies (Yang & Cao, 2013). In such environments, online help seeking is becoming increasingly important to students' academic success (Rakes & Dunn, 2010). Though posing little threats to students' self-esteem (Ryan & Shin, 2011), online help seeking brings new challenges to students. As an example, search engines are limited in their capacity to respond to students' questions if students fail to input accurate keywords. A clear understanding of factors influencing student's online help is essential for making guidelines that inform educators how to help students seek help online effectively. Therefore, this study investigated the most significant predictors for students' online help seeking.

Online Help Seeking

Help seeking is a cognitive skill associated with capacity for self-regulated learning (Aleven, et al., 2006). Online help seeking specifically refers to help seeking supported by online tools, such as search engine or question & answer forums. Two classification standards were proposed for online help seeking, including the nature of helpers, such as human beings or machines, and the relationship between helpers and help seekers, such as peers or teachers (Puustinen & Rouet, 2009). Three types of online help seeking emerged based on the two classifications: 1) Online searching, 2) Asking teachers for help online, 3) Asking peers online for help. This study will only focus on students' use of online searching for help seeking.

Potential Factors influencing Online Help Seeking

Eight factors, including prior knowledge of the learning subject, learning proficiency level, academic performance, epistemological belief, interests, problem difficulty, age and gender, were identified as potentially influential factors on the three types of online help-seeking behaviors.

Methodology

Two groups of 203 undergraduate students from University of Georgia participated in this study. One group 162 students were novice learners. The other group 41 students were expert learners. A survey developed by the authors (see Appendix I) was used to measure participants' frequency of different online help-seeking behavior and six of the proposed factors (*age, gender, epistemological belief, interest, prior knowledge of the learning subject, and problem difficulty*). The seventh factor, learning proficiency level, identified which group participants belong to. The eighth factor was academic performance. All students' grades were collected by the end of the semester and standardized to represent their academic performance.

Results

Factor Analysis of Survey on Online Help Seeking

Data from 203 participants were collected, while 4 participants were excluded from analysis due to missing major information. Exploratory factor analysis was conducted on 10 questions in section 3 of the survey measuring the proposed four factors (*interest, prior knowledge of the learning subject, epistemological belief and problem difficulty*) with oblique rotation (varimax). The KMO measure verified the sampling adequacy as .60. Overall reliability α is .61. Four factors with eigenvalues over 1 emerged as proposed, and explained 54.13% of the variance in total.

Most Important Predictors of Online Help Seeking

Ten-fold cross-validation was used to determine the number of most important predictors by comparing the test errors of models with different combination of predictors. In our case, ten-fold cross-validation was applied 1,000 times to avoid the randomness of one result. 63.4 % of all the cross-validation results selected 4-factor models as the ones with lowest test error rate. The selected 4 predictors include learning proficiency level, academic performance, epistemological belief and problem difficulty. The four factors explained 29.9% variance of online searching ($R^2 = .299$, $p < .00$). In contrast, all eight proposed factors explained 31.1% variance of online searching ($R^2 = .311$, $p < .00$).

Table 1. Multiple regression analysis on best subset model of online searching

	R^2	R^2_{adj}	ΔF	β	t
Online searching	.299	.285	20.7		
Academic Performance				0.15***	2.87
Learning proficiency level				0.53***	4.22
Epistemological belief				0.33***	5.87
Problem difficulty				0.20***	3.37

* $p < .05$; ** $p < 0.01$; *** $p < .001$

Discussion

Results of three selected factors provide practical guidance on learning, teaching and instructional design as the following:

Learning proficiency level: Expert learners tended to search online for help more frequently than novice learners. This finding confirms the discrepancy between expert and novice learners in online help seeking skills (see Karlsson et al., 2012), and necessitates deliberate training of such a skill. Moreover, this finding also provides practical guidance for instructional design that the decisions on whether to incorporate online help seeking needs to take learners’ proficiency level into consideration.

Epistemological belief: Students who preferred independent learning tended to search online rather than ask teachers for help, while students who preferred classroom learning tended not to. This finding shows the strong effect of epistemological belief on students’ online searching, and indicates that instructional designs involving online help-seeking should take students’ acceptance of independent learning into consideration for their designs.

Academic performance: Students with better academic achievements tended to seek help more frequently. However, more frequent online searching for help was more likely to reflect better online searching skills among students rather than self-confidence, given that students can remain anonymous in online environments. This finding further necessitates deliberate training for students’ to enhance online searching skills, especially for academically-challenged students.

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Appendix I

Check the survey at <http://goo.gl/X7JchG>
 Check the data analysis R codes at <http://goo.gl/vMyo40>

From “Sit Down and Shut Up” to Big Classrooms, Big Camaraderie

Oscar Solis and Windi Turner, *Virginia Tech*

Abstract: Although large classes are practical for universities, they can be challenging for students and instructors. Students in large classes may feel as if they are merely a number and the instructor has little to no interaction with them. Instructors may perceive that students are not highly motivated, satisfied, or engaged. Despite the growing body of literature on best practices for teaching large classes, there still remains a need to fill the gap of knowledge on the relationship between positive student-instructor interactions and student engagement. The potential benefits draws attention to the need for instructors to go beyond their subject matter and curriculum to possess an additional layer of skill: the ability to establish connectedness with students. In the context of higher education where large classes are more frequent, it is important to consider strategies that will accomplish the same outcomes desired in small classes. This interactive session will show you how to put aside those age-old assumptions of lecture-mode teaching in order to engage, motivate, and challenge students.

Literature Review

One of the most common teaching approaches for large classes is the longstanding lecture format. Though pragmatic for universities, large classroom settings present students with a plethora of opportunities to become disconnected from learning (Smith, 2001). In the literature, researchers have not come to a consensus about how to define the size that constitutes a large class. Large classroom settings may vary from 50 to 500 students, while the number that qualifies a class as “large” depends on the individual instructor’s viewpoint. In a large class, students may very well perceive that they are merely a number and the instructor does not know their names much less whether they are even present. As a result, student attendance in large classes tends to decline throughout the course (Christopher, 2011). Another common perception held by students is that the instructor has little to no interaction with students and simply stands at a podium or in front of the classroom to lecture for the duration of class.

Effective teaching goes beyond having expertise in content and delivery. In order to be effective in the classroom, instructors need to meaningfully engage with students, connecting them with the content and with their peers (Francis, 2012). Instructors enhance student engagement by expressing messages of inclusion, appreciation, and willingness to communicate (Mottet, Martin, & Myers, 2004). The quality of interaction between instructors and students is determined by a number of factors, including the instructor’s compassion, understanding, approachability, helpfulness, responsiveness, and concern, as well as how these traits are perceived by students. Research informs us that students are more likely to be academically successful and to engage with instructors who demonstrate leadership skills and are sociable, supportive, intelligent, and objective (Furnham & Chamorro-Premuzic, 2005). Moreover, an effective engaging instructor has the ability to make a large class feel smaller.

Students learn more they are engaged. When instructors intentionally utilize strategies to create positive student-instructor interactions, students are held accountable for class attendance, which in turn promotes increased student performance. Instructors benefit from positive interactions with students by having (a) attentive and engaged students in their classes; (b) students who feel more comfortable talking to them; and (c) an interactive and engaging course. Likewise, when students have positive interactions with their instructors, they are more likely to give positive feedback about large classes and the university experience, which can in turn increase enrollment in courses. Thus, positive student-instructor interactions not only benefit students, faculty, and the department, but the university as well. When considering student-instructor interactions, Frisby and Martin (2010) recommend that student recruitment, retention, engagement, and involvement are outcomes that should be studied further. Seidman (2005) suggests that student dissatisfaction with the class experience and/or instructor may negatively influence retention.

Goals and Objectives

Participants attending this session can expect to:

- Identify instructional strategies that promote positive student-instructor interactions in large classes;

- Participate in interactive strategies intended to develop positive student-instructor interactions in large classes; and
- Understand how to develop and incorporate strategies for positive student-instructor interactions in their own classes.

Description

Participants attending this session will be introduced to instructional strategies intended to create positive student-instructor interactions in large classes through a series of interactive activities. First, participants will identify instructional strategies that promote positive student-instructor interactions in large classes (Yes, teachers in large classes truly can feel connected to students). Second, participants will engage in role-playing in order to practice—and leave the session equipped with—strategies to develop positive student-instructor interactions in large classes. Participants can return to the classroom prepared to transform their pedagogy from “blah” to “aha!”

Discussion

Often, instructors perceive that students in large classes tend to be unmotivated, unsatisfied, and disengaged. In response to this perception, we suggest that building positive student-instructor interactions can promote student engagement in large classes. In university settings where large classes are more frequent, instructors should consider strategies that will tender the same outcomes desired in small classes: student engagement and effective learning. The effectiveness of positive student-instructor interactions in large classrooms as a tool for meeting the needs of the students and the institution will depend upon using multiple strategies and using them consistently. Simply put, while it is doubtful that students will remember a PowerPoint lecture, they *will* remember the interactions they had with their instructors.

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“Unbundling” Difficult Content with Cognitive Load Theory

Lana L. Becker, East Tennessee State University

Abstract: In most college courses regardless of discipline, certain concepts or skills emerge as being the “most difficult” for students and thus create significant challenges for educators as well as learners. As experts in our disciplines, it is sometimes difficult to understand *why* students struggle with certain content. Cognitive load theory provides a valuable lens through which educators can begin to unravel some of the mystery associated with student difficulties. Cognitive overload is especially threatening to novice learners who are faced with tasks which are inherently complex. Complexity of tasks often occurs due to the presence of underlying elements or sub-skills which must be processed simultaneously. The term “unbundling” is used to describe the important process of identifying these underlying skills which must be individually mastered in order to successfully complete the more complex task. A classroom example will be presented to illustrate how this “unbundling” process was used to develop an instructional tool which addresses the intrinsic load associated with complexity and also makes learning more “visible.” Participants in the session will engage in activities designed to help them practice the “unbundling process” so that they can begin to “unbundle” the difficult content in their own courses.

Literature Review

According to Paas and Ayres (2014), the fundamental objective of cognitive load theory is to “optimize learning of complex tasks by efficiently using the relation between the limited working memory and unlimited long-term memory” (p. 192). Cognitive load theory is especially applicable to novice learners who lack the highly interrelated knowledge structures present in experts known as schemas. According to Sweller, Van Merriënboer, and Paas (1998), the development of schemas is the fundamental purpose of education and creates what is known as “germane” load.

Because working memory is limited, the building of knowledge structures creates cognitive load which must compete with extraneous and intrinsic cognitive load. Although extraneous load (e.g. confusing course materials) is considered to be controllable by the instructor, intrinsic load is driven by the complexity or the degree of interactivity between the underlying sub-skills of a complex task. The simultaneous processing of these interactive elements creates a cognitive burden for the novice learner, leaving little cognitive capacity for the schema construction that makes full understanding possible. An understanding of this phenomenon, described in the literature as the “paradox of learning,” can help educators begin to unravel the mystery of why some content is so difficult for novice learners (Pollock, Chandler, and Sweller, 2002). Research efforts have been devoted to determining instructional strategies that can effectively address cognitive complexity including scaffolding and sequencing techniques such as “simple-to-complex” and “progressive” sequencing (Van Merriënboer, Kirschner, and Kester, 2003; Sweller and Van Merriënboer, 2005).

Objectives

- Raise awareness of the effect of cognitive overload on learning, especially for novice learners who lack schema
- Explain what creates complexity of tasks, how complexity creates cognitive overload, and how cognitive overload impacts learning
- Demonstrate how “difficult” content can be “unbundled” to address complexity and drive instructional design
- Demonstrate the value of making learning “visible” in the classroom
- Engage participants in activities to reveal the complexity of tasks within their own classrooms
- Provide ideas for addressing the intrinsic load often associated with complex course content

Description

The literature related to cognitive load theory will be used to anchor a presentation focused on understanding why novice learners encounter significant difficulties with certain course content. The presenter will emphasize how identification of the sources of complexity through a process referred to as “unbundling” is a critical first step to designing effective instruction for difficult content. An instructional tool designed for a complex skill in an introductory accounting course will be presented as an example.

Discussion

Using small groups, participants will complete an exercise designed to “unbundle” a familiar task into its interrelated and underlying sub-skills. Using “pair and share,” participants will be asked to identify a “particularly challenging” concept or skill they teach in a course and “unbundle” its complexity by identifying the sub-skills that must be mastered and processed simultaneously.

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Practice While You Work: Teaching in a Simulated Environment During Student Practicums

Jacqueline Rodriguez, College of William & Mary

Abstract: The TLE TeachLivE™ Lab (TLE) is a mixed-reality environment with simulated avatar students and adults. The purpose of TeachLivE™ is to provide opportunities for pre- and in-service educators to develop their skills (i.e. classroom management, discipline specific pedagogy, collaboration, and communication skills) through virtual rehearsals in an authentic, safe environment. In this presentation, you will learn how TeachLivE is used in teacher credentialing and higher education practice by engaging with the Avatars in the Lab.

Literature Review

A MetLife national teacher survey on the expectations and experiences of teachers in the United States found that slightly more than one quarter of American teachers felt unprepared to work with students of varying learning abilities (Markow, Moessner, & Horowitz, 2006). Paradoxically, almost 90% of educational leaders in institutes of higher education and school principals believe it is important to train new teachers to work students of varying abilities (Markow, Moessner, & Horowitz, 2006).

With increased accountability standards, teacher educators are required to provide pre and in-service educators increased opportunities to engage and hone their knowledge and skills, (Markow, Moessner, & Horowitz, 2006) and to develop culturally responsive mindsets. These experiences require higher education faculty members observe and provide feedback to pre-service educators based on specific licensure criteria including evidence-based effective practices (Simonsen, Fairbanks, Briesch, Myers, Sugai, 2008).

Performance feedback in the classroom is one of the four components Scheeler, Bruno, Grubb, & Seavey (2009) identify in supporting maintenance of preferred teaching strategies. According to Colvin, Flannery, Sugai, & Monegan (2009) performance feedback given to teachers can inform practice and increase sustainability of effective instructional practices. Colvin et al., (2009) sought to evaluate the extent to which performance feedback impacted class engagement and social behavior in a high school classroom. As in the use of TeachLivE™, classroom observations provided the context for the feedback, drawing from specific examples of teaching practices, student engagement and behavior.

The TeachLivE™ Lab, is an alternative environment that creates authentic teaching experience for teachers (Dieker, Hynes, Hughes, & Smith, 2008; Dieker, Hughes, Rodríguez, Lingnugaris-Kraft, Hynes, & Hughes, 2014). The TeachLivE™ Lab is the result of a unique collaboration between education, computer sciences, and simulation technology. TeachLivE™ was developed to impact educator recruitment, preparation, and retention by creating a mixed-reality classroom for pre-service and in-service educator professional training and development (Dieker, Hynes, Hughes, & Smith, 2008).

Goals and Objectives for the Practice Session

This presentation explores how feedback provided to educators after their virtual rehearsals in the TeachLivE™ Lab, in what is called an after-action-review cycle, supported increased frequency in specific behaviors as well as the implementation of concepts learned during coursework, practiced in the virtual classroom, and generalized into practicum environments.

1. Introduce faculty to the TeachLivE™ Lab as a tool to be used in higher education instruction.
2. Provide faculty an opportunity to engage in the Lab, including mini- virtual rehearsals.
3. Discuss the various environments of the Lab and how to integrate the environments into courses, assignments, seminars, and other formats of instruction and assessment.

Description of the practice to be modeled

Virtually rehearsing with the avatar students in the TeachLivE™ allows educator candidates to focus on the development of specific skills prior to interacting with real students and adults in educational contexts. Participants can interact with students and review previous work, present new content to students, provide scaffolding or guided

practice in a variety of content areas, and monitor students while they work independently or in small groups. In an environment like this, prospective teachers can learn the instruction and management skills needed to become effective teachers, and practicing teachers can hone and refine their skills.

Likewise, with the adult avatar the participant can develop the diplomatic skills needed to adeptly handle the myriad of parent-teacher, specialist coach-teacher or administrator-teacher interactions they will encounter throughout their careers. Through practice in the lab student participants have the chance to build the confidence and knowledge to become our new leaders in education.

Participants will interact in the Mixed Reality Environment, TeachLivE™, during the session to inform how to integrate this technology into their own classrooms

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Using Design Thinking to Approach Problem Solving In Higher Education

Julie K. Marsh, The College of William and Mary

Abstract: Design thinking is a powerful problem solving process that employs intuition (Cross, 1982), abductive reasoning (Martin, 2006), and empathic processes (Lockwood, 2010) in order to cultivate an environment that fosters exploration, innovation, and creative problem solving. This practice session will define design thinking and its process, explore reasons for using design thinking, and use the process to approach problem solving in higher education.

Objectives

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

1. Define and describe design thinking and its process
2. Recognize reasons for using design thinking in their own educational institution
3. Practice using the design thinking process to approach problem solving in their own educational institution

Description

We live in a complex world where we must become problem solvers in order to address ambiguous and emergent problems efficiently and collaboratively in a technology-driven world. Design thinking is a way to provide much-needed tools in order to help us become the best possible problem solvers. Design thinking employs intuition (Cross, 1982), abductive reasoning (Martin, 2006), and empathic processes (Lockwood, 2010) in order to cultivate an environment that fosters exploration, innovation, and creative problem solving.

This presentation will discuss the tenets of design thinking and its process in order to support participants in exploring ways to solve specific problems in their own educational institutions. As we work through the steps of the design thinking process, we will practice the steps by designing an ideal 21st century learning center for each participant's own context. This activity will allow the participants to practice design thinking and allow them to apply design thinking to future problems.

Discussion

Cognitive learning theory supports the idea that learners understand more by doing. Participants of this practice session will engage in the design thinking process by going through the steps of design thinking in order to design their own 21st century learning center for their own educational context. Once participants are able to engage in these steps, they will then have a better understanding of the process as well as have opportunities to extend their thinking to connect to other problems they face at their institutions.

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“Let Me Tell You a Story”: Critical Approaches to Storytelling (and Storylistening) in the College Classroom

Daisy L. Breneman, Susan Ghiaciuc, Peggy Plass and Terry Beitzel, *James Madison University*

Abstract: This presentation collaboratively explores both the benefits and the risks of using storytelling in the college classroom, encouraging participants to utilize rhetorical frameworks to examine the complexities of storytelling and storylistening. By asking important questions about the process of storytelling in the classroom, including questions around authorship, ethos, framing, reciprocity, power and privilege, and responsibility, as well as encouraging the development of tools for self-reflection, the presenters suggest effective approaches to embracing the power and potential of storytelling, in the classroom and beyond.

Literature Review

The use of storytelling in the classroom has a long and diverse story (Delistraty 2014). The pedagogical value of storytelling has been widely explored. Recently, though, critical theory offers tools for examining our relationship to storytelling, and the ways stories can be used to both perpetuate and resist oppression. For example, Disability Studies scholar Eli Clare notes the value of stories in resistance (2009), while critiquing the exclusion of missing voices, including those shut out of higher education by social and other barriers. As other scholars in disability studies note, ableist tropes in scholarly literature deny people with disabilities, including autism, “rhetoricity” and question “the reliability of their narratives” (Yergeau 2013). Similarly, scholars in the social sciences have offered insight into the artificiality, and dishonesty, of the separation of “scholarship” and the telling of autobiographical stories (Altman 2002). An awareness of both the power and dangers of storytelling in the classroom reminds us of the inextricability of storytelling and higher education. In many ways, all learners, in all disciplines, are weaving together a story of what it means to be human.

Goals and Objectives

Throughout the interactive session, participants will be encouraged to:

- Share stories of successful (and problematic) storytelling in the classroom
- Apply critical approaches to storytelling pedagogy, across a wide range of disciplines
- Explore the possibilities for innovative uses of storytelling that honor diversity and inclusivity
- Develop strategies and tools for self-reflection and thoughtful incorporation of storytelling into teaching

Description and Discussion

The presenters will collaboratively explore the value of storytelling in the teaching of social justice and advocacy in various disciplines, while also calling for the use self-reflective and thoughtful approaches to storytelling. In particular, the presenters will reflect on experiences using storytelling in interdisciplinary departments. By telling the stories of our classrooms, and highlighting various applications of storytelling to a range of courses (including first-year composition, general education and upper-level Justice Studies courses, upper-level Writing and Rhetoric courses, and community service-learning courses), we emphasize both the benefits and risks of using storytelling in the college classroom.

Using storytelling in the classroom has positive potential, but also certain pitfalls that can undermine the very things we are working to accomplish. For example, storytelling can help students develop empathy and emotional intelligence, explore social issues and problems, put human faces on otherwise abstract concepts, and learn to listen, tell, and share stories, allowing them to participate in larger academic and civic conversations. Social change can happen through story—as Eli Clare argues, “it is through listening to and collecting stories that we begin to notice oppressive patterns and systems and develop strategies of rebellion and resistance” (2009).

However, just as storytelling can resist, it can also reentrench oppression, which underscores the need for thoughtful approaches. Presenters utilize a rhetorical framework for exploring storytelling in the classroom, including examining audience, purpose, and occasion, issues of authorship and ownership, kairos, ethos, and responsibility. Some of the questions we invite participants to explore include: Whose stories do we include or exclude? Who is authorized to tell stories? Who do we believe? How do we contextualize and frame stories to make them useful for students (and, then, what do we gain or lose in the framing?) Do we as teachers authorize ourselves to talk—to tell

our whole stories? How do all of these questions affect our and our students' perceptions, and how do we arrange the classroom, our communities, the world based on these perceptions?

The presentation also highlights the importance of reciprocity: storytelling is about storylistening. In bringing storytelling to the college classroom, we must help students be good storylisteners: to allow victims of oppression to offer (or refuse to offer) testimony and to bear witness to that testimony. With an awareness of privilege and the power dynamics that enter into both story telling and listening, we invite a critical approach to using storytelling that can in turn give students tools to examine oppression, power, and privilege. With storytelling also rests the dangers of exploitation and the coopting of stories. We must ask, and invite our students to ask, "Whose story is this to tell?", to prioritize self-representation and voice, and to resist the objectification and othering of those individuals whose experiences we aim to illuminate through story. We must consider the choices we make in relation to storytelling, and the consequences of such choices. The act of storytelling requires vulnerability, for teachers and learners alike. Though risky, storytelling offers unique and compelling benefits; as philosopher Megan Craig asserts, "the stories we tell and those we hear bear profoundly upon the texture of our lives." Through vigilant, thoughtful, and reflective approaches, we can embrace the power of storytelling, in the classroom and beyond.

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Teaching ‘Black Music’ as a Diversity Initiative and Pedagogical Intervention

Anthony Kwame Harrison, and Ali Colleen Neff, *Virginia Tech*
Craig E. Arthur, Radford University

Abstract: In his path-breaking book, *Blues People* (1963), Amiri Baraka explained that for a people once denied access to education—specifically, the literacy skills necessary to author their own written history—recorded music (literally, musical records) existed as primary historical texts. The importance of music in articulating and addressing Black experiences in America has been recognized by numerous scholars and cultural commentators. Since the final decades of the twentieth century, Popular Music Studies has developed as a dynamic academic field that incorporates, among other things, questions of identification, social organization, cultural hybridity, and knowledge production. During this same period (roughly the last forty years) both the United States and its institutions of higher education have experienced dramatic demographic shifts. Questions surrounding how to effectively manage racial/ethnic diversity—indeed, how to make a virtue of it—have been among the most pressing issues facing academic institutions in their mission to develop competent and cognizant twenty-first-century citizens. In this practice session, we discuss how to use one slice of Popular Music Studies scholarship—that which focuses on the social/commercial construct called “Black Music”—to develop curricula and pedagogical practices that address issues of race, diversity, and inequality. This includes articulating ways in which modes of Black music production, performance, and reception can work to broaden the frameworks through which we teach students to succeed academically and measure academic success. Finally, we reflect on how a Black music based curriculum aligns with inclusion and diversity priorities of colleges and universities, both inside and outside the classroom.

Literature Review

As an emerging academic field, Popular Music Studies has created engaging avenues for students to grasp complex sociological phenomena including, but not limited to, identification (Frith, 1996), social organization (Hebdige, 1979), and cultural production (Peterson & Anand, 2004). The preeminence of ‘Black music’—preliminarily defined as including music traditions that are strongly associated with African-diasporic communities—in both the history and current state of American popular music (Ramsey, 2003) renders everyday popular music discourse one of the few social arenas where people consistently grapple with issues surrounding race. Thus far, the (sub)field of Hip-Hop Studies has outpaced the rest of Popular Music Studies in foregrounding innovative pedagogical practices (see, for example, Ibrahim, 2004; Neff, 2010; Petchauer, 2012a). Broadening the focus to include all musical traditions falling under the category ‘Black’ allows educators and their students to jointly pursue important ontological questions (to paraphrase Stuart Hall [1993], what is this ‘Black’ in Black music?). These include interrogating the historical processes through which music styles were linked to racialized bodies (Miller, 2010), examining the intersection of raced and gendered subjectivities (hooks, 2004; Gaunt, 2006), as well as exploring debates surrounding cultural appropriation (Ziff & Rao, 1997). Building on Hip-Hop Studies’ educational scholarship, a Black music oriented curriculum offers innovative formulations of compositional practices (Rice, 2003), standards of citation (Craig, 2013), and presentation (Petchauer, 2012b), thus fostering alternative models for academic success. Critical pedagogical studies have shown how forms of *everyday racism* (Essed, 1991) persist in many existing curriculum and pedagogical practices (Leonardo, 2005). We consider how a Black Music focused curriculum might meaningfully and effectively align with diversity initiatives on college and university campuses.

Goals and Objectives

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

- Understand how to use ontological discussions of Black music as entry points to examine the social construction of race, racial identification, cultural processes, and social inequality.
- Articulate ways in which modes of Black music production, performance, and reception broaden frameworks through which we teach students to be successful and measure academic success.

- Consider the multiple ways in which a Black music curriculum might align with the inclusion and diversity priorities of colleges and universities.

Description of Practice

Through interactive discussion, we will demonstrate how a series of questions surrounding the ontological nature of ‘Black Music’—for example, how do we define ‘black music’ and who can rightfully claim it?—becomes a basis for teaching about the constructed nature of race, the fluidity of culture, and how power operated to produce inequalities and secure privilege. Following the achievements of Hip-Hop Studies, we will outline how structures of composition, performance, and reception that have traditionally been associated with Black music can serve as a basis for re-envisioning academic practices of researching, writing, and presenting. Finally, we will reflect on how foregrounding Black musical traditions and practices in our teaching and learning disrupts the status quo of the classroom and how this potentially aligns with inclusion and diversity initiatives.

Discussion

Within the changing landscape of higher education, Popular Music Studies offers models for reimagining the ways that curricular and extracurricular education might align with the inclusive priorities of campus diversity offices. As educators whose work spans arenas of African-diasporic musics, we showcase how foregrounding ‘Black music’ as a conceptual pathway for curricular development can achieve some of these goals. Introducing Black music into both college classrooms and campus spaces beyond the classroom demonstrates a commitment to diversity—particularly, creating inclusive spaces for Black identifying students and Black cultural priorities—on campus.

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Conversation: Learning That Matters

Dawn Rauscher, Flathead Valley Community College
Gretchen Thomas, The University of Georgia

Abstract: Participants in this session will engage in small group discussions to develop a list of teaching strategies that support learning that matters. These classroom techniques will be appropriate for face-to-face and online courses and will include, but are not limited to, technology-based solutions. Participants will leave this session with a toolbox of strategies to make learning matter for their students.

Literature Review

Significant learning, authentic learning, and meaningful learning are all similar ways to label learning experiences that matter to students. In order for learning to matter, students must be “willfully engaged in a meaningful task” (Howland & Jonassen, 2012). Higher education faculty must create these learning experiences so that they “make a difference in how people live - and the kind of life they are capable of living” (Fink, 2003). Effective faculty provide learners with “intriguing, beautiful, or important problems, authentic tasks will challenge them to grapple with ideas, rethink their assumptions, and examine their mental models of reality” (Bain, 2004). There are many tools available to faculty and students to support learning that matters but it can be difficult to identify the most appropriate tools and to determine ways to use them with learners (NMC Horizon Report, 2015).

Goals and objectives for the conversation session

The goal of the presentation is to engage participants in small group discussions to develop a list of teaching strategies that support learning that matters. Objectives include identifying appropriate tools and strategies for engaged learning, determining what techniques should be considered at different times in the semester, and examining the group dynamics of a classroom community.

Description of topic to be discussed

In this session we will discuss strategies to support learning that matters. We will use Tuckman’s stages of group development as an organizing theme (Tuckman, 1965). Within the Forming, Storming, Norming, and Performing categories, the facilitators will share active learning strategies to use across a semester-long online or face-to-face course. Using examples from their own classrooms of technology-supported learning, service learning, innovative internships, experiential learning, problem-based learning, and group sharing techniques - the facilitators will develop a collaborative document to be co-created by and shared with session participants.

Facilitation techniques

This session will begin with a brief introduction including the facilitators’ background, courses taught, and experience with creating environments where learning matters. Based on Tuckman’s stages of group development (Forming, Storming, Norming, Performing), we will provide examples of how the dynamics of a classroom community can support student engagement and meaningful learning. Examples from our own classrooms will be shared to begin the conversation among the participants.

Participants will self-select small groups based on interest and expertise. Using the examples provided by the facilitators and a set of discussion questions (see below), each small group will share their own examples for supporting learning that matters in their classrooms. Finally, small groups will share their ideas with the larger group. Strategies will be collected in a collaborative document that will be available to participants after the session. We hope that participants will continue to add to this document once they return to their home institutions.

Sample small group discussion questions:

Forming:

How do you make course goals clear to your students?

What modifications have you made to your syllabus design to make learning matter?

Storming:

What strategies do you use to build community at the beginning of a semester?

How do you build a safe classroom environment for students?

Norming:

What techniques do you use to increase communication and collaboration between students?

How do you encourage open communication?

Performing:

What strategies do you use to introduce problem-solving activities?

What mechanisms do you have in place for students to present their work?

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Conversation: How Can We Teach Creative-Thinking Skills That are Maintained?

Edward R. Whitson, *Roanoke College*

Abstract: Educators, business executives, governments of many nations, faculty researchers, and students are increasingly clear about the need for and value of the critical skills and techniques of creative thinking and problem solving and of the importance of teaching those skills and techniques. The current conversation session briefly examines literature that emphasizes this importance and then focuses on pedagogical issues in teaching creative thinking and problem solving. Desirable intended learning outcomes, successful pedagogical techniques and strategies, course syllabi, and research showing some good results as well as some questionable results, will be shared and discussed. Ideas for continuing the conversation and sharing conclude the session.

Literature Review

The importance of creative thinking is recognized widely. With respect to the business world, Nikravan (2012) described the IBM Global CEO Study of 2010, “which surveyed more than 1,500 chief executive officers from 60 countries and 33 industries worldwide,” and which “concluded that creativity is now the most important leadership quality for success in business, outweighing competencies such as integrity and global thinking.” Florida (2005) has argued that “(f)or an economy to grow and prosper, all types of organizations – individuals, firms, cities, states, and even nations – must nurture, harness, mobilize, and invest in creativity across the board” (pp. 32-33); and the “great challenge of our time will be to spark and stoke the creative furnace inside every human being” (pp. 34-35). Chavez-Eakle (2010) states that “(u)nderstanding, identifying, and nurturing the creative potential is relevant in education if we want students able to solve academic and personal problems and challenges, to find innovative solutions and alternatives, and to have better tools and resources for success in a fast-changing world...If our goal is to teach and nurture future scientists, artists, engineers, entrepreneurs we need to understand and nurture the creative potential because creativity has provided the foundation for art, science, philosophy, and technology. If we want to teach children to become productive human beings, and more satisfied with what they do with their lives we need to support them in the process of discovering and enjoying their creative potential.” Kegley and Robbins (2009) noted that a “2006 issue of *PeerReview*, a publication of the Association of American Colleges and Universities, is entitled *The Creativity Imperative* and offers a collection of papers acknowledging the importance of creativity in building a competitive workforce and calling for universities to play a more active role in teaching creativity to students.” McWilliams and Dawson have observed that there “is now a platform of research and scholarship that is making it possible to foster small ‘c’ creativity through sustainable and replicable pedagogical practice,” and a “recent report issued by the European University Association has responded by directing the entire higher education sector to consider creativity as central to research and teaching” (p. 634). Livingston (2010) argues that it is incumbent upon institutions of higher education to include creativity in their mission statements, and creativity needs to be reinforced; “if the academy wishes to center its mission on honing creativity, it can best do so by pedagogies that maximize opportunities for students to practice being inventive ... creativity is also a technique, a skill that can be developed and refined over time” (p. 60). Cromwell (1994) argues that “creative visioning” is so important that it should be incorporated into learning at all educational levels. Having created an environment in his college classes that would support and nurture creative visioning, he cites as evidence that this approach has value his student evaluations, the student products, and student feedback years later about the students’ continuing involvement with creative process. Thus, for Cromwell, “creativity may be seen as one of the most needed skills for humankind... it may well be the most critical skill” (p. 217).

Goals and Objectives

Given the context concerning the importance of teaching creative thinking skills, goals and objectives for this discussion section include the following: (a) Participants will have been actively involved in identifying some intended learning outcomes for a college-level course or program on creative thinking and problem solving; (b) Participants will have learned about and shared some current pedagogical efforts and approaches for the teaching of creative thinking and problem solving at the college level; (c) Participants will have shared any pedagogical techniques or approaches to teaching creative thinking skills that have worked well for them; (d) Participants will have learned specifically about the pedagogical efforts and syllabus of the presenter, as well as some of his research that suggests that creative thinking skills are indeed learned and demonstrated from taking a creative thinking course

but not necessarily maintained several months later; (e) Participants will have discussed their interest in forming an informal collaborating group that would focus on further exploring and sharing in the area of promoting the effective teaching and long-term learning of creative thinking skills and problem-solving approaches that can be used in learners' other classes, work environments, and in everyday life situations.

Description of Topic to be Discussed

The topic to be discussed is the importance of creative thinking and problem solving and effective pedagogy in this area; it is intended for individuals who have been or are interested in developing and implementing appropriate curricula and pedagogical techniques for the teaching/learning of creative thinking and creative problem-solving at the college level, as well as for those who simply would like to learn about a few techniques that might be incorporated in other courses. The main focus will be on pedagogy: identification of appropriate intended learning outcomes, sharing of techniques or strategies that participants may have used with some success; sharing of course syllabi for teaching creative thinking skills; presentation of some research that raises questions about the long-term perceived effectiveness of a single skills course (Whitson, 2010); and discussion of ideas for continuing the conversation on the pedagogy of creative thinking.

Facilitation Techniques

The presenter will start the discussion session with a short description of the literature review on the importance of teaching creative thinking and creative problem solving skills. The presenter will then facilitate group involvement by asking participants individually or in small groups to develop what they consider to be desirable and appropriate goals and more specific intended learning outcomes for a college-level course or program on creative thinking; these will be rated as to priority of importance in the session, and the presenter will collate these goals and outcomes and subsequently e-mail them to session participants. The presenter will invite participants who employ creative thinking techniques or exercises to share those that are considered most effective with the group, and, in particular to identify techniques or strategies that can easily be used by students in other courses. The presenter will share his syllabus for teaching creative thinking and problem solving and share his research that suggests that skills that can be demonstrated during and immediately after a course are not necessarily maintained a semester later; the group will then discuss ways to help reinforce and maintain learned skills. Finally, the presenter will solicit interest among participants in forming an informal collaborating group that would be interested in and committed to further exploring and sharing in the area of the effective pedagogy for creative thinking and problem solving.

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Teaching Entrepreneurialism Through Interprofessional Collaboration

Liat Gafni-Lachter, Izabela Szymanska, *Saginaw Valley State University*

Abstract: Entrepreneurship and interprofessional competencies are necessary to meet our clients changing needs and to enhance our leadership in healthcare. This presentation describes the outcomes of a learning activity to prepare occupational therapy (OT) students for entrepreneurialism through interprofessional collaboration.

Literature Review

Entrepreneurship is a way to seize opportunities that exist for occupational therapy in healthcare (Anderson & Nelson, 2011; Herz, Bondoc, Richmond, Richman, & Kroll, 2005). Developing new health services that are financially sustainable often requires collaboration between healthcare practitioners and business professionals. However, little is known about how to best prepare healthcare professionals to work with non-healthcare professionals.

The purpose of this study was to determine the effectiveness of a learning activity for students in a Master of Science in Occupational Therapy (MSOT) and in a Management undergraduate program (MGT) in terms of (1) mastery and application of entrepreneurship concepts and (2) enhancement of interprofessional education and collaboration (IPEC) competencies (teamwork, communication, identifying roles and responsibilities, and identifying professional values

Methodology

Following IRB approval, 61 MSOT students and 40 MGT students were assigned to small interprofessional groups for an 8-week learning activity focused on the development of a business plan for a new healthcare service, to meet an unmet community need.

Students' comprehension of entrepreneurial concepts and their attitudes towards IPEC competencies were evaluated using a mixed methods quasi-experimental design. Pre- and post-testing was conducted using a researcher-developed Entrepreneurship Concept Learning (ECL) assessment and the Readiness for Interprofessional Learning Scale (RIPLS; Parsell & Bligh, 1999). Additionally, at the end of the activity, participants completed a researcher-developed IPEC Competencies survey based in core competencies identified by IPEC Expert Panel (IPECEP, 2011), and reflective debriefing papers. Internal validity for all quantitative assessments was satisfactory ($\alpha < 8.35 - 9.92$). RIPLS, IPEC survey, and ECL were analyzed using non-parametric paired t-tests to identify pre-post changes. Debriefing papers were coded and ranked for themes.

Results

Findings included significant positive changes pre-post intervention on ECL ($P < 0.001$), but not on RIPLS. 80% of IPEC Competencies survey responders reported that the activity was "helpful" or "very helpful" to promote their IPEC skills. No significant differences were found between the MSOT and MGT students. Themes from debriefing papers included enhanced learning, benefit from collaboration, and respect for knowledge of others.

Conclusion

In conclusion, carefully designed learning activities for MSOT and MGT students can promote development of entrepreneurial and interprofessional competencies. These capacities are essential for realizing occupational therapy's centennial vision of being a "powerful" and "widely recognized" profession (AOTA, 2007). During the presentation specific guidelines for developing, implementing, and assessing such activities will be shared.

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Thursday

February 11, 2016

Session 8

11:20-12:10 PM

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

Instructor versus Peer Feedback: Improving Photovoice Captions

Kelley E. C. Massengale, Public Health Education, The University of North Carolina at Greensboro
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Abstract: Feedback, an essential element of education, improves student performance by allowing the student to make adjustments to his or her work. In general, students prefer receiving feedback from college instructors rather than their peers. During a photovoice assignment, undergraduate students took photographs in the community of influences on sexual health decision making. Then, students used a mnemonic device to write captions to better describe the context of the photographs and challenge the photograph viewer to consider how he or she could address the concerns documented. To prepare students for displaying their photographs and captions at an exhibit open to the community, students received either instructor or peer feedback on written drafts of their captions. While peer feedback and participatory analysis are vital components of photovoice methodology, students in our study were more accustomed to receiving instructor feedback and for the photovoice assignment, did make more substantial changes to their captions upon receiving instructor feedback.

Literature Review

Feedback, an essential element of education, improves student performance by allowing the student to make adjustments to his or her work. Undergraduate students typically describe a strong preference for instructor feedback as they hold notions that instructors are context experts and control grades (Zacharias, 2007). While qualitative evidence has shown peer feedback is more effective than no feedback at all (van den Berg, Admiraal, & Pilot, 2006), little research has compared the effects of feedback provided by an instructor to feedback provided by a peer.

Since its introduction in the 1990's to the field of health education (Wang & Burris, 1994), photovoice methodology has guided many community groups to photograph elements in their communities representing issues of community concern, then engage in group discussion about the images, write captions describing the photographs, then to present a selection of the photographs to community members as an effort to advocate for positive changes. Photovoice has pedagogical uses for both undergraduate classroom (Cook & Quigley, 2013) and online learning (Janzen, Perry, & Edwards, 2011) environments. Photovoice caption writing is often guided by participatory analysis (Wang & Burris, 1997) and use of a mnemonic device, SHOWED (Hergenrather, Rhodes, Cowan, Bardhoshi, & Pula, 2009). The SHOWED mnemonic encouraged students to describe what was SEEN in the photo, what was really HAPPENING, how the issue related to OUR lives, WHY the concern or strength was present, how the viewer could be EMPOWERED through a new understanding of the issue, and what the viewer could DO to address the concern or strength.

Little research exists that evaluates the use of feedback to improve the captions written to represent photographs at a photovoice exhibit. While photovoice methodology is built on the importance of community participation and discourse, academic literature as cited above describes students' general preferences for instructor feedback on their work. This study uniquely compares the use of instructor feedback to peer feedback to assist undergraduate students in improving their photovoice captions prior to a community exhibit of their photographs. The implications have value not only for future photovoice projects with undergraduate students, but for providing students feedback on other course assignments.

Methodology

Undergraduate students enrolled in two sections of a Human Sexuality course participated in a photovoice assignment. After taking photographs in the community of influences on sexual health decision making, students used a mnemonic device to write captions to better describe the context of the photographs and challenge the photograph viewer to consider how he or she could address the concerns documented. To prepare students for displaying their photographs and captions at an exhibit open to the community, students received feedback on written drafts of their captions. One class section received feedback from the Instructor while students in the other section provided feedback to their peers. At the conclusion of the project, students in both sections ($n=64$)

completed a survey about their prior experiences and preferences for receiving feedback on their work. Students also described how they may have used the feedback received during the photovoice assignment to improve specific aspects of their captions. Two researchers blinded to the type of feedback received independently analyzed students' final captions to make comparisons between type of feedback and caption quality.

Results

In general, students reported receiving feedback on assignments from college course instructors “*about half of the time*” or more often (72%). Peer feedback on assignments was received far less often as most students indicated they received peer feedback “*never*” or “*seldom*” (78%). Students very strongly preferred instructor feedback to peer feedback (92%; 8% indicated “*no preference*”). Further, students valued instructor feedback more than peer feedback with more students agreeing or strongly agreeing that instructor feedback was important to them (97%; 48% felt peer feedback was important). However, students previously applied both types of feedback to improve past course assignments (83% used instructor feedback and 47% used peer feedback “*about half the time or more frequently*”). Specific to the photovoice project, students who received instructor feedback were more likely to add more information to their captions and to use additional resources to research the context of the concerns documented in their photographs (see Table 1).

Table 1. Changes made to Photovoice Captions by Type of Feedback Received

	Instructor Feedback	Peer Feedback
Feedback received was “Important” or “Very Important”	82%	60%
Used feedback to improve overall work on photovoice project	88%	83%
Used feedback to make grammatical changes to photovoice captions	33%	38%
Used feedback to add more information to photovoice captions	79%	60%
Used feedback to use additional resources to do research about captions	49%	17%

Discussion

Our findings support the literature documenting students' preference for instructor feedback over peer feedback. However, peer feedback and participatory analysis are vital components of photovoice methodology. Students in our study were more accustomed to receiving instructor feedback and for this assignment, made more substantial changes to their photovoice captions upon receiving instructor feedback. Additional research is needed to cultivate techniques for students to provide feedback to their peers during photovoice assignments that will encourage them to not only improve their written captions but also to further research the context of their concerns in the community prior to exhibiting their work for community members.

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Teaching Metacognitive Skills: Helping Students Take Ownership of Learning

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Abstract: Research has shown the importance of metacognitive skills to positive learning outcomes. Yet, students struggle to engage in appropriate metacognitive strategies and faculty struggle to teach metacognitive skills. In this practice session, participants will engage in a classroom intervention designed to facilitate teaching metacognitive skills in higher education. Importantly, the intervention is designed to fit within existing classes. The intervention consists of a series of modules. Each module contains a short video, in-class activities, and extensions for existing homework assignments for becoming more aware of their thinking and practicing metacognitive skills. The session will also include interactive conversation about how participants can adapt the strategy for use in different courses and learning contexts.

Literature Review

Metacognition is critically important to student learning and there is a particular need to teach college students metacognitive skills. Metacognition is defined as the knowledge and regulation of one's own thinking (cognitive) processes (Flavell, 1979). Drawing on current literature, our conceptual framework for metacognition (shown in Figure 1) includes the two main elements of *knowledge of cognition* and *regulation of cognition*. Knowledge of cognition includes knowledge of persons, tasks and strategies. Regulation of cognition includes activities such as planning, monitoring, controlling and evaluating learning. Notably, knowledge and regulation of cognition are interactive. As one regulates their cognition, *i.e.*, their thinking and learning, they draw on their present knowledge of cognition. Further, one's knowledge of cognition is built and refined through experiences of regulating one's thinking and learning.

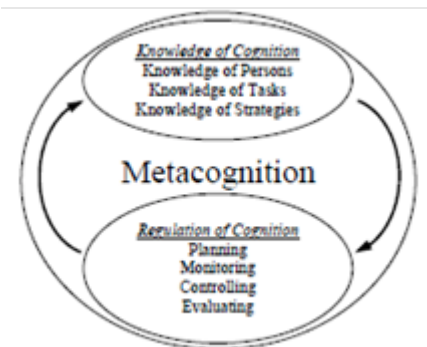


Figure 1. Metacognition Conceptual Framework (Cunningham et al, 2015)

Metacognition plays a significant role in student learning such as understanding and planning to complete an assignment or preparing for a specific type of exam. Metacognitive development is beneficial to all learners and ultimately enables students to know and take responsibility for their thinking and learning (Pintrich, 2002, Ambrose, Bridges, DiPetro, Lovett, Normal, 2010), that is, it enables them to take ownership of their own learning. Importantly, training and practice in metacognition not only can improve student's immediate learning, but also leads to long term benefits in self-directed, self-regulated, or lifelong learning (Ambrose et al 2010).

Goals and Objectives for the Practice Session

The primary goal of this practice session is to engage participants in an intervention designed for the teaching and learning of metacognitive skills. The session will focus on how to deploy and adapt the intervention but also why instructors might want to use this approach. At the completion of the session, participants will be able to: 1) define and describe key elements of metacognitive learning, 2) articulate reasons to teach students how to be metacognitive, 3) describe one possible approach for teaching metacognition, and 4) identify how and why this approach would need to be modified for the participant's own teaching context. We will accomplish these goals by opening the session with a brief discussion of the benefits and challenges of metacognitive teaching and learning. We will then directly engage participants in the first module of the intervention: a video, "in-class" activity, and a "homework" activity. We will share effectiveness data from our NSF-funded research project and explain our reasoning for designing the intervention the way we did. We will close with an interactive discussion of contextual factors so participants leave with a clear plan for how they might adapt our approach for their context.

Description of the Practice

Becoming more effective and efficient learner requires accurate awareness of how one processes information, what type of thinking specific learning tasks require, and multiple strategies for different learning tasks (Svinicki 2004, Weinstein, Acee, & Jung 2011). Further, successful learners consciously draw on and actively implement this knowledge during learning experiences. Developing these metacognitive skills and becoming an efficient and effective learner is not innate, but it does develop with focused attention, effort, and practice. This is most effective within specific learning contexts, that is, within classes as students are engaging with particular content (Kaplan, Silver, LaVaque-Manty, & Meizlish 2013). Therefore, we have designed this metacognitive intervention to fit within an existing course or learning context.

Our intervention consists of a three interconnected elements implemented in series across an academic term. The elements include: 1) a short video (no more than five minutes long), designed to introduce an aspect of metacognition with a preliminary argument for its utility; 2) a short activity to be conducted in class, designed to help students translate theory to action for the specific course or learning context; and 3) a short homework assignment, designed to help students become more aware of their thinking and practice the metacognitive element in conjunction with an existing homework assignment. The elements are paired together within each of six modules to spur metacognitive development throughout an academic term. The videos are generic, that is, they are not specific to a particular course or learning context, and are aimed at students. They use analogies and personal stories to relate the concepts and the utility of metacognition for learning. Because the in-class modules and assignment extensions are particular to the course or learning context, they need to be modified for application in other contexts, and we will be providing guidance and support for doing so. We intentionally designed the interventions to be short as this was extremely important for our context; engineering instructors tend to resist teaching “non-technical” content and the engineering curriculum is already perceived to be overloaded (Shuman, Besterfield-Sacre and McGourty, (2005).

Discussion

Consistent with current literature, preliminary findings from our study show that teaching students about metacognition will have positive impacts. In collecting the baseline data we used to design our intervention, we conducted interviews at the start and end of an academic term. At the start of the term we asked students how they planned to approach learning in the up-coming quarter. At the end of the term, we asked students how well they executed their plan and if it worked. We also showed interview participants a preliminary version of the first video. After seeing the video, students expressed enthusiasm for learning how they could better approach learning. They suggested moving the metacognition interventions earlier in the curriculum. At the end of the semester, one student remarked that she changed the way she thought about learning simply from having participated in the interview at the beginning of the quarter where she was introduced to metacognition and the potential benefits.

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The Shape Activity: Experiencing (and Learning about) Social Constructivism in the Classroom

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Abstract: Teaching the foundational ideas of social constructivism, and how they lead to and inform constructivist practice in education and other helping professions, can be challenging, both because these ideas are complex and because few people have much experience with constructivist-based learning in their own previous educations. This session shares a fun, shape-based activity useful at all levels from undergraduate to doctoral classes that offers students the opportunity to both experience and reflect on the social construction of knowledge in small groups, in light of some basic principles of social constructivism drawn from scholars like Vygotsky, Rogoff, and Lave and Wenger. Session participants will actually complete the activity themselves in small groups, reflect as a whole on their own experiences in so doing, and leave with full instructions for using/modifying the activity in their own classes.

Literature Review

I've been teaching educational psychology to pre-service and in-service teachers and other educators since 1993 from a social constructivist stance (Lave & Wenger, 1991; Rogoff, 1990; Vygotsky, 1978). However, as others have found before me (e.g., Frid, 2000; Schreiber & Valle, 2013), the foundational ideas of social constructivism are particularly difficult for many students to grasp, in part due to their not having experienced much constructivist-based learning during their own prior educational experiences (Haney & McArthur, 2002; Holt-Reynolds, 1994). Not surprisingly, at least to social constructivists, I find that simply explaining basic constructivist ideas to my students, however clearly and carefully, with both conviction and practical examples, is ineffective. They dutifully write in their ever-present notebooks everything I write on the board or put up in overheads, and some even memorize the "seven principles" I give them, but because they have not had the chance to wrestle with these ideas, to talk about them and use them--in short, to construct them for themselves--they never make them their own.

The activity I will share in this session is designed to give students the opportunity to do exactly this: to experience social construction in a small group of peers using simple materials and assigned "contexts," and to reflect in groups and as a whole on how and why they constructed as they did. Because the activity is multi-level by design and reflection is guided by the instructor, this activity can be used in a wide variety of classes, from psychology to education to social work to philosophy, and at all levels (I have used it effectively with undergraduate through doctoral students) - any class that requires or includes an initial introduction to the ideas of social constructivism.

Goals and Objectives for the Session

- 1) Participants will learn a classroom activity to use in teaching foundational tenets of social constructivist theory by doing the activity themselves in small groups (people always enjoy this!), and then sharing and reflecting upon their own constructions and experiences as a whole group
- 2) Student responses from 18 undergraduate classes to an evaluation survey of this activity will be presented so that participants may judge the potential effectiveness of this activity for themselves.
- 3) Participants will leave with a template for constructing the shapes used in the activity and a summary of likely student responses and potential elements to bring out in discussion, so they will have everything they need to use or modify the activity as they wish in their own classrooms.

Description of the Practice to be Modeled

Students (participants) are divided into six small groups. Each group is handed an envelope containing the nine shapes cut out of tag board in three different colors, specifically designed to produce discussion around multiple possible solutions to the task that will be posed to each group. Each envelope has one of the three following sets of instructions on the outside:

- Set 1: You are in *geometry* class. You have been asked to sort the enclosed shapes in to three appropriate groups.
- Set 2: You are in a *PE* class. Please figure out a way to use the enclosed shapes to fairly sort students into 3 teams and select a captain for each team.
- Set 3: You are in an *art* class, and have been asked to use the enclosed shapes to construct a balanced collage.

Groups are encouraged to take at least 15 minutes to do these tasks, to investigate alternatives and come up with a solution that they all feel is a "good" solution to the task. After each group finishes, they are given the following questions to discuss, and to be prepared to share their group's solution and responses with the rest of the class.

1. Explain how your group decided to organize/use the pieces you were given.
2. What characteristics were most salient or important in your decisions on how to place/use each piece? Why were these characteristics most important?
3. Did everyone agree right away about how to organize/use the pieces?
 - a) If not, what alternatives were suggested? How did you come to agree on your final plan? Did different group members take different roles in this process?
 - b) If so, can you think of any other reasonable way(s) to organize/use these pieces?

Results/Discussion

In many classrooms, the two geometry groups come up with the same solution--they put the three triangles together, the two circles together, and the squares and rectangles (quadrilaterals) together--this solution is especially likely in groups that contain math majors or aficionados. Quite often, however, one geometry will sort by color instead of shape, because color gave them three equal groups (though that is not mentioned in this instructions)--this allows us to discuss how people often "read into" texts from their experiences. The PE groups usually come up with one of two solutions. Either they decide to sort students randomly onto teams by color, by having students draw out of a hat, or they consider the shapes as representations of the students themselves, and thus carefully sort the shapes into "fair" teams, with relatively equal numbers of big and little shapes (often seen as representing student size or athletic prowess) and/or of different colored shapes (again often seen as symbolizing athletic ability or even ethnicity). Heated debates often emerge, both within and between groups, between advocates of the "random" sorting method and the carefully-balanced-for-fairness method about what is "really fair," showing that there is no one "right" way to do things "fairly." However, every group always puts three students on a team, which helps to show that, while there is no single "fair" way to sort the teams, there are still some ways we could all agree are "unfair" (e.g., teams of 1, 1, and 7). The two art groups never come up with the same collage, amid massive discussions about what is a "real collage" and what is "balanced," mostly based in their own experiences in art classes in elementary school, unless there is an art major in the group, to whom they will often then defer. Such outcomes allow for the discussion of how differing areas of knowledge are more (geometry) or less (art) convergent, and how positioning and authority affects group processes and constructions.

After doing this activity, students from 18 different undergraduate classes completed an anonymous survey asking them to rate, on a 1-5 Likert scale (from "very helpful," to "confusing") how much this activity had helped them understand each of seven foundational social constructivist ideas. Overall means ranged from 2.51 to 1.76, indicating that students on average found the activity "quite helpful" in understanding this difficult theoretical stance. The origins of each principle, additional elements of typical small group responses, and averages for each class will be presented and discussed in more detail in the Handout that will accompany this session.

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How to Diagnose and Improve Low Student Motivation in Your Courses

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Abstract: It can be fairly easy to identify when students are unmotivated in a course. For example, students may be unresponsive or looking at their phones or laptops. It can be harder, however, to know exactly *why* students are unmotivated. In fact, different students may be unmotivated for different reasons. The MUSICSM Model of Academic Motivation Inventory (Jones, 2015) was designed to help instructors identify groups of strategies that can be used to improve students' motivation. In this conference session, I lead an interactive activity designed to help participants understand how they can use the MUSIC Inventory to diagnose and improve students' motivation. Because the inventory is linked directly to teaching strategies, participants will begin to consider teaching strategies that they can use in their courses. Participants will leave this session with an understanding of what the MUSIC Inventory is and how to use it in their courses, with the ultimate goal of being able to intentionally design instruction that motivates students.

Literature Review

The MUSICSM Model of Motivation was developed to help instructors design courses that engage students in learning (Jones, 2009). 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: *eM*powerment, *U*sefulness, *S*uccess, *I*nterest, and *C*aring (MUSIC is an acronym that is used to help instructors remember these five components). The five key principles of the model are that the instructor needs to ensure that students:

1. feel *empowered* by having the ability to make decisions about some aspects of their learning,
2. understand why what they are learning is *useful* for their short- or long-term goals,
3. believe that they can *succeed* if they put forth the effort required,
4. are *interested* in the content and instructional activities, and
5. believe that the instructor and others in the learning environment *care* about their learning and about them as a person (Jones, 2009).

The MUSIC model components are explained briefly in this section and more fully in Jones (2009) and at the MUSIC model website (www.theMUSICmodel.com).

The *empowerment* component refers to the amount of perceived control that students have over their learning. Instructors can empower students by supporting their autonomy. The *usefulness* component involves the extent to which students believe that the coursework (e.g., assignments, activities, readings) is useful for their short- or long-term goals. One implication is that instructors need to ensure that students understand the connection between the coursework and their goals. The success component is based on the idea that students need to believe that they can succeed if they put forth the appropriate effort. Instructors can foster students' success beliefs in a variety of ways, including making the course expectations clear, challenging students at an appropriate level, and providing students with regular feedback. The interest component includes *situational interest*, which refers to the immediate, short-term enjoyment of instructional activities. Instructors can create situational interest by designing instruction and coursework that incorporates novelty, social interaction, games, humor, surprising information, and/or that engenders emotions (Bergin, 1999). The caring component includes the degree to which students feel that the instructors or other students care about their academic success and well-being. To support caring, instructors can show concern for students' success and failures, listen to and value students' opinions and ideas, and devote time and energy to helping students (Jones, 2009).

The MUSICSM Model of Academic Motivation Inventory (Jones, 2015) was designed to help instructors identify specific strategies that can be used to improve students' motivation. The MUSIC Inventory measures students' perceptions of each of the five MUSIC model components. The MUSIC inventory has been shown to produce valid scores across many different types of college courses (Jones & Skaggs, in press).

Goals and Objectives

By the end of the session, participants will:

- understand what the MUSIC Inventory is and how to use it in their courses and
- have identified some teaching strategies that they can use to motivate their students.

Description of Practice

The session will be organized in the following order:

- *25 minutes* – Participants will engage in an interactive activity to learn what the MUSIC Inventory is and how to use it in their courses.
- *20 minutes* – I will lead a discussion about the key components of the MUSIC model and the related strategies that can be used to motivate students.
- *5 minutes* – I will answer final questions from participants.

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Using Simulations, Exercises and Experiments to Teach Millennial Students Applied Economics

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Abstract: Successfully using simulations, exercises and experiments to teach undergraduate applied economics to millennial students requires a bit of 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 creates a competition for learning, establishes a teachable moment and an objective or expected learning outcome for each simulation, exercise, or experiment, 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 activities include auction (restaurant menu) or trading (lemons) decisions, market demand and demand elasticities (snacks), efficient allocations (bus routes), diminishing marginal returns (tennis balls), or quality control evaluations (quality airplanes). Attendees participate in two – three of the aforementioned activities. Handouts of thirty activities will be available.

Literature Review

“If you bet on a horse, that’s gambling. If you bet you can make three spades in poker, that’s entertainment. If you bet cotton will go up three points, that’s business. See the difference?” is a quote attributed to William F. Sherrod on the topic of succeeding in a competitive world, which today encompasses the college classroom as well as the global economy.

The use of games, simulations, exercises and experiments in classroom instruction is not a new concept or learning pedagogy (Heineke and Meile, 1995). There is, however, a newfound reason for including these activities in the teaching environment – the current millennial students respond more favorably to active, competitive, and social instruction of applied economics, rather than the standard lectures. Economics is a social science with a theoretic foundation, and has not been praised as an experimental science. As applied economics has become more technical in forecasting, strategies, and reactions, the use of games, simulations, exercises and experiments provides an important connection between the theories and the key features or concepts being studied (Holt, 1999). Laboratory experiments, ala voting and game theory and trading auctions, have long been conducted as means of proving various economic hypotheses – dating back to the first Nobel Prize sixty years ago. Game theory is often introduced into undergraduate applied economics course using the prisoner’s dilemma paradigm, illustrating the conflict between social incentives to cooperate and private incentives to defect.

Goals and Objectives for the Practice Session

The goals and objectives for the practice session are two-fold for the attendees and participants:

- Gain an appreciation of how to engage the millennial undergraduate applied economics student and to understand how they learn, especially for those students who may never take another economics course and find no current enjoyment nor need in learning economic theory, concepts, principles or applications.
- Develop a tool box of simple, not time-consuming, yet participative activities to try in their classrooms, including defining the teachable moment or objective or expected learning outcomes for each activity, creating the competitive environment for learning, and establishing rubric or reward mechanisms, as well as actually doing the activity (as time permits).

Descriptions of the Games, Simulations, Exercises and Experiments

Today’s millennial students seek learning stimulation from other forms of games and activities, such as shuttling tennis balls to learn diminishing marginal returns, building paper airplanes to gain an appreciation for designing, producing and marketing to meet consumer needs, competing for food items (Snickers and Payday candy bars or Coke and Pepsi colas) to learn market demand and demand elasticities and trading decisions, creating menus to see

an auction market in action, flipping coins to simulate door-to-door selling, or understanding the payoff of the prisoner's dilemma using a deck of playing cards.

A simulation is a decision-making tool that requires the development of a model of a process and testing the performance of the model under various conditions; simulation does not find a solution to a problem, however. Using simulation, the decision-maker can take a 'what-if?' approach to understanding a problem. In a selling or sales course, for instance, a door-to-door simulation using groups of five students is plausible for the following setup: The economy is bad! You are deciding whether or not to take a part-time job selling XYZ parts door to door, and historical sales information (probability percentages) is available with outcomes. Four coins are needed to complete the simulation representing the random variable of someone answering the door, whether a male or female answers the door, and the success of the sales call. A simulation worksheet is provided to document the number of coins flipped and the number of parts sold during one night's work of making twenty calls. How did each group do, and what kept them from doing better? Obviously, no sales if no one was at home.

Classroom economic experiments typically involve monetary payoff, suggesting that significant financial incentives are inherent. If money is at stake, the college's administration must be accepting and on board with the concept, so that the interpretation to students and other stakeholders is not one of gambling. Small monetary incentives may be useful, if only because they reduce the noise in the decisions, but are not necessary. The use of extra credit or bonus points as incentives is much more controversial since fairness becomes a constraint that may conflict with the teaching purpose, adding stress and conflicting with the key economic ideas, like mutual benefits from trade. Several experiments are available, either online or from the author.

An interactive exercise that teaches the concept of marginal returns to students requires two buckets and a number of tennis balls. Students are told they are part of the inputs required to generate a factory's short run production function. For each assembly line, one student is the timekeeper and a second is the output recorder while the other students become workers on the production line. The buckets are placed about 20 feet apart in the classroom, and the first worker picks up one tennis ball at a time and runs to the other bucket, placing the ball in the bucket, and then returns to the first bucket to collect the next ball. The goal is to transfer as many tennis balls as possible between buckets in thirty seconds. What would make this line more efficient? More workers! So a second worker is added to the process. The balls must be handed (not tossed) between the workers, and determine how many balls can be transferred in 30 seconds. Add a third worker, then a fourth, etc. At the end of each 30 seconds period, the balls are counted and returned to the first bucket. Continue the 30-second runs until negative returns can be demonstrated (fewer balls are transferred in 30 seconds because too much time lost with many workers in the line – inefficiency). Graphing the data is also of help to the students to understand the concepts, especially as to when adding workers – when marginal return starts to decrease or when it becomes negative.

Discussion

What is more important as a take-home message for the students: the quantitative calculation of a theory, or the understanding of the implications of the why's and what-if's of the theory or concept? For today's millennial students, the latter is more significant. These activities allow for this learning by doing. Several positive results occur from this change in teaching: students seem to remember concepts reinforced with an active learning activity, become engaged in the topics (putting down their cell phones and computers), and comment favorably on course and instructor during exit interviews and faculty evaluations. Plus, active participation provides a nice change of pace to the normal classroom tedium.

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Including Community Partners in the Grading Experience for a Service-Learning Course

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Abstract: Student engagement in experiences that are relevant and intentionally designed and are tied to community needs create space for meaningful learning. When incorporating service-learning in course design a common challenge for educators is the role of and relationship with the community-partner. The process of incorporating community partners, who oversee the learning process and experience for students in the field, in an authentic grading and feedback process may be particularly challenging. This practice session will demonstrate ways to incorporate community partners into the grading process, utilizing a service-learning course at Virginia Tech as a case study. The course instructor, an external course collaborator, the service learning coordinator for Virginia Tech, and a community partner will share their experiences with the course and their assessment tools and assignment guidelines.

Literature Review

Service-learning has been identified as a high-impact practice (HIP), in higher education that has been shown to facilitate deep learning and students' general, personal and practical gains, a practice students may enjoy more than a traditional lecture (Kuh and O'Donnell, 2013; Stavrianeas, 2008). The addition of service-learning in curricula creates a learning environment that expands past the boundaries of institutional walls, which has the potential to enhance students' learning experiences. A praxis of connecting academia with community engagement "within a framework of respect, reciprocity, relevance, and reflection", service-learning is a movement toward engagement in higher education (Butin, 2010, xiv). There is ambiguity defining service-learning in the literature, lending opportunity to defining what a model of service-learning would look like when designed and implemented with the individual culture of university and community where the engagement is occurring. Viewing the spectrum of service-learning and varying definitions of engagement, three standards that remain constant are that the activity is legitimate, ethical, and useful (Butin, 2010). Engagement of community-partners is essential to enhancing and expanding community-university partnerships that are mutually beneficial

Goals and objectives

Following this session, participants should be able to:

1. Understand the rationale for including community partners in the grading process
2. Identify strategies for designing authentic assessment tools for community partner use
3. Identify opportunities for including community partners in the grading process in their own courses
4. Gain insight into community partner needs and experiences with a service learning course
5. Identify opportunities for institutional support or develop strategies for gaining institutional support for including community partners in meaningful ways in service learning opportunities

Description of Practice

The practice that will be exemplified in this session is the inclusion of community partners in an authentic grading and feedback process for a service-learning course. The incorporation of community partners in the grading process in a service-learning course at Virginia Tech will be used as a case study. The course instructor, an assessment and curriculum design expert, the service learning coordinator for Virginia Tech, and a community partner will share their experiences with the course. Suggestions for meeting the needs of the instructor, students, institution, and community partners will be offered. Participants will also be given the opportunity to ask questions and engage in dialogue with the presenters about their own experiences with service learning, working with community partners,

and meeting institutional goals and objectives. Practical assessment tools and assignment guidelines will be presented. Tips for communicating with community partners and students will also be provided.

Discussion

Service learning can be a rewarding experience for educators, students, and community partners while meeting learning objectives and institutional goals. In order for this to be the case, community partners can and should be viewed as educators in their own right, included in an authentic grading and feedback process. Faculty can design tools to facilitate this process. Institutional divisions, departments or centers that focus on service learning and community partnerships are valuable resources when building relationships with community members and designing service learning courses.

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Interprofessional Simulation Pedagogy: Use of 2015 INACSL Standards

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Abstract: The 2015 INACSL best practice criteria for interprofessional simulations (IPE sim) will be applied using three different IPE simulations. Examples of the use of each of these standards with the supporting evidence for the standard and specific use of the standard in each of three unique IPE simulations will be presented.

Literature Review

Interprofessional education (IPE) has been identified by accrediting agencies, professional and governmental organizations as being important for safe and high quality health care (e.g. AACN, ADA, AMA, CDC). The World Health Organization (1988) in the report Learning Together for Health Report promoted IPE to enhance teamwork and collaboration. Students participating in IPE simulations learn "with, from, and about their peers in other healthcare disciplines." (Interprofessional Educational Collaborative, 2011) Simulation is a pedagogy that has been demonstrated to increase perceived knowledge, skills and attitudes (KSA), shared reasoning and mental models as well as observed increases in team performance and patient experiences (Lapkin, 2013 ; Morse, 2015). Standard VIII from the International Nursing Association for Clinical Simulation and Learning (INACSL) (Decker, et al.,2015) identifies four major criteria for best practice in IPE simulation: 1) use of theory 2) follow best practice in simulation-based and IPE 3) address institutional and local issues 4) include an evaluation plan. In addition, the IPE Collaborative expert panel (2011) identified core competencies for IPE. Standards can be used to design, implement and evaluate IPE simulations.

Goals and objectives

Participants will be able to:

1. Review the INACSL best practice criteria and IPEC competencies for interprofessional simulation
2. Identify a learning theory/standard that could be applied in an interprofessional simulation for your learners
3. Discuss a best practice recommendation for IPE simulation that could be applied with your learners
4. Identify the institutional issues that would facilitate or hinder use of IPE simulation with your learners
5. Describe an IPE simulation evaluation plan best suited to your learners

Description of Practice to be Exemplified

The practice of IPE simulation, using recent beset practice standards and competencies will be explored using three different interprofessional simulations - one with biology (genetics) and nursing at the graduate level, one with nursing and dental hygiene students at the undergraduate beginning level and one with nursing and occupational therapy students at the senior undergraduate level. In each simulation, the use of INACSL standards will be discussed.

Standard: Sim-IPE should:	Sim 1 - Nursing and Dental hygiene (oral care in acute care)	Sim 2 - Nursing and occupational therapy (early mobilization)	Sim 3 - Nursing and biology (genetics)
Be based on theory	Kolb's experiential learning theory Complexity theory- content theory IPEC competencies	Kolb's experiential - learning theory Kolcaba's Comfort Theory- content theory IPEC competencies	Kolb's experimental learning theory Situating Cognition- learning theory Roy's Adaption Model IPEC competencies
Follow best practices in sim-based and IPE education	Related to other IPE experiences at respective Universities, is authentic	Promotes interprofessional collaboration and	Interprofessional collaboration promotes development of realistic,

	(uses real patient information), has shared objectives for the learners, fits the level of the learner, uses structured debriefing	communication through shared objectives,has an authentic scenario based on providing quality patient centered care to a NICU, uses team-based structured debriefing	challenging simulated learning experiences based on students' knowledge, needs, and experiences, uses structured debriefing
Address institutional and local issues	Involved two Universities with instructional support	Involves two disciplines at local university with instructional and institutional support.	Involves team from biology and nursing department at local university with instructional support.
Include an evaluation plan	Evaluation of best practice for oral care as well as teamwork/communication	Best practice for care of an infant with total brachial plexus injury as well as Interprofessional teamwork/communication	Kirkpatrick's Four-Level Training Evaluation Model for student's role in integrating genetic/genomics into practice level and interprofessional teamwork/communication

Discussion

The INACSL standards for IPE simulation can be used to identify continuity across the curriculum and ensure that interprofessional simulations address the components of teamwork and collaboration. Across the three simulations, Kolb's experiential learning theory and IPEC competencies were used in addition to content theory. Best practices used drew from several of the other INACSL standards. Local issues are important when working across departments and/or Universities and a unified commitment to IPE is required. The evaluation plan needs to address teamwork and collaboration as well as other content areas.

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Conversation: Bridging Pedagogical Freedoms and Bureaucratic Realities in Online Course Design

Jamison R. Miller and April D. Lawrence, *The College of William and Mary*

Abstract: For faculty well acclimated to their face-to-face teaching styles and approaches, the changes invoked through a shift to online teaching can be daunting. This can be especially true for those who have long practiced non-traditional teaching rooted in humanist (Rogers, 1969) or critical (Freire, 1968; hooks, 1994) philosophies centered on student experience, emancipation, and liberation. Participants in this conversation session will be invited to discuss the tension between the structural approach required by online course design and institutional-bureaucratic contingencies and more emergent learner-centered pedagogies.

Literature Review

For faculty well acclimated to their face-to-face teaching styles and approaches, the changes invoked in a shift to online teaching can be daunting. This can be especially true for those who have long practiced non-traditional teaching rooted in humanist (Rogers, 1969) and/or critical (Freire, 1968; hooks, 1994) philosophies that are centered on student experience, emancipation, and liberation. These approaches can be in apparent conflict with the more structured approach dictated by best practices in online course design (Majors, 2015; Smith, 2008), and the notoriously rigid constraints of learning management systems (LMS). Further, accrediting bodies and accountability discourses in higher education are increasingly interested in quality control and evaluation of online courses (Adair, 2014). The tensions evoked by these two seemingly antagonistic paradigms—student centered and radical learning versus systematic course development—have the potential to generate anxiety and frustration for faculty, staff, and students alike.

Goals and Objectives

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

- Objective 1:* To identify both barriers and opportunities to designing online courses.
- Objective 2:* Share experiences and encounters with similar tensions between theory and practice; teaching styles and institutional contingencies.
- Objective 3:* Collect, compile, and share a web-accessible inventory of topics and resources that are brought up in the session.

Description of Topic to Be Discussed

Over the course of two years, the facilitators of this session have been intimately involved in the design, development, and delivery of eight new online courses at the College of William and Mary. All of the courses are part of a new online certification program, and deliberate efforts were made to establish a consistent look, feel, and general layout to the courses to aid student learning and navigation through the courses. All of the courses were built in the institutionally supported LMS, Blackboard, a notoriously rigid platform for online learning. Additionally, a key part of the process involved an assessment of the courses by an outside evaluator utilizing the Quality Matters Rubric (Shattuck, 2011). Working with four different faculty members and their concomitantly varying teaching styles, tensions emerged within these newfound institutional, bureaucratic, and interface constraints. Questions emerged: how can we create a radical space of possibility (hooks, 1994), a transformational experience for students (Freire, 1970), or the freedom for students to learn based on their own objectives (Rogers, 1969) within the parameters of a systematic course design process.

Facilitation Techniques

The conversation will begin with a brief overview of the contexts and contingencies that have shaped the development of eight courses in a new online program. A set of guiding questions will be provided for the audience to allow for maximum focus on the conversation about the tensions that emerge between long-held teaching

philosophies and online course design. Included in these questions will be a focus on common challenges faced structuring new online programs, teaching strategies, and learner-centered approaches in online 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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Quiet Conversations About the Introverted Students in Your Class: Giving Voice to the Quiet or Silent Students Without Making Them Speak

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Abstract: Classroom participation is understood most often as students' verbal activity; their silence is rarely viewed as a contribution to classroom work and learning. How we define or identify class participation is key to how we interpret the communication behaviors of quiet or silent students. As human communicators, we can *choose* to speak, or we can *choose* to not speak, to be silent. Silence should be examined as a phenomenon that is socially produced and contextually specific.

Literature Review

In her book, *Rethinking Classroom Participation: Listening to Silent Voices*, Katherine Schultz states, "Classroom participation is a ubiquitous idea in education, yet it is rarely defined or elaborated. Classroom participation is understood most often as students' verbal activity; their silence is rarely viewed as a contribution to classroom work and learning (Schultz, p. 1)." Schultz's suggests that educators rethink the meaning of classroom participation and the meaning of silence.

"We live with a value system I call the Extrovert Ideal – the omnipresent belief that the ideal self is gregarious, alpha, and comfortable in the spotlight. The archetypal extrovert prefers action to contemplation, risk-taking to heed-taking, certainty to doubt. He favors quick decisions, even at the risk of being wrong. She works well in teams and socializes in groups (Cain, 2012, p. 4)."

How does this Extrovert Ideal that Susan Cain describes in her book, *Quiet: The Power of Introverts in a World That Won't Stop Talking*, present itself in our college classrooms where professors seek to "engage" their students through class discussion, specifically through verbal participation? How are we facilitating those students who *prefer to work on their own rather than do group work* to fully contribute to the class discussion? When we facilitate classroom discussion do we allow for quiet reflection, or do we look for that first hand up, thus avoiding that painful pause for student response? Schultz observes that, "...one student's silence can enable another student to speak (Schultz, p. 3)."

Defining Classroom Participation

How we define class participation is key to how we interpret the communication behaviors of quiet or silent students. Karp and Yoels (1976), study of student participation identified factors important in influencing students' decisions on whether or not to talk in class. Fritschner's (2000) study of college student class participation identified the sources of interactions as (1) instructor initiated, (2) student initiated, (3) direct question, (4) offhand comments. In both studies, participation is seen as talk, or an oral contribution to the class. Participation can be seen as an active engagement process that can be sorted into five categories: preparation, contribution to discussion, group skills, communication skills, and attendance (Dancer & Kamvounias, 2005).

Human communicators can *choose* to speak, or we can *choose* to not speak, to be silent. "When a teacher does not recognize silence as a form of participation, some students may disengage from school learning and withdraw from the classroom community altogether (Schultz, p. 5)." Schultz argues that classroom participation is about "contribution and connection," and that teachers must attend to all forms of student communication behaviors (verbal and nonverbal, aural, visual, written) that may communicate connection and engagement.

Carl Jung (1923) was a leader in the exploration of personality and is credited with developing the constructs of extraversion and introversion. Jung sees the introvert as a reflective, introspective thinker. In *Psychological Types*, Jung defines *introverted intuition* as a consciousness that "peers behind the scenes, quickly perceiving the inner image . . ." (1921/1971, CW6, 655–656). Introverts are likely to relate to the external world by listening, reflecting, being reserved, and having focused interests (Francis, Craig, & Robbins, 2007). Myers and Myers (1993) work suggests that introverts are likely to keep their inner worlds to themselves, which may lead others to make inaccurate assumptions about introverts and their needs.

Zembylas & Michaelides (2004) maintain that Western society favors speech in the classroom. "Yet speaking is not always as conducive to learning as is often assumed. The authors contend that there is a cultural fear of silence that results in a focus on an overemphasis on vocal participation in the classroom. This focus on speaking can, however, produce an environment that silences some students." The authors argue that silence is an alternative way of viewing the world and that perspective is being lost in our focus on verbal participation. They suggest that teachers reflect upon their own "fears or resistance to silence, and find ways to actively encourage its positive dimensions in the classroom." Schultz offers that silence be examined "as a phenomenon that is socially produced and contextually specific (p. 28).

If teachers *evaluate* student participation as a component of the final grade for a course, then we must have conversations about what warrants *student participation*. We must examine our own relationship with silence in our classrooms. What ways might we find to better *hear* the often insightful and powerful ideas of our introvert students without always making them talk.

Goals and Objectives

The goals of this conversation session are to:	
<ul style="list-style-type: none"> better understand how introverted students work in a classroom 	<ul style="list-style-type: none"> better understand silence or the use of silence
<ul style="list-style-type: none"> define classroom participation and/or student engagement 	<ul style="list-style-type: none"> define the introverted student
<ul style="list-style-type: none"> examine how our teaching, our class environment may support the quiet/silent student, or serve to “silence” students. 	<ul style="list-style-type: none">

The objectives for this session are:	
<ul style="list-style-type: none"> for each participant to leave with at least one idea on how to “involve” introverted or silent students in the class discussion 	<ul style="list-style-type: none"> to employ new definitions or perspectives of “class participation;”
<ul style="list-style-type: none"> to rethink silence in the classroom; 	<ul style="list-style-type: none"> and accept, where appropriate, that silence can be a deliberate choice of communication behavior

Description of Topic to Be Discussed

This conversation will examine the concepts of introversion and extroversion, student participation, and silence as components of classroom participation and student engagement. How we as educators define and operationalize these concepts influences our classroom communication behaviors toward the quiet or silent student. How might we better allow for or create space for quiet reflection, even silence as forms of participation?

Facilitation Techniques

- The session will open with an activity designed to provoke reflection on one or two key issue within the larger session topic. Participants will be asked to *reflect on their reactions to the activity, silently record their thoughts, and then share those ideas* (orally or in writing) in small groups or to the larger audience (dependent on number of session participants).
- The session facilitator will summarize key insights from the available research (not to exceed 10 minutes)
- Facilitator will offer questions or activities to provoke discussion.
- Conduct brief brainstorming session to generate tangible “next steps” to begin a larger conversation on the quiet or silent student.

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To Buy or Not to Buy: Rethinking the Traditional Textbook

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Abstract: As college costs have continued to rise, textbooks now average over \$1,200 per student per academic year (College Board, 2013). Traditional textbooks are not only expensive, but also have fixed and frequently outdated content, while scholarly literature shows more customized and relevant materials result in higher student performance (Lee, Pate, & Cozart, 2015). This study compared student feedback on the use and perceived quality of a traditional textbook versus open and no-cost online materials in an undergraduate Foundations of Education course. Results revealed students found open and no-cost online materials more useful to their success in the course and more engaging than a traditional textbook. Qualitative analysis further revealed while students appreciated there was no cost for the online materials, they preferred them to a traditional textbook because of the customized content. Results suggest students find an instructor-curated no-cost online readings more useful and prefer it to a traditional textbook.

Literature Review

The costs of higher education have risen steadily over the past 10 years with course materials now averaging over \$1,200 per student per academic year (College Board, 2013). For many students, the cost of the textbook may contribute to their decision of whether or not to remain in a course, or, should they choose not to purchase the textbook, students may ultimately receive a lower course grade. Additionally, recent data shows 30% of students choose not to purchase textbooks, while many others may illegally download versions or photocopy portions from classmates (Schick & Marklein, 2013). The resulting compromises in not purchasing or delaying purchase of course texts can adversely impact students in terms of both academic performance and college completion.

Faculty members wrestle with an additional textbook challenge: changes in content can take place from the time the book is written to when it is published and distributed. Further, publisher-determined content may not speak to course topics as well as instructor-curated content, meaning readings from a traditional textbook can be irrelevant or out-of-date. One approach to combat both increased costs and customizability is through the development of Open Educational Resources (OER). OERs offer the ability to share online content at no cost; content is freely available and open for use via public domain or an open license, such as Creative Commons. Though this is a growing area, there are still relatively few OER options for education courses in higher education. By using a combination of library resources and free, open content, more up-to-date course readings can be utilized to encourage greater student engagement, which can lead to higher course grades and greater student retention (Lee, Pate, & Cozart, 2015; Patall, Cooper, & Wynn, 2010) and simultaneously decrease the associated textbook costs for students.

Methodology

This comparative study investigated perceived student differences in both use and quality with a traditional multicultural education textbook and instructor-curated open and no-cost online readings. No-cost online readings refers to journal articles and book chapters available through the university library, while open readings were those in the public domain or published with an open license. Both quantitative and qualitative measures were used with 117 students in Fall 2014 and 99 students in Spring 2015 in EDUC 2120 (Exploring Socio-cultural Perspectives on Diversity) at The University of Georgia. Fall 2014 students completed the course using a recommended, though not required, traditional textbook at a cost of \$165.00, while Spring 2015 students used an online compilation of open and no-cost online readings provided through the learning management system.

Quantitative analysis included a survey where students responded to the following Likert items, “*The textbook, Multicultural Education in a Pluralistic Society, was important to my success in this class*” and “*I found the course textbook engaging and helpful*” in Fall 2014, and, “*Online readings were important to my success in this class;*” and, “*The course reading materials were engaging and helpful,*” in Spring 2015. Qualitative analysis was also utilized via a coding scheme for key themes in responses (Bogden & Biklen, 2007) to an open-ended survey question asking for feedback on the students’ use and evaluation of the reading materials.

Results

In order to determine if there was a statistically significant difference in the responses from students utilizing the traditional text and the online readings, the responses for each semester were compared. A chi-square test of independence was performed to examine the relation between Fall and Spring. This analysis was completed for both the importance of the readings for course success and how engaging and helpful the readings were. For the first question regarding the importance of the readings to class success, results indicated that the responses from the Fall to Spring were significantly different, $\chi^2(4, N= 96) = 107.2, p < .001$. For the second question regarding how engaging and helpful the course materials were, results again indicated that the responses from the Fall to Spring were significantly different, $\chi^2(4, N= 97) = 153.1, p < .001$.

Table 1
Descriptive Statistics

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Question 1						
Fall	23 (.225)	20 (.196)	25 (.245)	15 (.147)	19 (.186)	102
Spring	1 (.001)	4 (.042)	12 (.125)	32 (.333)	47 (.490)	96
Question 2						
Fall	19 (.184)	21 (.204)	32 (.311)	11 (.107)	29 (.194)	103
Spring	1 (.010)	3 (.031)	8 (.082)	30 (.309)	55 (.567)	97

Notes. Percentages are in parentheses. Question 1: The textbook/online readings was/were important to my success in this class. Question 2: I found the course textbook/online readings engaging and helpful.

Qualitative analysis was used to code student responses to an open-ended question about their use and evaluation of the reading materials. In terms of students’ use of the traditional textbook, a few common themes occurred. Almost one-third (28.89%) of students chose not to purchase the book; about 55% of students purchased the text and used it on a limited basis; and, 18.89% of students used the textbook as a reference to expand on course content. Overall, only 20% of students reported the traditional textbook helpful for the course, which is a dramatically smaller number than the 88% of Spring students who found the online reading materials helpful.

Additionally, while students appreciated the cost savings and easily accessible online readings, the most common theme was that students appreciated the relevancy of the selected readings to course topics and the variety of authors. Over one third (35.30%) of Spring students had written responses that fit with this theme, including statements like, “[T]he readings were more current and showed things that really were happening in society and not a hypothetical,” and “The issues we talked about are ever-changing, so it was nice to see news items and scholarly articles that deal with issues as they appear currently.”

Discussion

Given textbooks can be both expensive and infrequently updated, these findings make a compelling case for instructors to utilize instructor-curated open and no-cost digital materials in courses as applicable rather than a traditional textbook. While electronic versions of textbooks have not proven more effective than print versions (Woody, Daniel, & Baker, 2010), the difference is these results demonstrate the value in instructors more specifically tailoring course materials to the actual course content. Additionally, OERs and other open or no-cost materials offer a cost effective and accessible path to accomplish this goal. By giving students an equal opportunity to succeed in the course by having all materials freely available on the first day, as well as selecting particularly relevant reading selections, this can offer a path to greater student engagement and collegiate success.

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Thursday

February 11, 2016

Poster Session B

12:10-1:30 PM

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

"To Say or Not To Say": Facilitating Cultural Intelligence with Multicultural Alertness In Higher Education

Jessica Mayo, Tiffanie Sutherlin, and Joy Mwendwa, *Liberty University*

Graduate counseling programs prepare future counselors are taught multicultural competences to interact with clients and a community who are diverse. Students are instructed through the lens of the American Counseling Association (ACA) Code of Ethics where they are exposed to and challenged to wrestle with the content in these professional scripts in various settings. The multicultural alertness of a graduate counseling classroom is therefore essential in meeting the theoretical foundation for a counseling degree requirements and in practice, the crux of graduating professionals who are competent to face the complexities of our diverse society. This presentation will discuss the findings in literature reviews on student's counselor education efficiency on multicultural training along with sharing informative points below on how culture differences can be explored in professional settings in a respectful and authentic manner that can foster deeper understanding. Being that multiculturalism is defined is a view that various cultures in a society merit equal respect and scholarly interest along with multicultural competency in counseling is explained as approaching the counseling process from the personal context of the client the presenters explored means of engaging in topics to process culture barriers with various counterparts. Presenters will share personal examples that have impacted their growth in the area of multicultural alertness.

A 21st Century Approach to Higher Education: A Learner-Centered Approach to Learning for Teacher Preparation

Henry McCallum, Ed.D, *Chadron State College*

Twenty-first century learning is evolving into an effective "learner-driven" system of inquiry mirroring actual practices used by effective learners. To enhance learning in the 21st century, effective teachers must understand student-centered learning and integrate the use of technology in ways that powerfully advance learning by increasing student engagement in meaningful, authentic, and challenging learning environments. Technology is no longer a stand-alone course or set of courses; technology can may be used to create a dynamic and constantly changing course based on student learning preferences and active learning. Once the instructor moves from a position of dispenser of information to facilitator of learner-directed and -centered knowledge, today's technological innovations are a set of tools that prepare students for a more effective learning. Evidence, will be provided, based on current and ongoing data collection, indicates student learning preferences which allowing for collaboration, digital literacy, creative expression, and critical thinking/problem-solving, qualities advocates believe schools need to must teach in order to enable for students to thrive in today's world. A currently utilized textbook free course structured through a backward design and with content mapping will be described and shared through the Canvas Learning Management System. The model will demonstrate a relevant and engaging learner-centered and project-based learning opportunity format; it will also demonstrate the use of a variety of learner-preferred and -chosen modalities based on inquiry- and outcome-based education. Evidence of student learning will be presented through electronic technology-based portfolios incorporating artifacts demonstrating mastery of intended outcomes. Pre-post student learning preference data will provide evidence that students prefer active learning by the end of the semester. Students, when given an opportunity to use web-based resources and technology as the learning platform have demonstrated their preferences. Graduate students demonstrate many of the same learning preferences as undergraduates, although some differences are indicated.

Transcendental Phenomenological Study of Developmental Math Students' Experiences and Perceptions

Hope Holloway and Megan Cordes, Ed.D, *Liberty University*

Current literature suggests the rise of enrollment among United States (U.S.) postsecondary institutions but the decline in graduation rates. While there is extensive quantitative data examining course redesigns and increasing student achievement in developmental math courses, there is limited research examining students' experiences and perceptions within these courses. The purpose of this transcendental phenomenological study was to examine the experiences and perceptions of postsecondary developmental math students in a math emporium redesign. This study utilized the theoretical framework of Bandura's (1997) social cognitive theory and Tinto's (2012) retention theory. Research questions focused on the lived experience of struggling within a developmental math course in a math emporium, past math experiences and attitudes, and current perceptions of developmental math placement and math emporium model. Purposeful sampling was used to identify 13 students who did not pass a developmental math course at a private four-year postsecondary institution. Data collection included formal response questions, interviews, and Self Description Questionnaire III (SDQ III). All data were analyzed through traditional phenomenological analysis methods of bracketing, horizontalization, clustering into themes, textural descriptions, structural descriptions, and textural-structural synthesis (Moustakas, 1994). Provisional codes were used for the initial review of the interview data to cluster significant statements into themes. The study revealed themes of (a) isolation, (b) self-doubt and negative attitudes towards developmental math, (c) success clouded by inability to progress, (d) fixed mindset, (e) experiences with teachers, (f) expected placement, (g) good placement, (h) desire for change, (i) overall positive experience with staff, and (j) change in math confidence. Implications for administration, faculty, and students are discussed.

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Ask Them: Preferred Gender Pronouns in the Classroom

Amanda Armstrong, *Educational Policy Planning & Leadership, The College of William & Mary*

Title IX, a law passed in 1972, "prohibits discrimination on the basis of sex in any federally funded education program or activity" ("Overview of title IX," 2015). While this law protects students regardless of their real or perceived sex, gender identity, and/or gender expression, covert discrimination still occurs inside the classroom. One situation, which can cause discomfort for students in class, is in having to correct their preferred gender pronouns (PGPs). Not only is this uncomfortable, but it also essentially forces students to out themselves (Tisley, 2010). Students no longer identify themselves solely by the male-female binary; therefore, calling roll at the start of class is no longer a task of reading off printed names. For students whose identified gender may not correlate with their given and/or printed name, addressing this correction on the first day of class can be embarrassing and frustrating (Schmalz, 2015). This poster includes literature that outlines the effects of acknowledging, or not acknowledging, PGPs, outlines best practices for asking students which pronouns they prefer to use for themselves, and shares other ways faculty are promoting inclusivity for students who identify as non-binary (Cole, 2014; Junior, 2014; "Preferred gender pronouns", n.d.a.; "Preferred gender pronouns", n.d.b.; Sanchez, 2013; Williams, 2015)

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Assessment 'For' Learning: Using assessment outputs to support the learning of other students in the class

Stephen M. Rutherford, *School of Biosciences, Cardiff University*

The traditional view of assessment as a tool to measure learning is expanding to include a paradigm whereby assessment is an integral part of the learning experience, and a learning activity in itself. Assessment can go further and potentially support the learning of peers as well as the student being assessed, if the output of the assessment is sharable within the class. In this study we describe an assessment whose output is aimed at supporting peers' learning. Students were given a topic within the core curriculum and tasked to produce a learning/revision resource. Students were allowed free-rein in the design of the resources, with marking criteria assessing accuracy, depth and breadth of the information presented, degree of challenge and utility of the resource. Evidence from an analysis of the resources produced over a 4 year period shows that the assignment developed digital literacy skills, as most resources used technology (e.g. Prezi, Videos, wikis and websites). The depth and challenge of the resources generally showed a high level of skill and engagement. Students' logs mapping the design process, and presentations of the resources to their peers, showed good understanding of the learning styles of their peers in the design of resources. Surveys of the students revealed that they enjoyed the assignment, understood the potential impact of the assignment for their learning and their revision, and appreciated the production of a bank of student-authored resources to support their studies. This assessment approach demonstrates how an assessment can be of benefit, not just to the author of the assignment, but to the class as a whole. This study also emphasizes that students are a rich, and potentially under-used, pool of talent for designing resources to support learning of a curriculum.

Building Research Competencies Across Baccalaureate Nursing Curriculum

Kimberly Brown & Cynthia Goodrich, *Liberty University*

Does the integration of intentional research assignments influence student knowledge and attitude related to the evidence-based practice and research? The purpose of this project will be to determine how well students are being prepared with foundational knowledge and skills within the curricula to meet the challenges of the practice setting. The current education literature reveals that achieving student buy-in to the relevance of evidence-based practice (EBP) and research to everyday nursing practice is a challenge. One contributing factor could be the emphasis placed on EBP and research throughout nursing curricula including the required undergraduate nursing research class. Students have the tendency to lose certain skills if they are not consistently reinforced. The premise is that with the intentional integration of specific aspects of EBP/research principles, importance of strengthening the skills and using the skills will be reinforced. The specific skills that will be intentionally implanted into the existing

curriculum (after the sophomore level nursing research class) are: 1) Development of a research question using the PICO (patient/population- intervention-comparison-outcome) framework into the junior level NURS 302 & 303 profile assignments, 2) the identification of the levels of evidence in the junior level NURS 352 into the existing journal article assignment, 3) integration of an EBP assignment into two senior level classes, NURS 440 and 490. The complex healthcare environment requires that nurse graduates are prepared to participate in EBP/research initiatives in their practice settings. The aforementioned integration activities will reinforce, not only the importance of EBP/research to practice but provides the opportunity to apply knowledge and skills to actual patient situations. Liberty students complete their clinical experiences in Magnet™ accredited organizations which require that nurses at the bedside are expected to be competent in EBP/research activities. Upon graduation, annual performance reviews of graduates will include their ability to apply EBP/research knowledge and skills to practice as well as engaging in teams to address practice issues using current evidence.

Communicating Science: A Qualitative Analysis

Will Manion, Stephan Munz, Eric Wetzel, Asha Shazo, Maja Tyhurst, *Virginia Tech*

The ability to disseminate scientific knowledge to a general audience is becoming an increasingly significant challenge for scientific researchers, leading to a gap between the advancements in knowledge created by science and the general public's ability to understand it. In an effort to fill this gap and create well-rounded scientists who can both execute and explain research, universities have begun creating communicating science classes, as advocated by the popular Communicating Science workshop programs at Stony Brook University (Alan Alda Center, 2015). These classes use improvisational theatre skills to develop presentation techniques and skills, including awareness of voice, body language, listening, and audience. Virginia Tech offers a graduate level communicating science class modeled after the Alan Alda Center (2015) program. Although this class is popular amongst the students, the perceived effectiveness of the class is not available. The purpose of this qualitative study is to describe the communication experiences of graduate students who have completed a communicating science course at Virginia Tech. In order to achieve this goal, the researchers of this study set out to answer two research questions: 1. Why did students elect to take Communicating Science? 2. How did the Communicating Science class affect the perception of scientific knowledge dissemination? The study was designed and conducted using a qualitative research approach. Purposive sampling was used to recruit participants and five semi-structured, one-on-one interviews with open-ended questions were used as the data collecting method. At the overall level, participants indicated that their identity, their position in the hierarchical power structure, and the dissemination process influence the communication process of their knowledge. On the second level, motivation, in-class development and self-perception change are related to the overall themes, describing the purpose and value of the class. The class seemed to help the participants to become more active and reflective communicators.

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Comparison of student perceptions of learning within an interprofessional collaborative healthcare simulation

Kimberly A. Whiter,, Patricia Airey, JC Cook, Jordan Tucker, *Jefferson College of Health Sciences*
Heidi Lane, Bruce Johnson, *Virginia Tech Carilion School of Medicine*

Using standardized patients, hybrid and mechanical simulation, faculty from two health care institutions immersed students in a large-scale, realistic healthcare situation. The objectives of the simulation were for students to be able to function within one's professional role in a timely manner to promote positive patient outcomes, identify commonalities and complementary practices among healthcare professionals and collaborate with other healthcare

professionals through the communication of critical information to move teams forward towards positive patient outcomes. During the simulation students had the opportunity to meet the objectives by gaining a perspective on each profession's contribution to patient-centered care through a team-based approach to solve patient cases that fostered critical thinking. At the end of the simulation students completed a likert-scale survey to assess that the objectives of the simulation were met. The results of the survey indicate that students from all programs involved met the objectives, however depending on which setting the students participated; different objectives were met at different strengths. Students involved in trauma rescue/triage agreed strongest with gaining a better understanding on how they fulfilled their own professional role with other professionals. Students involved the critical treatment of patients in the ER and Surgery setting agreed strongest with the situation testing their reasoning skills. Students in the rehabilitation area of the simulation agreed strongest with gaining a better understanding on how all professionals contribute to patient outcome. Medical students, who were placed in the ER critical care, surgery, and rehabilitation settings agreed strongest with the simulation identifying areas of knowledge enhancement in a critical situation.

The Power of the Pen: High School Courses Replacing First-Year Writing

Courtney E. Colligan, *Department of English, College of Liberal Arts and Human Sciences, Virginia Tech*

A quintessential part of collegiate education is freshman composition. For some students, this course is exempted due to their participation in either Advanced Placement or Dual Enrollment. While some who are exempted from this vital course are adequately prepared, others are not fully ready to bypass a re-teaching of sentence structure, grammar and mechanics, and the rhetorical situation. The high schools in Southwest Virginia are a strong representation of the different programs that are considered to be replacing first-year writing. Dual Enrollment courses are not as strictly regulated as Advanced Placement courses, as AP curricula must follow the College Board's rulings explicitly. Therefore, despite possibly receiving the same credit as an AP student, the DE student may not be as well prepared as his counterpart yet still prove better prepared than the general high school English student. This generalization is derived from the research available from the College Board's website regarding its statistics of the success of the AP student. It is extremely difficult to weigh which program, AP or DE, is better, as each teacher has a different type of effectiveness, while the regulations and strong observance of all AP teachers and their syllabi appear to produce the most successful writing students (if they received a 3, 4, or 5 on the exam). Based on the syllabi and course descriptions presented from two Southwest Virginia high schools, as well as teacher interviews, Dual Enrollment courses cover the fundamentals of academic writing, specifically focusing on the EDNA model (Exposition, Description, Narration, Argumentation), while AP English covers a more critical approach to writing and analysis. Overall, both programs strive to prepare students for college-level writing, yet statistically speaking, AP English appears to be the best preparation in its rigid and evaluative form.

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Poster Presentation Proposal for the Conference on Higher Education Pedagogy

Tobin Richardson, *West Virginia University*
Ayesha Sadaf, *Ball State University*

The purpose of this research project was to review the literature focusing on current methods of teaching digital literacy in the classroom. This poster will focus on the concept of digital literacy, exploring how and why this is an important topic globally, and on the current literature regarding how the technical, cognitive, and social aspects of digital literacy can be purposefully implemented into a higher educational setting by collegiate-level instructors. This topic is important as, although today's college students may be comfortable with technology, a number of factors may be impactful in a teacher's hesitation or uncertainty regarding the actual act of teaching digital literacy within the higher education classroom. For example, college students may have a wide range of abilities and understandings regarding technology; or teachers themselves, particularly those who did not begin their teacher training in the digital era, may feel less connected with digital tools than their students. These factors make the teaching of digital literacy intimidating. While the teaching of digital literacy is multifaceted, there are strategies higher educational educators can employ to better cultivate digital literacy within their students. The technical, cognitive, and social aspects of digital literacy combine to give students an overall technological savviness necessary to be highly successful in the digital world, and to in-turn teach digital literacy within their various K-12 classrooms. Educators must consider how to best teach these different aspects of digital literacy including these technical skills such as connecting technology and making it work or navigating web browsers; cognitive skills such as locating appropriate resources on the internet; and social skills including appropriate and respectful digital interactions with others (e.g. writing a proper e-mail or using social media to build or maintain relationships), or using technology in a legal and moral manner.

Contemplative Pedagogy and Mindfulness Meditation:

Effect on Concentration and Attention Span among Male Survivors of Sexual Assault

Walter R. Hughes, *Mercer University*

Sexual trauma can affect victims in many ways. Male survivors of sexual assault feel isolated, ashamed, and "less of a man." Other feelings include anger, fear, guilt, self-blame, denial, depression, sexual dysfunction, sleeplessness, feelings of helplessness, and feelings of being out of control. Sexual trauma may also affect a male survivor's cognitive ability such as their ability to concentrate. Other problems such as confusion, disorientation, indecisiveness, shortened attention span, memory loss, unwanted memories, and difficulty making decisions are also exhibited. Contemplative pedagogy and mindfulness meditation are exercises which can be used in college classroom to help students gain control thoughts and focus. It is ideal for males dealing with sexual trauma and struggling with concentration and the inability to remain focus. It is designed to help improve their attentiveness and cognition. First, the session will discuss the impact of sexual trauma on concentration and attention span among male survivors of sexual assault. Second, the session will explore contemplative pedagogy and the role mindfulness meditation can be used in college classrooms among male survivors of sexual assault. Third, the session will explore the results contemplative pedagogy and mindfulness meditation on improving concentration, attention span, memory and strengthening cognitive skills.

Creating a Quality Data-base for Students Who are Required to Complete Internships or Fieldwork Within One to Two Semesters

Kevin Ayers and David Sallee, *Health and Human Performance, Radford University*

The purpose of this presentation is to describe a strategy for faculty members to create a quality internship data-base, within one to two semesters, for students to use to help them acquire a required internship. Many universities require students to complete full-time internships as a requirement for graduation. Internships or other job related

experiential activities allow students to bridge the gap between course work theory and practical application (Cuneen & Sidwell, 1994; Gower & Mulvaney, 2012). Employers prefer new graduates to have some relevant work experience (NACS, 2012). Obtaining an internship can be a difficult and stressful prospect especially when the institution does not engage in placement. The faculty member can greatly enhance the students internship search process by providing a quality internship data-base. Students engage in self-search reaserch based process in the semester before they are to participate in an internship. Cuneen & Sidwell (1994) previously addressed the benefits and short-comings of the student self-search internship process. Few have written about specific strategies used to attain the sport management internship (Ayers, 2007; Verner, 2004; Cuneen and Sidwell, 1994) and fewer still have written about the creation of a data-base to help students with the self-search approach to securing an internship. This poster discusses both part of students self-search strategy to secure internship and how this process is used to create a high quality and useful data-base for current and future students. This process of research, presentation, engagement, and data-gathering takes place in a three credit sport management class during the last semester of a students coursework and prior to their internship experience. This strategy could prove useful to any faculty member who help students to secure nonplacement internships.

Cumulative Final Exam Performance With and Without a Cheat Sheet

Lola Aagaard, Ronald L. Skidmore, and Timothy W. Conner II, *Morehead State University*

Nearly 40 years of research on the use of cheat sheets (or crib cards) during college exams has yielded very inconsistent findings. A recent meta-analysis of 15 studies showed a moderate but positive effect size in exam performance using cheat sheets (Larwin, Gorman, & Larwin, 2013). Larwin et al. reported wide variability across the studies they analyzed, however, with some showing no effect at all and others finding higher scores on exams when students did not use a cheat sheet. It is still not settled whether students' careful preparation of a hand-written cheat sheet engages them more deeply with the material (Larwin, 2012), or whether they become dependent on the cheat sheet and therefore do not study as much as they should (Dickson & Bauer, 2008; Funk & Dickson, 2011). The present study compared the cumulative final exam performance of students in two consecutive semesters of a human development course. Students in Fall 2014 (n=126) took the final exam without a cheat sheet, but students in Spring 2015 (n=129) were allowed to handwrite information on both sides of an 8.5 by 11 inch cheat sheet and use it during the final exam. The items on the two exams were identical. Although scores on the first test of the semester were not significantly different between the two groups, an independent t-test showed the cheat sheet group scored significantly higher on the cumulative final exam (71.8 vs. 64.8; $p < .001$; Cohen's $d = 0.56$). Analysis of the items missed by both groups indicated the cheat sheets helped mostly at the knowledge level, but not as much with items calling for application. These results may indicate the cheat sheets serve as a memory crutch, but perhaps are not enabling deeper connections with the content of the course.

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Curing the High DFW Rate in First Year Science Courses: Data and Results

Victoria Brown, Adam Childers, Kristin Emrich, Kim Filer, Jan Minton, Hannah Robbins, David Taylor
Roanoke College

The rigors of college courses can be difficult for incoming freshman to adapt to, especially when a student is taking multiple science courses in their first semester. Over the last several years, our department became concerned with the high DFW rate and low moral we observed in our first semester calculus course. In an effort to alleviate the problem, we now offer two concurrent versions of calculus. In addition to our original calculus course, we've added a new course which covers same material as the original, except over the course of two semesters, with some just-in-time algebra review. The students are placed in the appropriate course based on a placement test (in conjunction with their SAT math and HS GPA) before the semester begins. Furthermore, there is the option for a student in the faster-paced course to drop down to the slower-paced course up until the week after the first test. As we begin the second year of our new calculus curriculum, we have deemed it a clear success. While we have not yet significantly reduced the DFW rate, we have already noted a much more enjoyable experience in the classroom for faculty and students alike. We have begun to formally assess the change and have developed a tool we will deploy in the fall, to measure the effectiveness of the program. In this poster, we will explain the motivation and methods for restructuring a first year science course and provide an analysis of both the qualitative and quantitative data we have collected.

Designing and Developing Frameworks for Embedding Self-Regulated Learning Strategies into Distance Education Utilizing the ADDIE Model of Instructional Design

Eric M. Stauffer, *Virginia Tech*

As colleges and universities increasingly see distance learning as critical to their long-term strategies to address growing enrollments and contain spending, so does the importance for instructors and instructional designers to address the academic needs of the increasing number of students who may be continuing their educations without the self-regulated learning strategies required to be successful in these rapidly evolving learning environments. Research and theorizing about distance education is not novel and in recent years there has been a great deal published about the autonomous nature of student within distance education. While there has been some discussion about the need for students to be more self-directed there has been little cross pollination between the research areas of distance education, self-regulated learning (SRL) research and theory in educational psychology, and the field of instructional design and technology (IDT). This study seeks to bridge this gap through the operationalizing of empirically based research found within the last four decades of SRL research with that of distance education in an attempt to create new frameworks for analyzing and designing new online courses through a multi-phase study that is positioned within the realm IDT. As such this study utilizes pragmatic and creative research methods collected under the title of design and development research (DDR). This research specifically utilizes literature synthesis and expert review to contribute to current research in all three realms of inquiry with the systematic development of new instructional specifications using learning and instructional theory to ensure the quality future instruction in distance education that includes the development of instructional materials and activities that will foster academic achievement and performance in higher education distance learning environment by embedding SRL strategies within the ADDIE model of instructional design to encourage students to cope better academically when learning at a distance.

Developing Intercultural Competence for Intensive Learning Courses

José F. Bañuelos-Montes, Dolores Flores-Silva, *Roanoke College*

Intercultural competence develops students' cognitive, affective, and behavioral skills to support an effective cultural interaction within diverse cultural contexts. The principle purpose of applying intercultural competence to intensive learning courses is to increase cultural awareness, helping students to appreciate cultural differences in order to gain a respect for values and cultural practices that can transform the student into a more reflective

and globalized citizen. Intercultural competence is an experiential learning opportunity in which students have the capability to develop a deeper understanding of their new cultural community, an understanding which can impact students' perceptions, values, behaviors, and practices across the various cultural and linguistic environments. During the time of the immersion, the student will develop self-awareness by engaging with people from the local culture to cultivate an empathetic cultural diversity. One of the chief goals of this experience is that the student increases interest, respect and appreciation of other cultures so that superficial comparisons are avoided and bridges are created for the acceptance or navigation of cultural differences in order to experience a stronger, more genuine adaptation. The student will have the opportunity to notice and confront cultural differences, find commonalities, increase cultural self-understanding, and interact with the culture to learn to adapt to those differences. A diverse list of intercultural competence questions helps students to delve into another cultural community and to eliminate interpretations and behaviors based on stereotypes. Through careful assessment and reassessment of their responses to these questions, students encourage themselves to not only explore their new cultural environment, but to also test the limits of their own system of beliefs in order to arrive at more sophisticated and fluent levels of intercultural and linguistic competence.

Discourse as a Key Component in Teaching: Encouraging Students to Construct their own Mathematical Understandings

Diana L. Moss, *Appalachian State University*

Meeting the needs of all students during an undergraduate mathematics methods lesson can be a challenge. Effective discussions in undergraduate classrooms occur when students articulate their own ideas, consider others' perspectives as a way to construct understandings, and elicit diverse views and voices (Brookfield & Preskill, 2005). Students must actively be engaged in sense making and be creative communicators when learning mathematics, and, to deepen understanding of mathematical ideas, students need to generate and evaluate knowledge, communicate their thinking and be able to reflect on and critique each other's thinking (NCTM, 2000). The *Framework for Three Levels of Sense Making* (Lamberg, 2013) can be used as a strategy to facilitate meaningful mathematics discussions to support students' learning. In each level of discussion, students connect prior knowledge to new knowledge and make new mathematical connections. In this poster session, I will present how small group and whole class discussions support the learning of undergraduate students through making thinking explicit, exploring each other's solutions, and developing new mathematical insights. I focus on a lesson where pre-service teachers analyze student work and begin to develop computational fluency in subtraction (Flowers, Kline, & Rubenstein, 2003).

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Do Students Value Service Learning? Community Kitchens Design Case Study

Kathleen Parrott, *Virginia Tech*

Service learning, also called community learning, includes educational experiences in and beyond the university classroom as a critical means for achieving course objectives (What is Community Learning? 2015). The strategic plan for Virginia Tech has a principle strategy to increase "experiential learning opportunities"... connecting real-life experience with academic concepts" (Envisioning Virginia Tech, 2012). Two student teams in a senior design class (n=8) completed service learning projects designing kitchens. Team One's project redesigned a church kitchen for a congregation's growing social outreach ministry and expanding on-site child care program seeking licensure.

Team Two's project, for a county Extension Service, redesigned a former private school dining hall kitchen into a teaching/demonstration space and incubator facility for food-based businesses.

Common project themes were:

- Meet state and county health department and building codes.
- Include spaces frequently used by volunteers and educational programs.
- Accommodate clients with limited budgets and lacking knowledge of kitchen design.

Clients were contacted five months after receiving the students' designs. Neither project was built, but the clients praised the quality of the students' work and the value of the designs in securing grants and funding toward implementation of the projects. A post-project survey of students addressed service learning and project evaluation. Most students (6 of 8) believed the projects were of value to their résumés, but only one student tied that value to the service aspect. The majority of the students (6 of 8) indicated they would include the service aspect of the projects on their résumés or portfolios. However, clarifying comments indicated that the importance of the service aspect was equated with the opportunity to work with a "real" client. Mastering commercial codes and products (5 of 8) and communicating with real world clients (3 of 8) were the students' most valued learning experiences.

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Does Experience Matter? Technological Pedagogical Content Knowledge of In-service and Pre-service Teachers

Emtinan Alqurashi & Elif N. Gobkel, *Duquesne University*

Technological pedagogical content knowledge (TPACK) is a framework for teachers to explore and understand a range of knowledge types needed for effective technology integration into teaching. Kotrlik and Redman (2009) highlight that teachers' tendency of integrating technology into instruction depends on five demographic characteristics: Gender, teaching experience, technology anxiety, technology availability, and age. Teaching experience and age have been identified as factors that have a negative relationship with the pre-service and in-service teachers' knowledge and self-efficacy to use technology (Inan & Lowther, 2010; O'Dwyer, Russell, & Bebell, 2004; Ju Chun Chu, 2010; Kohl, Chai, & Tsai, 2010). It was reported that higher aged adults are the most disadvantaged groups to increase their acquisition and self-efficacy toward technological tools comparing to middle-aged and younger adults. Then, they are less motivated to integrate new technologies into classroom as an assistive tool. In sum, those findings raise questions about how pre-service and in-service teachers differ in their levels of technology, pedagogy, and content knowledge that influence their interaction with novel tools.

The purpose of this study was to evaluate the TPACK of pre-service and in-service teachers, and then analyze the factors affecting teachers' TPACK through ANCOVA, which incorporates gender, age, education level and ethnicity as covariates, and the domains of TPACK as dependent variables. Findings show no significant differences between in-service and pre-service teachers in all seven domains of TPACK ($p > .05$). This study also found no significant differences ($p > .05$) between in-service and pre-service teachers in all seven domains of TPACK if controlled by demographic characteristics (gender, age, education level and ethnicity). This study concludes that experience does not matter in teacher's technological pedagogical content knowledge.

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Title of Poster Proposal: E-learning Readiness Analysis: Identifying Factors Affecting E-learning Readiness in Organizations.

Cathy James-Springer, *Virginia Tech*

E-learning in higher education in the form of online instruction has become commonplace in higher education. However, adoption of e-learning is often considered without addressing key factors that determine successful implementation of e-learning. With increasing popularity of e-learning as a mode of instructional delivery in Higher Education it is important to discuss these factors and how they are related to the context in which they are implemented. Using five existing e-learning readiness models, Aydin & Tasci (2005); Chapnick (2005); Borotis and Poulymenakou (2005); Psycharis (2005) and Omoda-Onyait and Lubega (2011) as a basis for identifying factors affecting e-learning readiness, three broad aspects of e-learning readiness were identified, the wider organizational considerations; learner factors and technology considerations. The purpose of this research was to build on existing readiness models by a literature review, identifying additional e-learning readiness factors that can be used to analyze e-learning readiness of organizations and how these factors are interconnected. From these broad headings, e-learning adoption literature identifies organizational goals, context, culture, technological resources and content design, among factors affecting adoption and sustenance of e-learning in organizations. Findings indicate that e-learning readiness should be linked to larger organizational goals, which in turn address learner and technological needs. Since these categories are intricately connected the relationships add a new dimension for considering when conducting e-learning readiness assessments.

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EduMESH: Educational network to promote more MEaningful, Satisfying and Happy careers and lives

Daavid Väänänen, *North Carolina State University*

According to a recent study 72% of US educators believe that college graduates are well prepared for work life while 42% of the employers agree the same. The persistent problem is not only at the level of higher education. In order to fundamentally change the existing paradigm, the problem has to be tackled already earlier. We propose to create an educational network that connects all levels and types of formal and informal educational institutions through common projects and programs that connect to real life challenges and opportunities. The first step has been

to establish a pilot network among participating institutions in Wake County, NC. The pilot network allows to construct a model with a strategic plan how to efficiently build such networks in a sustainable way. In order to ensure successful implementation of the model, we propose an evaluation method that would measure the impact of such networks on education and well-being of the local population. Information sharing and data collection is done through EduMESH - an online platform that allows continuous short-term and long-term data analysis, impact measurements and scalability. Once the model is established it can be applied to other areas where the help is most needed. Educational networks of networks can be then scaled-up nationwide and globally such that every person - even in the most rural areas - would have access to the best available educational methods and information together with an equal opportunity for more meaningful, satisfying and happier careers and lives.

Effect of Instructional Design on Students' Motivation to Learn in Online Courses

Jennifer Brielmaier, Ying-Ying Kuo, *George Mason University*

Instructional design can enhance students' motivation to learn by providing relevant course content while encouraging students to achieve specific learning goals. An effective course design increases student satisfaction and competency in the subject matter and helps students enjoy the learning process (Keller, 1983, 2010). The effect of course design on student motivation was investigated in a fully-online physiological psychology (PSYC 372) course, taught in Fall 2014. The course provided lecture videos, individual and group activities, weekly quizzes, and study notes in a flexible format where students had full control of their study strategies and schedule. A total of 25 students enrolled in the course. Upon the completion of the semester, 20 students shared their learning experiences with regards to course design, satisfaction, and learning motivation in a survey of online learning. Results from the survey indicated that students overall felt satisfied with the course (mean = 5.2, s.d. = 0.83) with a 6-point Likert scale from Strongly Dissatisfactory (1) to Strongly Satisfactory (6). The top five items that motivated students to learn included "Course Structure and Navigation," "Content/Resources Provided," "Competency in the Subject Area," "Performance," and "Fostering of Critical Thinking." Both qualitative and quantitative data collected from the course survey support the conclusion that good course design can promote students' learning motivation, satisfaction, and course performance.

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ePortfolio Research: A Tool for Accessing the Evidence

Jacquelyn McCarthy Woodyard, *Virginia Tech*
 Jessica R. Chittum, *East Carolina University*

As the use of ePortfolios becomes common in higher education, it is increasingly important that empirical research on ePortfolio be accessible. In this poster, we will explore a web-based tool (i.e., open-access website database) that we developed to support higher education practitioners and researchers as they investigate and implement ePortfolio (eportfolio.uga.edu). After compiling empirical evidence of ePortfolio's effectiveness (Bryant & Chittum, 2013), we felt that others should benefit from the fruit of our labor. We designed this site to benefit multiple parties: (a) practitioners who are looking to implement ePortfolio and are seeking information on best practices, as well as (b) researchers gathering information. We will take participants through each major section of the website to describe their practical uses and purposes. 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.

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Factors Related to Academic Success

Eric Lovik & David Martin, *Radford University*

Student success in higher education has often been measured by cumulative grade point average, student retention and graduation rates. Researchers theorize on why students drop out of college (Braxton, 2004; Seidman, 2012; Terenzini & Reason, 2005; Tinto, 1993). In general, the higher education literature recognizes not only the value of the institutional environment on student success, but also precollege characteristics as well, which are also referred to as inputs (Astin, 1976, 1991; Pascarella & Terenzini, 1991, 2005; Renn & Reason, 2013; Terenzini & Reason, 2005). There are numerous precollege characteristics and college experiences that could affect whether a student is successful academically, however we must be careful to avoid attributing causation when what we are observing is simply correlation. The IR analysts at this university examined some possible indicators of academic success, and found some relationships worthy of further analysis. As a general observation, high school gpa relates positively to college gpa. Students who enter college with some type of advanced or more rigorous academic experiences such as dual enrollment and Advanced Placement also perform better in college than their peers who do not. This leads to another potential factor: academic minor. While students' majors represent their declared field of study, the minor can serve as either a supplement to the major curriculum or an opportunity for additional personal development and challenge. Is there something about students who declare a nonrequired minor during college and their overall success in higher education? The results from this study indicate that there is a significantly higher retention rate for students who pursue an academic minor in addition to their declared major than students without a minor. The purpose of this descriptive study is to identify relationships between high school gpa, dual enrollment, Advanced Placement, and university success measured by college gpa and retention.

Fear: The Real Success Snatcher

Kimberly Griffin, *Mercer University*

Fear is a common and a natural reaction to unwanted circumstances that all human beings face. The concept of fear, however, is associated with the perceptions of teacher narratives, cognitive perceptions and anxiety driven emotion. This presentation will discuss the need for teaching professionals to understand their obligation to enlighten students on fear avoidance behaviors that may hinder student success (Bledsoe & Baskin, 2014). Likewise, teachers should become aware of their fear-based narratives (Patthoff, 2015) as motivators and become conscious of fear driven behaviors that might ordinarily cause a teacher to be biased or judgmental toward a low achieving student. If a student can begin to understand that fear is the motivator behind anxiety driven behaviors, such as lateness or habitually missed assignments, students will develop the necessary skills to recognize their fear and utilize techniques to combat those fears.

First Year GPA and Graduation Rates

Eric Lovik & Damien Allen, *Radford University*

For many years, researchers and practitioners within higher education have raised concerns about student retention and graduation, and have developed and refined evidence-based theories on why students drop out of college (Braxton, 2004; Seidman, 2012; Terenzini & Reason, 2005; Tinto, 1993). Pascarella and Terenzini's (2005) review of the college impact literature identified the importance of students' grades on retention and completion. "College grades may well be the single best predictors of student persistence, degree completion, and graduate school enrollment" (p. 396). Studies on national data demonstrate how valuable first year grades are in setting the tone and direction for students' subsequent college years (Adelman, 1999; Astin, 1993; House, 1996; Ishitani & DesJardins,

2002-03). More recently, there has been a body of research that focuses on average students – those who are not high achievers, but not at risk of academic action. Venit (2014) discovered areas of concern among student non-completers whose first-year grades were not within the range commonly flagged for at risk students. Using a national set of data, Venit coined the term ‘Murky Middle’ to describe the average students whose first year grades range between 2.0 and 3.0, but gradually decline until the students drop out (Tyson, 2014). At Radford University, students must maintain a cumulative grade point average at certain levels to remain in good academic standing. This minimum requirement increases over several benchmarks during the subsequent periods of college attendance based on the number of credit hours that students attempt. In light of the significance of students’ grades, it is useful to track student success over the duration of the undergraduate lifetime, which is typically measured as 150% of normal time – six years. The purpose of this study is to examine the graduation rates of students based on their cumulative GPA and time of departure.

Fitting of the Mathematical-Structural Model of Knowledge Commercialization in Payame Noor University

H. Hafezi, M. Ekrami, N. G. Ghourchian, MR. Sarmadi, *Payame Noor University*

The present study was conducted to fit the mathematical-structural model of knowledge commercialization in Payame Noor University. This research is quantitative and based on correlation method with Structural Equation Model (SEM) approach. Statistical population of included all faculty members and PhD students in Payame Noor University. In this research, the required data were collected by using the proportional stratified sampling method during the two stages, pilot stage (100 people including 79 faculty members and 21 PhD students) and main stage (245 people including 200 faculty members and 51 PhD students). A research instrument included the researcher-made 114-item questionnaire that was to measure seven existing constructs in research model. Psychometric properties, including reliability and validity, of research instrument were evaluated and supported by using the confirmatory factor analysis approach on the data of preliminary stage. In order to analyse the data in main stage, first by means of data screening (including box plot, Mahalanobis statistic, uni and multivariate Skewness and Kurtosis coefficients, and scatter plot) the position of outliers' data and assumptions underlying Structural Equation Model (SEM) statistical approach were also investigated. Then, by using a statistical approach of structural equation model, the way the model was fitted and mathematical-structural relationships between its existing constructs were tested. The results showed that preliminary fitted model requires some reforms in format of deleting of 8 direct insignificant paths among its constructs and as well as adding paths of correlation variance errors between indicators of the model endogenous constructs. Thus, the final modified model was perfectly fitted.

Fixing the Academic Pipeline Through Summer Research Programs

Delight B. Yokley & Jody Thompson-Marshall, *Virginia Tech*

The retention of underrepresented college students within STEM related degree programs has been a concern for college administrators and scholars for many years. Research suggests academic pipeline leaks impact the number of students advancing to graduate school (Jackson, 2000; Sethna, 2011; Shaw & Stanton, 2012) or are capable of working in STEM related careers. Summer research programs are one approach to remedy leaks within the academic pipeline, which provide underrepresented students the opportunity to work with one-on-one with faculty mentors. The experience also provides hands-on experience to design, conduct scholarly research, which extends learning beyond the classroom. These opportunities provide students of color more focused support as they navigate their academic programs. This poster is a literature review addressing the academic pipeline, who is impacted, and how summer research programs can serve as a tool to remedy academic pipeline leaks.

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Flavors of Diversity: Communicating Culture via Food

Robert F. Maslowski & Galina N. Fet, *Marshall University*

Cooking traditional foods and eating at a family table is the most powerful way of family, cross-generational communication. World travel today is easy, and interest of young people in other cultures is high, but lack of social contact with older generation leads to loss of cultural traditions (e.g. Miller, 2015). Food culture is addressed in this class, team-taught by a biologist and an anthropologist as an elective for graduate students in Biology, Sociology, and Anthropology. Major focus was on communication via food culture (Flandrin & Montanari, 2013). Cross-disciplinary discussion issues covered geography, history, biology, ecology, agriculture, ethnic traditions, health practices. Issues included: biodiversity of wild ancestors of cultural plants (Fet, 2007); Native American game animals and plants (Maslowski, 2015); introduced common cultures (coffee, orange); mushroom-hunting as a lesson in ecology and cross-cultural education (a field trip by children and grandparents); food as natural medicine (oils and spices; human microbiome: digestive system as an ecosystem; regional vitamin/mineral deficiencies; modern food consumption issues essential for health professionals; symbiotic organisms for fermented foods (cheese, yogurt). Ethnic cooking preserved in modern Appalachia allow comparisons to counterparts across the globe (Greek, Italian, Spanish, Asian traditions). The class attracted non-traditional and remote students as it was taught in conveniently once a week, as a 3-hr lecture discussion format, with ethnic food demonstration. An online component included an interactive blog, and online tests, and final presentations. Our experience demonstrated efficient understanding of the material by students due to real-life issues, family histories, and health problems. Students expressed awareness of healthy eating and interest in cross-cultural communication and appreciation of diverse cultures. The class proved to be of a broad interest to students with different backgrounds. We plan to offer it at undergraduate as well as K-12 level as STEAM Education component.

Fostering Peace in a Higher Education Classroom

Faith M. Maweu, *School of Conflict Analysis and Resolution, George Mason University*

In the recent past, our society has seen an increase in racial, class and social tensions. Escalation in some of these situations have been linked to words and statements spoken through news or social media. In an effort to foster peace, educators in higher education can benefit from exploring peace theories and literature on student identity development, and its impact on a student's perceived understanding in language. The presenter who is a graduate student in a Conflict Analysis and Resolution program will discuss the importance and power of words, how students perceive and understand the meaning of words, and how an educator's influence can impact the student's receptivity and growth. The presenter will use personal examples from classroom settings observed and practiced to expound on lessons on fostering peace.

Hispanic Students and College: The Effectiveness of the Hispanic College Institute in Changing Attitudes Toward College Enrollment

Bridget E. Hamill & Juan Espinoza, *Virginia Tech*
Maricel Quintana-Baker, *Virginia Latino Higher Education Network*

Informing students on the idiosyncrasies of college access can be a daunting process both for students and programmatically for the leaders involved. Research demonstrates underrepresented students are at a distinct disadvantage in terms of receiving needed and timely college access and affordability information. For Hispanic youth, this disadvantage can be multiplied when issues of citizenship and language barriers are considered. The Hispanic College Institute, is a college preparedness seminar hosted by Virginia Tech, in conjunction with Valhen (Virginia Latino Higher Education Network) and provides vital college and financial aid information to 115 juniors and seniors from Virginia High Schools. Through a series of presentations, open forums, and a structured

environment, students who applied and were accepted are introduced not only to a college campus, but the college application and financial aid process. This study examines the HCI program and its effectiveness among the students enrolled. The students, through their enrollment paperwork agree to participate in both a pre and post survey. These surveys allow HCI to evaluate the effectiveness of the program and illustrate through specific data points the students' knowledge-growth in terms of college access and financial aid. The data also demonstrates the students' changing attitudes towards school, course work, and perceived ability to attend college. The data and information provided by the study validates how a singular program can have vast effects on a population and their attitudes. The findings consider not only the effectiveness of the program but how introduction of similar programs for other underrepresented groups can be used to influence and prepare students for college and academic success.

Hokie BugFest: Taking the Creepy Out of the Crawley

Stephanie L. Blevins, *Virginia Polytechnic Institute and State University*

Hokie BugFest, an annual free event held at Virginia Tech each fall for youth and families, began in 2011 and has grown from 2,000 to over 7,000 attendees in 2015. Entomology faculty, staff, and graduate students partner with Extension, 4-H, and other entities to provide an educational experience to the public. The goal of hosting this outreach event is to showcase research, increase public awareness and appreciation of entomology, and develop better public perceptions of insects and other arthropods. During Hokie BugFest, efforts made to assist in reaching these goals include: graduate students and faculty showcasing research; local entities displaying their professions; hosting of special events like the 4-H Insect Collection Contest; exploring different species from the bug zoo; and allowing attendees to express their creativity through arts and crafts. Although many events like Hokie BugFest exist (Frazier, 2002; Hamm & Rayor, 2007; Hvenegaard, Delamere, Lemelin, Brager, & Auger, 2013), little research has been conducted to investigate how attendees perceive these events. Whether or not these events impact public attitudes toward insects and other arthropods is lacking in research as well (Pitt & Shockley, 2014). During the event, youth attendees are given the opportunity to receive a Junior Entomologist Certificate. In order to receive the certificate they are asked to fill out a survey containing general demographic information, a scavenger hunt, and targeted questions regarding their fear of insects and other arthropods. More recently, adult attendees were given the opportunity to complete a survey designed to capture their perceptions of insects and other arthropods. After collecting and analyzing the data, preliminary results show that attendance at Hokie Bugfest assists in positively impacting perceptions of attendees. This poster presentation will discuss the event itself, the results of the survey, and plans for future iterations of the event.

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Holistic Grading vs. Analytic Grading: Effective Assessment Methods in Low & High Stake Work

Courtney Simpkins & Lindsay Stinson, *Radford University*

Holistic grading offers more benefits in high stake writing assignments, comparable to the benefits offered by analytic grading in lower stakes writing. Using the two major writing essays in Radford University's Core 101 course, the Opposing Viewpoints Essay and the Academic Argument Essay, we examined four different sections' assignments as the students learned the writing process, genre, style, audience, and standard written English. All sections encouraged process writing in order to monitor student learning, encourage collaborative learning, and be able provide ongoing feedback. Students were asked to show and reflect on their writing process through writing

prompts, which facilitated class discussions, and later helped form their drafts. There were two drafts required to be submitted for one peer review and a conference before a final draft could be submitted to further encourage writing as a process through accountability. Two of the sections focused more on the writing process focusing on holistic grading in the final submitted essays, while two sections focused on the writing process through analytic grading in the assignments due leading up to the final submitted essay. The sections focusing on holistic grading, used a single holistic grading rubric; the sections focusing on a more analytic approach, used an analytic rubric as a guideline. The end results were intriguing as we were able to collaborate as a teaching team to weigh the benefits of each grading style, as well as the students' learning behaviors. We will discuss the pros and cons to both grading styles, how each affected students' learning the writing process and goals of Core 101, and how the final submitted graded works might help them forward their conversations into their academic careers.

How Does Writing Intensity Impact Students' Views of a Course?

Amanda Joyce, Murray State University

When evaluating student learning, many professors and students prefer multiple-choice tests for their perceived ease in grading, and taking, respectively (i.e., Walstad & Becker, 1994; Zeidner, 1987). However, many professors prefer essay evaluations for more thoroughly examining student thought processes and knowledge (Walstad & Becker, 1994). The purpose of this evaluation was to determine if students had a more positive course experience when given the opportunity to express themselves through essay writing. 166 students in 5 sections of 3 courses in a mid-sized Southeastern Psychology department completed end-of-semester evaluations in which they reported on various learning outcomes. Two course sections evaluated students primarily through multiple-choice exams, while the remaining 3 sections assigned students essay exams and assignments. Students' overall ratings of the essay courses ($mean = 4.03, SD = .06$) were higher than their ratings of the multiple-choice courses ($mean = 3.70, SD = .00; t(164) = 57.31, p < .0001$). Interestingly, students rated the challenge and engagement levels of essay courses ($mean = 4.33, SD = .29$) lower than multiple-choice courses ($mean = 4.70, SD = .28; t(164) = 7.87, p < .0001$). However, students rated the relevance of course material as higher in essay courses ($mean = 3.97, SD = .31$) than in multiple-choice courses ($mean = 3.75, SD = .35; t(164) = 4.01, p < .0001$). They also rated their instructor's interest in student learning as higher in essay courses ($mean = 4.47, SD = .25$) than in multiple-choice courses ($mean = 4.10, SD = .14; t(164) = 12.23, p < .0001$). Results imply that students' course experience can be improved, in some ways, with essay opportunities, which allow professors to give more detailed feedback to students. However, future research is needed to determine why challenge and engagement levels are negatively impacted by essay opportunities.

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Implementing Best Practices within the Classroom for Increasing Student Success and Persistence in First Generation and Underprepared College Students

Karen P. Woodring, *Harrisburg Area Community College*

No doubt about it: more people and more diverse populations are attending college than ever before. Faculty can use best practices to continue to teach their course content while engaging first generation students to adapt to college expectations, increased student responsibility, and increased student empowerment to succeed. It's not that these students don't belong; rather, they need to learn the academic system and how to flourish within it

Inclusive Classrooms: Setting the Stage

Darren Maczka and Martina Svyantek, *Virginia Tech*

We acknowledge that we cannot understand all possible experiences that any individual may bring to an environment. However, we can come to understand our own experiences and develop an awareness of how our experiences shape the way we interpret the world. By participating in the Inclusive Classrooms Workshop, participants will be encouraged to examine their own teaching and learning experiences in higher education, thereby fostering cross-disciplinary dialogues about classroom environments through discussions and activities meant to promote self-reflection and awareness.

Incorporating an Experiential Teaching Model on Effective Presentation Skills into Higher Education Curricula

Deborah Ferron, *Cardiology, Carilion Clinic*

Temujin Dinaram, *MInterventional Cardiology Fellowship, Virginia Tech Carilion School of Medicine*

Shari Whicker, *Virginia Tech Carilion School of Medicine*

Formal presentation is an integral element of practice in most professional fields. (Hafizoah & Fatimah, 2009; Khare, 2010.) Specifically, in Medicine, physicians are often expected to present at local, regional, and national levels. (Accreditation Council for Graduate Medical Education [ACGME], 2013) However, honing one's presentation skills is not an element addressed within their medical training. Therefore, our Cardiology fellowship program developed a curriculum that would allow our trainees learn and practice public speaking and communication skills using an experiential model (Kolb & Kolb, 2005). Effectiveness of an oral presentation depends on the ability of the speaker to communicate with the audience by gaining and retaining their attention, speaking clearly without distracting filler words, and utilizing a variety of proven public speaking tools (Collins, 2004). Our public speaking curriculum is designed to engage the fellows in previously allotted hourly sessions on a monthly basis. Each session consists of 15 to 30 minutes of didactics related to introducing and reviewing presentation skills and techniques. Time is also allotted for the participants to practice the techniques by delivery of a variety of impromptu and prepared speeches. Group discussion, feedback, and evaluation of the techniques and presentations are interwoven within the practice segment. Assignments are made at the end of each session to be reviewed in future sessions. Each fellow presentation is attended by a faculty evaluator. Immediately following the presentation the evaluator provides brief feedback designed to be positive and provide specific areas for improvement, reinforcement of speaking techniques, and encouragement for future presentations. Detailed evaluation becomes a part of the fellows' individual record. Because presentation skills are essential to most professional careers, this model could easily be adapted for use within other higher education fields as an approach to addressing a much needed topic often not typically addressed within the curricula.

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Increased Academic Support within Residence Halls on Campus

Jamia Danzy, *Mitchell College*

The purpose of this poster is to examine a redesigned residence hall at Mitchell College which integrates academic support staff within the traditional residence hall setting. The goal is to implement strategies to support students'

academic and social success while retaining them at the institution. This redesign responds to the 59% retention rate for students going from their first to second year of College. Forty percent of Mitchell College students have a documented learning disability. Learning specialists are employed to work with students with not only learning disabilities but also students with Asperger's and along the autism spectrum. Last April, students completed housing applications that included details about newly created living communities focused on community service, transfer students, academic majors, and academic support. Students were able to self-select the community that appealed to their interests. Ninety students self-selected to live in a residence hall with academic support. This residence hall has a classroom, computer lab, and study room. In addition to the traditional RA and RD staff members in the hall, an advisor, tutoring staff, health and wellness intern, and a learning specialist will be available in the building from 9am-7pm from Monday through Friday. The community will be assessed with a monthly focus group composed of students who live in the building. Preliminary results include students' view their involvement with the learning community has created more connections between them and staff and faculty on campus which will result in their retention at the College.

Increasing Student Engagement and Learning Using Semester Long Teams

Barbara Rule, *Marketing, Appalachian State University*

As part of Appalachian State University's inaugural Faculty Academy for Scholarly Teaching, a survey type course was redesigned with the goal of improving student engagement and learning. Techniques included in the course redesign include Threshold Concepts, 5 E Learning Cycle Model, Marketing Orientation Philosophy, and Team Testing. The redesign also employs creating semester long teams with a twist. The initial design includes assigned teams that must sit together in class, participate in all in-class activities together, hand in team assignments (case driven), as well as team based testing. This redesign has resulted in higher student course evaluations (from below departmental average to at or above departmental average), and a better understanding, by students, of the objectives of team based learning as evidenced by qualitative feedback from several semesters of classes taught with this design. Teams are designed based on information gathered on the first day of class along with information about individual majors. Teams are assigned at the beginning of the semester and teams sit together all semester. This method has shown to build rapport and trust which seems to translate into a better learning experience for the students and increased engagement and learning. It appears that students take away connections for their chosen careers from this experience as well. In addition, this format has been so successful that semester long teams are now utilized in all of my classes, from larger, upper level junior/senior classes to small freshman seminar format classes. This poster will offer a general overview of the course redesign as well as updates including current team methodology and student feedback regarding the team format.

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Increasing Success Rates in Online Courses within a Rural Georgia Setting : Promoting Student Engagement with Smartphone Technology

Caesar Perkowski & Cortney Grubbs, *Gordon State College*

This project presents specific, tangible ways that professors can improve the success rate of their hybrid and online courses in rural settings in Georgia, which the student populations are largely lower socio-economic and African-

American; and, the project will also add to the overall discussion of pedagogical theory, as it relates to online and hybrid education

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Integrated ICT approach in Teaching-Learning at Higher Education Institutes

Sanjeev Sonawane, Vaibhav Jadhav, Rajeev Ghode,
Savitribai Phule Pune University, Pune, India

The present research deals with the integrated ICT approach in teaching-learning at Higher Education Institutes. The researchers tried to explore an integrated ICT approach of teachers in class-room teaching, e-content creation, and use of applications for various academic purposes. Similarly, the researcher has analyzed how PG students use mobile technology for learning and academic submissions (assignments, tutorials, projects, presentations). The pedagogical and socio-economic forces that drive higher learning institutions to adopt ICTs in teaching and learning are -increased access to information; greater communication; synchronous and asynchronous learning; increased collaboration; cost-effectiveness; and pedagogical improvement (Sife et al., 2007; Nawaz & Kundi, 2010a). The researchers needed quantifiable data for the overall conclusion, and used Quantitative approach for this research study. Primary data has been collected by filling guided questionnaire from 630 teachers and 210 students from affiliated colleges under Pune University. The study reveals, teachers do not use ICTs to the extent in teaching. PG students do not use social and mobile technologies for responsive learning.

Introduction to Decision-Based Learning

Ken Plummer and Richard Swan, *Brigham Young University*

Blending theory with practical application in a meaningful way is an ongoing struggle in higher education. This session will introduce Decision-based Learning, an innovative instructional approach that brings theory and practice together in a that more efficiently transforms novices to experts. Decision-Based Learning is a pedagogy that directs learners to take a bank of related-problems through an expert-decision model where they are taught how to frame these problems as a preliminary step to solving them. As this process is repeated learners develop a more or less automated decision-based schema that can be used in future problem framing. Attendees will see a demonstration of this method and supporting software. They will also be guided through an activity to help them determine the degree to which decision-based learning is a good fit for their pedagogical objectives

Learning Across The Curriculum: How STEM became STEAM and everyone won.

Gillian Backus, *Northern Virginia Community College*

The pedagogical literature has shown that using a cross-disciplinary teaching approach promotes critical thinking and improved attitudes towards mathematics (Elliott, *et. al.*, 2010) and can increase science competency over science courses taught in the single-disciplinary model (Train and Gammon, 2012). Interdisciplinary teaching also encourages faculty collaboration. Unfortunately, cross-disciplinary collaborations are rare, especially between the STEM disciplines and the Humanities. At Northern Virginia Community College (NVCC), we developed an intentionally cross-disciplinary course combining science with arts (STEM to STEAM). The course, entitled “The Creative Mind: The Intersection of Art and Science” offered Honors students the opportunity to learn Science deeply through Art. Each student was matched with two faculty mentors – one from science and one from an art discipline. Working together, the faculty facilitated student learning in an area of the student’s choice. The course has run for two semesters, and has grown from an 8-week, 1 credit course to a 16-week 2-credit independent study. The course culminated in a formal Art Exhibit, where each student displayed or performed their art, presented a technical discourse on the scientific concepts underlying the art, and discussed the inspiration and process of developing the art itself. Faculty partners mentored each student’s progress, and ultimately graded them not only on their finished product, but also on their deepening scientific understanding, and artistic development, as recorded via student journals compiled on Blackboard, the . Using a unique on-line assessment tool, the Student Assessment of Learning Gains (SALG), students and faculty reported their own growth and learning as the course progressed. Quantitative and as well as anecdotal evidence strongly suggested cross-disciplinary learning promoted deeper, more meaningful student-centered learning gains in both science and art, as well as significant improvements in cross-departmental faculty collaboration.

“Lessons Learned from CIDER Certificate Programs: A Focus on Teaching Large Courses in Agricultural and Applied Economics”

Mary A. Marchant, Kim Morgan, Gustavo Ferreira, Sarah Asebedo and Rose Jeter
Virginia Tech

Marchant, Morgan, Ferreira and Asebedo, faculty members in Virginia Tech’s (VT) Department of Agricultural and Applied Economics (AAEC), each completed teaching excellence certificate programs through VT’s Center for Instructional Development and Educational Research (CIDER). Jeter, AAEC Communications Manager and Instructor, holds a Master’s degree in Education and has assisted in AAEC curriculum development and evaluation. Marchant completed CIDER’s “Large Class Teaching Certificate Program,” while Morgan, Ferreira and Asebedo completed CIDER’s “New Faculty/Early Career Teaching Certificate Program.” All teach large AAEC classes, which include students from a variety of majors. Thus, key challenges include teaching logistics for large student numbers, as well as maintaining student interest in course content for non-majors. This poster provides highlights of key lessons learned through these CIDER teaching certificate programs—both general lessons on course design, lesson plans, evaluation and student engagement, as well as specific large class management strategies.

Leveraging Local Cases Studies and Field Trips in the Class Curriculum

Erin A. Hopkins, *Virginia Tech*

Industry involvement is influencing higher education pedagogy (Callanan and McCarthy, 2003). Real estate students at institutions of higher education are no exception as they believe that more practical fieldwork should be introduced into the curriculum (Callanan and McCarthy, 2003). This study examines the effectiveness of adding a local case study and associated field trip to the curriculum; namely a local sustainable building project to an applied real estate development course. Utilizing case studies in the classroom can provide students with an excellent opportunity to connect the dots between classroom theory and practical fieldwork. Furthermore, utilizing progressive education techniques by having students visit the building project after reading and answering questions about the case can further contribute to their learning.

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Mentoring: Humanizing research

Ester Sesmero, *University of Maryland Baltimore County*

Have you ever been treated like a number, an object or a producing machine?. Probably most of us have had this experience at some point and I do not think that anybody would say they liked it. We all like to be valued, appreciated, supported and treated according to our dignity as human beings. If this is the case, why is it that in some undergraduate research opportunities, especially in science, students are still being treated as numbers, objects or producing machines?. We worked in a research team composed of three students, two of them senior undergraduate students and the third one a high school student, using as mentoring motto “I believe in you, you are going to be able to do it and I am here to help you” and we confirmed that as stated by Julio Ramirez in his article about mentorship and supported by literature “our student mentees appear to attain higher levels of personal well-being, confidence, and a belief in their own abilities to succeed”. Some of the strategies that were used in the mentoring process were: 1) set clear expectations and clear goals, 2) trust the potential of your students to learn, 3) encourage fluent, open and honest student – mentor communication, 4) always have a positive attitude. I firmly believe that the more human our mentoring style is, the more motivated and empowered are students are, and the more progress they make in their research. It is a win-win, for both mentor and mentee, they are happier, growing as persons and as scientific researchers, and as a result they perform more and better research.

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Metacognitive Awareness and Academic Achievement in Genetics through Problem Based Learning

B.Ranjanie & V.Rajeswari, *Mother Teresa Women's University, Kodaikanal. TamilNadu India*

The study aims to determine the metacognitive awareness and academic achievement in genetics among the eleventh standard students through the Problem Based Learning (PBL) approach. The Sample for the study (n=106) were selected in three schools in Chennai through purposive cluster sampling technique. Single group pre-post test comparison design was used to collect the data using the Metacognitive awareness Inventory (MAI) and achievement test in genetics constructed by the researcher. Appropriate statistical analysis of the collected data reveal that PBL was more effective in developing metacognitive awareness among the students and enhanced the students to reveal their academic potential in learning genetics.

Older Adults & Use of Computer Technology: Implications Practice and Teaching Gerontology in Higher Education

Etty Vandsburger & Rebecca Scheckler, *Radford University*

Living in geographically isolated areas often means poor access to health care; lack of social and educational activities and opportunities; and, lack of public transportation needed for older adults to travel to medical appointments, shopping, activities, and to visit family. Research suggests that technology can slow the loss of sensory and motor skills experienced in the aging process. Existing research has not explored the benefits of computer use on isolated rural populations. This study explored how computer technology contributes to the older

adults' living in rural areas. The conceptual framework informing this research builds on the developmental and humanistic theories.

Perspectives of Science Educators and Science Supervisors for Preparing Future Science Teachers

Tracy Walker, Trina Spencer, Leslie Whiteman, *Virginia State University*

The Knowledge, Skills, and Dispositions (KSD) Survey was developed, field tested, and administered as part of a National Science Foundation Broadening Participation grant. The grant's aim is to increase the number of pre-service elementary teachers who are more confident and knowledgeable in teaching elementary science. The survey, which contains items linked to the university's education unit's conceptual framework, was developed based on three domains necessary to become a reflective practitioner: *knowledge, skills, and dispositions*. The specific intent of the survey was to measure the beliefs of K-12 science supervisors and science educators under the three domains in attempt to align the unit's conceptual framework to current practice. Results indicated alignment between the Education unit's current conceptual framework, expectations of science educators and K-12 science supervisors in Virginia. In addition, results found the unit's framework to be comprehensive and well-aligned to current beliefs and practices.

Planning Field Trips for Engineering Students to Food Manufacturing Plants

Olga Kovalchuk, Hanna Boretska, *Kaduna Polytechnic*

Students majoring in Food Technology and Engineering find their jobs in multinational food processing companies and fulfill important positions such as quality control, production management, and new product development. It is important to demonstrate them a link between the classroom and the real world as well as facilitate transfer of the classroom experience into production context. Field trips to food production plants (e.g. bread-baking plants, breweries, preserving plants, confectioneries etc.) are considered to be a valuable learning tool. The research emphasizes their educational, professional and social value. Conducted in L2, field trips are quite challenging both for teachers and students. The research examines possible goals and objectives which need to be clearly defined from the very beginning. The investigation also addresses the factors that must be taken into account when planning a field trip as well as the development of preliminary activities so that students could get most of it.

Planning Into Excellence

Cortney Martin

In this "Planning Into Excellence," I explained what Excellence means, how it relates to Knowledge, Principle and Ignorance. This also shows how the major excellent people's characters demonstrate Excellence as they encounter life in the perspective of Science. The final theme is to show how all can excel and come out of their own world's drama. The conceptually derived relationship of Excellence gives clue and meaning to life. It is explained in the way one can understand from life's point of view. It is not a mathematically derived formula rather it is a conceptual relationship showing how Excellence is related to Knowledge, Principle and Ignorance. From now onwards, Excellence is denoted as E and it has a direct companionship with "Brightness of mind" also called "Illumination," denoted as e. Professional's excellence can also be assessed and assists Professionals to pursue to their desired goal through networking. The ultimate goal is for people to excel in all areas of life through giving a "package of Excellence." These concepts suite my life, they should do better for others, too. My advice is practice it.

Preparing Future Faculty to be Effective Educators

Ellen K. Payne, *Department of Health and Human Performance, Radford University*
David C. Berry, *Department of Kinesiology, Saginaw Valley State University*

A terminal degree (PhD or EdD) helped solidify the athletic training educators' (ATE) role in academia, assuming the rights and responsibilities necessary for tenure/promotion and to affect policy. However, the degree itself does not necessarily guarantee a complete understanding of pedagogy, an integral component in assuring effective knowledge and skill delivery. Traditionally, graduate students prepare to become faculty members in higher education through the apprenticeship model. Higher education is the only educational setting where classroom instructors are not required to possess any formal training in pedagogy or assessment. Thus, graduate students are not always fully prepared for their future roles as educators. After examining the related literature, six themes emerge: (a) developing student-educator communication, (b) modeling professionalism, (c) facilitating critical thinking, (d) developing professional mentors, (e) reflecting on teaching practice, and (f) promoting teaching opportunities. In response to calls for better preparation of future faculty members in general, some graduate programs have adopted faculty preparation programs in an effort to make their graduates more marketable and better prepared for roles in academia. These programs focus on pedagogy and classroom teaching, engaging in university and professional service, and acquiring skills beyond research. More recently, ATEs must now also be prepared to meet the need for understanding and engaging in interprofessional education initiatives to allow students to learn how to collaborate effectively. More emphasis needs to be placed on pedagogy and on being effective educators, role models, and leaders to the next generation of athletic trainers during graduate education programs. Continued investigation of the recommendations to help prepare future ATEs should be the cornerstone in the development of any educators.

Preparing future leaders: Creating leadership opportunities for doctoral students

Ryan Cook, Katie Biddle, Claudia Howell, & Laura Welfare, *Virginia Tech*

At almost all universities, faculty members are called to be leaders at their universities and in their communities. Similarly, junior faculty members are asked to participate in a variety of service and leadership positions and this participation may also be a part of their tenure and promotion review process. Thus, as future faculty members, it is critical that doctoral students gain experience serving in leadership positions in order to be prepared for the challenges associated with these service roles. Many doctoral students; however, experience lack of opportunity or other barriers that prevent serving in leadership positions. Through collaboration, faculty members who work with doctoral students can encourage participation in leadership roles as well as create opportunities for them. An experienced guide, such as a faculty member, can help students navigate the service and leadership opportunities in their profession so students can choose opportunities that best fit their goals and resources. In Counselor Education, this is done through advising and mentorship as well as integration of leadership opportunities into course curriculum. This poster will explore ways faculty members can encourage doctoral student participation in leadership roles and identify how faculty members can integrate leadership and service opportunities into their classroom content. Additionally, doctoral students who have served in a variety of leadership roles including university committees, community organizations, and professional associations will share reflections. These doctoral students will offer examples of the ways in which faculty members facilitated leadership opportunities as well as highlight how involvement in these opportunities has been critical to their professional development and career preparedness.

Professional Self Awareness: Reflection-in-Action using Digital Technology

Catherine Caldwell, *Illini Bluffs Community Unit School District #327*
Heljä Antola Crowe & Beto Davison-Aviles, *Bradley University*

Awareness and insights into our own professional behavior are a necessary part of effective teaching. Using digital pictures and videos allows for candid captures of interactions with others in the classroom. Used as self-supervisory tools these images take on new and purposeful meanings. Seeing ourselves in moments when we are unaware of our professional demeanor, pictures or videos become a powerful tool for professional development. An evidence-based, reflective *Insight into Interactions* workshop was developed based on observations made in university and elementary classrooms with teacher candidates. The *Insight to Interactions* pedagogy is anchored in Kolb's (1985) experiential learning cycle where a concrete learning experience is followed by reflective practice (Schön, 1987) and

observation, which leads to abstract conceptualization and active experimentation where learners are planning or trying out what was learned in the experience and reflecting on it. This professional development session created by an academic peer focused on analyzing both lived experiences and candid pictures through the eyes of professionals and children. We found that self-awareness enlarged the public space of the Johari window (Halpern, 2009) within ourselves, and observed it in our teacher candidates as well as in discussions with classroom teachers. Trusting the process gave unexpectedly positive results in learning and pointed to paths otherwise unseen. The serendipitous coming together of professionals allowed for perspectives to be developed which used both experiential and disciplinary experiences previously hidden in the academic context we inhabited. Intentionality in professional articulation reaps both a joyful sharing but a deep learning within groups of colleagues. Both children and community cultures benefit from such positive action because we reflect on how all of us regardless of our roles in the learning become a *success identity* that we can use as stepping stones in our future professional growth.

Promoting Counselor Advocacy: A Research Case Study on Sex Trafficking

Brittannie Moroz & Jessica Skean, *Liberty University*

Advocacy within the professional counseling field is a growing movement that continues to require active and intentional engagement. Graduate counseling programs have been charged by CACREP accreditation standards to infuse advocacy within their program and class learning objectives. Further, one theme of the upcoming American Counseling Association (ACA) 2016 conference is “Enhancing Counselor Community Engagement through Professional Advocacy.” In response to these expectations, presenters will discuss the advocacy topic they identified and are researching: sex trafficking survivors (STS) and their obstacles to rehabilitation. Presenters will also discuss the impact of taking on this advocacy research project and how it fits into their professional goals both in the classroom and in their future careers within the field of professional counseling. Finally, the presenters will provide recommendations for incorporating advocacy for STS within graduate counseling curriculum and professional counseling competence requirements.

Re-Imagining the Blog: Evolving Case Studies Using the Blog as a Scholarly Space and Learning Tool

Rachel Constance, *Walsh University*

This study examines the use of blogs as a tool for training in scholarly research and informing in-class discussion sessions. It focuses on three case studies taking place over three years from an Honors History of Science course. Each case study is built from experience gained from the previous attempt, therefore the course utilizes student blogs in slightly different ways each year and evaluates them on different scales with different rubrics. In doing so, it demonstrates the most and least effective practices in utilizing and evaluating the blog as a learning tool for the course. The question explored by this study is, can the blog be used to teach undergraduate students effective writing and research skills outside of their major, and can that research inform the classroom discussion experience? Over three semesters, a blog assignment was given to three different groups of students, all freshman honors students, mostly from science majors, none of whom were history majors. All students had experience with computers, and were familiar with blogging as a tool. The students were required to engage in independent research on a particular historical question posed to the class several times over the course of the semester, publish their findings on the course blog, then read and respond to the findings of their peers. The students then discussed their findings, and those of their peers, in class. Over three years, this methodology was modified based on student feedback. By the third year, a majority of students identified the blogs as useful in improving their understanding of historical methodology, their writing skills, and their critical thinking skills.

REAL Writing, REAL Learning: Information Literacy and Situated Writing Projects

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

While the traditional research paper has a long history as a site of information literacy skills development for undergraduate students, the genre has come under increasing criticism. Critics point most often to the highly

decontextualized nature of the assignment. Not only are students asked to “imagine” an audience other than their instructor (who is, in truth, their only actual audience), but they are also tasked with writing in an argumentative form that exists almost nowhere outside of the classroom. The artificiality of the genre is only heightened by the fact that, in most cases, even the students’ research-seeking behavior is highly prescribed and constrained as they are presented with strict guidelines about the number, type, and origins of their information sources. In other words, the traditional research paper assignment typically bears little resemblance to the sorts of inquiry and argument that students already practice or that they will be asked to practice beyond the classroom. In order to gain a deeper perspective on how this might affect students’ research and writing behaviors, the researchers developed a curriculum for an undergraduate, general education writing course that featured two parallel research assignments: the traditional research essay and a REAL (Rhetorical Exigence and Active Learning) project, in which groups of students worked together to describe a compelling “real-world” problem or issue in their own lives, investigate the issue through appropriate avenues of research, and create a text designed to spark some type of resolution or change. At the end of the course, the researchers analyzed students’ process journals and conducted focus groups to further investigate student reaction to the traditional and REAL research projects. We will share our analysis of this data, exploring what it has to tell us about crafting engaging, meaningful assignments that get students truly invested in the research process.

Redesigning Higher Education Marketing – Frameworks and Tools to Improve Candidate Engagement and Acquisition by Universities

Soumik Ganguly, *QS Quacquarelli Symonds, London*

This paper attempts to provide scientifically derived methods on practicing higher education marketing by studying current marketing methods, advertising classifications, integrated marketing attributes, multi-channel attribution, and by using Bayes Theorem to show the probability of different marketing channels’ contribution towards Results or ROI. The model suggested here, after analysing marketing design and the attribution of different factors in marketing-returns, provides important cues to measure and build marketing campaigns that yield significantly better user acquisition results as compared to current practices. The User Acquisition formula deduced in this paper, for super-linear marketing returns and branding, is based on the way Buyer2.0 (or the new generation buyer) engages with brands and the way such engagement is factored into acquisition of the buyer by an Institution. The paper provides insights into all components of Higher education marketing, and provides answers to problems in return-on-marketing-expenditure that exists across all institutions and their marketing teams.

Revising an Iraqi Course on Debate and Critical Thinking: A Collaborative Effort between Iraqi and US Universities

Sara Olin Zimmerman & Mona Abinader, *Appalachian State University*
Fatimah Hasan Al Bajalani, *English Language Teaching and Curriculum Design, Iraq*

A collaborative effort between the Ministry of Higher Education and Scientific Research and Appalachian State University began in 2008 to reform higher education in six universities in northern Iraq. This collaboration was renewed in 2015 through a grant from the International Research and Exchanges Board (IREX), an international nonprofit organization providing thoughtful leadership and innovative change globally. This recent grant supported Iraqi faculty and administrators to strengthen university curriculum, enhance and update teaching methods and to implement technology. Specifically, Appalachian State worked with Salahaddin University-Erbil to revise a course on critical thinking, debate, public speaking, and respect for different points of view. This work involved using technology in creative ways to deliver both professional development and coursework to undergraduate students. This session will address the challenges of curriculum revision and course delivery along with examples of the technology tools used.

Roadmap for Accessible Online Course Development in Higher Education

Larry Alenda Cox II, Zeynep Ondin, & Zerrin Ondin, *Virginia Tech*

Guidelines for making online learning accessible are available through different sources and they offer good step-by-step guideline for creating accessible online learning environment. Nevertheless, in real life practices there is confusion over whose responsibility is this and what should be the effective task allocation. Considering the different stakeholders participating designing, developing, and delivering the online courses in higher education the problem becomes more complicated. The current study aims to develop a framework for higher education institutions to effectively design and develop inclusive online courses. In order to achieve this end, real-life experiences of instructors, instructional designers, and managers were investigated and problems they have faced in terms of creating accessible learning environment were analyzed. While employing a qualitative inquiry approach, the current study aims to reveal challenges that higher education practitioners are facing and provide suggestions for an effective organizational structure.

Simplicity of Function: The Motivation Equation©

Margaret Sorrell Trueman and Jerry Dale Jones *Fayetteville State University*

“Motivation cannot be done to someone, it cannot be controlled or commanded into being; it is a complex human dynamic that, at best, can aim to understand and work to inspire” (Dawn, 2001, p. 1). A plethora of research, descriptions and interventions coupled with much pontification abounds on the subject of motivation inclusive of its components, variables that enhance or hinder its effect and strategies to address those variables. One can readily get lost in the myriad of information when, in essence, what is needed is a rediscovery of the missing link; the common sense view of what we expect and what we value in the logarithm of motivation. This poster presents the Motivation Equation©, a simplified flowchart that addresses the key components of motivation inclusive of expectancy-value and intrinsic and extrinsic rewards leading to achievement behaviors.

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Simulation-Based Instruction for Software Courses: A pedagogical Technique to increase Learner to Content Engagement

Samuel Jennings & West Bowers, *Radford University*

As college students prepare to use complex software programs in the workplace simulated training can be utilized to increase engagement and improve learning outcomes for learners in courses that require mastery of computer software. Research suggests that increasing learner to content engagement with simulated training can improve learning outcomes (Curtin, L., Finn, L., Czosnowski, Q., Whitman, C., & Cawley, M., 2011). Simulation is a technique used to provide authentic, immersive, on demand practice that can also guide learners towards specific learning outcomes (Lateef, 2010). Simulated training can also be used to incorporate the scaffolding within chunks of instruction or within the overall instructional process (Vygotsky, L. 1978). Simulated environments allow learners to experiment with a given scenario and actually fail or make a mistake while in a safe practice environment. Programs like Adobe Captivate allow for the creation of both a view it and try it mode. The view it mode provides step-by-step instructor guided instruction and modeling. In the try it mode learners are provided with an authentic interface that allows full interactivity based on the learning target objective demonstrated in the view it mode simulation. The try it mode can be designed to utilize guided prompts and immediate feedback geared towards very specific learning outcomes. Guided prompts can also be removed from the try it mode making it more challenging for learners and allowing for scaffolding to take place. Simulation development tools can also enable

multimodal accessibility with HTML5 output allowing learners to access the simulated training from virtually any device including mobile phones.

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Supporting our Internationally Educated Academic Colleagues

Patricia C. Robinson & Valerie Scovill, *George Brown College*

In our increasingly multicultural institutions and global societies, our students can only benefit from more opportunities to work with academics from around the world. However, there are challenges faced by internationally educated academics in finding and maintaining employment in the higher education sector. They often struggle with applying pedagogical practices which are very different from the way they learned and taught, and from challenges in communicating in the professional academic setting and navigating the academic employment process. And hiring managers, chairs and academic supervisors often are not aware of their issues or of how to best support them in their classroom practices and employment goals. In this session, designed for internationally educated teachers, hiring managers, chairs and professors, we can share experiences and challenges faced by all areas of the academic hiring process, and strategies designed to more fully support and integrate our colleagues from around the world into the North American academic environment.

The Educational Impact of Working in a Statistical Collaboration Laboratory

Eric A. Vance, Thomas Metzger, & Tonya Pruitt, *Virginia Tech*

Since 2008, Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis (LISA) has sought to provide meaningful, impactful statistical analysis and collaboration to researchers across the university. To achieve this, LISA focuses on training statistics graduate students to become effective interdisciplinary collaborators (Vance, 2012). Such training has resulted in many positive impacts for researchers at Virginia Tech (Vance, Casement, and Pruitt, 2015). This study determines how statistics graduate students have been impacted by their training and experience in LISA.

Current and former LISA collaborators (n=123) were surveyed to assess the impact LISA had on their technical skills (including theory, methods, computing, application, and data analysis); non-technical skills (including communication, collaboration, teamwork, and project management); and how their work as statistical collaborators affected their job acquisition, performance, success, and advancement.

An overwhelming majority of students surveyed described their work in LISA as having had a positive impact on their education at Virginia Tech in acquiring technical (94%) and non-technical (95%) statistics skills. Students believed experience in LISA enhanced classroom topics as well as touched upon ideas not seen in the standard curriculum. They also benefited from work with diverse research topics from across the university in regards to communication and other necessary job skills. Four-fifths (80%) of these students reported that these skills directly led them to obtain jobs and succeed in them.

Overall, the results from this study can be used to augment educational practices in statistics at Virginia Tech and at other universities around the world, especially those that want to create statistical collaboration laboratories. Work as a statistical collaborator will become increasingly important and sought after as data and rigorous analysis become more influential in research and innovation (Vance, 2015). Most students recognize this importance, and value their collaboration experience as an important part of a comprehensive education in statistics.

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The Effects of the LCT Model in a Large SLL Course

Ming Li, *Virginia Tech*

Peng Lu, *Sias International University*

The Learner-Centered Teaching (LCT) model works to correct the traditional lecture class because "the one who does the work does the learning" (Doyle, 2008). We examined how the LCT model could be used in a large Second Language Learning (SLL) course in a central China university. We used the questionnaire in the MUSICSM Model of Academic Motivation Inventory (Jones, 2015) to identify students' perceptions upon their class. We hypothesized that students would perceive a sense of empowerment, interest, and caring in the LCT model. Group work and rubrics were implemented throughout the new model. The participants were 44 sophomores enrolled in a College English course. We observed that participants had a significant improvement in perception of all the five components, empowerment, usefulness, success, interest, and caring in post-test scores ($p < 0.01$). There was also a statistically significant improvement in their scores ($p < 0.01$). We suggested the two strategies, group work and the rubrics, used in the LCT model that worked well for the students' second language learning. This difference between the final results and the hypothesis demonstrates that the LCT model is welcomed by undergraduates and the LCT class is more interesting than the traditional lecture class. There is more space for exploration of the LCT model in the large SLL course.

The Potential Impact of Online/Distance Education for Special Education Students in Higher Education: A Meta-Analytic Investigation

Matthew J. Erickson, *Slippery Rock University*

Karen H. Larwin, *Youngstown 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 enrolled in post-secondary training programs including colleges and universities. Meta-analysis is the selected methodology as it provides the ability to determine the significance of multiple variables against an outcome variable, specifically student achievement for the current investigation. Collegiate students constitute a much more diverse population today. Inequalities in higher education participation are evident and may include differences in terms of age, gender, ethnicity, language, social class, health/disability, learning difficulties, and family structure (Altbach, Reisberg and Rumbley, 2009). As many turn to online/distance education to overcome various challenges, new barriers arise for people with disabilities who are enrolled in colleges and universities. Specifically, students with disabilities are among the least considered in the educational context of online learning, making the accessibility and success of distance learning programs an important topic to address (Corrigan, and McCarter, 2004). The current investigation will present the impact of online learning on student achievement, relative to face-to-face instruction as well as relative to non-online/distance learning for students with disabilities. Additionally, the impact of different types of moderators (how the online instruction is delivered, the type of disability, hybrid delivery versus exclusive delivery, et cetera) will also be presented.

Accurate and Broadly Descriptive

Jenny Heuer & Tempest Holbrook, *Mercer University*

Online learning, although not a new concept, continues to be an ever-present conversation in academia. Today more students are enrolling in online learning than the traditional classroom environment. However, the challenge is a high attrition rate and keeping students enrolled. Despite the attrition rate there are indications that online learning is here to stay. There are mixed reviews surrounding whether students and teachers prefer the online or traditional classroom setting. The online learning environment provides many advantages, such as flexibility and cost effectiveness. Also, students who may not be comfortable in a traditional classroom may feel more at ease in an online environment. However, there are uncertainties surrounding engagement of students who are left with a feeling of disconnection due to the lack of face time with students and teachers. Issues also surround the use of technology and navigating items such as discussion boards. This poster presentation focuses on the advantages and disadvantages of online learning.

The Unfolding Case Study: Opportunity for Decision Making in the Classroom

Sharon Elkins, *Centra College of Nursing*

“An Unfolding Case Study” (UCS) is a teaching strategy that allows students to actively participate in the classroom and make decisions as if the students are performing in their professional role. An UCS consists of a real life based scenario, which evolves and changes as the scenario progresses. The UCS was used in an undergraduate nursing pharmacology course. The student learning outcomes for the class session, medications for diabetes, was the basis for the development of this Case Study. A graded worksheet on the diabetes medication content, which must be completed prior to the class session, was assigned. This allows the students the opportunity to apply previous learning to the actual scenario. The need to include the discussion of various medications due to the changing health status of the patient in the scenario worked well as an UCS, which evolved over time. Students in groups of four to five discussed and made decisions on a section of the case study, and then each group contributed to a total class discussion of that section before unfolding the case study. The instructor provided guidance and clarification to ensure correct information and connect theory to practice. By implementing this best practice teaching method, there was a six percent increase in test scores on this content.

Traditional versus Flipped Classrooms: Comparing Student Learning Outcomes

Katherine Shannon, *Michigan State University*
Eileen O'Brien, *University of Maryland, Baltimore County*
Mary Shuttlesworth, *Mount Aloysius College*

Online course content may address shortcomings of traditional face-to-face teaching in higher education, including staffing availability, need for application of concepts, and accommodation of student needs (e.g., work schedules, long commutes). A “flipped classroom,” where students first interact with material online and then meet face-to-face, represents one solution to these shortcomings (Berrett, 2012). If students in flipped classrooms master course content as well as students in traditional classrooms, higher education institutions may be more likely to adopt the flipped model. The current study sought to compare undergraduate student performance in traditional and flipped sections of a psychology course. The traditional section ($n = 90$) included weekly hour-long lectures, weekly thought papers, textbook chapter readings, class discussions, and an in-class final exam. The flipped section ($n = 54$) used online content including an e-text, video clips, quizzes, online exams, discussion board postings, 6 face-to-face class sessions and an in-class final exam. Across both sections, we collected student GPA, a pre-test on course concepts and scores from a common final exam. There was significant overall improvement between pre-test and final exam scores, $F(1, 142) = 99.33, p < .001$, and this did not significantly differ between sections. Differences in mean final exam scores between sections were examined with pre-test scores and GPA as covariates. At average levels of pre-test scores, there were no significant differences in mean final exam scores between traditional ($M=79.06$) and flipped sections ($M=76.83$). At average levels of pre-test scores and GPA, there were no significant differences in

mean final exam scores between traditional (M=79.15) and flipped sections (M=76.95). There is no statistical evidence to conclude that there are differences in the extent of material mastered between traditional and flipped sections of this particular course, supporting utility of the flipped classroom model.

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Undergraduate Students Attitude towards Service Education and Independent learning in Africa.

Victor Uwaifo & Ivonne Uwaifo, *Vocational and Technical Education, Nigeria*

E- Service distance education systems are being used along with the regular education systems in order to respond to the demand for higher education. Technological advancements, interactive learning possibilities are forcing the regular universities to make more use of the E- Service distance education systems and technologies. Most of these E- Service distance learning universities create the opportunity for their students to be independent learners and learners who can organize their learning processes by using E- Service distance education systems and technologies. It is thought that students who can learn on their own and who can organize their learning processes will be more likely to use lifelong learning opportunities. In Africa where there is a great demand for higher education, the use of E- Service distance education systems in regular universities is not common. These regular universities can make use of the E- Service distance education systems and technologies in certain lectures and cope with the pressure of the increasing number of students. Successful implementation of the E- Service distance education applications in regular universities will affect the African education system in a positive way. In this study, the views of the undergraduate students at regular universities on the use of E- Service distance education systems and independent learning will be determined. Based on the findings, recommendations will be made on the attitude of these students towards E- service education and independent learning.

Understanding the Perceptions of Leaders and Administrators within Colleges of Agriculture to Improve the Recruitment and Retention of Underrepresented Students

M. Antonio Silas, *Virginia Tech*

There is a need for more diversity within the field of agriculture. Esters and Bowens (2004) noted that by 2014, non-Hispanic whites were expected to comprise only 25% of the population. In comparison to the consistently changing demographics of the United States, there is very little diversity represented within agriculture. Diversity is important for agricultural companies and entities so that they can maintain a steady stream of knowledgeable employees to meet the growing demands of the field (Esters & Bowen, 2004). Despite the fact that this lack of diversity has been a prevalent issue for quite a while, there have not been effective solutions utilized to correct the issue. Leaders and administrators within colleges of agriculture are noticeably absent within the narrative regarding underrepresented students in agriculture. Scholars note that it is important for university leadership to be proactive in their efforts to make college climates appealing and comfortable for underrepresented students (Hurtado, Alvarez, Guillermo-Wann, Cuellar, & Arellano, 2012). The researcher interviewed leaders and administrators within a college of agriculture located in the South. Qualitative interviews were utilized to obtain a better understanding regarding the perceptions of leadership regarding the barriers that underrepresented students face and the steps that are taken to alleviate them. The interviews will be coded and analyzed to document trends within the data. The findings from this research will help to promote a meaningful dialogue regarding strategies for the recruitment and retention of minorities in agricultural education. This will add to the body of knowledge that colleges of agriculture can use they work towards including underrepresented populations in their ranks moving forward. Future studies should provide substantial suggestions and strategies for recruiting and retaining minorities in agriculture.

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Universities and Community College Collaborate on Renewable Energy Assessment Curriculum

V. William DeLuca and Elizabeth Nichols, *North Carolina State University*

In rural eastern North Carolina, markets for renewable energy are rapidly developing in the bioenergy and woody biomass sector, solar and solar thermal energy, and wind energy generation. At North Carolina State University (NCSU), Elizabeth City State University (ECSU), a historically black university (HBU), and Cape Fear Community College (CFCC), a comprehensive curriculum to develop skills to assess lands and facilities for renewable energy technologies was developed and implemented providing a minor and certificate program to science and non-science majors. Six courses were developed which exist both as online, distance education courses (NCSU) and as face to face courses at ECSU and CFCC. Each institution linked their renewable energy curriculum websites to a central web portal site to highlight the collaborative project and ad describe which courses are available and by what delivery platform at each institution. Descriptions of those variables contributing to the success and those that impeded progress toward achieving the project goals will be reported, and recommendations on how to sustain and improve programmatic and educational accomplishments will be discussed.

Using Fictional Characters to Enhance Student Learning, Material Engagement, and Recall

Madeline Haftel, Kari Brossard Stoos, *Ithaca College*

The implementation of fictional characters through case studies, when teaching challenging course material, has proven an effective learning tool. Previous research by Boston University's Center for Excellence and Innovation in Teaching (2015), demonstrated that case studies are excellent educational tools that "develop [student] skills in: problem solving, analytical tools, . . . decision making in complex situations, coping with ambiguities". In our approach, characters are given specific attributes, which personalizes the material and creates character association when recalling precise details pertaining to course information. To organize this, several characters were developed per chapter of material. We then created specific character elements (such as aesthetics and personality), provided students with pictures or videos of them, and later, had the student explain the way they perceived the character to ensure their full understanding. Specifically, these characters were used to understand the pathophysiology, symptoms, and treatment of disease. Some tutees chose to engage in the use of characters, and others, not. Each group was analyzed qualitatively and we found that the students who chose to explore the use of characters remembered details more specifically and performed better on exams than the students who did not. Not only was the use of character simulation in case studies a pedagogically effective tool, but it proved more engaging for student learning due to its utilization of multiple learning methods through one approach. Students also reported increased enjoyment, making them more likely to stay alert during lessons. This application can prove both effective for any learner and is applicable for any subject matter and any learner whether they be visual, auditory, or kinesthetic learners. No matter what the material, this pragmatic tool can function to create increased learning.

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Using Mindfulness Techniques in the Classroom

Doyle, K. & Haynes, J. *Counselor Education, Virginia Tech*

Mindfulness is an intentional practice that can nurture respect, increase awareness, and assist in enhancing student wellness. Mindfulness is a commonly utilized tool both in Counselor Education, and counseling practices. This presentation will define mindfulness; discuss the benefits of utilizing mindfulness as a pedagogical strategy to frame conversations and class discussion surrounding controversial topics, and highlight potential implementation strategies for teachers in common classroom settings. Presenters will discuss relevant findings of mindfulness utilization in the classroom and will address concerns that professors/faculty members may have in broaching the issues that relate to mindfulness and use as a teaching intervention.

Using Pop Culture and Mass Media to Engage Students in Critical Reading, Thinking, and Discussion

Erik Nicholas, *Virginia Tech*

The use of pop culture and mass media in the college setting is becoming increasingly important in the 21st century. Students entering into college are more likely to be interested in the course if the ideas discussed and the readings assigned are modern and interactive. Using interactive articles and including mass media discussions with the readings allows students to make definitive connections to their lives and to the class. The value of connections is shown through examples used in the college composition classroom. Not only were students in these courses engaged in the reading, but evidence shows that they were also more engaged in the class discussion. The engagement in class discussion doesn't just stem from the use of pop culture and mass media in the classroom, but also stems from asking the appropriate questions to the students to begin the discussion. Moreover, the connections made with the readings and the media used allowed students to engage in a critical reading and discussion. In other words, using modern readings and mass media fostered critical thinking, reading, and discussion. These media can be songs, news clips, or even YouTube videos. Based on personal experience, students are more engaged in the class when the ideas are easily relatable to their lives. When students can relate the class to their lives and are able to think critically and respond critically, there is more take-away from the course and more transferability to other courses and life after college.

“I’ll Meet You in the HUB!”

Cultivating Community, Collaboration, and Critical Thinking in the Higher-Education Hybrid Classroom

Theresa Henderson, *Indiana University of Pennsylvania*

This hybrid course model demonstrates the cultivation of community, collaboration, and critical thinking in a graduate and undergraduate classroom. Understanding the delicate balance of technology and pedagogical practice is vital for educators in creating an online atmosphere that impacts and supports student engagement, performance, and satisfaction during face-to-face class time. This poster presentation will display the online platform (D2L) referred to as the “HUB” and related tools (wikis, reflective practice, discussion boards, etc.) that enrich the classroom community and foster higher order thinking and practice. Blended learning and hybrid courses have shown to be more effective than fully face-to-face or exclusive online learning in terms time and place flexibility, increase and effective peer interactions and discussion skills, and developing communities of practice (Keengwe & Kang, 2013). This course model aims to contribute to the teacher education preparation for blended learning initiatives.

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“Sidewalk Labs”: Using the Campus as a Classroom to Engage Students and Teach Transferable Skills

Denise Wilkinson, *Mathematics, Virginia Wesleyan College*

Transferable skills – those skills that will be valuable to our students throughout life as they move between workplaces, civic activities, and personal life – can be incorporated into any course, and the entire campus (and greater community) can serve as the classroom. For today’s Net Generation who thrive on a learning environment that fosters experiential and engaged learning and presents a connection with real life, building these skills is a means of building social capital as well as connecting with core course concepts. This poster will focus on “Sidewalk Labs,” an enhanced lab component to a math class that was implemented to help students explore the content of the course more deeply and understand the “real world” relevance of the content, while improving listening, writing, communicating, cooperative learning, creativity, and understanding a concept in a different context. The labs include in-class collaborative exercises, on-campus field trips, and out-of-class independent and collaborative activities. Many of these exercises include research and working with a graphing calculator. A “Sidewalk Lab” focusing on the Pythagorean Theorem serves as a case study. This lab moves from the history of the ancient Greek mathematician Pythagoras himself, to his discovery of the relationship of notes on a musical scale and ratios of simple whole numbers, to the Pythagorean Theorem, to producing a written report on the concept, the mathematics involved, and concept applications. Although this example focuses on a math class, “Sidewalk Labs,” which use the larger campus as a classroom, are a model that can readily be adapted to other disciplines, and can purposefully be designed to integrate transferable skills as a focus of the lesson. End of semester course evaluations revealed positive results with enhanced learning and student engagement on the implemented labs.

Thursday

February 11, 2016

Session 9

1:50-2:40 PM

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

Generation of a Persistence Model for Online Doctoral Candidates

Amanda J. Rockinson-Szapkiw and Lucinda S. Spaulding, *Liberty University*

Abstract: Based on a synthesis of traditional attrition models and the empirical literature on online students and doctoral persistence, an online doctoral persistence model was developed using archival data from 148 candidates. A logistic regression demonstrated that the entire model consisting of the linear combination of institutional (financial support; program, curriculum, and instruction; and support services) and integration variables (academic, social, economic, and familial integration) significantly predicted the likelihood that an online, doctoral students would persist in the dissertation phase of their programs. The model accounted for between 50.8% and 75.8% of the variance in online, doctoral persistence and correctly classified 93.2% of the cases. Academic and family integration, support services, and faculty connectedness were each individual significant contributors. Implications for improving online, doctoral persistence are provided.

Literature Review

Doctoral student dropout rates range between 40 and 60%, with attrition rates as high as 70% for EdD programs (National Science Foundation [NSF], 2009; Nettles & Millet, 2006). Online doctoral programs report attrition rates 10% to 20% higher than traditional programs (Rovai, 2002), and the largest degree of doctoral attrition occurs during candidacy. With high attrition in online, doctoral programs, particularly in candidacy, program administrators and faculty need to understand online doctoral persistence—“the continuance of a student’s progress toward the completion of a doctoral degree” (Bair, 1999, p. 8)- and ways to foster it.

While Tinto's (1975, 1993) student integration model and Bean and Metzner's (1985) student attrition model are foundational to understanding persistence in higher education, they have limited explanatory power for the persistence of online, doctoral candidates. Thus, drawing on these theoretical models and online education and doctoral literature, a composite model to explain online doctoral persistence was created and tested. Institutional and integration factors were focused upon in the model as they exert more influence on doctoral persistence than student characteristics (Bowen & Rudenstine, 1992; Lovitts, 2001). In her classic study on doctoral attrition, Lovitts (2001) found that over 50% of dropouts cited academic or institutional reasons (e.g., isolation, loss of advisor, problems with advisor, dissatisfaction with program) and 20% of dropouts cited financial reasons. Only 20% of dropouts cited personal or environmental reasons. This study’s model did not include individual variables.

Method

A predictive, correlation research design and logistic regression (LR) were used to examine how the likelihood that online, doctoral candidates will persist can be explained by the linear combination of institutional and integration variables. Archival data from 148 doctoral candidates’ course and program evaluations completed during a prospectus development course. Candidates were enrolled in an online Doctor of Education (EdD) program at a private university located in the Commonwealth of Virginia. The eight week, online prospectus development class is taken immediately following admittance into candidacy and passage of the class depends on the candidate’s ability to construct a viable dissertation prospectus that can then be developed into a dissertation proposal in subsequent courses. During the final week of the prospectus development course students complete a survey that consists of validated instruments and faculty developed questions that inform the betterment of the program and were used to measure the predictor variables in the study, Institutional Factors (Program, Curriculum, & Instruction; Financial Support; Support Services) and Integration Factors (academic, social, economic, and familial integration). Cronbach’s coefficient alphas for reliability of scales in the present study were acceptable. Persistence, the criterion variable, was measured as enrollment in a dissertation proposal course the semester following the prospectus development course. The survey data and enrollment data were obtained as archival data after Institutional Review Board approval was received.

Results

Data was analyzed using a direct logistic regression analysis which demonstrated that the entire model, including all the institutional and integration variables, significantly predicted the likelihood that an online, doctoral student would persist in the dissertation phase of his or her program, $X^2(8, N = 148) = 104.99, p < .001$. According to Cox and Snell *R* Square and Nagelkerke *R* Square, respectively, the model accounted for between 50.8% and 75.8% of the variance in online, doctoral persistence. The model correctly classified 93.2% of the cases. Support services, academic integration, faculty connectedness, and family integration each made significant individual contributions to the model explaining persistence. Family integration, with an odds ratio of 2.61, was a strong predictor of persistence, indicating that online doctoral students with good family integration were more than two times as likely to persist in the dissertation phase of the doctoral process. Consistent with Tinto’s (1997) theory, social and academic integration variables individually explained variance in persistence. The positive odds ratio of over one, indicated that the higher the online doctoral student’s academic integration and social integration or connectedness with faculty, the more likely he or she is to persist. Better satisfaction with support services also significantly increased the likelihood a student would continue in the dissertation courses

Discussion

These findings provide implications for online doctoral program administrators in terms of program supports and structures across the phases of the doctoral journey:

Entry:

- Provide orientations for students and families to foster familial integration by socializing the doctoral student and his/her family to the nature of the journey and the needs of the student in each distinct phase (see also Rockinson-Szapkiw, Spaulding, Swezey, & Wicks, 2014).
- Implement a cohort model and a required residential course upon entry to foster social and academic integration, sense of belonging, and institutional commitment early in the program.

Coursework:

- Design curriculum to foster social and academic integration among students and faculty (e.g., discussion forums, collaborative projects, peer-review assignments, faculty-mentored research courses, etc.)
- Prepare students for the dissertation by designing a strong and rigorous curriculum, including core courses, courses in the concentration, and research design and analysis.
- Ensure clear and consistent communication about program expectations, support services, and departmental and university resources (online and residential).

Dissertation:

- As this is the most isolating stage in the journey (Spaulding & Rockinson-Szapkiw, 2012), encourage connection via social-networking and other technologies (see Rockinson-Szapkiw, Huevelman-Hutchison, & Spaulding, 2014).
- With the faculty advisor/chair playing an instrumental role in doctoral persistence, faculty should not be overloaded so they can communicate consistently and provide timely and substantive feedback.

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Assessing Student Learning Environments

James P. Barber, College of William & Mary
Catherine W. Barber, Old Dominion University

Abstract: Alexander Astin's (1993) I-E-O model is a well-known framework in student learning assessment that encourages educators to consider three elements of the learning process: the inputs, the environment, and the output. Too often, assessment efforts focus on the inputs (student characteristics) and outputs (learning outcomes), without much consideration of the environment in which learning is expected to take place. This session details multiple examples of assessing environments for student learning, using methods including surveys, focus groups, personal interviews, and structured observations. The overarching goal of this session is to help faculty and administrators examine and effectively document how the environment affects college student learning.

Literature Review

Alexander Astin's (1993) I-E-O model provided a simple and logical framework for examining student learning: Where does the student start (I=inputs), what environmental experiences does he or she participate in (E=environment), and where does the student finish (O=outcomes)? Astin (1993) wrote, "the basic purpose of the model is to assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions" (p. 7). This model allows educators to focus on the impact of the college environment on the student, that is, the how the environment mediates change between the input and output (see Figure 1).



Figure 1. The I-E-O model (Astin & Antonio, 2012, p. 20).

Michel de Certeau (1984) developed a conceptualization of place and space. According to de Certeau, place refers to a stable, physical location. On the other hand, space is constructed and dynamic, created in part by elements that coexist, interact, connect, and sometimes conflict, within a particular place. Space, as conceived by de Certeau, is "practiced place" (p. 117). In our assessment of learning environments, we consider both place and space.

Strange and Banning (2015) emphasized the importance of studying the interaction of students and learning environments in higher education. They wrote, "campus environments set conditions that effect student learning; in turn, students influence the shape of campus environments" (Strange & Banning, 2015, p. 272). As such, it is vital to include students' perceptions of the learning environment in the assessment process.

Goals and Objectives for the Practice Session

Participants in this session will learn about two frameworks for considering learning environments: Astin's (1993) I-E-O model of assessment, and de Certeau's (1984) notion of place and space. Using these two frameworks, we will share examples from our own experiences with assessing learning environments to demonstrate how educators can study and document how the environment affects college student learning.

This practice session will be very interactive. Active discussion among participants will be encouraged, and participants will take part in an exercise leading them through the planning process for creating an environmental assessment plan. Our goal for this session is to provide a practical element where participants leave with an outline of an assessment plan for a learning environment at their home institution.

Outline of the Proposed Session (Total 50 minutes)

Introductions (5 minutes/5)

Literature Review: Frameworks for Assessing Learning Environments (8 minutes/13)

Description of Assessment Methods with Examples (12 minutes/25)

Audience Discussion: Examples from Home (10 minutes/35)

Theory to Practice – Outlining Your Assessment Plan (15 minutes/50)

Description of Practice to be Exemplified

In assessing student learning, it is beneficial to have a number of methods available to tailor the assessment to the context (Suskie, 2009). During this session, we will share examples of several methods that we have used for assessing learning environments, including surveys, focus groups, and observations.

Survey-based research. In an assessment of a residential learning community, we used an online survey from EBI Educational Benchmarking to understand attitudes and perceptions of residence hall students regarding the quality of services provided within housing, dining, and the residence hall experience. This nationally benchmarked survey allows departments to compare results over time, against peer institutions, and determine which improvements can have the greatest impact on the student experience. Data regarding students' room/floor environment were particularly insightful in exploring the current residence hall learning environment. Information gleaned from the EBI survey led staff to conduct a study room audit of all learning spaces within the residence halls on-campus. This audit involved assessing all study areas (considering both place and space) and developing a campus standard for residential areas that would be conducive to student learning and success.

Focus groups and personal interviews. Speaking directly with students about their experiences in the environments was essential. Using semi-structured protocols allowed for the students to describe the physical places from their perspectives, and explain how they constructed and used the space.

Ethnographic methods. Spending time in the learning environments with students was a key aspect of some of our assessment efforts. For example, meeting students in the places or asking for a student to provide a guided tour of a learning environment provided context for the assessment. Photographs or videos can become important data to document characteristics of the environment (see Figure 2).



Structured observations. Conducting structured observations of educational environments can provide a third-party perspective distinct from that of the educator or student. Such observations are useful tools in assessing classroom interactions and educational programs.

Discussion

John Dewey (1933) wrote, “We never educate directly, but indirectly by means of the environment. Whether we permit chance environments to do the work, or whether we design environments for the purpose makes a great difference” (p. 22). The environments in which learning occurs are often overlooked in educational assessment, where the focus tends to be on the inputs and outputs. The findings from our assessments have contributed to a more complete picture of the student learning experience, and provided valuable data for accreditation and budgeting processes. Most importantly, assessing student learning environments has afforded an opportunity to see the students' lived experiences and better understand how both place and space affect their abilities to thrive and learn in college.

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Flipping the Classroom: Strategies for Graduate Education Enhanced Learning

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Abstract: In recent years, campus discussions around effective teaching and learning practices have focused on many strategies, including the concept of “flipped classrooms” or “flipped learning” which changes the relationship between teacher and student, but also encourages a more dynamic, interactive learning environment (Neshyba, 2015; Talbert, 2014; Ash, 2012). Scholarly articles and publications on practical applications have been written on the subject, yet many focus on undergraduate classes and the instruction of STEM courses, leaving those who teach in the humanities or social sciences to devise strategies that best meet their students’ needs. This presentation examines the flipped strategy of action learning groups (ALG) applied to the graduate student population in social sciences. Participants will engage in discussions on effective practices and challenges that may be unique to graduate students. Opportunities to examine the approach used in two courses including syllabi components, assignments and activities using a flipped approach, and reactions from students will also be provided.

Literature Review

Constructive-developmental theories posit that meaning is not gained from external sources (teachers) but rather from creating meaning ourselves, which results in growth. Therefore, learning comes from many contexts (Perry, 1981) and can be promoted in experiential and action learning activities that enhance the self-efficacy of students. Perceived self-efficacy contributes to cognitive development and efficacy beliefs influence how students feel, think, motivate themselves, and behave (Bandura, 1993). Because of this, utilizing blended learning approaches has become more common within college courses, with the ‘flipped learning’ approach among them. Talbert (2014) describes the approach using the acronym FLIP which articulates the four pillars of the approach. They are, 1) Flexible environment, 2) Learning culture, 3) Intentional content, and 4) Professional educator. Many descriptions of this pedagogical approach suggest that providing content — in a digital forum — in advance of face-to-face class meetings using videos from a repository (i.e., Kahn Academy, TED Talks), recorded lectures, podcasts, screencasts, or slide decks that students can review at their own pace. In turn, class time is used for the application of concepts from readings and other shared content rather than a lecture on assigned readings (O’Flaherty & Phillips, 2015; Ash, 2012).

In a review of literature, O’Flaherty & Phillips (2015), found that the most common face-to-face activities used in the flipped class included case studies and presentations, team-based discussion, panel discussions, role plays, discussions and debate, and student presentations (pg. 89). However, action learning in the form of problem-based groups, also known as action learning groups (ALG), was not identified as a strategy. What is unique about ALGs is that they can transcend synchronous and asynchronous activities in the online and face-to-face environment. Action learning is an integrated learning experience that is focused on solving a complex or urgent problem and requires critical reflection and active involvement from group members (Yeo and Marquardt, 2015; York, O’Neill & Marsick, 1999). Additionally, a coach and/or facilitator are key roles in the process and are ones that can be taken on by students and the professor. This approach is an important consideration for graduate education as the exploration of graduate pedagogy is often overshadowed by the focus of undergraduate education, as the assumptions that graduate students already know *how* to learn is perpetuated. Focusing on greater metacognitive and professional awareness in graduate courses provide the necessary focus for advanced professional preparation (Khost, Lohe, & Sweetman, 2015).

Activities that focus on cognitive development such as questioning, reflection, sense making and information processing and behavioral changes such as dialogue, feedback, active participation, and action taking enhance the learning experiences of students (Yeo and Marquardt, 2015). Action learning groups provide these opportunities for growth through a structured learning experience. Finally, the educational benefit of ALG’s is that they promote higher levels of cognitive development (i.e. Bloom’s Taxonomy) including procedural and metacognitive knowledge and analysis and synthesis abilities, among others (Krathwohl, 2002).

Description of Practice

The presenter will use two different graduate-level courses to briefly model the application and benefit of ALGs. The courses are: *Human Resources Management* a hybrid course in an executive masters of public administration program and *Project Seminar* a face-to-face capstone course in an organizational leadership program.

In reviewing each course and assignment that uses the ALG approach, the presenter will review and discuss activities that focus on cognitive development and behavioral changes of the graduate students. These include:

- Using project groups for solving a real-world problem
- Journaling for reflection on individual problems and group dynamics
- Using group time for the application of learned concepts and support for new behaviors
- Peer feedback mechanisms addressing individual and group expectations while practicing feedback strategies
- Group prompts from the professor to ignite specific discussion, exploration, and reflection

Additionally, participants will hear from the experiences of the presenter on what has and has not worked well with ALGs in graduate-level courses. Finally, open discussion will occur where participants will discuss the viability of using ALGs in various courses. The following questions will be raised:

- Do you believe aspects of the ALGs are problematic for graduate students? And if so, how might those problems be resolved?
- What are some other activities that can be integrated into ALGs to encourage higher levels of learning?
- In what other forums can ALGs be used for graduate education?

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Oh Say, What Do You See? Using Student-Videos for Reflection and Feedback

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Abstract: Come discover the many applications, benefits, and potential roadblocks of student-created videos. This session will provide information on how personal videos can 1) promote student learning and professional growth, 2) be incorporated into assessments, and, 3) serve as accreditation evidence. The audience will participate in activities to explore the practical ways that student-videos can be incorporated across disciplines for a variety of purposes.

Literature Review

It is one thing to master the knowledge associated with an area of study. However, the ability to apply that knowledge in an integrated fashion in authentic situations requires a higher degree of mastery. Student-created videos encourage students to take an active role in their growth and reflect on their own teaching (Towndrow & Tan, 2009). Videos also allow instructors to give in-depth feedback about the students' skills when embedded in complex, interactive settings. Similarly, students can learn how to give appropriate, positive feedback to peers by watching and commenting on colleagues' videos (Baecher, McCormack, & Kung, 2014). By archiving videos, students can also demonstrate growth over time (Rich, Recesso, Allexsaht-Snider, & Hannafin, as cited in Tripp & Rich, 2012) and mastery of a range of accreditation standards. Finally, exemplar videos can be shared across instructors to establish evaluation expectations and standardized observation feedback.

The presenters will provide advice about how to incorporate student videos as part of the learning and formative assessment processes. We will showcase the Edthena platform as one resource for managing and archiving videos. We will model a variety of ways that we have used student-videos across the education programs. The audience will be involved in sharing how videos could be incorporated across disciplines for a variety of purposes.

Objectives and Activities

We will explore the uses of student-created video as both a learning and assessment tool. Additionally, as a group, we will discuss the practical benefits, roadblocks and possible solutions to incorporating video into instruction and assignments. This conversation will be contextualized through the lens of our experience in a teacher preparation program. However, participants will brainstorm and share ways to implement video across their disciplines.

- Participants will begin and end the session by filling out an **anticipation guide** where they will capture their beliefs and knowledge about using video in the class.
- We will **model** how Edthena, an online video tool, can be used to enhance current instructional and assessment practices.
- A carousel activity will serve as a forum for discussing the benefits, roadblocks, and uses for student-created videos.
- Participants will problem solve potential roadblocks such as time management, permissions to video, and a variety of technical issues.

Description

This presentation will explore the use of student-created video as a tool for reflection, assessment, and learning. One of the valuable attributes of video is that it allows one to see oneself in action, as well as receive feedback from others. The video can also be used to document change over time when memory fades. As pre-service teachers, students in teacher education need to develop discipline-specific practices, which will impact the students they are responsible for in their field placement.

In this presentation, the presenters, faculty in a teacher education program, will describe how we have implemented video within our courses to facilitate development of our students' learning.

We will discuss the challenges we have faced, as well as the paths taken to address those challenges. Our focus in using video with our students is to encourage them to take ownership of their development and to document that progress.

Participants will have the opportunity to ask us questions about our experiences. Some areas of possible interest include faculty and student buy-in, technical issues, and ways to embed video in course and fieldwork to demonstrate teaching effectiveness.

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Role Play: Acting Out in the Higher Education Classroom

Monique Elise Jimerson, *Mercer University*

Abstract: The concept of the boring lecture style is considered outdated and old fashioned by students. Student learners desire to participate actively in class learning while sharing their creativity and engaging peers through the use of the role play. The use of the role play enables learners to increase knowledge about course content, and increase confidence in communication skills and learning from peers. Participants will view samples of role play activities from my presentation as a doctoral student, discuss other role play designs, and facilitate the creation of personal role play models compatible to established academic course design.

Literature Review

Role play is an effective and commonly used education method that incorporates experiential learning. Role play is a key component of experiential learning because it is an important aid to holistic learning. Several theories comprise role play as an educational method. In brief, “the act of role play allows students not only to assimilate core knowledge but to learn and practice related skills, such as creative and rational thinking in a realistic situation” (Johnston-Hollitt, 2008, p. 1). Although several role play models have been developed, various researchers have conducted studies that highlight the value of role play in university classroom settings. Role play enables learners to identify problems in peers’ comments in an online course, aids in understanding course material and learning, increases student confidence incorporated with learning from peers, and is beneficial for the development of medical student’s skills studying end-of-life care communication skills and formulating empathic responses (e.g. Ching, 2014; Truscott, Rustogi, & Young, 2000; Johnston-Hollitt, 2008; Crow & Nelson, 2015; Nestel & Tierney, 2007; Smith, Gair, McGee, Valdez, & Kirk, 2011). Role play has been well documented in research literature and has been proven as an effective educational teaching method that warrants inclusion in university experiential teaching techniques.

Goals and Objectives

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

- Explain historical theories that comprise role play as an educational method
- Identify historical and current role play models
- Specify the goals of the millennial student population who desire to engage in role play that will result in academic success, a good learning environment, and course material retention
- Observe demonstrations of different role play models that can be used immediately to engage students in the learning process, get them excited about participating in class and participating in a role play on course learning modules
- Participate in role model design class activities that they will be able to use in the academic setting
- See examples of proven leaning techniques from quantitative and qualitative studies that incorporates a creative role play model in the course curriculum.

Description of Practice

Participants who engage this session will learn about several role play models unique to the university learner population, will learn what these students desire in academic outcomes through the use of innovative role plays, and will learn what motivates them to want to actively participate in role plays during class. I will first show examples of the use of my own role play model with students. I will allow participants to analyze the model: What did they learn about the use of the role play model? What did they learn about teacher student engagement? Was student confidence increased about content area? Then I will walk the participants through the steps of creating their own role play model compatible to their course design, explaining other role play model designs. Finally, participants will be encouraged to present role model designs that they will be able to use in the academic setting to encourage and instill confidence about course material in their student learners.

Discussion

As a doctoral student, I have presented during class incorporating the role play design for student learners. For example, during my presentation during the advanced social justice class, I presented on the impact of advocacy and social justice principles for the elderly population. In the class, three groups were created and they incorporated key facts about elderly advocacy in their presentation. I personally witnessed their knowledge about the aging population increase as they demonstrated confidence and mastery of knowledge with excitement while presenting their role play. After each group presented their role play, students expressed a gain in confidence about the topic, enthusiasm about peer feedback, and an increase of creative thinking skills and communication abilities. Students were ignited with creative thoughts and ideas while mastering academic content.

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Co-opting Students as Co-teachers in Graduate Level Courses

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Abstract: The purpose of this presentation is to share experiences of graduate students and their professor as co-teachers. In this presentation, co-teaching refers to the professor co-opting students as co-teachers in instruction. Many studies suggest that co-teaching has been used extensively in K-12 education, particularly in special education classrooms. However, there is little research that supports the ubiquitous use of co-teaching as a strategy in higher education. The over-arching goal of this presentation is to expand dialogue on how co-teaching as an instructional strategy can be effectively used to promote learning while capitalizing on the experience and expertise of students. The co-teaching model adopted is the teach-assist model where one teaches content and the other re-teaches or clarifies concepts and answers questions. In utilizing this model, the students and professor are co-learners and co-creators of knowledge. They both assume roles of teacher and learner, expert and novice, giver and recipient of knowledge.

Literature Review

Co-teaching refers to sharing the responsibility for instruction and capitalizing on the knowledge and expertise of individuals (e.g. teachers and teachers, teachers and students) in order to increase student learning. It is an instructional strategy used extensively in K-12 settings (Conderman, 2012), but there is a dearth of research about its application in higher education (Matlin & Carr, 2014, Seymour & Seymour, 2014). In co-teaching “students are not submissive, silent individuals in learning environments, but rather they are viewed as motivated partners in collaborative enquiry based on dialogue, experimentation and mutual learning for tutor and student” (Bovill, 2014, p. 14).

The rationale for co-teaching is those who co-teach, co-learn (Matlin & Carr, 2014), in order to establish collective responsibility for what occurs in the classroom and to offer opportunities for change, growth and reflection (Ferguson & Wilson, 2011). Co-teaching takes several formats according to Hepner and Newman (2010), Kariuki (2013) and Metzger (2015). The first is the one teach-one assist model where one teaches content and the other answers questions and clarifies or re-teaches concepts. The second is the station teaching model that involves planning of three learning activities by the co-teachers. Co-teachers lead two learning activities while the third activity is completed by the students. Third is parallel teaching that involves dividing the class into two groups. Co teachers teach the same lesson but to half the class. The fourth format is alternative teaching that focuses on catering to the ability levels of students. The co-teachers split the class and teach similar concepts to different ability levels. The fifth is team teaching also known as tag teaching. Both co-teachers teach the lesson together and assume tasks and aiding each other throughout the lesson. Finally, the teach-observe model occurs when one teaches and the other observes.

Co teaching, using graduate students as co-teachers can produce rewarding results in the learning process. First, both the teacher and students become co-learners and co-creators of new knowledge and (Matlin & Carr, 2014). Second, they share leadership in the classroom and assume roles of experts and novices depending with the topic (Kariuki, 2013). The co-teachers may bring unique and much needed expertise. It also respects diverse ways of learning, encourages diversity of opinion and innovative practices to teaching (Matlin & Carr, 2014).

The challenge for the professor is a great deal of vulnerability to let down the persona of a teacher, and for the student to let down the persona of a student (Matlin & Carr, 2014). The professor and student will both worry about correctness, depth and breadth of content. However, with proper planning and communication this hurdle can be overcome by cultivating high levels of trust among the co-teachers.

Goals and Objectives for the Session

The goal of this session is to share the co-teaching experiences of one professor and students in two school administration graduate programs. By the end of the session, participants should be able to:

1. Identify co-teaching approaches or formats
2. List the benefits and challenges of co-teaching using students as co-teachers

3. Critique the experiences co-teaching as shared by the professor and students during the presentation.
4. Discuss and chart other possible ways of improving of co-teaching between professors and graduate students

Description of the Practice to be Modeled

The professor will outline the rationale for co-opting students as co-teachers as a teaching strategy. Each student will describe the benefits and challenges he/she encountered as co-teacher. This is followed by a question and answer session. Participants will be given an opportunity to share their experiences of co-teaching. The session will conclude by taking suggestions for improving co-teaching as a strategy in graduate programs.

Discussion

Giving the students the opportunity to be co-teachers is imperative, but a very delicate dance. First, graduate students bring epistemic advantage that is borrowed from work and life experiences. The unique individual experiences that each student brings are core to building collective knowledge and learning. Sharing the instructional space brings challenges to both the professor and students. For the professor, it is important to “strive for ego strength and balance, confidence in self and respect of others’ gifts” (Matlin & Carr, 2014, p. 66). In practice, it means the professor respects talents of students and capitalizes on what they bring, fully knowing that the students are both co-creators of knowledge and co-learners with the professor. However, co-teaching exposes all involved to a great deal of vulnerability. What is required is trust, communication and confidence in the collective efficacy of this instructional strategy.

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Practice Session: The Role of Faculty in Bolstering Resilience in Students

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Abstract: Students experience significant stress throughout their higher education journey. This stress extends to their professional roles once they have earned a degree and entered the workforce. Resilience is a construct frequently lauded, discussed, researched, and recommended as an important component of a positive emotional response to life's stressors. Faculty can have a direct impact on students' resilience. In this practice session, participants will broaden their understanding of the concept of resilience, become more aware of their own resilience, and explore methods to bolster their student's resilience. Exemplars of teaching strategies to accomplish enhanced student resilience will be shared.

Literature review

Richardson (2002) explains that the research related to resilience, which has spanned more than 60 years, has occurred in three waves: consideration of resilience qualities; understanding resilience as a process; and developing resilience as a vital skill in coping with adversity. Steps taken to provide clarity on the meaning of resilience included research describing resilience as a trait (Lee et al., 2004), process (Masten, 2001), continuum (Ahern, 2006), and cycle (Aronowitz, 2005; Black & Ford-Gilboe, 2004). Polk's (1997) synthesis of resilience research resulted in a clear theoretical definition of "the ability to transform disaster into a growth experience and move forward." Importantly, resilience is not a stagnant quality, but one that can be learned and enhanced with intentional practice (Masten, 2001; Richardson, 2002).

The Resiliency Model illustrates the importance of individual protective factors in the face of general life "disruptions" (Richardson, 2002). The study of resilience as a protective factor against adversity in the work place has evolved over the past 20 years. McCann et al. (2013) conducted a literature review from five helping and health professions (nursing, social work, psychology, counseling, and medicine) and identified ample literature support for resilience as a key factor in supporting professionals coping with workplace adversities and stressors. In the formation of a professional identity, resilience was identified as a vital skill to the wellbeing of an individual professional (Delany, et al., 2015; Sanders, 2015; Wald, 2015; Wald et al., 2015).

In current society, most professions require a college education. For many students, the college experience is fraught with inherent stressors. The burden of academic responsibilities and professional identity development require students to rely on existing coping skills for effective emotional regulation. Resilience is a cornerstone to that emotional regulation. Educators can have a role in bolstering student resilience as a component of higher education. Educators' ideal vision for their students is for them to experience a smooth transition into a professional practice after graduation. Resilience is a key skill in this transition and is reliant on students becoming adaptive not just hardy when facing adversity (Longennecker, Zink, & Florence, 2011).

Resilience development can be enhanced through formal biopsychosocial and spiritual education that increases the student's awareness of the concepts of stress responses and resilience (Delany et al., 2015; Grafton, Gillespie, & Henderson, 2010; Sergeant & Laws-Chapman, 2012; Wald et al., 2015). Educators can provide opportunities to increase self-awareness through reflection exercises and practicing resilience skills through case studies and role playing (Epstein & Krasner, 2013; Wald et al., 2015). Educators can create and/or cultivate a physical and emotional environment that enhances resilience (Grafton et al., 2010). Additionally and perhaps most importantly, educators can practice generativity in a manner that models resilient behaviors (Sanders, 2015; Shirey, 2012; Wald, 2015).

Goals and Objectives for Practice Session

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

1. Define resilience and understand the evolution of its meaning
2. Identify four teaching strategies that can be used to bolster students' resilience
3. Identify opportunities to apply these strategies in a meaningful way in the participant's own discipline

Description of Practice to Be Modeled

Participants who attend this session will learn the general evolution in the meaning of resilience. Richardson's Resiliency Model will be shared for context in the current understanding of resilience. Discussion will be open to participants to explore their current experiences with student resilience and the opportunities seen in current practice for improvement.

Four strategies will be shared with participants and exemplars from the presenter's current practice will be shared. Participants will be divided into small groups to brainstorm current resilience development strategies and ideas for future integration of resilience development in their specific disciplines.

Discussion

Many faculty experience the stress of helplessly watching vulnerable students struggle through their college experience. The vast majority of colleges have student development programs, professional counseling, and resource centers to support students with these issues. However, they are not on the front line in the classroom. The primary goal for this session is to empower faculty to harness basic knowledge and apply it in a meaningful way to support all students in developing resilience. Resilient graduates will be fortified for a smooth transition into professional practice.

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Conversation: Theatre as a Teaching Tool in the Higher Education Classroom

Emily Kasprzak, University of Saint Mary

Abstract: The John Hopkins study “Neuroeducation: Learning, Arts, and the Brain” (Hardiman 2009) states that integrating the fine arts into classrooms improves students motor control, attention, and motivation. Brain Based Learning, as talked about in “Teaching with the Brain in Mind”(Taylor 2008) states that students are better learners when they are learning through movement, social conditions, and brain challenges. These Brain Based techniques can be executed by using theatre in the classroom. As a theatre professor, I am always searching for ways to use theatrical elements in teaching other subjects. In my non-theatre classes I incorporate what I call the Theatrical Elements. Using the traditional theatre practices of dramatic structure, scene work, and improvisation I have found my students are more engaged and are able to better grasp concepts taught in class. I have found that theatre fosters collaboration and critical thinking. Theatre encourages students to problem solve and think quickly. I would like to open this discussion to see if others in higher education have done the same, or how these Theatrical Elements could be used in other areas of study such as the behavioral and social sciences or the health care field.

Literature Review

The Learning, Arts and the Brain (Ashbury 2008) states that students who participate in the fine arts demonstrate an increased motivation to learn in other subjects areas and improved cognition.

I have found that:

- Theatre fosters collaboration between students
- Subjects can be presented in a way that engages students.
- Improvisation in the classroom encourages students to say “Yes” and think on their feet.
- Theatre fosters Critical Thinking and artistic thinking.
- Scenes or Scenarios allow students to jump into situations and put their knowledge into practice.

Goals and Objectives

The goal of this conversation would be to introduce Elements of Theatre (dramatic structure, scene work, and improvisations) as a tool in the higher education classroom.

Dramatic structure refers to the structure of literature or theatrical plays. There is an inciting incident (the beginning) the climax (the highest moment of tension) and the resolution (the end). Most lectures lend themselves to using Dramatic Structure.

When using scene work I have students write short scenes to give an example of something we have discussed in class. The goal of these scenes is not to help students become great playwrights, but rather to get them thinking about the “real world” applications of what they have just learned.

Improvisation in Theatre is based on the idea of “Yes, and” meaning you agree to something, and add to the conversation. This can be used in the higher education classroom in several ways. “Yes, and” can be used to facilitate class discussion, as a brainstorming tool, or as variation on the scene work.

Discussion

A brief presentation that introduces the Theatre Elements and how they directly relate to the Brain Based learning principles developed in “Teaching with the Brain in Mind”

Then participants will have a conversation about how they believe they could use those elements in their classroom, how their subject area might lend itself to theatrical learning, and ideas on how this topic could be developed for the future.

Facilitation Techniques

After the presentation, a handout with the Elements of Theatre would be handed out to participants as a jumping off point.

Questions:

- How can theatre be used in their subject area?
- When have you used something theatrical in the classroom?
- Ideas moving forward.

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Conversation: Faculty-Librarian Partnerships in the Classroom

Thaddeus Fortney and Jennifer Stout, *Virginia Commonwealth University*

Abstract: The Libraries at Virginia Commonwealth University along with the University College proposed a long term observation of the second tier writing class as part of a plan to learn more about the structure of the course. The plan was to have one of the teaching librarians (Jenny Stout) sit in on every class as an observer over the course of the eight week summer session. Part of this would entail occasional meetings with the instructor of the course (Thad Fortney), as well as instructional sessions when the librarian would lead class during the research process of the course.

Though the anticipated goals were to provide a better sense of the overall structure of the tier two writing course for the library, there were several unexpected outcomes. First was the observed improvement of instruction and feedback during the research and drafting units from the collaborative effort of the librarian and the instructor. We believe that the integration of previously covered material, and the observation of the development of student projects allowed the librarian to communicate with students and the professor about potential issues or missteps in the research process.

The second outcome of the collaboration was the students' willingness to reach out to the librarian for additional help throughout the process. It became clear that certain students found Jenny to be extremely helpful, and their willingness to reach out to her on a regular basis was because of her continued presence in the classroom. In many ways this provided students with better insights to the nature of the research project that may not have been available in a normal class. Our discussion will briefly address some of the strategies we implemented in the classroom, but we also would like to open the discussion to the importance of building faculty-librarian partnerships.

Literature review

Although research indicates that traditional one-shot library instruction increases student library use (Saunders, 2003, Portmann & Roush, 2004) and introduces students to the basics of information literacy (Spievak & Hayes-Bohanan, 2013, Walker & Pearce, 2014), much of the literature calls for increased collaboration between university faculty and academic librarians in the form of "embeddedness." Shumaker (2012) defines embedded librarianship as "a distinctive innovation that moves the librarians out of libraries and creates a new model of library and information work. It emphasizes the importance of forming a strong working relationship between the librarian and a group or team of people who need the librarian's information expertise" (p. 4). As the shape of librarianship changes, there are calls for librarians to push back against the role as peripheral service providers and instead take on an active role as equal partners with university faculty (Meulemans & Carr, 2012) and aim for collaborative, long-term relationships rather than circumstantial, in-the-moment relationships (Moore, 2004). The benefits of strong faculty-librarian partnerships range from the opportunity for the librarian to have a deeper understanding of student learning and development (Silverman & Williams, 2014), better communication about the types of services the library can provide for professors and students (Jacobs, 2010), and positive impacts on student retention (Knapp, Rowland, & Charles, 2014). While faculty-librarian collaboration can come in many shapes and sizes, Ivey (2003) identifies four essential elements for a successful teaching partnership: a shared, understood goal; mutual respect, tolerance, and trust; competence for the task at hand by each of the partners; and ongoing communication.

Goals and objectives:

- Understand why the authors chose to collaborate in the classroom
- Understand what the collaboration looked like during the planning stages and in the classroom itself
- Describe the benefits of faculty-librarian partnerships in the classroom, especially as it pertains to enhancing student learning
- Describe the possible problems or difficulties of faculty-librarian partnerships in the classroom

- Have the opportunity to share their own experiences with faculty-librarian (or similar) collaborations, and offer ideas for implementing such a collaboration at their own institution

Description

The authors will discuss their collaboration in the classroom. Jenny Stout is a Teaching and Learning Librarian at VCU Libraries and Thad Fortney is a Research Writing Instructor at University College (the central home for VCU's core curriculum). As the library liaison to UNIV 200, a required research and writing course taught through the University College, Jenny wanted to attend Thad's summer sessions of UNIV 200 in summer of 2015 in order to learn more about the structure of the class and its curriculum. Additionally, Jenny taught two library sessions for each of the two sections of UNIV 200. By working together on lesson planning Thad and Jenny were able to gain mutual insight into the class and the best ways to help students with the research process. Jenny's continual presence encouraged students to open up to her about their research and questions they had.

Facilitation techniques:

The authors will start the conversation by describing their own experience with faculty-librarian partnerships, including the benefits and potential stumbling blocks of such a collaboration. The authors will then open the discussion to the audience, asking if they have similar experiences they would like to share, or concerns and questions about implementing a similar partnership at their institutions. The authors will have questions prepared in case the audience needs inspiration and encouragement to join the conversation.

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Revealing the Factors that Impact Faculty's Role as Undergraduate Research Mentors: An Empirical Study

Rebecca McMullen, Jennifer Hammack, Robin S. Lewis, Doreen Sams, and Steven Jones,
Georgia College & State University

Abstract: In the spring of 2015, a census of 318 faculty (tenure and non-tenure track) of a small liberal arts university in the Southeastern United States received an online survey consisting of 17 questions directly related to constraints on faculty engagement in mentoring undergraduate research (UR). From the census 87 usable surveys were received. The purpose of this study was to investigate factors that influence faculty's propensity to mentor undergraduate students in research. Among the conclusions, it was found that although time and workload are the two most significant factors constraining faculty from mentoring, 81.81% of those responding engage in mentor undergraduate students in research. Further, it was found that although a reduction in workload was ranked as the highest incentive to participate in mentoring UR, additional compensation was second and having it valued in tenure and promotion was third. It is surmised that if UR mentoring is valued in tenure and promotion that workload and compensation issues could be resolved.

Literature Review

A recent mixed methods study demonstrated that aptitudes (i.e., self-efficacy and STEM-fluency) sought in the marketplace (i.e., graduate programs and employers) achieved by mentees of undergraduate research were self-reported as significantly improving the quality of their learning experience. Thus increasing aptitudes and giving them a competitive advantage (Sams, et. al 2015). However, efforts at the sample university to increase mentoring across educational disciplines have met with yet to be identified roadblocks. Therefore, empirically evaluating possible constraints on faculty engagement in such an important pedagogy is critical to empowering faculty to make decisions as to the degree to which they are willing to participate in mentoring UR. Research has shown that the personal relationship between the mentor and the mentee has been reported by mentees as the most important element of their experience (Cox & Andriot, 2009). According to the Council on Undergraduate Research (2009), undergraduate research is defined as, "an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline." Moreover, mentoring undergraduate research is currently viewed as the development of each person's influences on an interdependent relationship rather than just how faculty members impact students (Long, Fish, & Kuhn, 2010).

Methodology

If mentoring of undergraduate research is not formally acknowledged by the administration, it may be marginalized. Therefore, this study investigates factors that impact faculty mentoring to gain an understanding of what faculty believe would increase their propensity to engage in mentoring UR.

A survey was sent electronically to a census of faculty ($n = 318$) at a small liberal arts university in the Southeastern United States with two follow up reminders in order to achieve responses representative of the portion of the population from each discipline. A proportionate sample was achieved. Due to the small size of the population, a census was conducted. However, to assure a representative sample size, sample size was calculated as 175 (7.5% chance of sample responses differing from the true population) with a reach rate of 700 needed to obtain a 25% response rate. The response rate based on the census of 318 was 27.4% (10% chance of sample responses differing from the true population (Krejcie & Morgan, 1970). Findings from the data are representative of the population. Nevertheless, a larger sample size would have limited the influence of outliers and extreme observations. Upon examining the data, there were no outliers or extreme observations. Therefore, the findings of this study are useful in understanding the sample's behaviors, opinions, and beliefs.

Data Analysis and Results

In order to determine the level of importance of UR to the faculty, respondents ranked the ten AACU LEAP High-Impact Practices. Of the 84 who responded to the rankings scale, undergraduate research was identified as ranking

3rd. A multidimensional Scale (PROXCA) analysis using SPSS® analytical software confirmed the findings a frequency analysis.

In the case of barriers to mentoring UR, the respondents were provided with an open-ended question in which they were encouraged to identify constraints. Of 74 respondents who took the opportunity to address the open-ended question, 49 of them referred to a workload issue as the main barrier. The 87 respondents were asked to mark any incentives that would entice him or her to engage in UR mentoring. The data were examined with a frequency analysis and prioritize by percentage across responses (336):

- 1st – Workload reassigned – 19.9% (67)
- 2nd – Additional compensation – 19.3% (65)
- 3rd – Valued in tenure and promotion – 18.8% (63)
- 4th – Valued in IFR – 16.4% (55)
- 5th – Included in tenure and promotion – 13.4% (45)
- 6th – Included in IFR – 11.6% (39)
- 7th – Chose none of the options – less than 1% (2)

Discussion/Conclusions

Findings suggest that workload should be examined closely and weighed in the T&P process. For example, is it fair to hold faculty members to the same standards when teaching new courses versus when they are not? Is it equitable to weigh T&P the same when mentoring both graduate and undergraduate students?

From the findings of the current study, workload, time, financial support, and T&P impact faculty's propensity to mentor in UR. Based on the previous research, UR is an important pedagogical initiative for US schools. Taking the lead from Purdue University (InsideHigherEd.com, 2015), other universities can make significant changes in their teaching evaluations on two new measures: (1) commitment to involving undergraduates in research and (2) to pedagogical innovation [through mentored undergraduate research].

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Thursday

February 11, 2016

Session 10

3:00-3:50 PM

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

Adapting the Q Sort Methodology for Instructional Purposes

Lloyd P. Rieber, The University of Georgia

Abstract: The Q methodology provides a quantitative means of examining subjectivity. The cornerstone of this methodology is a data collection activity called a Q sort in which participants must sort a list of given items within a predetermined sorting form that resembles an inverted normal curve. Although the Q Methodology has a long history as a research tool, its use as an instructional tool has not been extensively explored. This is likely due to the fact that the apparatus for conducting a Q sort is difficult to prepare in its traditional, paper-based form. Few digital versions have been produced and the ones that are available can be very expensive. To meet this challenge, a prototype of a digital version of a Q sort tool was built. The purpose of this research was to use formative evaluation procedures to revise the prototype while concurrently designing an appropriate instructional strategy for integrating the Q sort activity within the teaching of graduate-level courses.

Introduction

The Q methodology “...provides researchers with a systematic and rigorously quantitative means for examining subjectivity” (McKeown & Thomas, 1988, p. 7). The main components of the Q methodology are the Q sort and the Q analysis. During the Q sort, participants order a set of statements about the topic of interest. The statements broadly reflect the communication that surrounds the topic of interest and therefore may be generated by researchers, members of the intended audience, or both (Shemmings, 2006). In sorting those statements, participants articulate a unique perspective on the topic of interest (see reference to Stephenson’s 1935 work in Watts & Stenner, 2005).

To understand how a Q Sort activity works, consider your subjective feelings about the topic of pizza. In particular, consider how you would rate a list of statements such as: “The crust is thick and chewy”; and “The pizza has lots of toppings.”

If you enjoy pizza, and therefore “care” about the topic, and were given a standard Likert-type scale ranging from “1-not important” to “5-very important” you would likely rate most or all of these items very high without much thought. Perhaps statements about meat versus vegetarian might give you some pause. If you do not particularly care for pizza, you might rate all of the statements low on the scale. You have the option of giving each item whatever rating you wish regardless of your rating of the other items (Daniels & Stephen, 1978; Madson, 2005; Ritter & Sue, 2007). If you are ambivalent or unsure of any item you can quickly revert to the strategy of giving the item a neutral rating. Similarly, you can choose to rate an item either as a 1 or 5, even though you might discriminate the item further if motivated to do so (Thissen-Roe & Thissen, 2013).

In contrast, a Q Sort requires you to place each of the statements into one and only one slot (i.e. bin or spot) on a Q Sort board (see Figure 1) that resembles an inverted normal curve with columns that denote the rating of that item. However, there are not an equal number of slots in each column. The extreme left and right side of the board may contain only one slot, whereas the neutral column contains multiple slots. However, it’s important to note that a Q Sort board has exactly the same number of slots as there are statements.

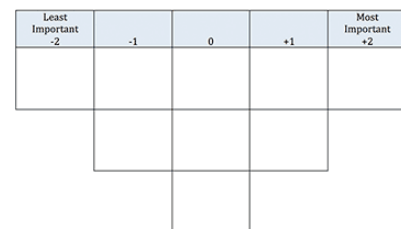


Figure 1. Example of a Q Sort Board

Unlike a Likert-scale, the Q sort activity forces people to process the items with greater depth, with consideration of all the other items, thus resulting in greater variance and a distribution that approximates normality.

Purpose

Although Q Methodology has a long history as a research tool (some recent examples include Barnes, Angle, & Montgomery, 2015; and Pruslow & Red Owl, 2012), its use as an instructional tool has rarely been explored. This is most likely due to the difficulty in preparing and executing the Q sorting activity with traditional paper-based

approaches in a face-to-face setting. For this reason, a Q Sort prototype (hereafter referred to simply as the “prototype”) was designed by the author with the expressed intent to investigate ways to seamlessly integrate the Q sorting activity within learning environments. The purpose of this research was to design and evaluate various instructional approaches to using the prototype to integrate Q sorts as a core instructional activity. The goals of the research were to gather evidence informing the revision of the prototype as well as the instructional process used to implement it through rapid prototyping procedures (Tripp & Bichelmeyer, 1990).

Evaluation Methods

An instructional evaluation was conducted of the Q Sort Prototype and the instructional activities, which emerged during the summer 2015. Three graduate level design classes and one non-graded online class participated in field tests. The evaluation was predominately qualitative in nature using prompted discussion (both synchronous and asynchronous), email question prompts, and informal surveys. Data sources for this field test primarily consisted of data from the Q sort activities, class discussions held in a virtual classroom periodically, and surveys.

Results

Two outcomes resulted from this evaluation. The first is a much-improved version of the prototype with a variety of features that derived solely from the field tests. The second important outcome of the field tests was an instructional strategy that was derived from feedback from students based on instructional experimentation.

Discussion

Teachers take for granted the use of questions as ways to engage students in course topics. Likewise, teachers now have easy access to online survey tools, such as Google Forms, Survey Monkey, and Qualtrics. Although these surveys offer a wide range of question types, multiple-choice or Likert-scale question types continue to dominate. These survey types have a weakness in that it is easy for students to complete them without mindful engagement. In contrast, the Q sort activity is both challenging and intriguing, with the identification of topics and construction of statements made with the participation of students. The Q sort activity itself, although not a game, has game-like qualities. The results of this preliminary research have shown that the Q sort activity has much promise for instructional purposes and should not just be consigned to research uses. Of course, many challenges remain which will be addressed in continued research and evaluation studies done in the coming months.

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Google Tools in a College Classroom: Where to begin the journey?

Ellina Chernobilsky and Virginia Rich, *Caldwell University*

Abstract: Google has been working hard to promote its products to educators on all levels (Casap, 2010). Many K-12 schools subscribe to Google services to enhance instruction and be associated with the strong Google brand (Dessoff, 2010). At the same time, a new generation of students use technology to learn on the go. The Pearson Student Mobile Device Survey (2013) reports that most U.S. college students believe that technology helps them learn. As students rely more on technology in secondary school, higher education educators can capitalize on those skills and incorporate them in their own classrooms. In this practice section, participants will explore recently-developed tools that Google has introduced to educators of all levels and reflect on the constructivist approaches underlying student use of the tools (Denton, 2012). Participants will sample these tools and brainstorm how to incorporate them into their pedagogical toolkit.

Literature Review

Today's ever-increasing proliferation of technology presents both the largest threat and the largest opportunity in contemporary education; capitalizing on this technology affords educators an extraordinary opportunity to enhance digital literacy skills, even to the level of fluency (Collins and Halverson, 2009). New standards in secondary education anticipate fluency in various technologies for learning (Common Core State Standard Initiative, 2015). In practice, since the Common Core standards were implemented in 2010, colleges and universities across the nation began seeing students arrive to college with experience in online courses and in using technology for learning and productivity (Worley, 2011). In 2006, Google introduced GAFE (Google Apps for Education), a learning tools suite (Bout, 2014), to allow students to move from traditional paper-and-pencil environments to cloud-based learning. Bout (2014) notes that the tools are designed to expand their educational horizons from traditional lecture hall to cloud-based environments anywhere in the world. Working across multiple platforms, GAFE allows users to collaborate both in real time and asynchronously. Many students today are familiar with Google tools like Gmail, Google Calendar, and cloud storage called Google Drive. Adding GAFE to the student toolbox allows educators capitalize on the knowledge students already have and use that knowledge for their own educational purposes.

Goals and Objectives

Participants in this section will review two Google tools, Google Drive and Google Forms, and discuss their use as pedagogical tools in multiple disciplines at the higher education level, with particular emphasis on the constructivist approach. The participants will then evaluate samples of student work from two courses, one undergraduate business course and one graduate Education Research course and consider how faculty and students at their institutions could utilize these tools in their courses. This could include, but is not limited to, introduction to course content, student-produced research, student-created reports and supporting documents, and formative or summative evaluations. Further, the group will learn how to access these tools and how to set up assignments using these tools. At the end of the session, the participants will have learned the steps of setting up the tools for their own use in the higher education classrooms and will have come up with concrete ideas to use these tools in their classrooms.

Description of Practice

The session will begin with the presenters sharing how their personal educational philosophy and reliance on constructivism and active learning led to their personal journeys into Google world. The presenters will demonstrate how they use these two Google tools in their classrooms and will walk the participants through the steps required to configure these tools for individual use. Once the tools are set up, the presenters will invite the participants to engage in think-pair-share activity where the participants will brainstorm how these tools can be used in the classrooms. Pros and cons of the use of these tools will be discussed and points of clarification will be given as these ideas are shared among the participants in the whole group discussion. Finally, the presenters will highlight the Google tutorials available online.

Discussion

As educators, we try to keep pace with the times in which we teach while creating optimal learning environments for our students. Educational technology is experiencing a boom, with many user-friendly, effective, and low-cost tools being introduced to the market daily. While keeping up with them is hard, it is useful to give some of them an earnest try to see what they can offer to our learning and teaching experiences. We believe in providing innovative learning environments, always with a view to the professional world our students will encounter after graduation. The suggested cloud-computing tools activate and build on prior knowledge students bring from high school, but take it to a new level by requiring collaboration in multiple formats (e.g., group projects, peer editing). We see clearly that using the cloud-based apps enhances students' learning experience, as they actively engage in creating content and working with the information collected from their efforts. Our students develop proficiency in the cloud-based tools that are common in today's workplace where they will collaborate and work synchronously with colleagues. We can see the student satisfaction that comes from actively engaging in this skill development. As teachers, we have experimented with Google tools in our respective classrooms and find them to be valuable for modern teaching and learning.

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Social Media Reading Reflections: Utilizing Facebook in the Classroom

Donald Snyder and Jennifer M. Harrison, *University of Maryland Baltimore County*

Abstract: This practice session reflects upon the utilization of ‘Facebook Groups’ as a pedagogical tool for promoting reading reflection and the development of soft skills. Facebook, and other social media tools, provide students with a familiar space where they are comfortable sharing their thoughts and ideas to a larger public. Contrary to the perception that one has to be ‘friends’ on Facebook in order to communicate and share, ‘Facebook Groups’ offers users a private dedicated page to share updates among a controlled set of people. As reading responses, Facebook reflections allow students to connect the course readings to their own experiences while sharing associated online content that highlights their own interests and furthers course discussion. Additionally students can learn about the ideas and interests of their peers by reading each others’ posts; a practice that is encouraged through a commenting requirement. Finally students are required to include complete citation information for all referenced materials (course readings and online links) which promotes good scholarship practices and evaluation of source legitimacy. Professors can then highlight selected Facebook posts during course discussion in order to further interrogate student positions and related online content. The use of rubrics for assessing student achievement revealed increased mastery of citation as a soft skill along with an increased ability to identify central themes within the course readings. Participants in this practice session will view examples of Facebook posts from University courses in Media and Communication Studies, duplicate the assignment by joining and posting to a Facebook group created for the practice session, examine the rubric used to evaluate the assignment (along with its related data), and discuss ways of adopting and adapting the assignment for use in their own classrooms.

Literature Review

Since the turn of the 21st century the popularity of social media has grown exponentially. According to a 2011 Nielsen report, “State of the Media: The Social Media Report,” social networks and blogging sites account for nearly a quarter of the total time users are spending on the Internet. The most popular social networking site, Facebook, has eclipsed 800 million users, and draws more traffic than any other website on the World Wide Web. Additionally, social media has become a dominant mode of communication, especially with the recent rise in text messaging and the mass adoption of smart phone technologies such as the iPhone. The Nielsen report also notes that close to “40 percent of social media users access social media content from their mobile phone.” Most of our millennial students are entering their undergraduate courses tethered to these smart devices, which has created new questions, concerns, and opportunities for our college classrooms. While many argue these Internet connected devices act as distractions (Carr, 2008; Shirkey), educators are also exploring the possible benefits of integrating social media platforms into the educational experience (Dyson, 2015; Roebuck, 2013; Casey 2013). The potential impact of utilizing social media centers around the ways these technologies promote peer connections and writing practice outside of the physical space of the classroom by presenting students with a forum they are comfortable sharing within (Abe, 2013; Ekoc, 2014).

Goals and Objectives

Session participants will reflect upon the potential pedagogical value and challenges associated with integrating social media platforms (Facebook, Twitter, etc.) into their classrooms. After evaluating examples from several courses in Media and Communication Studies, participants will be asked to duplicate the assignment using a Facebook group page created specifically for the session. The discussion will center around potential applications of the assignment for other courses and disciplines. Following this discussion, we will share the rubric, along with its associated data, in order to analyze the strength of the assignment in promoting reading comprehension, articulation, and the development of citation and information analysis skills. At the session’s conclusion, participants will have learned the mechanics of creating and maintaining a closed Facebook group, and will have discussed the merits and opportunities for integrating a similar assignment into their courses.

Description of Practice

Donald Snyder will explain the assignment and then highlight several examples of Facebook posts from his Media and Communication Studies courses. He will then present a short tutorial on how to set up a closed Facebook Group page, and then issue invitations to the session participants to join the group. While he is issuing permissions, Jennifer Harrison will present the rubric created for the assignment and detail the associated data. Once the group is finalized, we will distribute a short academic reading (Abe and Jordan's "Integrating Social Media into the Classroom Curriculum") for participants to read and respond to. Participants will then duplicate the Facebook assignment, creating short reflection posts that will include online links to sources that relate to and further the discussion of the distributed reading.

Discussion

After completing the Facebook assignment practice in the session, we will lead a discussion, reflecting on what we learned from each other through the practice assignment, and how the assignment might be adopted in other majors and disciplines.

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Embracing The New Normal: Designing Opportunities for Teaching Presence in the Online Courses

Stephanie Smith Budhai, *Neumann University*

Abstract: Online courses was once a new phenomenon, but now has become the new normal. Despite this fact, many faculty members still struggle with transition their pedagogical techniques to the online course. This presentation will demonstrate how faculty members can build teaching presence in online courses, and leverage the inherent emerging technology tools within Learning Management Systems (LMS) as well as reformat traditional teaching techniques in the online course. Participants will engage in an interactive discussion surrounding teaching presence in online courses, view examples of teaching presence in online courses, share challenges they have experienced, and practice outlining ways they can build their own teaching presence in their courses.

Literature Review

According to Allen and Seaman (2013), the current number of college students enrolled in online courses is 6.7 million, which is 32% of all college students currently enrolled in institutions of higher education. Additionally, 69.1 percent of chief academic leaders report online learning as critical to long time strategic plans (Allen & Seaman, 2013), confirming the continued growth in the area of online course and program offerings. As faculty move to the online environment, it is important to develop the pedagogical skills, practices, and methodologies consistent teaching in traditional face-to-face courses. There is also known research confirming the relationship between student satisfaction in online courses with the level of teaching presence (Ladyshevsky, 2013), and the research in this area is valuable (Kupczynski et al, 2010). The Community of Inquiry Model developed by Garrison, Anderson and Archer (2000) through their seminal paper “Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education” is the crux of exploring teaching, cognitive, and social presence. Teaching presence specifically surrounds the process of facilitating, designing, and guiding the cognitive learning processes in a meaningful way (Rourke, Anderson, and Garrison, 2001). Faculty members can rely on Web 2.0 technology tools to help build and increase teaching presence in online courses. One way to create online courses where the presence of the instructor is immersed in all aspects of the course is by focusing on “Teaching Presence” (Rourke, Anderson, and Garrison, 2001). Teaching presence is a sound and well researched concept, however, many online courses still lack a strong level of teaching presence.

Goals and Objectives

After participating in this session, participants will be able to:

- Define what teaching presence is in online courses
- Identify pedagogical techniques that can be employed to build faculty presence
- Locate emerging learning technologies inherent in Learning Management Systems that can be leveraged to increase teaching presence
- Share with peers challenges currently facing in regard to teaching presence in their online course
- Complete a template based on own course to document ways teaching presence can be increased

Description of Practice to Be Exemplified

During the session, I will start by defining teaching presence according to Garrison’s Community Inquiry Model. I will provide several examples of how teaching presence established in several different online courses, and explain the process for designing these. This will include the use of video and audio messaging and lectures, gaming and animation, case studies with interactive responses, virtual stimulations, and online debates. In addition, I will share several courses of survey data with students’ responses on the types of teaching presence they preferred and connected with. I will also provide participants with a template that they will use during the session to start aligning pedagogical techniques that increase teaching presence to the learning objectives and activities they have planned for their online courses (Anderson, Rourke, Garrison, & Archer, 2001).

Discussion

The interactive nature of this session will allow participants to not only experience pedagogical techniques for building teaching presence, but they also will have the chance to fully engage in the design and planning process to ensure that their online courses are filled with teaching presence. Session participants, as a result, will leave the session with an increased knowledge, awareness, and skills to utilize teaching presence to meet the learning needs of their students.

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Hunger Games in the Classroom: Engaging Student Learning through Pop Culture Narratives

Jason F. Lovvorn and Sue Trout, *Belmont University*

Abstract: This session will explore how pop culture narratives engage students at the same time critical examinations of these narratives authorize student expertise and deepen student learning. Two session leaders will unpack ways in which pop culture adds valuable dimensions to their classroom pedagogy.

Literature Review

Metrics like the National Survey of Student Engagement remind us that engagement is clearly linked to improved student learning and to personal development (Kuh, 2003; Kuh, Kinzie, Schuh, & Whitt, 2005). Moreover, good teaching practice often involves strategies that privilege student engagement. Consider, for example, the following observation by Ken Bain (2004) in *What the Best College Teachers Do*: “Many of them [best college teachers] spoke about beginning with what seemed most familiar and fascinating to students and then weaving in the new and different into the fabric of the course” (p. 40) Bain’s emphasis on student fascination suggests one inroad to student learning explored in this proposed practice session—namely, sites of popular culture where student interest is already high. While Grace and Tobin (1998) rightly argue that popular culture in the classroom is sometimes “purified, homogenized, and reconstituted as curriculum or motivational engagement” (p. 46), in this session, attendees will encounter pop culture as a useful stepping stone to deeper learning, for as Alvermann, Moon, and Hagood (1999) note, “pleasures derived from popular culture are also noteworthy because they are complicated, and at times, uncomfortable, and it is through the exploration of these various pleasures that students may take a more in-depth look at popular culture and ponder other possibilities and positions of political, social, and cultural relevance that they have not examined before” (p. 35).

Goals & Objectives

By the end of the session, participants will be able to:

- Understand how popular culture engages identity shifts and usefully de-centers the classroom.
- Recognize how pop-culture analysis helps develop transferable methods of making meaning.
- Develop strategies for using popular culture to promote student engagement and learning.

Description

The session will have three parts:

- 1) See description of Participant Interactivity. (20 minutes)
- 2) Each session leader will share ideas about course design and outcomes connected to student engagement and learning in their classes. Jason Lovvorn will explore how a writing class devoted to zombie narratives engaged students at the same time it impelled them to consider complex topics such as remediation, dystopia, modernism, ecology, consumerism, feminism, and racism. Sue Trout will explore how studying popular culture and critical theory in two writing courses prompted students to engage in complex topics such as: how visual rhetoric in advertising and product packaging develop and manipulate personal values; how television and film perpetuate gender expectations and stereotypes; and how popular but “low culture” young-adult books reveal archetypal stories that ask what it means to be human. (20 minutes)
- 3) Session leaders will conclude by synthesizing ideas from the first two parts of the session and by addressing more generally how and why popular culture makes sense for engaging students and getting them to think more deeply in the classroom, including conversations about popular culture and its effects on human identity and values (10 minutes)

Participant Interactivity

Session leaders will engage the audience in an interactive lesson designed to illustrate connections between popular culture, student engagement, and critical thinking. Participants will be asked to respond to a writing prompt: *How does language operate oppressively in despotic forms of government?* After writing for five minutes, participants will watch a short film clip from *The Hunger Games* and revisit the prompt, again addressing the categories of language, power, and despotism. Participants will briefly discuss ways that their engagement level changed between

the first and second writing activities. Moreover, participants will be asked to think about ways in which the pop-culture artifact (the film clip) not only engaged them, but also deepened their critical thinking about core concepts.

Discussion

Key ideas under discussion will include the following:

- *Popular culture commonly engages identity shifts which can usefully de-center the classroom.* Classes involving popular culture often promote collaborate learning rather than a top-down, authoritative pedagogy. The teacher may assume different roles in helping students to develop critical methods around popular culture, but one crucial role is that of learner (Alvermann, Moon, and Hagood, 1999, p. 40). When the teacher openly learns from students, student expertise becomes a vital impetus for engagement and learning.
- *Pop-culture texts help students develop methods of making meaning that can transfer to other domains.* As part of critical pedagogy, we often ask students to analyze, interpret, and argue. A “semiotic approach” (Alvermann, Moon, & Hagood, 1999, p. 10) or “semiotic method” (Maasik & Solomon, 2012, p. 9) involving popular culture can help students understand hermeneutic methods more readily because the students bring with them capable grasps on the primary texts. They can devote more classroom time to methods that lead to better research and arguments.
- *Popular culture engages curiosity and deepens learning because of its authentic contexts.* Pop-culture texts ask students to consider what they value and where those values arise. The aforementioned “semiotic method” helps students recognize the signals/signs with which they are bombarded daily and encourages students to craft their responses more thoughtfully.

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Using Multiple-Choice Quizzes as Vehicles for Higher-Order Thinking and Active Learning

Andrew Marx, Focused Inquiry, Virginia Commonwealth University

Abstract: This practice session explores the benefits of formative assessment geared toward high cognitive levels (e.g. application, analysis, and evaluation), delivered as low-stakes multiple choice quizzes. Research in assessment and active learning pedagogy supports the potential of such practices. This session will explore elements of assessment geared toward deeper learning that will make relatively low demands on classroom time but prompt rich student engagement.

Literature Review

Black and William's (1998) meta-analysis led them to conclude that formative assessment has a significant impact on student learning. By providing opportunities to deliver feedback to students, formative assessments can facilitate deeper learning among students (Biggs, 1999). Other researchers, including Klappa (2009), have demonstrated the value of quiz-related practices as effective components of instruction based on active-learning. They can encourage deep engagement with course content both inside and outside of the classroom. Cox and Clark (1998) have documented efforts to target higher cognitive levels in quiz activities, based on taxonomies formulated by Imrie (1995). This work follows on groundbreaking research by Bloom (1956) and more recent revisions by Krathwohl (2002). Sullivan (2009) has developed practices for adapting best practices in item writing (Haladyna, Downing & Rodriguez, 2002) to clicker-based quizzes, suited for efficient formative assessment activities.

Goals and Objectives

Participants in this session will gain greater understanding and appreciation for varied uses and benefits of "high-level" quizzes, as outlined below.

The practice of quizzing can serve a number of pedagogical objectives aside from the immediate need to incentivize student preparation for class sessions. Instructors can use them to gauge understanding of lecture and reading material, (re)adjusting and (re)prioritizing lesson goals based on evidence of student comprehension (or lack thereof). Used creatively, quizzes can heighten student engagement. During review and explanation of quiz answers, students often become invested in defending correct and incorrect responses. They can also provide context for further discussion of content.

The discussion and review of quizzes can help to advance higher-level thinking. Multiple choice quizzes can prompt application and analysis of key ideas in contexts where students can exercise independent judgment with "nudging." Higher order thinking can also serve to reinforce "lower level" knowledge: recall and understanding

Multiple choice questions can serve as tools for deeper learning. The key to this lies in working with plausible and tempting distracters and explaining why they don't correctly answer the question at hand. The process of working through distracters can help students to better grasp difficult concepts by "defining them in the negative"

Description of Practice

I will present a variety of multiple choice questions designed to elicit student engagement in deeper learning. To that end, I will demonstrate how quiz items can be crafted to prompt rigorous analysis and application of content. Participants will gain facility in distinguishing different types of questions aligned to distinct levels of Bloom's Taxonomy

Participants in this session will explore key aspects of multiple choice question development that emphasize higher-order thinking and attendant aims of clarifying essential concepts. They will gain practice in crafting questions that target key sources of confusion or error, and turn those potential pitfalls into "teachable moments."

Participants will have the opportunity to work with each in small groups and consider how advanced learning objectives can be adapted to quiz questions. They will have time to draft and critique quiz items.

Discussion

The inspiration for this session was based experiences as an instructor of core curriculum courses at Virginia Commonwealth University, and the two-semester course sequence of *Focused Inquiry* (FI) in particular. Like most other core courses at VCU, FI classes apply principles and best practices of active learning. Since there are no exams (essay and presentation assignments comprise the bulk of the course grade), I am keenly interested in advancing means of reinforcing content learning in a context where targeted assessment is unavailable. Intense student engagement in lower-stakes tasks may be a sound alternative, and discussion-oriented review of quizzes can elicit such engagement.

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Lessons Learned in Creating an Online College Teaching Certificate

Pamela Eddy, James P. Barber, April Lawrence, and Jamison Miller
The College of William and Mary

Abstract: Tertiary education is under increasing pressures due to public cries for greater affordability, increased graduation rates, and more thorough assessment 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, most faculty members are not taught about pedagogy. Second, increased access to higher education results 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). To address many of these concerns, 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 face-to-face and online workshops, and a capstone project that provides students with an opportunity for authentic learning and application of their new skills (Herrington, Reeves, & Oliver, 2010). On the one hand, our work focused on how to improve skill levels in our students and participants regarding teaching strategies. On the other hand, as the creators of the program and as adult learners, we also found learning opportunities in our work that contributed to how we viewed our own teaching practices. The intention of this practice session is to review the creation process involved in putting our courses online, how we evaluated our courses, and what we learned as faculty in the process of our efforts.

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 (Zubrick, Reid, & Rossiter, 2001). Yet, accrediting bodies increasingly require evidence of student learning (Hutchings, Huber, & Ciccone, 2011). There are no federal or state mandates requiring any type of teaching preparation for college faculty like those guiding K-12 teaching, thus we worked to create a College Teaching Certificate intended to help fill this gap in the field. Coupled with the building blocks for creating a program to support college teaching was attention to the scholarship of teaching and learning (Hutchings et al., 1990). Central to this process was the reflection of the faculty creators to their own learning. Understanding faculty members as learners requires intentional attention to program improvements (Fink, 2013).

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 session has the following learning objectives:

- Objective #1:* To support faculty as learners regarding 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.

The session will be structured as follows:

- (10 minutes) Introductions and identification of the creation of the College Teaching Certificate.
- (10 minutes) Review of the literature on teaching pedagogy and online learning strategies.
- (20 minutes) Share with audience contributing experiences regarding effective teaching strategies and assessments.
- (10 minutes) Discussion of lessons learned. Take away reference list

Description of Practice Focus

The juxtaposition of creating a program to help others improve their teaching practices relative to one's own teaching improvement highlights how faculty learn in the process. 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 engaging in deep learning activities (Wawrzynski & Baldwin, 2014). Moreover, evaluation of online learning relative to face-to-face assessment takes many forms. We used Quality Matters (<https://www.qualitymatters.org/>) and an external evaluator to assess our courses. These evaluations provided us with direct actions for the improvement of our CTC. 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.

Discussion/Conclusion

As reflective practitioners, faculty members continue to investigate their methods to improve learning opportunities for students. Creating an online certificate program provided us with a mechanism to promote access to improving teaching pedagogy to a wider audience. Yet, as with any new technology, faculty members involved in the process of creating online programming must assess how the technology adds to student learning. Merely substituting a digital version of an inadequate tool will not enhance the learning experience for students or justify the time and expense of implementing the new technology. Additionally, clear learning objectives and evaluation measures help provide students with a framework of how they can better use their class time for authentic learning. The benefits of the process and acquired skills can contribute to enhanced student learning and, ultimately, help faculty members to better prepare students with the skill base required in our changing, complex world. By interrogating their own teaching practices, faculty members can contribute to the scholarship of teaching to advance knowledge of how online course preparation helps inform faculty approaches to teaching.

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Conversation: How to Bring Geography into College Teaching—A Non-geographer’s Guide

Peter Henry and Thad Fortney, Virginia Commonwealth University

Abstract: Student engagement in almost any college-level class—from literature to political science to biology to economics—can be profoundly enhanced by giving students “geographic stewardship” of a physical space: a building on campus, a tract of land, a nature preserve, a neighborhood, a nation.

But if a professor doesn’t have a background in geography, what are best practices for such teaching? And given the many technologies available—from GIS to atlases to iPhones--what methods are optimal? This practice session will briefly model one such course at Virginia Commonwealth University—co-taught by scholars of English and Russian literature—as an example of non-geographers (humanities scholars, no less!) using geography to enhance student engagement. Participants will then engage in guided conversation regarding the possibilities and challenges of integrating geography into their coursework, as well as sharing best practices. Participants will conclude by re-imagining one of their own courses to include “geographic stewardship.”

Literature Review

This conversation is situated between three current trends: the increasing learner-centeredness of teaching in geography departments; the trend towards “space and place” in contemporary academic work, particularly in the humanities; the limited geographic knowledge among undergraduates whose primary and secondary education was in a high-stakes testing environment.

Geography departments have, in the last several decades, become remarkably engaged with theories of active learning and innovative practices. Grant (1997) offered the case method as a means of increasing student engagement in the teaching of geography.

Healey and Jenkins (2000), in turn, chronicled how geographers have integrated Kolb’s model of experiential learning in their own teaching. Drawing upon the educational theories of Dewey, Lewin, and Piaget, Grabbatin and Fickey (2012) show how the high-impact practice of service learning can breathe new life into the teaching of geography. Scheyvens et al (2008), in turn, demonstrate how active learning practices in the teaching of geography “revealed a wide range of benefits to students ... including the development of critical thinking skills, deep as opposed to surface learning, and generic skills such as collaboration and team work.” (67).

But what of the humanities? And what of using geography in pedagogy outside geography departments? Though the scholarship of humanities PhDs tends to focus increasingly on space and place, discussions of geography in their classrooms are increasingly rare. Reynolds’s seminal *Geographies of Writing* (2007) argued for the integration of geography into the teaching of writing, seeing it as fundamental to the larger arc of “postmodern spatiality” (3). Yet Arnold, NeCamp, and Sohan (2015) note the challenges of integrating geography into the teaching of composition to students who have grown up in the wake of the geography-free curriculum of No Child Left Behind, a malady they call “immappancy.” This conversation thus seeks to reconcile the ever-innovative teaching of geography departments and a desire to integrate geography into college-level teaching in the humanities and beyond.

Goals and Objectives

1. Understanding the possibilities opened by assigning students geographic space.
2. Understanding the limitations of using geography as an amateur.
3. Establishing the possibilities and limitations of geographic technologies, from GIS to Google Maps to print maps.
4. Discussing the responsible pedagogical use of geography as a non-specialist.
5. Re-imagining participants’ existing courses through the use of “geographic ownership.”

Description of Idea or Topic

This conversation seeks to determine best practices, challenges, and rewards of integrating geography into non-geography courses. The ultimate goal is to make the students' lived environment an object of study, engagement, and reflection.

Facilitation Techniques

Participants will begin by filling out a brief Google Form that asks their home discipline, the level of students they typically teach, their use of geography in the classroom, their level of training in geography, and the technologies they use. **(5 minutes)** After facilitators have briefly presented their course and identified their own challenges and rewards, they will then raise the fundamental questions of the Conversation Session (see "Goals and Objectives" above). **(10 minutes)** If the participant group is large (12 or more), participants will be put in heterogeneous groups and each assigned one of the fundamental questions. They will report out after a 10 minute discussion. If the participant group is small (fewer than 12), participants will be guided through a conversation that addresses each of the conversation's fundamental questions. **(25 minutes total)** With the help of participants, facilitators will generate a Google Document that presents the "takeaways" of the Conversation Session. **(10 minutes)**

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Conversation: Integrating Critical Thinking Skills into Outcomes and Classroom Practice

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Abstract: With employers often valuing problem solving and critical thinking skills ahead of specific job-related and subject-related skills and knowledge, and seeing gaps in these skills in their entry-level and potential employees (Conference Board of Canada, 2014; AACU, 2015) George Brown College, as part of a consortium of 6 colleges and Universities in Ontario, examined strategies to more clearly and fully teach and assess critical thinking skills within the subject-related courses and programs. In this session we will briefly communicate the research approach that was taken at the college, including the successes and challenges, and present the final rubric that was developed to be both comprehensive and user-friendly, and useful across a variety of courses. In this conversation, we will share questions and possible solutions that other institutions may have regarding the seamless integration of critical thinking skills into courses and programs. Lessons learned throughout the process we experienced may help to guide other colleges struggling with ways to incorporate significant, lifelong skills, such as critical thinking, into everyday teaching and assessment practices.

Literature Review

In our project, the first task was to define critical thinking within the context of our institution. Current definitions ranged from in-depth descriptions of declarative knowledge, procedural knowledge and metacognition (Kurfiss, 1988) to the habits undertaken when thinking critically (Marzano et al, 1993) to a simple broad description that critical thinking is “the king of thinking that professionals in the discipline use when doing the work of the discipline” (Taylor, 2004). Though definitions diverge, most definitions share some commonalities. Many agree that critical thinking is a skill or process and involves attitudes, habits, values, and behavior (Rickles, 2013).

The next task was to use the elements from the range of definitions as well as the critical thinking skills that our college teachers taught and assessed and begin to develop and test an assessment tool that would apply across a wide range of courses and programs. In terms of specific tools already in existence, the Foundation for Critical Thinking (Paul and Elder, 2007), Ku (2009) and Bers (2005) all reference different measures of critical thinking that are currently available. Ku notes the importance of measuring critical thinking using multiple response formats, such as The Halpern Critical Thinking Assessment Using Everyday Situations (HCTAUES), as they tend to capture critical thinking to a greater degree. The HCTAUES maps on to most of the criteria set out by Paul and Nosich (n.d.). Brookfield (1997) takes a different approach to assessing critical thinking. He posits that critical thinking is highly contextual and a social experience, with peers and teachers as critical mirrors. He notes that critical thinking can only be assessed in specific contexts, it is best assessed by peers, and the assessment should allow learners to document, demonstrate and justify their own engagement in critical thinking.

Our discussion will focus on both the process of defining critical thinking within the college context and developing and testing the rubrics that were developed through this process, and the presentation of the final rubric and teacher resources that arose from the project.

Goals and Objectives

The first goal is to describe the process that we used to develop, test and validate a rubric, designed to measure critical thinking skills, that is broadly applicable and user-friendly. In conversation, we will share any challenges that we faced, and that other institutions may have faced in similar circumstances, so that we all may learn from our experiences. The second goal is to present the rubric that was developed in order for others to be able to critique, use, revise, and apply it in their own contexts.

Description of Topic to be Discussed

The conversation will be focused on, but not limited to: 1) the process of developing and designing an assessment tool that can be broadly applied in a college context. This process included working with focus groups, involving faculty from a specific subject area and then faculty from a range of areas, designed to come to an agreement on a

definition of critical thinking within their contexts, and a sharing of methods of evaluating critical thinking skills within their contexts; 2) the design, testing and validation of a number of incarnations of the assessment tool; and 3) the presentation of the final result, including the teacher guide that accompanies it.

Facilitation Techniques

The discussion will begin with a brief presentation of the process and the results of the ongoing research which produced the subsequent changes and improvement to the assessment tool. A conversation will be encouraged among the participants based on their experiences of how they have tried to integrate critical thinking skills into their teaching and assessment practice and that of their colleagues, to get buy-in from their teachers and students, and to develop tools to help teachers teach these skills in more overt and inclusive ways. Then the facilitators will present the final rubric that arose from the project and discuss with the participants ways in which this rubric may be utilized, revised, and applied across disciplines. Participants are free to use the rubric in their own teaching areas, and will also have access to the accompanying teaching guide.

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Environmental Pledge Assignment: Connecting Classroom Lessons to Behavioral Changes with Calculable Impacts

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Abstract: Since its inception in January of 2008 the Environmental Health Science Pledge Project has made an impact on the local, state, and environment of our nation. More than 600 students have participated as part of an upper level introduction to environmental health science course where they pledge to spend one week committed to being as sustainable as possible with a special focus of their choice (water use, meat reduction, fossil fuels, agriculture, plastics etc.). Students collected environmental impact and footprint data from a typical week and compared that to data obtained during a pledge week. Class data is collected and pooled at the semester end so that students can see the impact made as a group. Students are also asked to calculate the impact they would have if they imparted their behavioral changes in part or wholly for a lifetime. Many students commit to making permanent lifestyle changes as a result of this experience. Here, data that shows the impact a class can make over the course of one semester is presented in addition to post class survey data that shows that the majority of the students who participated in the environmental pledge assignment continued to modify their behavior after the class ended.

Literature Review

The discipline of environmental health science is tasked with educating its students on the basics of preservation of the environmental for the sake of public health as well as giving students tools to implement changes in their own lives that lessen their personal environmental impact. These changes, once imparted at the student level, may soon become a part of persons outside of environmental health science if they are roommates or family members of the students who have imparted the desired behavior. Previous work has suggested that imploring a sense of responsibility has been an effective way to impart behavioral change. This is of utmost importance because poor lifestyle choice are responsible for a variety of environmental related illnesses as shown in several studies performed with medical students (Vargas & Zelis, 2014) (Phillips, Pojednic, Polak, Bush, & Trilk, 2015). Responsibility is difficult to convey with classroom lectures alone even when students are offered concrete advice and solutions that will increase their personal responsibility. In addition, it is difficult to overcome negative portrayal of conservation efforts in the media, which may affect undergraduate behavior (Geraee, Kaveh, Shojaeizadeh, & Tabatabaee, 2015), especially when it comes to climate change (Swim, Clayton, & Howard, 2011). It has been previously shown that role playing has had a positive impact on increasing social responsibility because it gives students a taste of a “real life” conversation or situation (Doorn & Kroesen, 2013).

Active environmental student learning by participation and community involvement lends itself not only to the immediate benefit to the environment, but also the potential to exact long term changes once students 1) try an activity and realize that it may not be as difficult to change their behavior as previously thought and 2) begin to feel a sense of community and responsibility about sustainability as they transition into adulthood and make the types of household decisions that can alter the course of environmental degradation at the local, state, national, and global level. With this in mind, a project was developed for undergraduate students that promotes environmental stewardship and sustainability that yields direct benefits to the environment during the course of the semester and holds the potential to alter their behavior such that changes will be imparted in the long term. Presented here is an assignment that was developed in part by the instructor, but given to the students each semester for full development during a classroom activity.

Methods

The assignment began by organizing students into groups to discuss changes that they could make in their lives now to lower their environmental impact. Each group of 5-6 students was charged to come up with three ideas. Ideas were discussed in class and listed for students on the class assignment web page. The following week, again on a mandatory attendance day, students were put into groups based on which pledge they selected. Each group had to have a minimum of 3 students; otherwise that option would be eliminated. Student groups were tasked with researching the impacts of their choice and unifying at least 3 data points that they would collect (and the units). For example, frequently in the group that selected to reduce or eliminate meat intake, students tracked the type of meat they ate, in ounces, and at which meals, and how much water was used to bring their meal from farm to table. They also weighed themselves and frequently had a daily energy scale of 1 to 5 to track how they felt during the pledge week. By agreeing as a group on their assignment development, students took ownership of the process, the assignment, and made it easier to compile their data at the end of the semester in a group report. The assignment dates could be selected by the groups as well. Groups could collect their pre-pledge week data, pledge week data during the same weeks or varying weeks during the semester. They were asked to find two sequential weeks that would be similar. Thirty minutes of class time at the end of the semester was set aside to compile group data and discuss experiences.

Results

Surveys were sent to 445 students who were enrolled in and completed the course from Fall of 2012 through Summer of 2013. Of the 94 respondents, 25 were from spring 2012, 33 were from fall 2012, 24 were from spring 2013, and 10 were from summer 2013. This pool of students was mostly juniors (48%) and seniors (31%), with almost equivalent small representation from freshman (9%) and sophomores (12%). Because the assignment was based on student's making independent decisions in their daily lives, they were asked to report age and living arrangements. Most students were 20 years or older and lived off campus with roommates.

Data for living arrangements during the assignment semester and current living arrangements were taken because students who live off campus have more control over several of the pledge options. For example, students who live in the dormitories do not have access to the thermostat to save electricity nor can they change shower heads to low flow. Students were also asked what grade they earned in the course and the grade profile was representative of total grade profiles for each of the semesters represented to be sure that a representative sample of students responded to the survey.

Pledge assignment selection was typically distributed among eight pledge choices. The majority of the students selected the pledge to become a vegetarian or vegan (29%) for a week or the pledge to conserve water (23%) for a week. Students were also asked whether they submitted an accurate report of their experience in order to find out if the students were exhibiting academic honesty during the pledge week data collection. Only 5% answered 'no' to the survey question, "Did you submit an accurate report of your experience".

Data from the pledge week demonstrated to students that already, as college students, they could make life choices that would lessen their impact on the environment. In addition, the pledge assignment required that they make a calculation that would give the long term impact they would make if they continued the pledge in full or in part (it was their choice as to which calculation to make). Two questions were asked to the pool of survey recipients to determine whether they continued their pledge behavior beyond the class. Students were first asked if they continued their pledge behavior beyond the pledge week at all. To this question 72% answered "yes". A later question in the survey asked if students were currently imparting some of the behavioral changes from their pledge assignment to which 69% answered "yes". To determine the extent to which students continued pledge behavior, they were asked to assess their continuous pledge behavior based on percent. The highest response was that students (26) continued their pledge behavior 50% of the time, followed by a group who continued with 75% of this time.

To determine, in general, why students did or did not continue the pledge assignment behaviors after the semester, they were given a series of options from which to choose a response that best fit their reason. The options were determined from several conversations with students outside of class through the years regarding pledge continuance. For those who did continue, 52% selected the following option: I feel better for participating in a change to better the environment for the sake of society and future generations. The next most popular reason (24%) was as follows: I was unaware of the impact of the changes that individual actions could have prior to the pledge, but was compelled to continue once I saw the impact that I could make. The other two options had similar numbers of students who selected them: I always wanted to make a change, but needed a reason to get started (8%), and I feel (physically) better for having made the change based on my pledge (15%).

For those students who did not continue the pledge 80% chose the following option: I did feel that the pledge made a significant change in the environment but it was too difficult to continue. The remaining 20% of respondents split equally between the following two options: 1) I did not feel that the pledge made a significant change in the environment and it was too difficult to continue, 2) I do not feel compelled to reduce my environmental impact. Environmental impact results from the pledge assignments themselves were compiled from the section of students who were enrolled one of two sections of the Introduction to Environmental Health Sciences course in the spring semester 2013.

The group that chose to reduce meat consumption tracked their meat consumption by weight in ounces and by type. Students categorized, in addition to meat, all the food they consumed that week in order to calculate the potable water that it takes to bring food from farm to table. Non-meat categories included: chocolate, butter, cheese, rice, pasta, bread, pizza, nuts, lettuce (salad items), vegetables, cereals, milk, eggs, wine and beer, tea and coffee. Students used a variety of online tools and literature to come to a consensus for how much water (in gallons) to assign to each food. During the non-pledge week, the students calculated that the required water consumption for their group of 13 was 60,358 gallons, and the pledge week consumption was 26,873 gallons. The group saved 33,485 gallons of water and dropped their per person consumption on average by more than half. The same group added a semi-quantitative twist to their assignment where they rated, on a scale of 1 to 10, their energy level for the day. The average energy per student for the week was not statistically different between the two weeks which put to rest some student concerns that without meat they would feel weak or tired. Students also estimated food miles and CO₂ saved as part of their data collection (data not shown).

The water conservation group focused on two ways in which they could reduce water consumption in their daily routine (other than changing their eating habits): time and frequency of showering and time running water while brushing their teeth and shaving. This particular group aimed for each member to cut shower time in half as one of their goals. They were able to go from an average shower time of more than 12 minutes to an average time of little over 6 minutes.

Conclusions

The environmental pledge assignment is a new approach to teaching environmental health because it allows students to craft an assignment that they design, implement on an individual basis, recruit friends and family (in some cases), and work in groups to gain knowledge of how to live more sustainably in the future using basic EH knowledge from an Introduction to Environmental Health Science course. By partnering with students to design the options in the pledge assignment as well as the type of data to collect, students take ownership of the assignment and begin to make independent, adult behaviors that are less degrading to the environment and in many cases, sustainable. By implementing a week of behavioral changes, tracking the environmental impact of such changes, and making adult, household decisions, students are empowered to continue with their environmentally responsible and more sustainable choices. Students are asked to calculate the impact they would have if they continued their pledge in full or in part, in the future, and asked whether they would continue with their behavior. Many of the students' narratives include pledges to continue their new behavior and they often remark a feeling of social gratification, and delight in how easy the pledge was to implement. This experiential learning assignment conveyed environmental knowledge but had students participate such that long-term impacts were achieved.

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Thursday

February 11, 2016

Session 11

4:10-5:00 PM

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

Fast Change: Teaching Intentional Self-development

Eric Pappas, Rosie Lynch, and Jesse Pappas, *James Madison University*

Abstract: The importance of intentional self-development cannot be over emphasized as a primary vehicle for societal change and individual growth. While we currently face global changes that once were fodder for bad dreams, we struggle to create change that may allow us to occupy the planet comfortably for, perhaps, a few more decades. While cultural, economic, environmental, and social change are critical to improving conditions, the central impetus for all these changes, and the most enduring, is individual change. There is simply no greater force, or foundation, for change.

The authors' research into intentional self-development spans well over a decade; two universities and several disciplines; thousands of students; and numerous federal, university, and corporate grants. While we have conducted 13 successful studies in intentional self-development (see Literature Review below) and developed at least five popular courses at two universities (Virginia Tech and James Madison University) employing these approaches, these methodologies have provided a process for creating positive change over a relatively *long period of time*—10-12 weeks. The methodology involves planning, self-discipline, attention to process, daily record keeping, reflective writing, and a willingness to experiment with one's self.

The present study is a departure from our established research, as much in process as time; that is, we are experimenting with producing lasting personality/behavioral change in *one week*. Our methodology employs fostering cognitive dissonance between 25 subjects' values and behaviors (their perception of their "real self" and "ideal self") and requiring students to be their "ideal selves" in every situation they are in for seven consecutive days. Surveys, narratives, and focus groups yielded reports of sometimes dramatic positive changes in behaviors, some that students considered life-changing.

Literature Review

What the authors' have not explored (until now) is the realm of "fast change," a genre populated by those least intelligent, most exploitive, and downright unethical. While these individuals (noted later) have made fortunes through book sales, DVDs, weekend workshops, and websites, most all their methodologies are *faith-based*. That is, like religion, they require the individual to believe that the method will simply work if embraced with enough blind passion. There is no room for science here.

Two of the authors of this paper have conducted at least 13 studies in intentional self-development with considerable success (Pappas & Pappas 2015; Pappas & Pappas 2011; Benton, Pappas, & Pappas 2011; Pappas 2013; Pappas 2011; Nagel, Pappas, & Hazard 2014; Nagel, Pappas, Swain, and Hazard 2015 and six others). Our work is informed by the research and philosophy of others, but most especially Rogers' (1980) work on "The Qualities of the Person of Tomorrow," Maslow's (1968) "self-actualized individual" and theories of human motivation, James' (1890, 1950) theories on human foundations for self-awareness and self-preservation, and Brandtstädter's (2009) work on self-regulation.

The research in the present study addresses the risky business of "fast change," a methodology normally relegated to self-help books, self-help gurus, and other questionable characters claiming to change lives overnight simply if one is willing to believe—in something—"just being" (Eckhart Tolle), "forgetting the past" and talking to your mirror (Louise Hay), "being ready" (Napoleon Hill), "destiny" (Tony Robbins), "aligning yourself with the energy of the universe" (Rhonda Byrne)—all of whom, most importantly (and lest we forget), will bring you financial riches overnight. These individuals claim millions of followers, and just those noted above have sold over 100 million books.

Still other fast change methodologies, none of which we embrace, are sometimes employed for military boot camp, detox, and yoga and meditation retreats. The current study, funded by the National Science Foundation (EEC #1158728: E. Pappas, PI), is experimental, and is the first we have conducted in implementing fast change, an area of little or no academic research.

Methodology

In this study, conducted in Fall 2014, the motivation for students to make rapid intentional changes is cognitive dissonance (Festinger 1957), most specifically between their everyday values and behaviors. Twenty-five upper-class James Madison University students took part in the study as a project in a senior-level special study social psychology course: *Sustainable Personality*. Briefly, students wrote narratives meant to discover and examine the differences between their “real self” and “ideal self.” Following a written analysis of cognitive dissonance in these essays, students were required to be their “ideal self” in every situation for a week. All students submitted electronic journal entries to their teaching assistant each night and took two surveys: one following the experimental week, and another at the end of the semester.

Results

The surprisingly encouraging preliminary results in this study, from focus groups, narratives, and two surveys, tend to support our hypothesis that when students recognize that their behaviors do not match their values, they engage in rapid positive personal change. Two reasons stated by many students as to why they felt motivated to make changes is that the change processes were “easier than they expected” and “made them feel good about themselves.” Additionally, it appeared that, confronted with this cognitive dissonance, many students were highly motivated by wanting to live a life characterized by authenticity and integrity.

Discussion

There are a variety of useful applications for this methodology, both inside and outside the academy, and in a variety of contexts and disciplines. Our CIDER discussion will focus on these topics, along with results from further research on the same topic currently under way.

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Using the Technology You Have to Support Flipping Your Classroom

Sherry A. Clouser and Carrie C. Bishop, *University of Georgia*

Abstract: Flipping the classroom typically refers to approaches that require students to significantly engage with instructional content before coming to class, allowing time in class for activities that may necessitate instructor guidance. Successful flipping requires a creativity, planning and support, and often faculty feel that they need to search out new tools and technology to flip their classes. In this session, the presenters will share how they help faculty to flip their classes using tools already supported on campus, including the learning management system, student response tools, and streaming media service.

Literature Review

The primary tenet of the flipped classroom is an inversion of the traditional classroom instructional model, moving first exposure to the content outside the classroom, and application of the content to in-class activities (Lage et al., 2000). Students can be exposed to the content outside of class in a number of ways, including textbook or other readings, video lectures created by instructor, or other online resources. The students are typically held accountable for these pre-class activities through low-stakes, graded quizzes or writing assignments that are completed before class begins. This not only holds students accountable but also gives them an incentive to complete the out-of-class work ensuring that they come to class ready to learn. Faculty can then spend the reclaimed class time with the students encouraging meaningful, authentic engagement with the content, either individually or in groups. Most see the use of technology—such as creating video lectures—as an essential component of the flipped classroom (Baeppler et al., 2014; Bishop & Verleger, 2013; Jensen et al., 2015; Strayer, 2012), though some believe pre-class readings can suffice (Lage et al., 2000; Kim, Kim, Khera, & Getman, 2014). However, the mere act of engaging with content outside of class does not alone constitute the flipped classroom; the real learning happens through purposeful in-class activities that integrate content and encourage higher-order thinking. (Jensen et al., 2015).

Goals and Objectives

During this session, participants will:

1. Define flipping the classroom;
2. Determine when flipping the classroom is the right approach;
3. Identify tools supported on their campus that could be useful in flipping the classroom;
4. See examples from faculty at the University of Georgia who have implemented these ideas;
5. Discuss how these ideas might work at their own campuses.

Description of Practice

The session will begin with a short discussion of what flipping is, and why it's considered an innovative and effective pedagogy. Then, the presenters will discuss the specific tools that can be used by faculty to create a flipped classroom.

The first important aspect of a flipped classroom is the work students do prior to class. The learning management system has several tools that can facilitate student engagement in these activities. The threaded discussion tool provides a space for students to engage with content, and each other, before class. The instructor can provide an article or chapter to be read before class, and require a thoughtful discussion post or answer to a discussion prompt related to the material. The quiz tool can also be useful in this area. The implementation of frequent quizzing not only gives students an incentive to complete their out of class work, it also helps them process what they have read or watched. The grades tool makes it easy to grade these activities and provide feedback in a timely fashion.

The second important aspect of a flipped classroom is the in-class activity that can now occur instead of a traditional lecture. In order to ensure that students come to class prepared to engage in an active classroom, appropriate, graded accountability measures should be used, such as quizzing via the learning management system and in class quizzing using a student response system.

One challenging aspect of the flipped classroom is designing activities to use in class, replacing traditional lecture. The tools in the learning management system can help facilitate these activities. In class group work can be made easier by using the Groups tool to create groups and organize group discussion boards and dropboxes. Students can share documents with each other or do peer review using their group discussion board.

We will share some examples from faculty at UGA who have implemented these ideas in their flipped classroom. Then, we will open the discussion to hear how these ideas, and other ideas might work at other institutions.

Discussion Questions

1. What is the flipped classroom?
2. When is appropriate to flip your classroom?
3. What tools are already supported on your campus that could help to flip your classroom?

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**Presenting an Instructional Resource Guide to Implement
Problem Solving in Higher Education Courses**

Christine M. Joseph and Jessica R. Chittum, *East Carolina University*

Abstract: There is a current trend in K-18 education for incorporating problem- and inquiry-based learning in multiple content areas. Problem-based learning is grounded in decades of research and theory, such as constructivist learning principles, student-centered learning, complex cognitive processes, and long-term retention and transfer (Barr & Tagg, 1995; Brooks & Brooks, 1999; Halpern & Hakel, 2003; Hmelo-Silver, 2004; von Glasersfeld, 1995). Problem solving incorporates reading, writing, listening, speaking, and critical thinking skills; all skills that better prepare college students to enter the workforce as effective professionals (Donald, 2002). We will present a structured planning tool, called an “instructional resource guide” (IRG), that serves to assist instructors in planning, designing, and implementing problem solving tasks in their courses. Through previous research, the lead presenter has implemented this tool in K-5 mathematics instruction with in-service teachers (Joseph & Hutton, 2014). We will present the IRG as a planning tool that can be revised to incorporate problem-based learning across content areas.

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Peer Review of Teaching: How The Reviewer Benefits

Candice Benjes-Small and Erin M. Berman, *Radford University*

Abstract: In traditional peer reviews of teaching, a faculty member is observed teaching a class by another instructor, and then is given feedback by the observer. Research has long supported the benefits of such reviews to the professor being observed. In recent peer review projects, we discovered that those who were observing reported an equally beneficial experience. This occurred for both in-person and online classes. Observers said viewing others' classes gave them an unexpected opportunity to reflect upon their own teaching practices. This presentation will discuss the positive experiences of the observers, explore ways to promote reflection in reviewers, and invite participants to brainstorm ways to make peer review a more reciprocal practice on their campuses.

Literature Review

Much research has been done on the benefits of peer review in the classroom and among students. In fact, the process of both being reviewed and serving as a reviewer has been well documented as a successful, reciprocal and active approach encouraging learning (Chism, 1999; Nicol, D., Thomson, A. & Breslin, C., 2014; Ralph, H. & Zarni, J., 2011; Shook, J., & Keup, J., 2012. Sadler (2010) explains that telling learners what is right or wrong and what should be improved does not promote learning. Conducting high-stakes reviews of teaching practices and correlating them to merit pay and advancement does not promote learning (Teckchandani, A., & Pichler, S., 2015). This begs the question; what does? This research focuses on adding to what is currently known regarding cognitive learning processes and shifting focus from student to teacher.

Goals and Objectives

- Identify benefits to the reviewer of conducting teaching assessments in low-stakes environments
- Discuss ways to encourage peer observation rather than just peer review
- Explain ways in which Radford University has conducted peer observation across disciplines
- Problem-solve solutions for overcoming barriers to peer observation

Description of Practice

Searching for ways to improve their teaching, instructors from across campus gathered to discuss pedagogy. From these discussions, we learned that virtually no department had an official peer observation or peer review of teaching program or process in place. Such review programs can be a dual-edged sword of course; constructive feedback could lead to better teaching, but criticism could potentially jeopardize one's position, especially for instructors who were not yet tenured or were in adjunct or temporary roles. We decided to form an informal peer observation group in which instructors would observe each other teach and then meet to discuss the class; instructors observed those from outside of their department and the observations were never shared.

In this low-stakes environment, participants found the post-class debriefing became a conversation about teaching and pedagogy and what worked, what did not, and why. Those who were serving as reviewers reported that they saw activities and approaches in the classes that they planned to "steal" for themselves and the community of practice began to grow.

When the group reconvened, we decided that observing was so powerful, we wanted to pursue more opportunities. We reached out to award-winning "super star" instructors on campus and asked if we could watch a class in action. Everyone who had the opportunity to observe such classes said the experience impacted their own teaching; they learned something new and applied it.

A similar result occurred among faculty members who were reviewing online courses, although in this review, the focus was on design rather than facilitation. Again, those who served on a review team reported learning more about design just by reviewing what others had prepared. Although a prescription for online course design exists, supported by research, there is no one right way to design a course, just as there is no one right way to teach it. By reviewing other ways to structure the design of a course faculty reviewers created a diverse learning community, from across disciplines, focused on sharing ideas to better support student learning, as well as adding tools to their own toolbox.

Discussion

This session will focus discussion on how observing others (both in design and facilitation) can powerfully influence the observer and how this shift in mindset can make the peer review of teaching a less threatening and more reciprocal experience.

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Multidisciplinary Perspectives: Critical Thinking Activities to Encourage Transdisciplinary Approaches to Academic Problems

Jennifer Roudabush, Virginia Commonwealth University

Abstract: As the push for “multi/inter/trans/ disciplinarity” becomes more and more ubiquitous in academic programs for both undergraduate and graduate work, it is increasingly important to consider ways of teaching students to approach problems across fields using a range of disciplinary lenses. This presentation examines the literature on multidisciplinary, its place in the undergraduate classroom, and ways in which instructors might foster transdisciplinary approaches to problem solving across disciplines. Participants will consider their own problem-solving practices, both in and out of the classroom, discuss with one another ways in which these practical solutions translate to academic pedagogy, and embark on several mock-classroom scenarios for fostering interdisciplinary problem solving.

Literature Review

Teaching students to think across disciplinary boundaries has multiple advantages across many layers of knowledge and skill building. Repko (2009) emphasizes the ways in which interdisciplinary education allows for greater cognitive ability across four key areas: perspective-taking techniques, development of structural knowledge, integrating of conflicting insights from alternative disciplines, and interdisciplinary understanding. Bransford (2000) further asserts that interdisciplinary instruction encourages students to recognize and address preexisting biases, and Fink (2013) connects interdisciplinary problem-solving instruction with the development of significant learning, which occurs in classrooms that allow for meaningful and lasting experiences.

Goals and Objectives for the Practice Session

By the conclusion of the session, participants will:

- Have a greater understanding of the ways in which academic programs and universities across the country have embraced multidisciplinary
- Verbalize some of the key findings regarding the ways in which multidisciplinary improves student learning and problem-solving ability
- Identify moments of significant learning that have occurred both professional and personally in their own experiences
- Consider the unique circumstances that surround the specific student populations that participants serve
- Discuss the need and applicability of multidisciplinary problem-solving across courses
- Participate in several perspective-shifting activities that translate to multiple classrooms, disciplines, and lessons within the higher-education curriculum.

Description of Practice Session

I will model the instruction of multidisciplinary problem solving through several activities. I will first ask participants to consider the practical applications of multi- and cross-disciplinary problem solving skills, and then encourage discussion of the real-world circumstances that require and encourage the development of such skills. We will then spend a brief amount of time reviewing some of the most prominent scholarship on employing multidisciplinary problem solving activities in the classroom, and the ways in which doing so might foster moments of “significant learning.” Participants will be asked to consider, share, and discuss times in which they employed crossdisciplinary thinking in solving real-world problems, and reflect on the ways in which such practical applications might be employed in classrooms across disciplines. Participants will also take part in several crossdisciplinary activities that demonstrate the utility of multidisciplinary problem solving. These activities will span disciplinary areas, and will encourage the consideration of multifocal perspectives as they apply to a range of inquiry projects.

Discussion Questions

Participants will be encouraged to discuss the utility of multidisciplinary instruction, as well as the ubiquity of such trends in higher education. We will discuss further the ways in which individual participants have employed crossdisciplinary problem solving skills in their everyday lives, and debate ways in which these practical situations employ skills translatable to the classrooms of multiple academic programs. Finally, participants will discuss the utility of generalizable perspective-altering activities, such as those employed in the session, in achieving the lesson goals of individual classroom agendas.

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Learning Beyond the Classroom: Mentoring and Engaging Students Through the Residential College Model

Eric Kaufman and Jay Read, *Virginia Tech*

Abstract: The Gallup Purdue Index reveals the importance of mentoring relationships between students and faculty. The “Oxbridge” residential college model provides a structure for increasing those interactions. This session will highlight successful strategies and approaches to expansion of residential colleges at modern institutions of higher education, including large, research-intensive institutions. Presenters will share strategies for empowering students to engage in learning opportunities with their peers and near peers. Participants will discuss ideas for further engaging faculty in mentoring opportunities with students beyond the formal curricula of their disciplines.

Literature Review

The inaugural report of the *Gallup Purdue Index* revealed that life in college matters for life after college. “Feeling supported and having deep learning experiences means everything when it comes to long-term outcomes for college graduates” (Gallup Inc., 2014, p. 6). More specifically, Gallup (2014) found, “if graduates had a professor who cared about them as a person, made them excited about learning, and encouraged them to pursue their dreams, their odds of being engaged at work more than doubled, as did their odds of thriving in their well-being” (p. 6). The question remains, though, what can colleges and universities do to foster such an environment. One option is a return to (or increased use of) the “Oxbridge” residential college model.

When colleges and universities were founded in the United States, many of them drew upon two prominent English universities: Oxford and Cambridge. Fink and Inkelas (2015) note that “this ‘Oxbridge’ inspiration included a residential college model that was the precursor to contemporary living-learning programs” (p. 5). One of the hallmarks of this approach is interaction between students and faculty that span beyond the classroom into students’ whole lives. As O’Hara (2006) notes, the “object is to ensure that students’ formal learning in the classroom is integrated in every way with their external life in the world.” In this way, the residential college model “expands the potential for learning because it consists of curricular and co-curricular learning opportunities” (Grohs, Keith, Morikawa, Penven, & Stephens, 2013). However, in order to accommodate larger student populations and more discipline-focused graduate training, the U.S. higher education system has limited its adoption and maintenance of the “Oxbridge” residential college model.

Goals and Objectives

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

- Identify foundations and key components of the “Oxbridge” residential college model.
- Evaluate the potential for expansion of residential colleges at modern institutions of higher education, including large, research-intensive institutions, like Virginia Tech.
- Share strategies for empowering students to engage in learning opportunities with their peers and near peers.
- Discuss ideas for further engaging faculty in mentoring opportunities with students beyond the formal curricula of their disciplines.

Description of the Practice

In 2011, Virginia Tech opened its first residential college, a place “where undergraduates, graduate students and faculty could live together in a facility dedicated to learning” (Johnson, 2011). The Honors Residential College (HRC) is a multi-generational, multi-disciplinary living-learning community with our own traditions and sense of belonging. We are comprised of more than 300 Junior Fellows (undergraduate students), several Graduate Fellows (graduate students), and more than 30 Senior Fellows (faculty and esteemed members of the New River Valley). While the HRC is student-governed, it also receives consistent leadership from a Faculty Principal (live-in tenure-track faculty member) and Student Life Coordinator (live-in Housing and Residence Life staff member). We foster a supportive, yet challenging community that creates the conditions for students to pursue meaningful encounters with

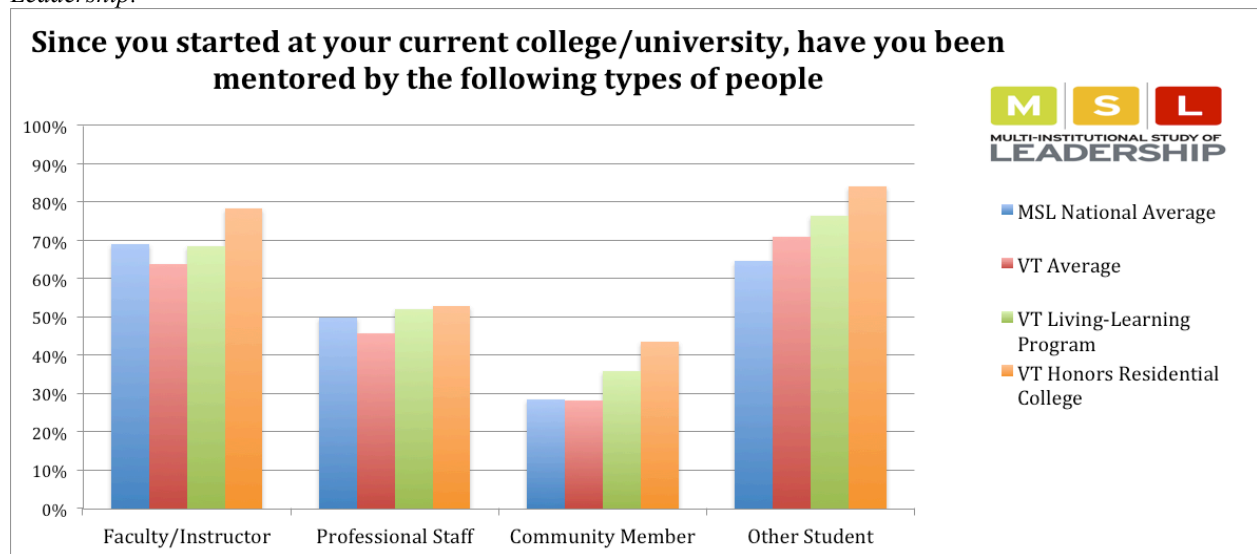
the wider world. Four “pillars” comprise the guiding intellectual vision of the HRC: learn a language, study abroad, engage in undergraduate research, and embody Virginia Tech's motto *Ut Prosim* (That I May Serve).

Discussion

The foundations of the residential college model include decentralization, faculty leadership, social stability, and genuine diversity (O’Hara, 2006). Data is emerging on the tangible benefits of this approach. The multi-institutional study of leadership is revealing that students in the Honors Residential College at Virginia Tech exceed their peers in terms of relationships with a variety of mentors (Figure 1). In this way, we are making gains toward our students’ future thriving and well-being. In sum, one of the faculty associated with the Honors Residential College shared:

“HRC provides a space on campus where students can practice informal networking with faculty, staff, and administrators. This kind of interaction prepares students for future leadership roles, gives them insight into the workings of the academic world, and facilitates connections among the various aspects of the intellectual and personal lives. I have thoroughly enjoyed conversations with students across the university, beyond my department and college.”

Figure 1. *Virginia Tech students’ engagement in mentoring, as reported by the Multi-institutional Study of Leadership.*



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Conversation: Exploring the Use of Reflective Learning to Make Course Material More Meaningful to Students

Natalie Van Tyne, *Virginia Tech*

Abstract: Reflective learning methods have been practiced in many college-level liberal arts courses and have also appeared in engineering curricula. Fundamentally, the term “reflective learning” refers to the active monitoring and evaluation of one’s own learning in order to discern concepts, patterns, and relationships. By implementing a weekly reflective journal assignment we were able to observe and measure students’ ability to identify, qualify, and implement new skills and insights. Students answered three questions: what did you learn, why is it important, and where else could you use this knowledge? Lengths of journal entries varied with student affinity for writing, but even shorter entries sometimes resulted in descriptions containing a greater sense of perception and synthesis of related ideas. A large number of students identified skills learned in our course that could be applied to other courses, as well as to everyday life. By adopting a basic, easy-to-use format for our reflective journals, we enabled our students to identify not only what they learned, but what it means to them.

Literature Review

Reflective learning skills relate to the development of creative and critical thinking skills, by revealing possibilities that are not immediately evident, but often turn out to be the most useful, as well as creative and/or innovative. Another major motivator for students to learn and use any skill or insight is their own perception of its relevance. The work of Turns and colleagues (1997) asserts that it is necessary to employ reflection to discover the “deep lessons” of engineering design, implying that it would provide relevance. Similarly, Palmer et al. (2008) identified the role of reflection as providing “new understandings” that students would add to their own accumulated knowledge and experience, thereby providing relevance.

To benefit from reflection, students need to refine their learning skills by realizing that not all knowledge is absolute; much of it is uncertain and depends on context (Felder & Brent, 2004a, 2004b). Therefore, it is up to each student to decide what they will accept as true, and under what conditions. Felder and Brent (2004b) identified four stages of intellectual development, ranging from absolute knowing, i.e., everything is certain, to contextual knowing, i.e., each person takes responsibility for making judgments about what is right. These stages provide evidence that students’ intellectual growth is a progression in which reflective learning can help them to recognize the importance of evidence in making judgments. Reflective learning exercises can help students to develop their intellect by progressing through these four stages of knowing, which provides an additional benefit to those mentioned above (Van Tyne & Wong, 2014).

Finally, we are also dealing with a student population belonging to the “millennial generation”, who were born between 1993 and 1996. This generation is characterized by both positive traits like optimism and open-mindedness, as well as negative traits like narcissism and self-centeredness (Chau, 2012; Hansen & Spaeth, 2013). Their strong sense of collaboration and interdisciplinary acceptance has been attributed to an intrinsic familiarity with network computing and other group-oriented aspects of the Information Age, such as social networking (Sweeney, 2013). Thus, we were particularly interested to see how students from this generation would engage with a reflective learning assignment.

Goals and Objectives

Participants in this conversation will be able to:

1. Recognize the potential benefits of reflective learning techniques for their students.
2. Develop realistic expectations for the extent of reflection possible, given students’ age and practice in critical thinking.
3. Identify the difference between reflections related to lifelong learning vs. those tied to a specific, short term outcome.
4. Share and learn about reflective experiences from faculty in this conversation and beyond.

Description of the Idea or Topic to be Discussed

We will discuss the use of reflective learning, beginning with what methods are already in use by this audience and their results. These “lessons learned” in a group sharing environment are helpful, especially for faculty who share similar content-based or process-based courses and are not yet familiar with this type of learning. We would then explore applications of course subject matter and their relation to students’ everyday experiences, based on the types of courses represented by this audience.

Facilitation Techniques

Slides will be used for the initial 10-minute presentation. As part of the presentation, each participant will be given an index card on which to write the course and class year in which they already implement reflective learning, or teach the course and are interested in using reflective techniques. Groups of about 5 members would be formed, and would meet for approximately 15 minutes. Within each group, each member introduces themselves, using their card, and then shares their experiences and questions, using these discussion starters:

- How would you describe the majority of your students?
- Do they ask questions about the meaning or application of specific concepts?
- What do you do to encourage them to think about their work and what it means to them?

During the remaining 20 minutes of the conversation, the entire audience would reconvene and each group would share what they discovered among their group members. The session would close with a summary consisting of a list of the groups’ interests and one or two “best practices” identified by the audience.

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Conversation: How do we better prepare graduate students for their future public roles?

Shannon Wiley, Ayla Arsel Wilk, and Hannah H. Scherer, *Virginia Tech*

Abstract: The role of university faculty encompasses much more than higher education instruction. Additional responsibilities include K-12 outreach, public engagement, committee work and a variety of other public roles. This conversation draws on our experience with the Graduate Extension Scholars Program to explore how faculty can assist graduate students in holistic professional development through mentoring, training, and outreach activities. The Graduate Extension Scholars program provides M.S. and Ph. D students in the College of Agriculture and Life Sciences at Virginia Tech with advanced training in K-12 teaching strategies and presentation skills while collaborating with diverse stakeholders outside the realm of academia to develop an educational module based on their research. Students participating in the program have not only demonstrated an array of new teaching skills, they have also expressed increased self-efficacy, becoming more confident in meeting the demands of their future professional roles.

Literature Review

One of the major critiques of graduate education today is that students' training emphasizes specialized research and technical skills while neglecting preparation in other faculty roles, such as teaching, advising, civic engagement, and public scholarship (Austin, 2002; Crone et. al., 2011; Tanner & Allen, 2006). For example, Golde and Dore (2001) surveyed nearly 10,000 graduate students and found the majority felt unprepared for the realities of future careers both within and outside of academia. Even in the Agricultural Sciences, a field known for community involvement via the Cooperative Extension System, graduate students often lack opportunities to engage in community outreach and public scholarship (Bagdonis & Dodd, 2010).

As the result of a four-year qualitative study of graduate students' socialization into the professoriate, Austin (2002) developed recommendations for more holistic graduate training. Some of these recommendations include providing opportunities to (1) develop deep knowledge and a personal philosophy of teaching and learning (2) learn about institutional service and public outreach (3) learn how to engage in interdisciplinary work or collaborate with partners outside of academia, and (4) learn how to communicate with the broader public.

Graduate students are often left to their own devices to develop the aforementioned skills through involvement in pre-professional student organizations, elective coursework, and volunteer community service. However, these opportunities are not necessarily available to all students due to research demands or financial circumstances. Funded mentoring and training programs promoting graduate students' development as educators and leaders can enhance learning through scaffolding and relationship-building (Collins, 2011; Montano, 2012; Buck, 2006; Burrows, 2009). Examples of such programs include the NSF G-K12 program, and Virginia Tech's Graduate Teaching Scholars and Graduate Extension Scholars programs.

Goals and Objectives

Drawing from our experience with the Graduate Extension Scholars Program, a novel outreach program for graduate students in the College of Agriculture and Life Sciences at Virginia Tech, we will facilitate an interactive conversation around the subject of graduate student professional development. Our goals for this conversation are to encourage participants to: (1) explore the issue of graduate student professional development across a variety of fields, with a focus on preparing students for teaching and public engagement (2) share experiences with graduate student professional development outside the realm of research, including approaches, successes, challenges, and lessons learned; and (3) collaborate with one another to develop ideas for future practice.

Description of Topic to be Discussed

Discussion will revolve around the following questions: (1) What encouraged our interest in the issue of graduate student professional development? (2) What have graduate students shared with us regarding the strengths and

deficiencies of their own professional development experiences? (3) How are practitioners assisting graduate students in strengthening their skills around teaching and learning, institutional service, public outreach, interdisciplinary work, extra-academic collaboration, and public communication? (4) What are the barriers to effective graduate student professional development? (5) How can these current barriers be addressed?

Facilitation Techniques

The conversation session will begin with a brief (10-minute) presentation sharing our experience with the Graduate Extension Scholars Program. Participating students' reflections on the strengths and deficiencies of their professional development experiences will serve as context for ensuing conversation. Conversation participants will be encouraged to deliberate the aforementioned discussion questions via a "think-pair-share" activity. After each pair has had an opportunity to discuss and share their responses with the group, participants will be given an opportunity to reflect on what they have heard and identify at least one professional development strategy they would like to explore further in their future work with graduate students. The session will conclude with a "round-robin" share-out of participants' ideas, which will be recorded by the facilitators and made available to participants at the conclusion of the session.

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Conversation on Sustaining a Vibrant Faculty Learning Communities Program at a Large Research University

Thomas Chase Hagood and Lindsay Coco, *The University of Georgia*

Abstract: When asked, faculty development professionals can easily articulate the multitude of benefits of trans-disciplinary, faculty learning communities (FLCs). Such groups are one of the few spaces in higher education designed to empower faculty with self-reflective consciousness as innovators and partners in teaching and learning techniques and a safe place where faculty can deliberate on their roles within the infrastructures of their home institutions—as teacher, researcher, administrator, mentor, advisor, etc. This conversation session will briefly examine the recent renaissance of a FLCs program at a large research university—from implementation of research-led best practices to logistics, planning, management, funding, assessment and, perhaps most importantly, program sustainability and growth.

Literature Review

Undoubtedly, the research on faculty development supports a passionate advocacy for FLCs (Beaulieu & Williams, 2013; Bernstein, 2013; Cox, 2004; Layne, Froyd, Morgan, & Kenimer, 2002; Shapiro & Levine, 1999). FLCs contribute to the creation of smaller, micro-environments within the larger university community where individuals can invest and contribute to the larger goals of the organization (Shapiro & Levine, 1999). Cox (2004) synthesizes that FLCs help to provide networks that can connect isolated faculty members, address pedagogical challenges, connect early-career faculty members with experienced faculty members, and allow for networking at a department to department level, to name a few. In essence, FLCs provide an alternative professional development model for faculty members that underscores a collaborative visioning and construction process focused on models of learning (Layne, Froyd, Morgan, & Kenimer, 2002). FLCs can take many shapes and forms on campuses across the U.S. However, Cox (2004) notes there are two broad categories of FLCs: cohort-based and topic-based. For example, a cohort-based FLC may come together and decide that a focus on flipped classrooms is a particular interest and need for the group; whereas, a topic-based FLC is designed to address a pre-determined particular campus need (such as gender equity on campus) where individuals apply to join based upon their interest in the topic area. Regardless of the particular thematic focus of FLCs, it is apparent that these groups contribute richly to academic life by providing deep learning experiences for those who are a part of these “micro-strategies” that enhance universities (Beaulieu & Williams, 2013, p. 1).

Goals and Objectives

Through this presentation, participants will explore research-based best practices on developing faculty learning communities programs, as well as tackle the persistent problems within this realm of faculty development—from reluctant participation of overworked faculty compounded by tightening institutional budgets. This nexus of benefits and constraints compel faculty developers to make the case for FLCs and to do it in a way that is both philosophically and scientifically appealing as well as illustrative of the good work these groups promote. During this session, participants will become familiar with the trends and concerns of administering an FLCs program so that faculty and Centers for Teaching and Learning can mutually benefit from increased faculty engagement and collaboration.

Description of Topic to be Discussed

This session will include a brief historical sketch of the FLC program at the University of Georgia. Much of the session will center on a dialogue among participants on their experiences with FLCs and initiatives they'd like to see at their institutions—including: (1) considering outcomes of an FLC program (i.e. creating a more autonomous, self-directed faculty), (2) institutional stakeholders, (3) potential resources, and (4) the recognition and distribution of FLC intellectual products. The session will conclude with a collective consideration of obstacles to establishing a successful FLC program as well as the challenges of rebuilding previously established programs.

Facilitation Techniques

The moderators of this session will utilize engagement and conversational practices that permit open dialogue, trust, and sharing of valuable experiences (Felten, Bauman, Kheriaty, & Taylor, 2013). Hagood and Coco intend to set a welcoming tone at the start of the session that is warm and inviting and then pivot to an interactive and inclusive workshop that empowers individual participants to speak out, contribute, and learn from the collective work of all attendees. The conversation will include two reflective moments in which participants will be asked to consider how their past professional endeavors can inform future innovation in this area of faculty development.

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How Online Professional Development Influenced Mathematics Teachers as School Leaders

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Jessica Yue, *Texas A&M University*

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Abstract: The purpose of this case study is to investigate the effect of high quality online professional development on in-service secondary mathematics teachers' taking charge behavior. The researchers used a retrospective post-and-then-pre design survey to measure the effect of one specific professional development on in-service mathematics teachers' taking charge behavior. The preliminary data analysis revealed a strong relationship between teachers' professional development (training) and their taking charge behavior in their schools. Further, the results indicated that teachers' self-efficacy acted as a mediator between teacher training and teachers' taking charge behavior.

In the age of accountability, school districts seek innovative yet practical strategies to improve student achievement through increased academic teacher growth and effectiveness. In-service teacher professional development (PD) is the most significant tool available to directly impact the academic growth and effectiveness of teachers (Loucks-Horsley and Matsumoto, 1999). A holistic approach to PD not only fosters teachers' academic growth but can also produce a "spillover effect" (Angelucci & Di Maro, 2010) which can, in turn, promote teachers' taking charge behavior. Taking charge behavior is defined as professionals' willingness to help their colleagues at their professional capacity (Morrison & Phelps, 1999). This explanatory mixed methodology study aimed to identify the relationship between in-service secondary mathematics teachers' job-satisfaction, self-efficacy, training, and taking charge behavior as the result of attending an online PD program that is designed to improve their content and pedagogical knowledge. It also examined the mediating effect of self-efficacy on teachers' sense of taking charge behavior within their schools and local educational agencies (LEA). The following research questions were the focus of this investigation:

1. To what extent does teachers' PD training, effects their level of job-satisfaction, self-efficacy, and teachers' sense of taking charge behavior?
2. What are the relationship between these constructs, PD training, effects their level of job-satisfaction, self-efficacy, and teachers' sense of taking charge behavior?

Literature Review

During the past few decades, there has been a growing emphasis in increasing teachers' content knowledge but less attention has been devoted to increasing teachers' taking charge—leadership—behavior. There is a fundamental difference between those individuals who go beyond their expected role in ways that improves their colleagues and schools performance and individuals who are unwilling to take on the extra-role of a leader. Researches in the field of Industrial Organization have argued that such a behavior is fundamental for organizational effectiveness (Morrison & Phelps, 1999). From their findings we extrapolate that such a role could also be essential for K-12 school teachers where instructional leaders are mainly appointed by the central offices rather than the teachers and, for the most part, these instructional leaders frequently are distant and unaware of the school climate. We argue that taking charge behavior is related to teachers professionalism and training. Teachers who have participated in an ongoing professional development tend to exhibit leadership behaviors and actively get involved in their schools and programs (Coburn & Russell, 2008). Programs targeted at reforming teachers' attitude and collaboration often foster teacher-leaders (Spillane, 2006).

Method

Sample. The population that was accessible to this study consisted of 60 in-service secondary mathematics teachers who were or had been enrolled in a statewide online PD program (RUPD) in Virginia between 2009 and 2015. The criteria for participation were: 1) eighteen years or older, 2) one year of secondary mathematics teaching experience, 3) current or past enrollment in the statewide RUPD. The data was collected using online retrospective post-then-pre designed surveys. Respondents were sent an e-mail. The e-mail introduced the study and contained a link to the online survey. This resulted in a sampling framework of 60 individuals with 60% response rate (N = 36).

Procedure. This explanatory mixed methodology study entailed two components of quantitative followed by a qualitative data collection (McMillan, 2012). The survey instrument aimed to measure four constructs *self-efficacy, job-satisfaction, training, and taking-charge behavior*. All of the measures used in this study were adapted from well-known instruments in the research literature on education and/or psychology. We adopted Rasch measurement framework to examine the item

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Sessions**

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Friday

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Session 12

9:00-9:50 AM

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PINK TIME: Applying self-regulated learning across course types

Timothy D. Baird and David Kniola, *Virginia Tech*

Abstract: To explore new opportunities to promote self-regulated learning (SRL) across a variety of contexts, this study applies a novel assignment called Pink Time in seven different courses at two universities. The assignment asks students to “skip class, do anything you want, and give yourself a grade.” In each case, instructors adapted Pink Time to fit the needs of their course. All together, 165 students completed 270 self-directed projects and self-assessments targeting 5 metrics of SLR. Early findings show that: (1) students are more likely to perceive success in certain measures of SRL than in others; (2) variance in perceptions is low; (3) subsequent iterations of the assignment support higher perceived measures of SRL. Together these findings illustrate the value and flexibility of the Pink Time assignment as well as persistent challenges in supporting students’ SRL.

Introduction

Recently, arguments have been made that college students are increasing proficient at following directions and angling for As and increasingly deficient at thinking critically, creatively and with purpose (Deresiewicz, 2014, Arum and Roksa, 2011). Furthermore, as the world becomes flatter, more connected, more dynamic, more entrepreneurial, and faster, educators face growing challenges to critically engage students in course material and the learning process. We view these growing challenges as opportunities to experiment in our classrooms. For us, rigid educational models must be retooled to: (1) better help students see the connections between their lives and their educations; and (2) support students’ interests and abilities to direct their own learning.

This study builds on an earlier assignment and assessment designed to promote self-regulated learning and academic motivation (Baird et al., 2015). Originally run in an undergraduate course on sustainability, the assignment, called Pink Time, instructs students to “skip class, do anything you want, and give yourself a grade.” Our initial study found several benefits associated with Pink Time, however, new questions arose. Specifically: (1) How could Pink Time be applied in other contexts? (2) How might the effects of the assignment vary across these contexts? And (3) What insights into self-regulated learning (SLR) might be gained from this exercise? Our current study addresses these questions.

Literature Review

One way in which educators can promote learner autonomy is through focus on SRL. Based on earlier research that showed that children with higher levels of self-efficacy and self-regulation learned more (Bandura, 1977), SRL seeks to support a range of activities and a “web of skills” (Nilson, 2013) that span cognitive, affective, and physical behaviors that enhance and fortify learning and promote long-term knowledge retention and transfer (Schunk and Zimmerman, 2012). These behaviors include elements of self-efficacy, personal character, motivation, and metacognition indicative of self-sufficiency and academic achievement. Stated plainly, SRL approaches focus on improving learning outcomes by encouraging students to direct and manage their own learning. However, an important challenge in moving to these pedagogical approaches includes low levels of motivation or competing motivations within educational settings.

In educational settings, low measures of student motivation have been attributed to the widespread emphasis on extrinsic factors such as achieving high grades and mastering specific content (Wright, 2011). For students in traditional classroom settings, the emphasis on grades has turned evaluative tools (i.e., tests, assignments, etc.) into metrics for reward or punishment (Pink, 2009). In these contexts, students are typically rewarded for surrendering their senses of autonomy and choice regarding the goals and methods of learning. Rather than pursuing strategies to deepen their learning, students resort to rote memorization, or “binge and purge” methods, as a rational strategy to win high grades or perform well on high-stakes, standardized tests (Wright, 2011). What is lost here is the students’ sense of responsibility for the entire learning enterprise—what should be learned, how it should be learned, and why it should be learned.

Methodology

To address the question: “How does the PINK TIME assignment influence self-regulated learning across a range of course types and applications?” we collected and assessed student data from 7 different courses at Virginia Tech and the University of Colorado where the Pink Time assignment was applied during the 2014-2015 academic year. Courses were in the fields of environmental studies, education, business management, sustainability, and leadership (Corps of Cadets at VT) – and included graduate- and undergraduate-level courses. In each case, Pink Time was adapted by the instructor to suit the needs of the course and was run between 1 and 3 times during the semester. All together, 165 students completed 270 Pink Time projects. For each project, students completed a self-assessment rubric designed to measure the relationship between their own perceptions of their work and a set of behaviors indicative of self-regulated learning. The rubric, which was originally co-designed by researchers and students (Baird et al., 2015), collected both categorical assessments and short answer responses. The rubric distinguished between multiple aspects of self-regulated learning, including: choice, complexity, effort, persistence and curiosity. Analyses of these data included both basic descriptive statistics of categorical data and content analysis of short answer responses using qualitative analytical software.

Results and Discussion

Early analyses of these data yield several findings. First, students across courses consistently perceive more success in some aspects of self-regulated learning (i.e., Complexity and Curiosity) than in others (i.e., Choice and Persistence). Second, variance in student assessments is low across metrics, except for Effort where variance is comparatively high for graduate students. Third, few differences are apparent between undergrad and grad students, except Effort, which is higher for grad students. Fourth, multiple iterations of Pink Time within the semester generally yield gains across SLR metrics, with the largest gains in Choice and the most modest gains in Complexity and Persistence. While qualitative results are still pending, these early findings indicate that Pink Time is flexible and can be adapted for different types of courses and in ways that reveal interesting differences and similarities in students’ experiences as well as barriers and opportunities to support self-regulated learning.

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Up Vote, Down Vote: Collective Content Modulation and Informal Learning on Yik Yak

Kasey Lee Richardson and Dana Riger, Virginia Polytechnic Institute and State University

Abstract: Pseudonymous mobile apps, like Yik Yak, create unique communities of practice and informal learning contexts. Yik Yak users manage content in a process of collective decision-making; they can “vote” content in or out of collective feeds, modulating inclusivity and influencing collective knowledge. Our research looks at the process of informal learning that occurs within Yik Yak’s community of practice. We further seek to explore the impact of these informal learning contexts on student identity development as well as how pseudonymous technologies such as Yik Yak can be integrated into college course designs. Scholarship focused on pseudonymous apps in learning environments is very limited. Utilizing a thematic analysis (Braun & Clarke, 2006), we will examine and record patterns and themes within publically available data from Yik Yak feeds. Using social learning and sociocultural theories of development as frameworks, we will discuss the implications of the themes and categories established in the analysis. In addition to exploring the influence Yik Yak has on perceptions of student identity, we will use data from publically available syllabi to further understand how educators are acknowledging and utilizing the informal learning occurring in communities of practice like Yik Yak.

Literature Review

Ostensibly anonymous postings through mobile apps that utilize mesh communication (Ballard, 2015), like Yik Yak, may impact users’ identity development. Anonymous mesh communications provide untraceable and un-blockable communication platforms that have been used aggressively against individuals through, for example, bullying and “revenge porn” (Ballard, 2015). Since true anonymity requires unlinkability, and in an increasingly digital age, it requires *untraceability*. we focus on *pseudonymity* (an attempt at anonymity), as our framing concept herein.

Research suggests that twenty percent of “yaks” (messages posted on Yik Yak) have the purpose of “insulting, offending, trash talking, targeting, shocking, or demeaning,” and often refer to gender, race, or other characteristics in potentially offensive ways” (Northcut, 2015, p.3). Given the nature of intersubjectivity in human learning and development (Mundy & Newell, 2007) and the effects of social relationships in sociocultural theories of learning and instruction (Watson & Battistich, 2006), these mobile applications warrant not only a critical investigatory focus, but also the development of theoretical propositions for instructors who will likely encounter them—and potentially utilize them—in varied educational contexts, including potentially powerful informal learning contexts such as those described by Hager and Halliday (2006).

The heightened speed at which mobile applications grow, change, and are used presents a myriad of challenges for both formal and informal learning environments, such as implementing classroom policies on mobile application use that support educational objectives and limit legal liability (McCarthy, 2015). Conducting social media training and review for educational administrators, instructors, and students alike may ensure technologies are used safely and effectively. Determining whether questionable posts cross the line and become a violation of university policy presents an additional problem for educators (McCarthy, 2015), especially when considering the successful formation and maintenance of communities of practice (Wenger, 1998).

Methodology

Given the interpretive nature of our research questions, we will employ thematic analysis, a method of identifying, analyzing, and reporting themes within data (Braun & Clarke, 2006), to analyze publicly available Yik Yak feeds. Thematic analysis is useful in organizing complex data sets rich in qualitative detail, such is the vast amounts of content generated on Yik Yak’s collective feeds. Thematic analysis provides a way to explore the nuances and

general themes across and within our data, as well as organize our findings in a way that would be beneficial to educators utilizing or regulating apps like Yik Yak in the classroom. We will present our findings, along with illustrative examples, in a form that both educators and students will find useful.

Initially, we will randomly sample screenshots of Yik Yak's feed at predetermined times. We will familiarize ourselves with data, generate initial codes, search for themes among the codes, review the themes, define and name them, and then produce a final report of our findings (Braun & Clarke, 2006).

In the next stage of data collection, we will conduct internet searches of the publicly available sample of human development and education psychology syllabi at universities in the Southeastern United States. We will conduct a content analysis of syllabi to determine if course designs have paid mention to the use of Yik Yak or have outlined social media policies that reference pseudonymous platforms. Lastly, we will engage in extensive memoing and other reflexive activities throughout the analysis to ensure reduced biased and enhanced rigor. It is our hope that this research will help establish succinct criteria for informal learning variables to be measured in future research.

Results

Preliminary results from our pilot analysis revealed that users on Yik Yak discuss learning styles and strategies, study skills, the stresses of academic life, socialization of gender and sexuality, student identity, and various other aspects of self and learning. The results of our data will be finalized by conference time.

Discussion

Our presentation will center on the findings of our research, namely the themes that emerged in our data and the relationship between those themes and syllabi content in human development and educational psychology syllabi. We hope to create a dialogue around pseudonymous mobile apps like Yik Yak, as well as the influence this type of app may have on pedagogical practices. We will discuss the strengths and challenges that pseudonymous environments present to students and the impacts on student learning. We further hope to identify ways instructors can utilize informal learning contexts and technologies to increase student engagement, critical thinking, and self-awareness.

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Implementing Instructional Technologies to Promote Student Engagement in Writing-Intensive Courses

Kayla McNabb, Amanda Wright Cron, Rachel Corell, & Allison Hutchison, *Virginia Tech*

Abstract: This practice session examines strategies for integrating relevant instructional technologies (IT) into writing-intensive courses. In particular, presenters will examine ways IT can be used to support student engagement in the classroom, online, and in hybrid spaces through in-class activities, video-based content, personalized audio-visual feedback, and improved administrative organization. As resident “writing experts” brought into programs to teach various aspects of professional and technical communication, presenters will discuss how they collaborate with technical instructors to integrate communication instruction and to strategically use instructional technologies. Examples come from courses that vary in content and size, including both first-year and technical writing classes and writing-intensive courses for engineering majors. During the session, the presenters will describe and demonstrate IT they use in the classroom, and participants will discuss current and potential use of IT for engagement in their own courses. In addition, participants will consider how using IT might benefit grading and managing course information and content (e.g. attendance, conferencing, etc.), especially in courses that are co-taught or employ graduate or undergraduate teaching assistants. Session objectives include: identifying specific IT likely to foster student engagement in courses, whether face-to-face or online; constraints on implementing multiple instructional technologies in a course (e.g. time, resources, previous experience); seeking feedback from students; and articulating questions and methodologies to both experientially and empirically study writing instruction through use of IT.

Literature Review

Finding ways to better engage students remains an ongoing concern in higher education, with many questions to be explored. While serving student needs is a central motivation behind incorporating relevant IT into courses, streamlining administrative aspects of course management, especially in courses involving collaborative teaching and grading, is another important impetus for this work. Though some instructors may be tempted to either incorporate or dismiss IT without full consideration, various fields have been working to establish pedagogically-informed strategies for the use of IT. For example, Cargile Cook (2005) considers the technical and theoretical limitations instructors face as they move courses online, and concludes that instructors can design pedagogically-driven courses by establishing IT use on theoretical foundations. Similarly, Dixson (2012) found that multiple communication channels, rather than specific IT, foster engagement. With regard to the task of introducing students to IT, van der Meij and van der Meij (2013) found video-based instructions superior to text-based or mixed media. Their findings are supported in Kay’s (2012) review of literature published from 2002-2011 concerning the efficacy of video podcasts in education. In addition, Oncu and Cakir (2011) call for building faculty development to prepare instructors for teaching in digital spaces. Our presentation and conversation will consider these as both implications for the classroom and avenues for future research.

Goals and Objectives

This conversation explores current teaching strategies and challenges with regard to using IT to encourage engagement in writing-intensive courses. Specific goals of this conversation include:

1. Providing an overview of relevant IT which presenters have integrated in various courses, such as:
 - using technology to offer authentic writing tasks that are engaging and potentially applicable to future real-world situations (e.g. Kickstarter in a technical writing course);
 - incorporating multiple technologies to facilitate student engagement (e.g. conference sign-ups, taking attendance, peer review, providing audio/visual feedback or supplemental course materials);
 - framing in-class activities to maximize student engagement (e.g. “think/pair/share” group work).
2. Presenting example instructional videos (e.g. Jing) covering how to use IT to create individualized audio/visual feedback and demonstrating modules of activities aimed at fostering engagement.
3. Discussing technology and engagement issues, such as increased enrollment and the subsequent need for additional instruction outside the classroom; and
4. Generating practical strategies, feedback, and questions on student engagement and implementing relevant IT in their respective fields.

At the end of this conversation, participants are expected to:

1. Identify and generate questions about their experiences and challenges with using technology to engage students in their respective fields.
2. Generate practical strategies, approaches, and solutions for implementing relevant technologies in both traditional and online classes, with an emphasis on larger classes.
3. Articulate methodologies to experientially and empirically assess the effectiveness of using these technologies to improve student engagement in a variety of classroom situations.

Description of Topic to be Discussed

The scope of this conversation encompasses issues and strategies of implementing relevant IT to foster student engagement in writing-intensive courses in various engineering programs, including Biomedical Engineering and Mechanics, Civil Engineering, and Materials Science and Engineering, and to some extent, First-Year Composition and Technical Writing classes. This conversation may focus on issues such as: (1) ways that using these techniques and tools make instructors better able to address the needs of students; (2) how willingness to take risks with technology can help foster student engagement by helping students to understand why certain technologies are promoted and/or required; and (3) how implementing specific technologies promotes openness with students through requests for feedback. This conversation will also give participants an opportunity to consider the benefits of implementing IT to provide detailed feedback tailored to individual students or teams of students, connect students with additional course content, and improve clarity of class instructions for assignments. Further, participants will consider what specific IT might be best suited to a particular class setting (i.e. face-to-face or online, small or large classroom). Discussion will help participants determine when and how to promote new instructional technology to students and evaluate student feedback for future courses likely to utilize IT. In addition, consideration will be given to how these issues manifest when teaching collaborative assignments graded by a combination of instructors, graduate teaching assistants, and/or undergraduate teaching assistants, as IT implementation often occurs in response to these needs.

Participant Interactivity (Facilitation Techniques)

This practice session will be divided into four parts. First, the presenters will distribute a handout—which will include a list of resources and the information to access the digital version of the presentation documents and videos—and provide a brief overview of different IT that have been used to promote student engagement in a variety of writing-intensive courses. Second, the presenters will ask the audience to take 10 minutes to participate in a group “think/pair/share” activity to generate questions about using IT and to brainstorm strategies that help determine if specific IT might better engage students in a practical, useful manner. Third, the presenters will spend about 5 minutes asking the small groups to share their top 1-2 questions or strategies, adding those to a single document that situates overarching concerns about incorporating IT within the context of individualized instruction, audio/visual feedback, and resources that serve as actual examples of potential in-class activities. Finally, the remaining 20-25 minutes will be spent exploring proposed questions and strategies as a group, with the presenters acting as moderators. After the event, attendees will have access to shared digital documents used during the practice session.

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High Impact Practices Across the Disciplines: A Digital Narrative of First Year Experiences

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Abstract: The Virginia Tech First Year Experiences initiative is a discipline based, pre-professional model that incorporates faculty and staff from departments spanning seven colleges that offer undergraduate degrees and university studies and other campus resources including the Library, VT Engage (service based learning initiative), Career Services, and Housing and Residential Life. First Year Experience Seminars are one of the ten high-impact practices that support student learning and engagement in college (Kuh, 2008). A recent study found that across the nation First Year Experience Seminars incorporate anywhere from two to four high-impact practices (Young & Hopp, 2014). This practice presentation will illustrate the multiple high-impact practices incorporated into the First Year Experiences initiative at Virginia Tech through a digital narrative to capture the details of faculty experience teaching and learning with first year students.

Literature Review

Kuh (2008) introduced ten high-impact practices that have been found to increase student engagement and positively benefit student learning and success. These ten teaching and learning practices are first year seminars and experiences, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity/global learning, service-learning/community-based learning, internships and capstone courses and projects (Kuh, 2008). First year seminars and experiences have been classified into a typology consisting of five descriptions: 1) extended orientation, 2) academic with uniform content, 3) academic with variable content, 4) pre-professional or discipline-linked, and 5) basic study skills (Brownwell & Swaner, 2010). Students have been found to have higher persistence, higher graduation rates and somewhat higher GPA and academic achievement when enrolled in first year experience seminars (Brownwell & Swaner, 2010). In addition to academic measures of success other characteristics to student success are found, such as interaction with faculty, faculty support, knowledge of campus resources, time management and campus involvement (Brownwell & Swaner, 2010). In addition to the benefits of first year seminars and experiences, when multiple practices are integrated into the curricula student learning and engagement opportunities and outcomes are shown to increase. Young and Hopp (2014) found that institutions nationwide that incorporate first year seminars and experiences integrate two to four additional high impact practices in the curricula.

Goals and Objectives

The goal of this practice presentation is to introduce the diversity of high-impact practices that are currently integrated into the curricula of a discipline focused First Year Experience initiative. In doing so, the pedagogical practice of faculty teaching and learning within the innovative and effective First Year Experiences initiative which represent multiple disciplinary majors will be illustrated. The digital narrative format will allow for a rich description of multiple courses with the experiences of faculty intricately woven into the presentation. In addition to a dynamic open conversation to learn from each other, participants who attend this session will be able to:

- Identify multiple high impact practices and examine domain specific pedagogy integrated in practice across the disciplines.
- Determine the value of high impact practices and identify criteria for intentional and meaningful integration.
- Integrate innovative student learning opportunities in their programs/courses based on effective examples shared in practice.

Description of the Practice

The practice to be exemplified is the inclusion of multiple high-impact practices that span the disciplines of all seven undergraduate degree awarding colleges and university studies at Virginia Tech by describing, in rich detail, the practice of faculty teaching courses in the First Year Experiences initiative. The Virginia Tech First Year Experiences initiative fits the typology of pre-professional/discipline linked skills. High-impact practices that will

be explored in this presentation include: first year seminars, learning communities, undergraduate research, common intellectual experiences, collaborative projects, writing intensive courses and approaches to integrate multiple practices across the courses (AACU, 2015). Common student learning outcomes specific to the initiative that will be explored are problem solving, integration of learning and inquiry skills. These learning outcomes are the cornerstones for the design of engaging pedagogies, collaborative learning and experiential learning opportunities.

Discussion

When designing high-impact practices for first year students, approaches that lead to higher success include incorporating collaborative teaching, campus based resource networks, connecting skills learned to future student success, intentional course design, providing mentoring and creating opportunity for reflection (AACU, 2009). Along with incorporating high-impact practices, faculty and administrators should integrate high student expectations and allow for the support needed to achieve these expectations. Expectations for student learning are best communicated through student learning outcomes and objectives that are aligned with the mission and goals of the program and institution. Continuous assessment of student learning and engagement is necessary to measure the effectiveness of incorporating high-impact practices both individually and in an intentionally combined design.

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If You Build It They Will Come: Structuring Class Discussion in General Education Classes

Judy Mann, Rodney Ray, and Michele Ren, *Radford University*

Abstract: In *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*, John Bean (2011) argues that "most teachers think of discussion classes as active" but reminds us that they "often fail to produce the kind of active learning desired" (p. 205). As members of a mentoring program for graduate teaching assistants and fellows, the presenters have worked together to design classroom discussion activities that encourage all students in the classroom to be fully engaged. The session will model a variation of the Socratic seminar used by the participants in freshman written and oral communication classes with the topic of discussion being class discussions.

Literature Review

In their article "Seven Principles For Good Practice in Undergraduate Education," Arthur W. Chickering and Zelda F. Gamson (1987) argue that "Good learning, like good work, is collaborative and social, not competitive and isolated" (p. 3). Jay Howard (2015) further argues that while there might be different ways of assessing "participation," getting students to speak about the material is more fruitful than simply asking them to attend class or listen actively, because "when students verbally participate they maximize their engagement and their learning" (p. 5). One common way to get students engaged in class discussion is to start them in small groups and then ask these groups to report back to class. A possible downside to this model is that "the chances that students will occasionally] checkout during the activity may be expected" (O'Connor, 2013, p. 342). For this reason, O'Connor offers alternatives such as graffiti walls, think-pair-shares, and inside-outside circles.

Another way to keep all students engaged is to give each student in small groups a particular job. Bean exposes "that in many cases, the discussion is carried on by only a few students, while the majority (usually many more than the teacher realizes) listen passively" (Bean, 2011, p. 205). Another solution Bean sites it is to have the students generate the discussion questions. These questions can be generated within the small groups or by each student individually. The goal being to keep each student in the room an active part of the discussion and to make sure multiple voices are heard and multiple concerns are addressed.

Goals and Objectives

Coming from a perspective much like that articulated in Brookfield and Preskill (2005). *Discussion as a way of teaching: Tools and techniques for democratic classrooms*, we think that "When a wide variety of learners express themselves, other participants are challenged to consider and digest a diverse range of views. This results in a richer and more memorable learning experience for all" (p. 9). We hope to model a type of discussion that encourages full participation in order to get a variety of points of view about how and why to use discussion in general education classes.

Upon completion of the session, participants will have:

- A sense of how class discussion can get students to engage the course material.
- Some strategies for creating fruitful conversations.
- Ways of promoting ownership of the class and a sense of community among students.
- An understanding of a variety of methods, challenges, and issues involved facilitating effective class discussions.

Description of Practices

Participants will be given a notecard on which to write a question, comment, concern or idea about facilitating class discussions. Presenters will then facilitate a modified Socratic seminar / fishbowl style discussion (these contain an

inner circle of discussants and an outer circle of listeners) using the questions generated by the participants. As a practice session, attendees will participate in the discussion as students in our classes would.

Shuffled into the “deck” of participant cards will be three “flush” cards. Participants in the “inner” circle of the conversation will turn over a card, read out the question, comment, or issue then discuss it. When the question has been fully discussed, they will turn over another card. If/when participants turn over a “flush” everybody leaves the inner circle and selects their own replacement. If people in the outer circle wish to speak, they tap somebody who has already spoken and take their seat.

When we run this type of discussion in our classes, everybody has to speak at least 2 times. Conference attendees will be encouraged, but not required, to do the same.

Questions for Discussion

Discussion questions will be generated by participants based on the following prompt:

As you settle in, take a moment to write ONE question, comment, concern or idea about the topic of classroom discussion on your notecard.

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Applying Mindfulness Within Disciplines

Douglas Lindner, *Virginia Tech*
Susanna Williams, *University of Virginia*
Alan Forrest, *Radford University*

Abstract: In this session we will discuss the growing use of mindfulness across various disciplines in higher education. We will begin with an overview of the motivations, objectives, and benefits of bringing mindfulness into the classroom for teachers as well as students. This discussion will include an overview of the many places in which mindfulness is coming into the university. Then we will discuss teaching a course on mindfulness for the general university student population. We will also discuss how mindfulness can be integrated into a curriculum for law students. Mindful communication, stress reduction, emotional regulation and focused attention are some of the skills the students learn. This session will conclude with a short mindfulness practice for loving kindness directed to the self. This practice can be used to re-affirm a commitment to teaching.

Introduction

One of the most innovative trends in pedagogy has been the introduction of mindfulness into the classroom. The benefits of mindfulness have been clearly documented in the medical community in the last 20 years where it is widely used. Recently, mindfulness is being used in the leadership development in the business community. Coincident with and supported by these successes, mindfulness has been integrated into the educational community. Research and empirical evidence have shown that integrating mindfulness into education has many benefits including improving cognitive learning, emotional regulation (which facilitates learning) and stress reduction, particularly in K-12 education. Interestingly, mindfulness has had less systematic impact in higher education. The first books describing the use of mindfulness in education are just now appearing (Simmer-Brown, ed., 2011; Barbezat and Bush, 2014; Rechtschaffen, 2014). In this session we will discuss the motivations, objectives, and benefits of bringing mindfulness into the classroom for teachers as well as students. Then we will describe an introductory course to mindfulness for the general student population as well as a course developed specifically for law students. Finally, we will present a contemplation practice for the reconnecting instructors with the motivations for teaching.

Overview

Mindfulness practice is an experiential mode of learning and self-inquiry. It is the intentional attending to what is happening in the present moment without judgment or reactivity. Studies show that mindfulness can foster greater empathy and communication skills, improve focus and attention, reduce stress, promote emotional balance and a deeper sense of compassion, and enhance creativity and general well-being. The development of these aspects of self-awareness within students leads to more active engagement, improved cognitive learning, and more satisfaction with the educational experience. When teachers use these same practices, the same benefits arise. Stress reduction is particularly helpful for those in an instructional capacity. All of these benefits will be discussed along with an overview of the many and varied places/disciplines mindfulness is being used in higher education.

In this session we will discuss a “Mindfulness Course” that is taught at Radford University. The purpose of the course is to introduce and provide students with a fundamental understanding of mindfulness through the study of neuroscience, theory, practice and science of mindfulness, self-awareness, self-regulation and understanding. The course will offer opportunities to cultivate these skills in student’s daily lives. This course is a very interactive, collaborative learning experience that provides students with the opening to explore accessible techniques ranging from mindful awareness in sitting, walking, eating, and resting that may enhance one’s ability to have greater concentration, focus, and well-being.

The development of self-awareness is threaded throughout the course with reflective and personal growth opportunities. The course provides an opportunity to develop and integrate a personal mindfulness practice. It includes readings, short lecture, small group discussions, journal work, and self-observation practices in home and

class settings. Learning will require mandatory attendance, active participation, critical thinking, and creativeness of each student. All of these activities will be described.

The University of Virginia is bringing mindfulness practice into multiple disciplines – for example nursing, medicine and law. For the purpose of this presentation we will look at one such program - Mindfulness for Law Students. This program is in its third year. It is a semester-long program that meets for an hour and a half per week and has a daylong retreat. It is geared to not only help the students deal with the remarkable amount of stress they experience as law students and UVA students amidst challenging times, but also teaches skills which will be useful in their careers as lawyers. Mindful communication, stress reduction, emotional regulation and focused attention are some of the skills the students learn.

The program evolved from a standard Mindfulness-Based Stress Reduction program based on a specific curriculum developed by John Kabat-Zinn (often referred to as the ‘grandfather’ of the mindfulness movement) at the University of Massachusetts. It was then adapted specifically to the context of the law students – for the unique stressors they face and for cultivating a larger perspective on law in general – one that focuses more on collaboration and resolution. Not only may the study and practice of mindfulness affect their individual lawyering, it may also impact law at the policy level, engendering a deeper justice that recognizes the connectedness of all human beings and takes a global perspective.

Between classes the students have a center with mindfulness resources including guided meditations, and books on meditation and yoga. There are special meditations for exam time to reduce stress and cultivate the positivity required for optimal cognitive function. Research was performed on two semester-long student groups that looked at quality of life, emotional regulation and wellbeing. There was a significant improvement in each area. These research results will be shared during the presentation.

Sample Practice

The proposed session would be an interactive forum in which not only the curriculum and process for teaching will be elucidated but also the practices utilized during the class will be shared with participants. We will discuss the specific skills learned and the practices that supported this learning for the students. The session will end with a mindfulness practice. The participants will be lead through the contemplation meditation on their motivations for teaching. By reconnecting with their intentionality for teaching, instructors may bring renewed energy in their classroom.

From this session, participants can learn

- simple practices for training and focusing attention
- the value of and practices for generating positivity
- strategies for tailoring a mindfulness program to a specific discipline
- techniques for stress reduction with themselves and their students

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Co-Teaching as a Learning Experience

Pamela L. Eddy and Kristen Tarantino, *The College of William and Mary*

Abstract: Acquiring teaching skills often receives scant attention in doctoral programs, as a main focus is on obtaining content knowledge and research skills (Gappa, Austin, & Trice, 2007). For this reason, the majority of new faculty face challenges when they enter their first classroom because they do so feeling stressed and underprepared (Austin, Sorcinelli, & McDaniels, 2007). One way to prepare graduate students for the teaching profession is by co-teaching with a seasoned faculty member (Eddy & Mitchell, 2006). Additionally, the growing emphasis on teaching from an inter-disciplinary perspective means that more and more faculty are facing co-teaching for the first time in their careers (Letterman & Dugan, 2004). The increased focus within the college completion agenda is on how to improve teaching in order to retain and graduate students (Mellow, Woolis, D., Klages-Bombich, & Restler, 2015). Faculty and graduate students, as adult learners, face new learning situations with a rich and varied background that allows them to incorporate new learning into their existing schemas (Knowles, Holton, & Swanson, 1998) and potentially to engage in transformational learning (Mezirow, 1991). The intention of this conversation session is to offer a survey of what is known about co-teaching, to facilitate a conversation about what others have experienced, to exchange best practices, and to create an ongoing network of professionals interested in the scholarship of teaching. The current co-teaching experiences of the presenters serves as a starting point for the session. Specific attention is paid to how co-teaching can create a learning experience for both co-instructors and how this learning influences teaching.

Literature Review

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

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

Goals and Objectives

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

- Objective #1:* To define the concept of co-teaching.
- Objective #2:* To discuss best practices for how to support co-teaching
- Objective #3:* To identify key learning outcomes for co-teaching based on adult learning theory.
- Objective #4:* To review the challenges of co-teaching.

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

Description of Topic to be Discussed

The national focus on outcomes and the completion agenda often neglects the key element in the process, namely college teaching (Mellow et al., 2015). 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 literature on co-teaching and a summary of the co-teaching experience by the facilitators. A set of guiding questions will be provided for the audience to allow for maximum focus on the conversation about co-teaching. Included in these questions will be a focus on common challenges faced when co-teaching, strategies to employ to get the most out of the co-teaching experience, and a collection of best practices from audience participants. The final moments of the session will provide an opportunity for collecting group information that will be posted on a publicly available web link for future access.

- 10 minutes--overview of the literature and facilitator experiences
- 35 minutes—exploration of definitions of co-teaching and engagement in conversation using guiding questions
- 5 minutes--summary and posting of key points

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Collaborative Pedagogy for Connected Learning

Ryan Cales and Jason Coats, Virginia Commonwealth University

Abstract: “Connected learning” continues to be a widely discussed and increasingly implemented concept in higher education. There has been a growing interest in the potential online connections between students and instructors can have in the classroom, including increased student engagement, higher quality products, and a more robust learning environment. Our department has begun implementing more opportunities for connected learning through a growing use of open blogging platforms, as well as housing Virginia Commonwealth University’s first cMOOC, now running for the second time. Such efforts have been made in order to encourage new ways for student agency and ownership of the work they create in courses in attempt to make connections beyond them: to make their work portable beyond the end of a semester. These opportunities have also afforded the faculty new and unique ways of collaborating across course sections: sharing course materials, ideas, and feedback in various ways. This has become particularly interesting given our programmatic goal as a department to help students engage with one another to make their learning valuable, visible, and sustained during and after their university careers while also fostering faculty development and collaboration. We will discuss our implementation and development of various collaborative connected learning practices and also cover issues that we have encountered in trying to successfully enact such practices in various iterations of courses. Participants will discuss ways to integrate connected learning practices in their own classes and ways to introduce the possibilities of them to their own departments or programs.

Literature Review

The literature surrounding online education has typically focused on asynchronous content delivery over distance education platforms, with its primary benefits of convenience for learners and capacities for those who would not otherwise be able to take a face-to-face course (Baran, et al., 2011). Attempts in the past decade to supplement content with the sort of instantaneity Socratic discussions have typically relied upon (MacNight, 2000). But such attempts have been hindered on the one hand by educators’ lack of understanding of learning management systems (Lane, 2009), and on the other hand by learners’ inability to engage authentically online (Attrill and Jalil, 2011) or unwillingness to engage in real time with their peers (Michinov, et al, 2011). However, contemporary learners are ill-served by any online system that fails to seriously emphasize peer assessment (Cartney, 2010) or demonstrate the digital functionality of the internet in an increasingly connected world (Morgan, 2002). Recently, as Nussbaum-Beach (2012) described, “connected learning” has emerged as a hybrid between synchronous and asynchronous online activities: an approximation of real-time activities by learners whose enthusiasm is stoked by reciprocal connections made with peers. And as Caine (2011) has emphasized, as learners become more and more used to making iterative connections, and understanding the electronic processes that are involved when they do so, their habituation should lead to increasingly more valuable interactions. At the same time, as this conversation will demonstrate, connected learning affords intriguing opportunities for educators to collaborate in much the same way our students do: both to model best practices and to demonstrate a shared understanding of content while still offering multiple approaches to the material.

Goals and Objectives

After this session, participants will be able to:

- Define and recognize “connected learning” in higher education.
- Explain the benefits of using connected learning as a pedagogical strategy.
- Identify and implement basic practices of online collaboration between faculty members.
- Discuss applicability of connected learning and collaborative strategies across disciplines.
- Apply common connected learning ideas to a course to enhance learning.

Description of Practice and Discussion

In this session we plan to discuss past and current experiences of collaboration and connected learning practices highlighting the challenges and successes of our efforts to enhance student learning and engagement. Our experiences span a wide range of approaches with our own collaboration over the years teaching a sophomore research writing course in both traditional and connected settings. Our recent collaboration emphasizes symbiosis between our respective courses, ultimately with the goal of fostering student agency, and engagement, and success. Moreover, these efforts span various iterations of the courses: hybrid, face-to-face, and cMOOC brands. Given these variables, the collaborative connected components--both our and the students’--allow for opportunities for engagement in a unique learning environment. Further, to demonstrate to the rest of our sizable department the value of faculty collaboration and utilizing open platforms for connected learning, we have led symposia on our work together and have facilitated various demonstration sessions on how to use online platforms and create connected learning activities in the classroom.

Facilitation Techniques

We hope this discussion will provide time for participants to share their own experiences, to explore possibilities for their own practice, and to discuss the following questions:

How can we best understand “connected learning”?

What role do open platforms have in higher education?

How can we effectively generate and use online content in collaboration across classes?

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Developing a Student-conscious Syllabus

Amanda Armstrong, The College of William & Mary

Abstract: The paradigmatic shift, in which colleges were once viewed solely as a place to provide instruction (teacher-centered) to a paradigm where students and faculty are viewed as co-producers of learning (student-centered), has been evolving since the 1980s (Barr & Tagg, 1995). Student-centered learning promotes self-directed learning in that students can execute and evaluate their own learning without the direction of an expert (Merriam, Caffarella, & Baumgartner, 2007). A course syllabus, a powerful tool, is one way to begin fostering such student autonomy. Due to the vast array of disciplinary subjects taught within higher education, a generalized student-centered approach to teaching and learning can be difficult, and often overwhelming, to establish. However, a transition to student-centered practices in the classroom does not happen all at once. This conversation, building from the literature on student-centered learning, will explore the notion of student-*conscious* syllabi – ones that incorporate general constructs relative to students no matter their discipline or status in college.

Literature Review

This conversation is grounded in Knowles, Holton, and Swanson's (1998) and Merriam et al. (2007) theories on self-directed adult learning and Levine and Dean's (2012) findings on traditional-aged college students. Scholars and faculty continue to utilize both student- and teacher-centered approaches to teaching and learning. Some faculty prefer the teacher-centered approach because they believe discussing emotional issues with students and accommodating their goals is inappropriate at the college level, or they find the student-centered approach "confusing and anxiety producing" (Knowles, 1986, p. xii; Lattuca & Stark, 2009). Other faculty, however, utilize the student-centered approach as a way to promote collaboration and student autonomy.

The syllabus can be used as a platform to begin developing a student-centered approach to learning and, ultimately, in promoting this autonomy. Faculty members vary in their approaches to syllabus design - some utilize teacher-centered syllabi, where the instructor develops all aspects of the syllabus, while others utilize student-centered syllabi, or a co-constructed document. When beginning the transition to a more student-centered approach, it may appear less daunting to consider a student-*conscious* approach to syllabi development rather than student-*centered*. Whereas *centered* can be defined as having the specified subject (student) as the focal point, *conscious* can be defined as being concerned or interested in the student and developing the syllabus with critical awareness ("centered", n.d.).

Scholars cite numerous rationale and benefits for implementing a student-centered approach to learning: it is human nature for students to make choices, it encourages students to be more engaged with and motivated by subject material when they have some control over the content, and it builds community and collaboration in the classroom (Doyle, 2011; Knowles, 1986; Lattuca & Stark, 2009; Rose, 1987). The irony and struggle in developing a student-conscious approach, or syllabus, is that many of today's college-going students may expect a more teacher-centered approach. Levine and Dean (2012) posit that *millennial* or *generation Y* students are now expecting such treatment and are "immature, dependent, coddled, and entitled" (p. xiii). Therefore, maintaining a teacher-centered syllabus may actually increase students' expectations of remaining passive learners. By developing a student-conscious syllabus, students are more apt to view learning as a process rather than a product – enabling them to establish identities as life-long learners (Ambrose, 2010).

Goals and Objectives

This conversation session will first provide contextual frameworks (10 minutes) to guide the remaining participant discussion (40 minutes). Topics to frame and guide the discussion include:

1. Defining the terms "teacher-centered" and "student-centered" according to the aforementioned scholars
2. Reviewing, collaboratively, the modern-day purpose of a syllabus
3. Sharing specific examples within student-conscious syllabi

Description of Topic to be Discussed

Participants will discuss strategies for developing a student-conscious syllabus based on personal experiences and ideas prompted throughout the session. Using Blinne's (2013) H.E.L.P. framework (that learners want to be heard, excited, liked, and personal), participants can explore concrete examples for how they can promote student autonomy by revising current syllabi design approaches. Samples will be available and participants are encouraged to bring their own syllabi. There is also an understanding that portions of teacher-centered syllabi, found to be effective, can be modified for use within the context of student-conscious syllabi.

Facilitation Techniques

Questions to guide facilitation around this topic include: Do students feel *heard* in your syllabus design? Do students get *excited* about aspects of your syllabus? Do students appear *liked* and appreciated for their contributions? Do students feel a *personal* investment regarding your syllabus?

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Friday

February 12, 2016

Session 13

10:10-11:00 AM

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

Interest, Internet-based Video, and Student Learning Outcomes

Christina Hardway, Joseph LaTorre, and Michael Stroud, *Merrimack College*

Abstract: This study investigated whether a video-based illustration of a scientific phenomenon precipitated curiosity about the topic and had an impact on related learning outcomes, using a theoretical framework which suggests individuals feel curious about a stimulus when they appraise it as both novel and comprehensible. Participants ($n = 80$) were presented with computer-based material consisting of slides containing information on cephalopods, their camouflage abilities, and their intelligence. Participants were randomly assigned to one of three conditions; those in the Video and Text (VT) condition received a short, related video (the video included no explanatory material) followed by supporting educational slide show; those in the Text Only (TO) group had access to same written material, without the video content; and those in the Video Only (VO) group viewed the same video with no supporting written materials. Participants in the TO group performed better on the learning outcomes, but did not differ from VT group in their ratings of novelty or comprehensibility. Implications for instruction and future research are discussed.

Literature Review

Reported levels of curiosity predict the rate at which individuals retain and are able to recall new information (Kang, et al., 2009). To evoke curiosity (or interest, a term often used to describe this construct), individuals must evaluate new information as previously unknown, and they must also assess it as potentially comprehensible (Silvia, 2006). Many professors promote students' interest in a topic by presenting evocative material in video format, but there has been little evidence to support its benefits to learning, rather, research often measures students' affection for the format or offers practical assistance (Cleveland, 2011). While researchers of curiosity have assessed the impact of curiosity on learning from written texts (Silvia, 2006), less work has assessed the impact of video content on learning outcomes as mediated by the construct of interest. There is some cause for concern, however, because other theoretical frameworks suggest that the presence of "seductive details" could even be counterproductive and potentially detrimental to individual processing, and therefore the amount of material learned (Silvia, 2006). Research on learning from both print and a multimedia format suggests that extra details can easily maximize a learner's cognitive load, resulting in reduced learning in many circumstances (Mayer, Heiser & Lonn, 2001). Whether video content, which includes details pertinent to the overall information presented along with textual material promotes interest and consequently learning outcomes is, therefore, unclear. The current study assesses whether video content will promote student learning as well as assess whether students who see a related video feel more competent to understand new information.

Methodology

Eighty undergraduate students reporting no knowledge of the to-be-learned material participated in the study. In the first step, participants were randomly assigned to the Video Only (VO), Text Only (TO), or Video and Text (VT) condition. In each condition, participants viewed a lesson on cephalopods, their camouflage abilities, and their intelligence on a laboratory-based computer, and were allowed to pace the administration of the materials. Students' appraised novelty was measured through the mean ratings regarding whether the presentation was *boring* versus *exciting*; *interesting* versus *uninteresting*; and *unengaging* versus *engaging*. Perceptions of comprehensibility were measured through mean ratings regarding whether the presentation was *hard-to-understand* versus *easy-to-understand*, *incomprehensible* versus *comprehensible*, and whether it was *incoherent* versus *coherent* (Silvia, Hensin, & Templin, 2009). Student learning outcomes were measured through a 10-item, multiple choice test.

Results

Those participants in the VO group rated the material as significantly more comprehensible $F(2, 77) = 10.41, p < .01$ and novel $F(2, 77) = 11.10, p < .001$ than those in the VT or the TO groups, yet this group performed significantly worse on the quiz than participants in the other two groups $F(2, 77) = 28.16, p < .001$. Participants in the VT and TO

group did not differ in their ratings of the novelty or comprehensibility of the material, but participants in the TO group scored significantly higher on the Learning Outcomes measure than participants in the VT group, $p < .01$.

Table 1. Means and Standard Deviations for Three Conditions; F_s , η^2 s, and Bonferroni Contrasts

	Testing Condition			F (2, 77)	η^2	Bonferroni Contrasts
	Video Only <i>M</i> (<i>SD</i>)	Text Only <i>M</i> (<i>SD</i>)	Video and Text <i>M</i> (<i>SD</i>)			
Novel	6.44 (.69)	5.17 (1.06)	4.91 (1.25)	11.10***	.22	VT < VO ***; TO < VO **
Comprehensible	6.08 (.83)	5.17 (1.18)	5.20 (1.10)	10.41*	.10	VT; TO < VO *
Quiz	.38 (.13)	.79 (.13)	.62 (.24)	28.16***	.42	VO < TO; VT***; VT < TO**

Note: $N = 80$. * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

Those who viewed the text-only material did not differ in their ratings of the novelty and comprehensibility of the material compared with those who also saw the video illustration of information, but they performed better on the 10-item test of learning outcomes. Participants who only viewed the video rated it as more comprehensible and novel than the other groups, but they performed quite poorly on the test. This was anticipated because the protocol was designed to include a video that was an illustration of the concepts presented without any conceptual material.

What was surprising is that participants who viewed the video and accompanied text, performed significantly worse on the quiz compared to participants who just received text. While the video was intended to help learners quickly develop a *better* schema for the principles being communicated, perhaps the additional stimuli evoked the unintended consequence of overloading the cognitive capacity of the participants in the video and text condition without providing the anticipated additional scaffolding. Research examining the insertion of high- versus low-interest seductive details in science-related materials suggests that more interesting details inserted in text-based learning materials decreases cognitive processing and disrupts learners' abilities to build a deep understanding (Mayer, et al., 2001). Evidence from the current study extends these findings to indicate that, even within a brief instructional episode, video can stimulate interest but potentially have a negative impact on learning.

Although a substantial amount of research has focused on the impact of interest in text-based learning (Siliva, 2006), little has focused on other mediums of communication and their impact on reported interest and subsequent learning outcomes. These finding suggest that, even when the visual content of the video is designed to specifically enhance a student's ability to organize incoming information, the cognitive processing required for this material can degrade the overall learning that occurs. More research needs to be completed regarding the best way for instructors within a live-classroom context to help scaffold this information so that students are not overwhelmed by the material. Other research should continue to examine the ways that videos can be integrated within an online learning environment. Findings from this research have implications for instruction as well. Teachers in the classroom should be mindful of the extent to which their students can process new information, and they should limit their use of extra details.

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Student opinion of the flipped classroom via www.ratemyprofessors.com

Christopher M. Seitz, *Liberty University*

Abstract: There has been a growing body of research regarding the “flipped classroom” model of teaching; however, most studies have been quantitative in nature and have not explored college students’ thoughts about the flipped classroom from a qualitative perspective. Therefore, the purpose of this study was to identify student opinions and experiences of the flipped classroom as shown from the website www.ratemyprofessors.com. In the fall of 2015, comments specific about the flipped classroom were collected from the website and analyzed. A total of 579 comments regarding 293 professors from a variety of academic disciplines were collected for the study. From these comments, a total of 13 distinct themes emerged from the data that expressed either positive or negative opinions of the flipped classroom. These themes have practical implications for professors in terms of preparing themselves and their students before implementing a flipped classroom.

Literature Review

The flipped classroom has become popular, resulting in calls for more research to study the strengths and limitations of the flipped classroom (Bishop & Verleger, 2013; Hamdan, McKnight, McKnight, & Arfstrom, 2013); however, the majority of research on the flipped classroom has been quantitative in nature, not qualitative. So far, quantitative studies have tested differences in the attitudes and academic performance of students enrolled in flipped and traditional classrooms (Bishop & Verleger, 2013). Nearly all qualitative research has been mixed with quantitative research methods by either including a few open-ended survey items that allow students to write their opinions about the flipped classroom (Butt, 2014; Cardette, Pon, & Christodouloupoulou, 2013; Dove, 2013) or by analyzing end-of-course student evaluations from flipped classrooms (Dove, 2013; McLaughlin, Griffin, Esserman, Davidson, Glatt, Roth, Gharkholonarehe, & Mumper, 2013; Wilson, 2013).

Adding to the body of qualitative research concerning students’ perceptions of the flipped classroom can help professors develop and improve their flipped courses to be effective and meaningful for their students. As such, the purpose of this study was to identify student opinions and experiences of the flipped classroom as shown from the website www.ratemyprofessors.com. According to the website, www.ratemyprofessors.com is the largest online resource for students to evaluate their professors. To date, the website contains over 15 million ratings of 1.4 million professors at over 7,000 schools in the United States, Canada, and the United Kingdom. Every month, over 4 million college students use the website (Rate My Professors, 2015). The website’s popularity among students makes it a valuable resource for researching topics related to teaching and learning in higher education (Clayson, 2014; Subtirelu, 2015; Theyson, 2015).

Methodology

During the fall of 2015, an advanced search option was used to search the website www.ratemyprofessors.com for the term “flipped classroom.” Every comment that specifically mentioned a flipped classroom was copied and pasted into a document along with the comments’ respective professor’s academic discipline. The comments were then read in their entirety in order to create a code book of distinct themes. Afterwards, the comments were categorized according to the code book. Portions of the comments that were unrelated to the flipped classroom were not included in the analysis.

Results

The search term resulted in 579 student comments that were posted on the website regarding 293 professors. Comments specific to the flipped classroom ranged in number from 1 to 16 per professor, with an average of 1.97 comments per professor ($SD = 2$, $Mdn = 1$). The professors in the study who implemented a flipped classroom belonged to a wide range of academic disciplines; however, the majority of professors taught in the fields of mathematics (23%), biology (20%), chemistry (12%), engineering (6%), or physics (5%).

From the comments, a total of 13 distinct themes emerged that expressed either positive or negative opinions of the flipped classroom. Positive themes included: Effective (students felt that the flipped classroom was effective in helping them to learn the course content), Quality In-Class Activities (students appreciated the quality of in-class educational activities), Quality Videos (students appreciated videos that were brief and that presented the material in an understandable fashion), and Prefer Over Lecture (students preferred the flipped classroom over having to listen to a professor lecture the material in class).

Negative themes included: Time (students expressed frustration in the amount of time required outside of class to prepare for flipped courses), Self-Taught (students felt that they were teaching themselves and that the professors were not doing their duties as professors), Dislike (students reflected their general distaste for flipped classrooms), Ineffective (students wrote that the flipped classroom was ineffective in helping them learn the course material), Professor Convictions (students did not appreciate professors that expressed personal conviction regarding the effectiveness of the flipped classroom), First-time Professors (students did not like being in a course that a professor was flipping for the first time), Initial Apprehension (students expressed their initial apprehension after being introduced to the flipped classroom), Bad Videos (students did not like video lectures that were long, boring, did not present the material clearly, and that had poor visual and/or audio quality), and Poor In-Class Activities (students felt that educational in-class activities were not beneficial to their learning).

Discussion

Although the study's methods have limitations (e.g., the lack of generalizability, the debatable validity of www.ratemyprofessors.com), the findings have practical implications for professors in terms of preparing themselves and their students before implementing a flipped classroom. For instance, findings suggest that professors need to prepare their courses by making clear, concise videos that are of quality production in terms of visual/audio and by creating engaging, meaningful activities during class time. In addition, professors need to prepare their students by making it clear at the beginning of the semester that the transmission of information (i.e., traditional lecture) does not necessarily equate to learning. This can help to reinforce that learning involves preparing outside of class and being engaged during class, which does not mean the professor is not doing their job or that students are only teaching themselves. Moreover, professors should prepare their students by informing them of the quantity of work that will be associated with the flipped classroom.

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Robot Meets Reality: Creating Social Presence in an Ever-Changing “Classroom”

Erin M. Berman and Charles Cosmato, *Radford University*

Abstract: Social presence is the perceived availability of others to interact with. That said, research supports the idea that there are a variety of techniques instructors could apply, both synchronously and asynchronously to encourage social presence in the classroom, regardless of the modality. The first and most basic level is being physically present in a classroom. Next, are asynchronous techniques, such as textual responses, for example, using a discussion board. Total emersion is another avenue to create social presence, using tools such as *Second Life*. The newcomer to the scene is the telepresence format, which essentially makes use of technology to create a physical presence in a real time environment. The underlying pedagogical and methodological techniques are dependent on the level of social presence one desires to create. This practice session will specifically address four main ways to create presence: Physical presence in a classroom, asynchronous discussion, real time discussion via a total immersion experience, and a telepresence robot.

Literature Review

Research has long supported the concept of social presence and the importance this has in a learning environment. Verbal and non-verbal behaviors, such as smiling, eye contact, and physical distance act as regulators of intimacy and personal interaction (Argyle and Dean, 1965). As class modality continues to change and expand, instructors and students strive to find new ways to create this same sense of immediacy. Immediacy, as defined by Wiener and Mebrabian (1968), includes human communication behaviors that reduce psychological distance between communicators and is considered essential to a successful learning environment (Bulu, S. T., 2012).

Much human learning is intuitive and a social act. Acts of dialog, debate, collaboration, cultural, exchange, dissemination, and critique figure prominently in the creation of new knowledge. Perhaps not surprisingly, as new forms of mediated instruction blossomed in the 20th century researchers and theorists began to explore if the social elements of learning could survive mediated learning experiences. The media richness theory, (Daft and Lengel, 1986), explains that the medium’s capacity for immediate feedback, the cues and senses involved, personalization, and language variety all add to the learning experience and the richer the media, the more satisfied the learner.

Goals and Objectives

- Describe the concept of social presence
- Identify various ways in which instructors can create social presence within a class
- Evaluate the effectiveness of various social presence techniques

Description of Practice

Social presence in the classroom is not a new phenomenon, but today, ways to create this idea of presence have expanded. This practice session will present research to support the value of social presence and specifically, four avenues to creating social presence in a class by having attendants experience and discuss the benefits and drawbacks of uses for a few of the most popular methods.

Discussion

Surrogacy is much different than being “present.” This is a discussion of how instructors create availability in the class, regardless of the modality. The focus of this practice session is to demonstrate various ways to create social presence in a classroom regardless of modality, starting with ways that we create social presence in a face-to-face environment to creating social presence in a virtual world using virtual technologies to creating social presence in the “real world” via telepresence methods.

Discussion topics include the following:

- How do we create presence in a brick and mortar environment?
- How can we enhance this and what practices might detract from this?
- What other strategies can be applied to enhance presence?
- How can social presence transfer to a virtual environment?

Specifically, the facilitators will demonstrate the use of a double telepresence robot and virtual meeting software and invite participants to experience each and share their ideas concerning how they can be successfully integrated into any classroom to enhance the concept of social presence, a well-researched component to a satisfying learning experience.

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Trends in ePortfolio Research: Where is the Field Heading?

Jacquelyn McCarthy Woodyard, *Virginia Tech*
Jessica R. Chittum, East Carolina University

Abstract: In 2013, as ePortfolio-based research hit a peak in scholarly publication, Bryant and Chittum found a lack of empirical evidence on ePortfolio published in peer-reviewed publications. They summarized notable trends in early ePortfolio research, citing a higher percentage of descriptive research rather than empirical studies. Further, of the empirical studies, most centered on people's perceptions rather than impact on outcomes. We have investigated the trends in ePortfolio research at multiple timepoints (2012, 2014, 2015), which serve to depict the current direction of the field. Although ePortfolio evidence has become more and more accessible, nearly doubling the number of peer-reviewed publications over the course of 2 years, we have found that descriptive articles continue to dominate the field. In this poster, we will discuss the need for evidence-based and outcomes-driven research in ePortfolio, which can serve to guide a science-based ePortfolio practice. Then, we will highlight the current trends in ePortfolio research to discuss where the field is heading.

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Reframe, Refocus, Reflect: A Model for Student Engagement and Civic Learning

Richard Bay, Courtney Ross, Laura Vernon, & Erin Webster-Garrett, *Radford University*

Abstract: This presentation furthers the pedagogic innovation of civic learning by presenting a model for engaging students in real-world problem solving and helping them create meaningful connections between their academic knowledge and their participation in civic life. Three case studies will be presented as examples of how civic learning can be experiential, social, and reflective across all disciplines. To this end, an interactive discussion will focus on helping educators reframe their teaching approaches, refocus their learning outcomes, and rewrite their prompts to promote higher levels of reflection among students. The session will conclude with a small-group brainstorming activity to stimulate a mix of civic learning ideas that can be further developed at the educators' home institutions.

Literature Review

Civic learning is grounded in the seminal work of David Kolb's (1984) theory of experiential learning and the seminal work of Albert Bandura's (1971) theory of social learning. These complementary theories have proven to be versatile, appealing, and highly effective approaches to achieving deeper student engagement, critical thinking, and behavior change (Baasanjav, 2013; Ernst, 2013; Kumpulainen & Wray, 2002; Rosenstock, Strecher, & Becker, 1988). While both theories advocated reflection as part of the learning process, reflection as a learning (and therefore assessment) tool had not received much scholarly traction or wide academic integration until the last decade or so (Moon, 2004). Now, experiential, social, and reflective learning often go hand in hand as higher education institutions look for ways to make learning and teaching more engaging. Civic engagement is one way that appears to be working well (Kolb & Kolb, 2005).

Goals & Objectives for the Practice Session

The purpose of this practice session is to (1) present a highly effective and applicable three-part model for creating civic learning experiences for students in all disciplines; (2) show three interdisciplinary examples of civic learning in action; (3) discuss the value of civic learning from both an educator and student point of view; (4) help educators reframe and refocus their teaching approaches and learning outcomes to include civic learning; (5) develop an effective civic-learning reflective writing prompt; and (6) engage educators in a brainstorming session to set them on a path toward developing their own civic learning experiences for their students.

By the end of this session, educators will be able to:

- Discuss the value of civic learning as a pedagogic innovation
- Explain the three-part model for creating civic learning experiences
- Analyze three case studies to better understand how the three parts work together
- Reframe their learning approaches and refocus their learning outcomes to include civic learning
- Create a civic learning experience for their students
- Promote reflection as a legitimate learning and assessment tool

Description of Practice to be Exemplified

Civic learning is a pedagogic innovation because it engages students in real-world problem solving related to their disciplines and helps students create meaningful connections between their academic knowledge and their participation in civic life. Thus, civic learning promotes positive social changes, engages students at a higher level with their discipline's knowledge, and provides students with transformative learning opportunities. Using the Scholar Citizen Initiative (SCI) (Radford University's Quality Enhancement Plan) as a model, Erin Webster-Garrett, the SCI director, will explain the three parts to a quality civic-learning project: (1) experiential, (2) social, and (3) reflective. The other three presenters will then share their case studies from art education, peace studies, and English that show civic learning in action. They are as follows:

1. **“Elementary Arts Interventions (Making Up for What’s Missing)” by Richard Bay:** This project is putting a true teaching experience in front of university students and making up for the lack of an essential

- program within a K-2 school: art education. The goal is to encourage children to think in new and innovative ways by sharing their personal experiences through art that can enrich their learning.
2. **“Peace in Action: Transforming Conflict and Building Peace through Civic Engagement” by Courtney Ross:** University students learn peace-making, peace-building, peace-keeping, and/or peace-education through real-world experiences called “Peace in Action.” They explore the advantages and challenges of transforming conflict to build peace at the individual, interpersonal, communal, national, and global level.
 3. **“Grammar Unwrapped” by Laura Vernon:** This project gives grammar students an opportunity to teach others difficult grammar and punctuation concepts through an instructional video, poster, writing tutor training, and campus-wide workshops. The project is a collaborative effort among grammar students, graphic design students in the Art Department, and the university’s tutoring center.

During the practice session, the three presenters will explain in more detail the social change the students wanted to influence and/or the problem they wanted to solve, the actions they took to make change and/or a solution possible, and the transformation in thinking and/or behavior that took place as a result for their actions. To stimulate large-group discussion, the presenters will explain the reflective process in which they engaged their students and the value the project brought to the learning experience. The goal of this discussion format is to simulate a reflective practice to help educators better understand how they may reframe their teaching approaches and refocus their learning outcomes to include civic learning based on what they learned from the case studies. The conversation will then extend into small groups where educators can brainstorm ideas for civic learning in their own disciplines, including possible ways to encourage productive reflection.

Discussion

The presenters will encourage educators to be open to civic learning as a different (perhaps nontraditional, maybe even radical or revolutionary) path toward transformative teaching and learning. One question underscores this practice session: What learning do you want to see in your students and how can you make it happen? To answer this question, educators may need to reframe, refocus, and reflect: three intertwined actions that can make civic learning possible. “Reframe” refers to the way educators teach, implying a more innovative approach that promotes positive social change and provides engaging and transformative learning opportunities for students. “Refocus” refers to learning goals and outcomes, implying that transformative learning often requires new ways of teaching and learning (i.e., hands-on experience in real time and in the real world) and new ways of assessing learning (i.e., reflection). “Reflect” refers to this practice that fosters students’ abilities to make intentional and intellectually informed connections between their academic knowledge and their lives as citizens in the communities where they live, study, work, and play. In addition, the presenters will encourage educators to be open to the Scholar Citizen Initiative as a model because it has a proven record of making a difference across disciplines, can be applied to almost any course, and has built-in flexibility to accommodate a variety of circumstances. At the end of the session, educators will leave with a solid understanding of how civic learning can work and a plan to make it happen.

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Teaching Hidden History: Creating An Effective Multi-Campus, Hybrid Graduate Course

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Abstract: Digital technology has come to play an increasingly visible role in higher education, especially in STEM-H classes at the undergraduate level. This session examines an experiment in designing and offering a successful hybrid online/videopresence graduate course in the humanities. “Teaching Hidden History,” a collaborative effort involving teams from the Department of History at Virginia Tech and the Center for History and New Media at George Mason University, is an inquiry-based, active learning course designed to strengthen research, historical thinking, and digital skills in history and social studies education graduate students. Funded by 4-VA, a statewide initiative dedicated to promoting inter-university collaborations that leverage the strengths of each partner institution, the course carefully guides students through the process of developing a digital history module focused on learning through ordinary objects.

Literature Review

Once promoted as a panacea for many challenges facing higher education, online course delivery has garnered increasing scrutiny over the years, even as the number of web-based courses continues to proliferate. Disproportionate withdrawal rates, a lack of academic rigor, inadequate student-to-student and student-to-instructor interaction, and a failure to promote student engagement, critical thinking, and active learning are some of the concerns raised about online courses (Samuels, 2015; Xu and Jagers, 2011; but see also, Nguyen 2015). Innovative teachers, especially those delivering online undergraduate instruction in STEM fields, have found numerous fruitful ways to address these concerns, but there has been much less focus on finding effective means to foster active learning, critical thinking, collaboration, and student engagement in graduate courses in the humanities (Kushner and Berry, 2014). Carefully constructed hybrid courses, which combine the accessibility, convenience, and flexibility of online courses with the many time-proven benefits of face-to-face meetings, are one approach gaining increasing attention and interest (Ilgu and Gahren, 2015; Lampert and Hill, 2012; Hall and Villareal, 2015; Kim and Bonk, 2006).

Goals and Objectives for the Practice Session

This practice session will focus on the design and implementation for “Teaching Hidden History,” a graduate hybrid course that teams from the Department of History at Virginia Tech and the Center for History and New Media at George Mason University offered collaboratively during the summer of 2015. Funded by grants from 4-VA offices at both institutions, this eight-week course relied on a combination of three asynchronous online sessions and five class meetings using a state-of-the-art Cisco Telepresence technology, which allowed discussion involving faculty and students at both institutions. Instructors also provided regular feedback on student assignments, both written and in individual meetings in the telepresence room, and the course required student collaboration, including peer evaluation, at various appropriate points throughout the term. Nine history and social studies education graduate students from George Mason and six graduate students in history, social studies education, and material culture and public humanities at Virginia Tech participated in this hybrid course.

Each graduate student enrolled in “Teaching Hidden History” researched, developed, and built an online learning module designed not only to teach historical content but also make visible how historians approach evidence and to show how everyday objects—like a Ferris wheel, a rusty piece of barbed wire or an old tin can—can illuminate important themes in history. A carefully selected main object provides the entry point for the module, and module users are asked to consider the object and form a hypothesis about how it might relate to larger trends in history. A series of 10-12 primary sources—maps, photographs, prints, posters, handbills, letters, songs, diary entries, and the like—which model how historical narratives are constructed, follow the main object, with a paragraph explaining each one. After viewing these sources and considering the accompanying text, module users are presented with the main object again along with their original hypothesis and then asked to reflect on how their encounter with the sources informed their understanding or changed their thinking. The hope is not only to promote the use of non-traditional primary sources but also to encourage awareness of how interpretation changes when historians are faced

with new evidence. Finally, a 300-500-word Connections Essay provides an overview of the historical topic and how the main object relates to this history. Module users can then compare their own newly developed understanding of the topic with that of the expert researcher who constructed the module.

This session will provide participants with a sense of how the teams at Virginia Tech and George Mason University collaborated to design and implement their hybrid graduate course, the models and previous experiments that informed the course design, the many challenges and institutional hurdles they had to overcome to pull off the experiment successfully, and the lessons learned along the way. Part of the session will also explore the innovative approach of using ordinary objects to teach history, which is the central principal behind the learning modules the students in “Teaching Hidden History” produced in the course. Presenters include not only the faculty and doctoral students who designed and offered “Teaching Hidden History,” but also two of the graduate students who completed the course.

Description of Practice to Be Modeled

In addition to strongly encouraging audience questions, comments, and feedback throughout the session, a portion of it will be specifically devoted to an audience participation exercise designed to show how the use of ordinary objects can be an effective means to promote student engagement and understanding about how history is constructed.

Discussion

While the potential benefits of hybrid graduate courses in the humanities are many, including offering flexibility and convenience to students as well as varied opportunities for collaboration and interaction, to date that potential remains only partially realized. Our recent positive experience with this pedagogical approach is consistent with that found in the literature. The hope is that participants in this session will gain a sense of the opportunities and challenges associated with a collaboratively taught, hybrid graduate course in the humanities and be inspired to emulate the experiment.

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**Ethical Behavior Is Not a Research Skill:
Employing Music and Metaphor When Talking the Talk Is Not Enough**

George Jackson, *Virginia Wesleyan College*

Abstract: Most of what we know we learned outside the classroom. Individuals might argue about when and how most learning occurs, but few persons contend it comes about as a direct result of formal academic instruction. This session focuses on identifying when and how instructors can enhance student learning by stepping back from their discipline's typical pedagogical approaches and using alternative strategies, including surprise, to reinforce critical concepts. Many of the examples in this session relate to how the classroom instructor can best imprint upon students the difference between learning ethical rules and learning to act ethically. The same strategies - parables, pictures, and music, as well as surprise – are equally applicable to many other academic topics.

Literature Review

Despite widespread acknowledgement of the importance of ethics education, there is general agreement that, at least in business programs, it is largely ineffective. The failure can be attributed in large part to the typically employed educational methods, in particular to instructors' focus on memory tasks and standardized tests (Groves and Weirich, 2012). Research in other disciplines points to the general inadequacy of relying exclusively on neural approaches, such as rational decision models, to instill knowledge (Noe, 2015; Horne et al, 2015). Studies examining the use of music and other metaphors to enhance learning in the social sciences reveal positive student reactions and enhanced mastery of subject matter (Tinari and Khandke, 2000; Weinrach, 2005). A more recent study affirms positive student reaction, but questions whether there is increased understanding of subject matter (Medcalfe, 2010).

Goals and Objectives

Following this session, participants will be better prepared to:

1. Identify alternative modalities for student learning.
2. Identify alternative modalities for communicating information.
3. Identify and isolate fundamental paradigms or principles of the applicable topic.
4. Match their own experiences (or those of students) with essential principles of the applicable topic.
5. Develop strategies for imprinting on students the most essential principles of the applicable topic.

Methodology

This session will demonstrate how instructors can complement traditional classroom instruction with visual, verbal, and musical metaphors. The emphasis is on exploring instructor and student common interests other than the applicable classroom topic, and employing those commonalities as instructional *accoutrements* used to emphasize critical points rather than primary pedagogical tools. Examples used by the instructor will include photographs, parables, and music. Attendees will be encouraged to identify other examples. At the session's conclusion, to emphasize the combined impact of surprise, common association, deep learning, and rote as alternative pedagogical tools, the instructor (and hopefully, some attendees) will employ musical instruments and jazz improvisation to demonstrate the association between successfully navigating ethical challenges and mastering the musical *blues scale*. In both instances, there is a marked difference between knowing the applicable rules and effectively using them.

Discussion

My most memorable classroom experience as a university student occurred in the five minutes following a supposed classmate's bold interruption of Professor Thomas Hazen's lecture on proximate cause, a key concept in the law of negligence. I and my more than fifty fellow first-year law students were momentarily aghast as a back row rebel railed loudly against whatever Professor Hazen had just said. To be candid, I should say *I guess* that's what prompted the challenge. Fact is, I was daydreaming while the instructor lectured, as were many others in the class.

Then, as all heads reeled back and forth from lectern to the rear row, the two classroom doors behind the lectern swung open and a quartet of guitar players burst into the room performing what I now call the *Palsgraf Principle*, to the tune of the Kingston Trio's *Man Who Never Returned (M.T.A.)*. The chatter about that class session continued until I graduated. Even now, more than 30 years later, at alumni gatherings students recall the memorable occasion. And, here's the kicker: everyone there still knows how proximate causation differs from mere cause and effect.

Utilizing musical metaphors to make important non-musical points is not limited to classroom situations. A prime example is Arthur Brooks, a former French horn player in the Barcelona (Spain) City Orchestra, who now heads the American Enterprise Institute, one of the nation's most highly regarded think tanks. Brooks repeatedly utilizes musical concepts to instill capitalistic values. He regularly encourages the 225 scholars working there to mesh academic tomes with "the music," his reference to that which speaks to both the heart and the head (McGurn, 2015).

For the classroom instructor, the key to best assuring optimal student retention of critical concepts is akin to how a navigator best determines exact location – the process of triangulation, which involves approaching the issue from a number of different angles. The more arrows leading to the same point, the better the result.

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Engaging the Senses: Revitalizing Standard Classroom Practices by Focusing on Sensory Stimulation

Kimberly Fahle, *Virginia Wesleyan College*

Abstract: Recent brain research has suggested a link between sensory stimulation and learning. This presentation examines this research, suggests how common classroom texts and practices like syllabi and assignment feedback can incorporate sensory stimulation to promote learning, and discusses the impact the inclusion of these redesigned practices can have on students. Participants will learn about infographic syllabi and screencast feedback, as well as learn about free or inexpensive programs to create these texts. Participants will also work together to brainstorm other classroom practices that could be redesigned to focus on sensory stimulation.

Goals and Objectives

In this session, participants will:

1. Learn how our senses and the integration of senses support learning.
2. See examples of new ways to approach traditional course practices such as syllabi and feedback on writing that focus on sensory stimulation.
3. Learn about free and inexpensive programs to create infographic syllabi and screencast feedback.
4. Brainstorm other common practices that could be revitalized or reinvented by attending to sensory engagement.

Literature Review

Students today live in a distinctly multimodal world, leading many to consider how multimodality can be harnessed to support learning in the classroom. Additionally, research from both neuroscience and education has demonstrated the role our senses and sensory integration plays in learning (Medina, 2014). This knowledge suggests the need to explore classroom practices that integrate these principles. Mayer (1997) explored these principles with multimedia presentations like PowerPoints. He offered several rules for multimedia presentations that touch on these principles including that students learn better from words and pictures than from words alone and that students learn better from animation and narration than from animation and on-screen text. Instructors have increasingly explored other classroom practices that could draw from these principles including infographics (Mocek, 2012; Taguchi & Ackerman, 2014), and screencast feedback (Brick & Holmes, 2008; Moore & Filling, 2012; Silva, 2012; Thompson & Lee, 2012; Vincelette, 2013; Vincelette & Bostic, 2013; Warnock, 2008). These practices need to be further experimented with and explored by instructors across the curriculum.

Description of Practice

Participants who attend this session will learn about the relationship between sensory perception and learning. With this relationship in mind, I will demonstrate how I redesigned my syllabi and my method of providing feedback to support sensory engagement to promote learning. Participants will learn about how infographic syllabi can support visual cognition and memory. They will also learn how screencast feedback, which integrates both visual and aural stimulation can promote understanding and learning. I will present examples of my own infographic syllabi and the feedback videos I have created. Next I will introduce several free and inexpensive programs for creating infographic syllabi and screencast feedback. Participants will then work in groups to brainstorm other common classroom and course practices that could be redesigned to stimulate different senses or that incorporate sensory integration.

Discussion

Syllabi and feedback are common practices across the curriculum and these are texts on which instructors often spend copious amounts of time. Additionally, the understanding of these texts is often crucial for student success. However, instructors often feel frustrated because students do not seem to read these documents or retain and understand the information delivered to them in these texts. Drawing on research that shows the connections

between sensory stimulation and memory and learning has the potential to revitalize these texts and practices, making them more accessible for students in a way that better promotes learning and success.

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Exploring a Playful Approach to Teaching and Learning with Technology in Higher Education Social Sciences.

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Abstract: Advances in technology continue to engender new and different opportunities for teaching and learning in higher education. Kee (2014) argued that an exploratory and experimental valuation of technology, which he termed *playing* with technology, helps learners interact with the content and practices of a discipline. Examples, such as gamification, rapid prototyping, and digital modeling, highlight the value of blending established pedagogy with innovative or non-traditional technology applications. Kee focused on the discipline of history specifically, and humanities in general, to emphasize a new look at technology in four areas of engaging with the content: thinking, play, modeling, and building. Does this approach translate to the social sciences? Can a playful perspective on technology integration align with current pedagogical aims in higher education social science classrooms? Utilizing Kee's (2014) perspective as a conceptual framework, this conversation will explore what it means to employ a playful approach to technology in the content and practices of higher education social sciences. Recent examples from related literature will be considered as participants explore current and potential applications related to their own institutions. Accordingly, this conversation will both investigate and showcase technology applications that highlight the concept of play in an academic setting.

Literature Review

“Community, relationship, and play” is the simple and succinct premise referenced by editor Kevin Kee in the recently published volume entitled *Pastplay: Teaching and Learning History with Technology* (2014). Volume contributor Stephen Ramsay identifies community, relationship, and play as the best approaches to navigating the complex role of technology in the humanities. According to Kee, community, relationship, and play is the mantra of *Pastplay* as contributors help bridge the gap between two seemingly opposite paradigms. The first is the traditional approach to teaching and learning history as experienced and appreciated by many academics and educators. The second paradigm is a modern approach to the discipline; one characterized by digital technologies and potentially limitless access to information. Rather than taking a position of advocating technology as a cure-all for teaching and learning history, the authors advocate a “playful” perspective from which historians and educators can work in community to utilize technology and interact with the discipline in new ways. This perspective can be broadened and applied beyond the content boundaries of history and the humanities. Social sciences, including areas of study such as Economics, Government, and Sociology, present opportunities for a playful approach to teaching and learning with technology.

Recent Technology Applications in Higher Education Social Sciences

Examples of technology use for teaching and learning in higher education are diverse in terms of application, yet similar in pedagogical purpose. Several recent examples highlight the importance of leveraging technology tools to engage with content in creative ways. Chan, Cheung, Brown, and Luk (2015) surveyed students in 39 university courses to study the effects of student response systems on student engagement and active learning. Results indicated short-term benefits in engagement and long-term benefits for deep learning. Similarly, active learning for complex content understanding was noted in Westera, Sloomaker, and Kurvers' (2014) study of gamification in a social sciences research methods class. Common to both studies is the emphasis on what could be termed as non-traditional, or playful, technology applications for student-guided learning.

Technology applications for assessment and feedback can similarly encourage playful engagement with content. Using multimedia projects and non-traditional communications for assessment in undergraduate classrooms is an approach garnering significant attention due to opportunities for creative and productive learning that directly challenges the traditional didactic approach (Cox, Vasconcelos, & Holdridge, 2010). Leveraging multimedia and collaborative technology tools enable instructors to assess learners' creativity rather than primarily assessing synthesis skills. Such methods have value in social science classrooms where alternative instruction techniques appeal to a broad range of students and allow for varying forms of student participation (Mobley & Fisher, 2015).

Goals and Objectives

This conversation session will promote an alternative view of technology applications in higher education by exploring an approach coined by Kee (2014) as “playing with technology”. The goal for this session is the discussion and application of Kee’s framework to the larger field of social sciences. By the end of the conversation session, participants will be able to:

- Identify key concepts from Kee’s approach to playing with technology.
- Expound upon recent and/or potential playful applications of technology at their institutions.
- Contribute ideas for applying this approach to specific social science content areas.

Description of Topic to be Discussed

The topic of play in a higher education environment encourages pedagogical shifts towards more active learning in higher education classrooms. The primary goal of utilizing a playful approach to integrating technology in learning is to encourage alternative pathways to learning. As described by Compeau and MacDougall (2014) in their account of utilizing alternate reality games for teaching history, play does not always equal games. Playing with technology indicates a bend towards creative innovation and experimentation. Through a focus on encouraging thinking, play, modeling, and building, instructors can utilize technology applications on the basis of conceptual aims rather than pedagogical goals or activity types. This notable shift from mainstream technology integration models magnifies the importance of learner buy-in and pedagogical flexibility.

Facilitation Techniques

Participants will engage in discussion based on areas of interest and/or experience. After a presentation of the topic and related examples, participants will form break-out groups in order to facilitate brainstorming on specific applications of playing with technology in their classroom environments. Break-out groups will report back to the whole for ideas to be collected and synthesized.

To achieve a more authentic experience in terms of the topic discussed, presenters will utilize various technology applications throughout the discussion. Tools such as student response systems and online discussion boards will be used to enhance discussion and collaboration. At the request of the participants, any and all recorded information will be made available for future use and elaboration.

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Reflecting on Students' Use of Technological Devices in Classrooms: Is a Balance Possible?

Yesim Keskin, Virginia Tech

Abstract: Despite the growing interest towards the technology integration in higher education settings, there is very little research on the use and effectiveness of the phenomenon and very little research seems to reveal conflicting results. Interestingly, the very few research also shows that the educators tend to adopt dichotomous attitudes towards technology integration in classrooms. The goal in this discussion is to facilitate a conversation regarding the advantages and disadvantages of technological devices use, reflection on whether a balanced use serving for learning purposes is possible and co-construction of strategies to create more productive educational settings.

Literature Review

Today's college students are regarded as the "digital generation" (Oblinger, 2008) and the integration of technology has been a hot topic among educators (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012). The research shows that significant portions of students brings and are willing to use technological devices (e.g. iPads, smart phones) during lectures (Aguilar-Roca, Williams, & O'Dowd, 2012). However, there is very little research on the use and effectiveness of technological devices in higher education settings (Ragan, Jennings, Massey, & Dolittle, 2014).

Some of the few studies suggest that the use of technological devices in classrooms can lead to positive outcomes such as increased class participation (Trimmel and Bachmann, 2004), and higher test scores (Cengiz Gulek and Demirtas, 2005). Whereas some other studies suggest that there is a negative correlation between the use of technological devices in classrooms and academic performance (Clayson and Haley, 2013), interaction among classmates and instructors (Mayer et al., 2009), and attention to class materials (Fried, 2008). The studies investigating perceptions of educators with regard to technology integration reveal that most of the educators perceive it as challenging (Vaughan, 2007) and tend to adopt dichotomous attitudes as either totally eliminating the use of technology by renouncing its benefits or thoroughly embracing by trivializing its pitfalls (Benson, Anderson, and Ooms, 2011; Pajo, 2001).

The aim in this session is to address and elaborate on both sides of the issue and facilitate a conversation among educators discussing the possibility of eliminating the pitfalls while maximizing the benefits of students' technology use in classrooms.

Goals and Objectives

As a result of this session, the participants will be able to identify the advantages and disadvantages of using technological devices in classrooms, discuss the opportunities and possibilities of eliminating the pitfalls, while maximizing the benefits of the use of technological devices and co-construct a means of creating digitally-informed educational environment in higher education settings.

Description of Topic

The participants will be introduced to the research findings and will be invited to reflect on their own experiences regarding the students' use of technological devices in classrooms. The plus/minus chart will be introduced and the participants will be invited to fill out this chart and the participants will be invited to reflect and reframe the plusses and minuses of the phenomenon. The possible strategies to promote a digitally informed learning enhanced educational environment will be introduced and the participants will be invited to co-construct new strategies that takes both the positive and negative aspects related to the phenomenon.

Facilitation Techniques

After the icebreaker activities the participants will be invited to discuss in small groups what the ideal classroom environment looks like and share with the larger group later on. Then the topic and literature review will be introduced and a plus/ minus chart will be drawn on the board and the large group members will be invited to fill out the chart together. They will be encouraged to share their personal experiences regarding the topic. Then, the chart will be summarized and group members will be invited to reframe the minuses/pitfalls from a systemic perspective, as a means of identifying the core problems with regard to technology use in classrooms (e.g. what can be the common reasons of distraction). The group members will be invited to brainstorm in order to find solutions for the identified problems and the mindfulness strategies to eliminate pitfalls of technology use while encouraging the core values and expectations in the educational setting will be highlighted.

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Friday

February 12, 2016

Session 14

11:20-12:10 PM

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

Evaluation of Effectiveness of Class-Based Nutrition Education on Lifestyle Behaviors of College Students

Jyotsna Sharman and Roofia Galeshi, *Radford University*

Abstract: College campuses can play a significant role in promoting healthy lifestyles for their students. The purpose of this study was to examine the effect of nutrition education on the dietary habits as well as lifestyle of university students. The students participated in an intensive dietary and lifestyle focused project, while learning basic nutrition facts. After 14 weeks of education and completion of the project, the students were asked to participate in a self-reflective pre-and-post survey to measure changes that might have occurred as the result of these activities. Randomly selected students' responses were analyzed with matched t-test. Consistent with our prediction the results indicated that the education and the project had significantly improved students' dietary habits and lifestyle. The students became more aware of their food intake, read the food labels more frequently, and increased their physical activities.

Literature Review

The period ranging from early adolescence to young adulthood can play a critical role in promoting health and preventing disease as individuals develop and adopt lasting health behavior practices. (Nelson et. al., 2008). Many food preferences are established early, but because individuals make more independent eating decisions as they move through adolescence, the transition to independent living during the college years is a significant event, making nutrition education increasingly critical. Nutrition education has the potential to not only increase nutrition knowledge of individuals to help improve their healthy behaviors, but also reduce the onset of chronic diseases and thus the need for healthcare later in life. The purpose of this study was to investigate the effect of nutrition education on college student's dietary habit and lifestyle choices.

The purpose of this case study was to measure dietary habit and lifestyle of college students due to their taking a college level nutrition course. College students are exposed to varied new experiences and lifestyle alterations as changes in eating habits, living environment, daily physical activity, and possibly alcohol intake which influence their overall health. (Huang et. al., 2003). It is well documented that college students do not follow the best dietary practices and often fail to consume foods according to the *Dietary Guidelines for Americans* (Alizadeh, 2008). It has also been reported that the greatest increases in obesity occur in individuals between the ages of 18 to 29 years. (Ogden et. al, 2010). Additionally, an unremitting waning in physical activity is common between the ages of 18 and 29 (Caspersen, et. al., 2000). Less than half of the college students have knowledge regarding the use of the food labels (Marietta et. al., 1999).

Methodology

Sample. The population of interest for this study is all adults who were enrolled in a nutrition related course in a small Liberal Art Colleges in rural areas. The population that was accessible to this study consisted of all students who were enrolled in Radford University's Introduction to Nutrition Course from 2013 to 2014. Respondents were invited to participate in taking the survey at the end of the semester. This resulted in a sampling framework of 200 individuals with 100% response rate, 48 individuals' responses were randomly selected for this analysis (N = 48).

Procedure. This single group retrospective pre-and-post quasi-experimental survey aimed to measure two constructs, dietary practices and physical activity. The first construct of the assessment included evaluation of intake of students for a variety of food groups including meat, poultry, fish and deli; their serving sizes, frozen and packaged foods, eggs, milk, cheese, frozen desserts, fats, oils & dressings, fried foods, desserts, snacks, whole grains, fruits & vegetables, nuts, salt, carbonated beverages, following healthy practices as reading food labels and making thoughtful selections. The second construct included frequency and amount of their engagement in physical activity.

The retrospective pre-and-post survey was designed to eliminate the validity threat caused by the pre-test effect. The researchers believed that the students' knowledge of the anticipated survey could have, to some extent, affected their dietary practices during the course. The students were asked to report their lifestyle behaviors after and prior to

taking the course and compare the changes that might have occurred. The dietary rating scale was a 27-item scale that measured daily dietary habit before and after attending a nutrition training. Ratings were given on a 0-to-3 Likert-type response scale where 1 = “rarely” and 3 = “usually” and the scale score was simply the sum of the 27 items. Similarly exercise-rating scale was a 1-item scale that measured individuals’ physical activity level. Ratings were given on a 0-to-3 Likert-type response scale where 1 = “rarely” and 3 = “usually.”

Preliminary Results

A matched-samples t-test was conducted to measure changes in the students’ lifestyle prior and after attending the course and completing the project. Consistent with our prediction, the students’ dietary habit after taking the course averaged higher (M = 59.4, SD = 8.4) than prior to taking the course (M = 52, SD = 9.4); $t(46) = 7.9, p < 0.05$ two-tailed. Similarly the students’ average physical activities increased after the course (M = 1.9, SD = 0.6) in comparison to their level of activities prior to the course (M = 1.6, SD = 0.7); $t(46) = 7.9, p < 0.05$ two-tailed. The effect size based on Cohen’s (1988) conventions was very large ($d = 1.4$) with a low probability of Type I error.

Table 1. Lifestyle Behaviors of participants Before and After taking the Introductory Course

	After		Before		
	M	SD	M	SD	P
Diet	59.4	8.4	52	9.4	< .05
Exercise	1.9	0.6	1.6	0.7	< .05

Discussion

This study confirmed that nutrition education is pivotal for college students to establish optimal healthy behaviors that may influence their health and nutritional status through life. Statistically significant improvements were observed in all healthy behaviors, with the greatest improvement observed in the students’ level of physical activity. These results are consistent with previous studies that showed that an increase in nutrition knowledge influences positive behavioral changes (Ha and Caine-Bish, 2011).

Similar to any pre-post test study, there were several limitations associated with this study. The most important limitation was that all measures were self-reported, and thus dependent on participants’ recall and honesty. There was also an imbalance between the genders of participants as the study had more females (n=42) than males (n=6). Whether the participants continue these lifestyle improvements in the long run was beyond the scope of this study.

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Examining the Relationships between Students' Perceived Level of Presence and Academic Achievement in Online Learning

Taeho Yu, Ana R. Abad-Jorge, and Kevin Lucey, *University of Virginia*

Abstract: The Community of Inquiry (CoI) framework has been considered as effective and efficient framework of learning in online learning environment (Shea & Bidjerano, 2009). Three components in the CoI framework (social presence, cognitive presence, and teaching presence) have been emphasized as important success factors in online learning (Ke, 2010; Morris, 2011). However, the previous literature in the CoI framework has focused on the correlations among social presence, cognitive presence, and teaching presence. Therefore, this study will investigate the relationships between student's perceived level of presence and academic achievement in online learning. Ten online courses at a large Eastern university were selected for this study. The data will be collected in the third week of November, 2015 and will be cleaned and analyzed in December, 2015.

Literature Review

The Community of Inquiry framework consists of three core elements of a collaborative constructivist learning required to sustain a purposeful learning community: social presence, cognitive presence, and teaching presence (Garrison, Anderson, & Archer, 2010). Social presence is defined as the level of recognition of other people in the process of communicating with them in online environment (Garrison & Arbaugh, 2007). Social presence can be measured by personal ability of developing the interpersonal relations with others through the purposed communication process in the online learning community (Swan, Garrison, & Richardson, 2009). Cognitive presence was originated from Dewey's Practical Inquiry (PI) model and focuses on the learning process as students achieve various levels including a triggering event, exploration, integration, and resolution (Garrison, Anderson, & Archer, 2001; Swan et al., 2009). Teaching presence is described as a social and cognitive process of design, facilitation, and direction for individual learner to get meaningful and educational learning outcome (Anderson et al., 2001). The three-factor structures was previously tested and verified for the English language version (Arbaugh, 2007; Arbaugh et al., 2008; Swan et al., 2008). The internal consistency reliability of the 34 item measurement of the CoI framework was excellent since Cronbach's Alpha was 0.91 for social presence, 0.95 for cognitive presence, and 0.94 for teaching presence (Swan et al., 2008).

Methodology

1) Research Questions

The specific research questions that will be addressed in the study are:

1. What are the correlations among students' perceived level of presence (social, teaching, and cognitive presence) and their academic achievement?
2. Do students' perceived level of presence (social, teaching, and cognitive presence) predict their academic achievement?

2) Context of the Study

A total of ten online courses of an online Bachelor's program in a large Eastern university were selected for this study. All courses in this program are online. The CoI Survey Instrument (Swan et al., 2008) will be administered to students to gather data using an online survey. The survey link to the CoI instrument will be posted in each online course site. All survey results will be collected electronically and coded for analysis. The 34 CoI survey items will be measured on a 5 point Likert scale (Strongly Disagree = 1 and Strongly Agree = 5). The final grades will be collected from the gradebook in the Learning Management System with the participating students' consent.

3) Data Analysis

1) Correlation Analysis

To examine the correlations between the three independent variables and a dependent variable, Pearson's correlation coefficient was generated by executing bivariate correlations analysis in the Statistical Package for the Social

Sciences (SPSS, version 23). The intervals of the correlation coefficient are between -1 and 1, and intervals closer to ± 1 can be interpreted as linear correlations between variables (Rodgers & Nicewander, 1998).

II) Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted by using Statistical Package for the Social Sciences (SPSS, version 23). Modeling the relations between the explanatory variables and response variables is the main purpose of conducting multiple linear regressions (Cohen et al., 2003). In other words, multiple linear regression analysis is an appropriate statistical method to determine which factors influence changes to the dependent variable (Draper & Smith, 1998). For this reason, this study implemented multiple linear regression analysis with three independent variables, described above, and final grades as a dependent variable.

Results

The results will be added after analyzing the data in December, 2015 since the data will be collected in the third week of November, 2015.

Discussion

This study will verify the relationships between student's perceived level of presence and academic achievement in online learning. In addition, this study will contribute to expand the research area of the CoI framework to the effect of students' perceived level of presence such as social, teaching, and cognitive presence from the CoI framework on their meaningful learning experience in online learning.

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Innovative Instruction in the Classroom: The Pizzazz of Prezi!

Felicia Tillman and Beverly J. Word, *Mercer University*

Abstract: This practice session will demonstrate the use of Prezi presentations as a viable means for teaching instruction in higher education environments. Integrating new technology in educational design has become imperative for instructors to remain relevant due to the ever changing face of technology in our society. New computer programs introduce opportunities for instructors to integrate modern technology into their classroom lectures and presentations. Prezi presentations provide an accurate example of innovative instruction that can be utilized in any subject area. Prezi presentations offer various options for presenting course materials that are not possible with PowerPoint presentations. Utilizing the choices available with Prezi could benefit instructors by keeping learners engaged throughout presentations and increasing learner retention of presented materials. This session will provide an overview of the importance of technological advancement in the higher education environment, a discussion on the benefits of Prezi versus PowerPoint in classroom instruction, and a step-by-step demonstration of how to effectively make and implement a Prezi presentation.

Literature Review

Integrating technology in higher education is a subject that is often debated by classroom instructors. Some would argue that there is not enough research-based evidence to support significant educational benefits of using computer technology versus traditional teaching methods (Kirkwood & Price, 2013). Additionally, researchers suggest that innovative instruction might grab students' attention, but they will revert to more traditional learning if their learning outcome is not improved as a result of new styles of instruction (Hu, 2006). Despite the uncertainties, the need for incorporating new technology in instructional design is still quite evident. In fact, instructors who are less apt to adapt to new technology in higher education settings might find themselves falling behind and unable to utilize programs and presentation modules that their students are using to complete assignments (Ng'ambi, 2013). While some instructors are using older forms of Microsoft programming, such as PowerPoint, to present lectures and classroom instruction, new programs, such as Prezi are making an appearance and leaving an impression among higher education students. PowerPoint has several disadvantages that might lead to it becoming an obsolete program in the near future (Yu & Smith, 2008). Research suggests that in order for innovative instruction to be deemed effective in the classroom environment it should increase or improve learning as well as transcend pedagogy in a wide variety of learning fields (Williams & Williams, 2006). Technology in the classroom will not be effective if instructors and learners limit the use and benefits of the identified medium (Selwyn, 2007). The use of Prezi in higher education environments allows instructors and students to open up new doors of opportunity for presenting material and remove limits previously imposed by older forms of computer programs.

Goals and Objectives

Goals

- Participants are expected to leave session with working knowledge of the history of need for innovation in teaching according to research in literature review.
- Participants will develop skills necessary to complete a basic Prezi presentation for higher education settings.
- Participants will understand benefits and challenges of utilizing technology and innovation in the collegiate setting and with multiple pedagogical styles.

Objectives

- Participants will engage in an interactive discussion about the weaknesses of Power Point presentations as it pertains to engaging the collegiate learner.
- Learners will review several completed Prezi presentations and discuss thoughts on the presentations
- Participants will brainstorm ideas and create an outline for Prezi presentations that might be effective in their classroom settings.
- Learners will work with facilitators to complete a step-by-step Prezi presentation.

Description of Practice

We will model the creation of a Prezi presentation, which is an innovative way to engage the learner. I will first show samples of other Prezi presentations that combine graphics, data, and videos. Participants will have the opportunity to analyze the presentations for effectiveness and creativity. They will be able to answer the question of whether the presentation was engaging and if key information was retained. Participants will then brainstorm a presentation topic in their individual field. We will then walk participants through the creation of their own outline and Prezi presentation. We will then briefly discuss editing and tips and tricks to reduce the learning curve of the new software. Participants will have the option to receive an email of the completed Prezi presentation upon completion.

Discussion

As current students in higher education, we are constantly seeking innovative and creative ways to present classroom materials. We have sought programs that will actively engage learners and hold the attention of the audience for the duration of the presentation. Additionally, we seek to use programs that will accomplish our goals while still presenting the material in the most professional manner possible. The Prezi format is one that has ultimately replaced PowerPoint in our personal presentations and teaching lectures, but is often unused by many classroom professors. After introducing Prezi to participants, we will discuss how participants felt getting acquainted with the new software and whether or not they are apt to include this software in their classroom instruction.

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Learning Environment Modeling

Kelly Ross, Bucky J. Dodd, and Liz Crowell, *University of Central Oklahoma*

Abstract: Educators face many challenges in designing and teaching courses, including a lack of universal communication to express ideas. Learning Environment Modeling and Learning Environment Modeling Language, an innovation by the Center for eLearning and Customized Education seeks to remedy this by providing a common language to facilitate communication between educators in order to enhance the educational experience for designers, faculty, and students. This practice session will allow participants to get hands-on with LEM and LEML, start building pedagogically-sound course patterns, and share with their colleagues. Ultimately, through future research, LEM and LEML will lead to better courses and better teaching.

Background

The Center for eLearning and Customized Education (CeCE) at the University of Central Oklahoma (UCO) provides innovative services for supporting elearning course design, teaching, and learning experiences. In the process of delivering these services, considerable research and development goes into understanding challenges faced by educators during these instructional experiences. One of these challenges faced by educators is the growing complexity involved in making course design and teaching decisions. This challenge is enhanced as course design and teaching experiences grow more collaborative and team-based where an educator may work with multiple professionals from diverse backgrounds such as instructional designers, technologists or other support staff. As the collaborative nature of course design and teaching experiences grow, so too does the need to develop ways of supporting meaningful communication and decision-making throughout course design and teaching experiences.

An innovation developed by CeCE that is designed to enhance communication and collaboration in course design and teaching experiences is called Learning Environment Modeling (LEM). LEM is a process for supporting course design and teaching experiences through modeling and visualizing key information about learning environments in much the same way an architect creates visual renderings of physical spaces. These models are created using a common language called the Learning Environment Modeling Language (LEML) and provides a shared “idea canvas” for enhancing shared understanding of learning environments, collaborative decision-making, and meaningful communication.

Purpose, Goals, Objectives

The purpose of this interactive session is to discuss challenges in the course design process and describe how the Learning Environment Modeling (LEM) system can address these challenges by bringing clarity and accessibility to the course design process. By making the invisible visible, LEM provides a highly-detailed, as well as easy to interpret, design overview that facilitates rapid analysis, prototyping, and revision in order to develop a pedagogically sound course.

The goal is that participants will be able to use LEM support materials to apply LEM in their own course design processes.

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

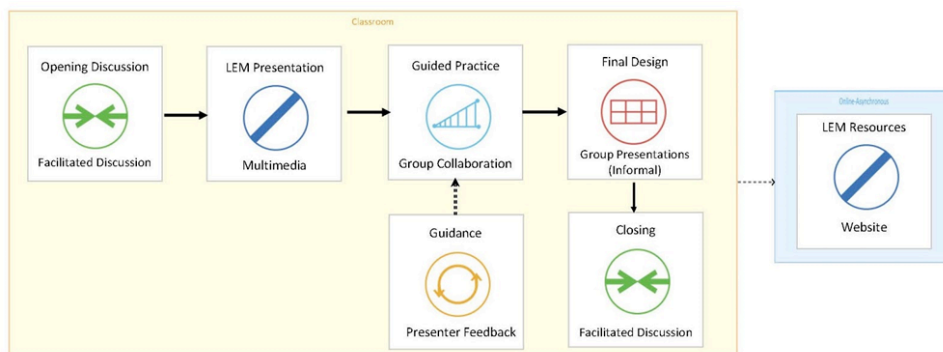
1. Describe the LEM.
2. Identify components of the Learning Environment Modeling Language (LEML).
3. Build a simple course pattern using LEM and LEML support materials.

Description

This practice session will begin with a brief discussion of the course design process and some of the challenges associated with it, in particular challenges of collaboration and making sure everyone is “on the same page” or

speaking the same language. This will be followed by a brief overview of LEM and the LEML components through a multimedia presentation. The participants will then work in groups as the presenter guides them through the creation of a course using the LEML. Groups will then share their final designs and the session will conclude with a discussion of ways the participant might use this in their professional positions. Participants will also be given electronic access to the LEM framework and components.

Description of practice session using LEM:



Implications for Research & Practice

CeCE is currently conducting research on LEM and LEML in the form of interviews with course designers in order to look at existing processes for designing and teaching courses and how that knowledge is currently transferred. In the future, potential patterns will be identified and analyzed for effectiveness both in the teaching of the course as well as student learning. In the future, CeCE hopes to develop patterns using LEML that serve as templates based around the goals of the course. Ultimately, having a universal language such as LEML, will lead to an increase in the ability to design effective courses and teaching strategies.

Fostering Interest, Agency, and Interaction in Online Learning Environments: A Framework and Toolkit for Building Superb Online Courses

Rachel L. Austin, *University of North Carolina at Charlotte*

Abstract: Online learning in higher education continues to grow as institutions focus on accommodating non-traditional and working students, expanding enrollment without building brick-and-mortar classrooms, and more and more instructors telecommute. This presentation will provide college-level educators with a both a framework and specific tools to construct online courses that focus on building student agency and involvement, incorporating relevant course materials that accommodate various learning styles, and provide support and encouragement to foster success. Session participants will practice building an informed, workable skeleton to use towards the construction of such an online course.

A Comparison of Active Learning TEAM Approaches: TBL and POGIL

Peggy M. Mohr and John B. Shabb, *University of North Dakota*

Abstract: This practice session will compare and contrast the characteristics of two active learning approaches, Team-based Learning (TBL) and Process Oriented Guided Imagery (POGIL), using examples from graduate physical therapy and undergraduate biochemistry courses in which each approach was implemented. Active learning strategies, guided discovery, and student team activities were used with both pedagogical approaches to create environments where students were actively engaged in learning prioritized concepts and essential critical-thinking skills. With both approaches, application exercises were designed to reflect real-world problems. The fundamental components of each approach and how the implementation of similar essential components differed between approaches will be described. Audience participants will be provided with examples of activities and assignments specific to each approach and select activities will be modeled. In an interactive, guided discussion, the influence of class size, varying student expectations, and faculty workloads will be discussed. Audience members will be encouraged to identify strategies that will stimulate students to develop a level of understanding that promotes successful application of the prioritized course concepts. Recommendations for future implementation of each approach will be provided.

Literature Review

The POGIL approach emphasizes active learning in the classroom. It arose from college chemistry instruction in response to the growing concern that traditional teacher-centered instruction, focused on efficient delivery of content, was not adequately developing critical thinking skills, deep understanding of fundamental concepts, development of independent learning habits, or an interest in science (Farrell *et al.* 1999, Hanson and Wolfskill, 2000). Much research has demonstrated the superiority of learner-centered constructivist pedagogies like POGIL over teacher-centered approaches (Eberlein *et al.*, 2008; Weimer 2013; Conway, 2014). POGIL has been successfully implemented in multiple STEM disciplines (<https://pogil.org/>) including biochemistry (Minderhout and Loertscher, 2007). The method relies on carefully developed written materials to guide self-directed small groups through the learning cycle of exploration, concept invention, and application. The instructor facilitates learning by encouraging students to construct their own understanding of fundamental concepts. In the process, instructors identify and correct misconceptions that may be uncovered by the learning process. Scalability is a major concern with effective implementation of any active learning pedagogy, though successful use of POGIL in large enrollment classes have been reported (Bailey *et al.*, 2012).

The fundamental components of the TBL approach include the use of permanent teams designed to distribute the resources within the class, assignments designed to promote learning and development of team skills, immediate and frequent feedback from facilitators, and application activities requiring the students to work on a significant problem, make a specific choice, and report simultaneously. The TBL approach was developed by Larry Michaelsen in 1979 for use in his business classes (Sweet & Michaelsen, 2012) and has been described with applications to several disciplines in a number of textbooks (Michaelsen *et al.*, 2004; Michaelsen, Parmalee, *et al.*, 2008; Michaelsen, Sweet *et al.*, (2008) and Sibley & Ostafichuk, 2014). This literature has provided a foundation of resource information for the implementation of TBL in both small and large classes.

Goals and Objectives

Goals:

- Compare and contrast the components, characteristics and implementation processes for TBL and POGIL.
- Provide examples of materials from graduate and undergraduate level courses for each approach.

Objectives: By the end of this Practice Session, participants will be able to:

- Describe the components of POGIL and TBL approaches.
- Describe strategies to facilitate student skill development and to enhance active involvement.
- Describe the differences in characteristics of assignments and activities implemented with each approach.

- Select components of activities that would promote discussion, critical thinking, and knowledge application.
- Describe feedback mechanisms designed to enhance learning and team interaction.

Methodology

During this presentation, the components of POGIL and TBL will be described in introductory overviews of each approach. Presenters will provide a brief review of outcome data from larger sized classes in undergraduate biochemistry and from graduate level physical therapy courses in which each approach was implemented. A comparison of the approaches will highlight the similarities in the essential components, such as the use of small groups or teams, facilitation by the instructors, activities designed specifically to promote active learning, mastery of course concepts, and development of critical-thinking and process skills. Differences in the design and implementation of each approach will be illustrated and select activities will be modeled. Audience participants will participate in activities and assignments specific to each approach. In an interactive, guided discussion, the influence of barriers and facilitating factors, such as class size, varying student expectations, and faculty workloads, on the process of transitioning a lecture course to active learning will be discussed. Audience members will be encouraged to identify strategies to apply in their courses to stimulate active student participation and learning. Recommendations for future implementation of each approach will be provided.

Discussion

Participants will be introduced to and guided through the POGIL and TBL approaches and will participate in the modeling of examples of course materials. The concluding portion of the session will be an interactive discussion focused on barriers to implementation that may need to be resolved and the potential barriers participants may bring to the discussion. Audience members will be encouraged to identify strategies to apply in their courses to stimulate active student participation and learning.

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Adopting a Community of Practice Approach to Teaching

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Abstract: We propose a practice session focused the community of practice model, recognizing that education proceeds by facilitating a process of a student becoming a member of a community. We initiate a conversation by first describing the community of practice model and soliciting feedback on type(s) of communities of practice represented in the audience. Use of reflective prompts and digital story telling were used in an Ichthyology class. Examples of student voices will be presented from qualitative analysis of scripts from their digital stories. Review of the digital stories highlight an incredible diversity of backgrounds, interests, and goals of the students enrolled in this class. Session will focus on practical guidance on use of digital storytelling applications.

Literature Review

We seek to move students toward disciplinary habits of mind (Costa and Kallick 2000) in a community of practice. Even if the student never expects to enter the discipline, they may understand transferability of these habits to other contexts. It's not easy to get into the head of a college student, but it begins by telling a story and inviting them to join you. There is rich literature supporting use of narrative writing and more recently digital storytelling in college teaching. We know students can't become a "fish-head" without working with and learning from other "fish-heads."

All learning begins with a dream. We are all dreamers. The average daydream is ~ 14 seconds and we have about 2,000 of them per day (Gottschall 2013 p 11). Our students imagine a future, perhaps murky and unclear; and they dream about it. How do we tap into students imaginations with our pedagogy? We ask them to share their stories and reflections. The use of narrative in our pedagogy has cognitive, social and science literacy benefits. Storytelling engages the brain of the listener in neural coupling. Listeners make the story their own with own experiences. Mirroring means the listeners experience same brain activity of they speak, allowing them to "predict" how this story will go. Storytelling releases dopamine (brain chemical responsible for reward, pleasure, goal setting). The brain produces more dopamine when telling a story about yourself than when telling a story about someone else (Tamir and Mitchell 2012). If stories have such as strong effect, we should use them in teaching.

Student emotions need to be engaged. As Carl Jung wrote "there is no change from darkness to light or from inertia to movement without emotions." It's easier for people to take on the goals, motivations, emotions, and even physical reactions of people whom they feel even minimally connected to. You can also use synchronous behavior -- having people do something together -- to create connectedness. Connectedness can actually make a team work harder and perform better. It's called "Mere Belonging" and many interventions may affect the long term student motivation and achievement and assist in creating a sense of belonging to the group (Walton et al. 2012).

The Science and Engineering Indicators Report (National Science Board 2014) finds that the primary source where Americans receive information about science and technology is nearly tied between television (34%) and the Internet (35%), with magazines and other print media tied for a distant third and fourth (9%). Berger and Milkman (2012) found that the biggest predictors of sharing content with others was that which was perceived as interesting, practical, surprising, and that evoked emotional reactions, all factors at which narratives excel. Our use of digital video for student storytelling is intended to serve as a transferable skill for a future workforce.

The community of practice model is designed to facilitate the ritual, repetition, and an emphasis on the practical value of each lesson in class. Students need to be curious and develop a ritual of observing fish, collecting and practicing the tasks that all Ichthyologists do. The French naturalist Constantine Rafinesque once wrote "The art of seeing well, or of noticing and distinguishing with accuracy the objects which we perceive, is a high faculty of the mind, unfolded in a few individuals, and despised by those who can neither acquire it, nor appreciate its results." One can't obtain the tacit, know-how, and thinking knowledge of an Ichthyologist from reading a text alone. Textbooks are filled with the explicit kinds of knowledge. What the students need most of all is to participate in the rituals we practice and do these many times, each time gaining that tacit knowledge held within the Community of Practice we affectionately refer to as Fish-heads.

Goals and Objectives

Our goal is to (1) demonstrate the value of a community of practice model in a college-level course in Ichthyology, the study of fishes, (2) provide practical advice to college teachers interested in trying digital storytelling, and (3) reveal the unanticipated benefits that may accrue.

Description of Topic

Our students all want something we have or to be part of something we are a part of. In Ichthyology class we talk of the mythical “Proud Ichthyologist” and hope the students will also seek to become one. We too wish to become Proud Ichthyologists and struggle with “becoming.” This past semester we asked students to create a digital story “On Becoming an Ichthyologist” in order to reveal to themselves [and others] who we are, why we are here, how we come to be what we are, what we value most, and how we see the world. This Digital Storytelling Pedagogy in Student Development recognizes that students need to engage deep reflection as they are struggling to learn Ichthyology or any other technical topic. Joe Lambert in *Digital Storytelling: Capturing Lives, Creating Community* defines a digital storytelling as “art of telling stories with some mixture of digital graphics, text, recorded audio narration, video and music.” We use example stories, writing prompts and story circle to facilitate this reflection process in students and encourage public narrative (Ganz 2011). Our goals are to have them think holistically about the “self” and recognize that the authentic tasks they accomplish are a part of the journey toward becoming an Ichthyologist.

Facilitation Techniques

We will model the value of narrative by sharing personal, true stories. Student stories, used with permission, illustrate what emerged when students reflected and explored their personal stories. We will share several student stories to illustrate validity of our approach. Sasha Doss starts her story with a quote from Johann Wolfgang Goethe “He who has never seen himself surrounded on all sides by the sea, can never possess an idea of the world and of his own relation to it.” Jacob Baker does not use photos of himself, but instead uses vivid imagery to help tell his story. Katie Ranger compares her journey and earliest experiences with fish to the journey of fishes. Skylar Wolf uses images from his Ichthyology Lab Notebook and describes changes in his study habits to do better in this class. Themes that arose in our qualitative analysis of video story scripts will be shared and other themes participants expect will be solicited and discussed.

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Broken Hammer: Using Undergraduate Teaching Assistants to Combat Stereotypes and Stereotype-Threat (Implications for Diversity and Inclusivity)

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Abstract: The use of undergraduate students as “teaching assistants” has been growing in popularity. Indeed, undergraduate teaching assistants (UTAs) are proving to be an excellent resource for enhancing student engagement in the classroom, thereby significantly improving learning outcomes. Building on previous research that explored how UTAs can fulfill a “mirror function” for students in the classroom, thereby contributing to student growth and empowerment (Murray 2014), this project explores how the strategic *positioning* of UTAs in the classroom can simultaneously combat stereotypes (for students of a different gender, sexual orientation, race, ethnicity, etc.) and reduce stereotype-threat (for students of a different gender, sexual orientation, race, ethnicity, etc.). This exploration relies upon the work of Heidegger (1962), specifically his epistemological concept of the “as-structure.” Insofar as any ideological preconception (such as a stereotype) can be understood as a Heideggerean “as structure,” those preconceptions can be strategically challenged by *positioning* UTAs in classroom activities in such a way that they can break the operative “as structure.” In this way, undergraduate teaching assistants can be viewed as valuable resources for enhancing both (acceptance of) diversity and inclusivity in the classroom.

Literature Review

The use of undergraduate students as “teaching assistants” can significantly improve learning outcomes, especially as innovative instructors are finding ways to use them in ways that go far beyond the traditional roles of “teaching assistant.” More than doing book-keeping or other tasks that primarily assist the instructor, UTAs are being used to facilitate small group discussions, model excellent student work and conduct in the classroom, work with students outside of class, and much more. According to Gordon, Henry & Dempster (2014), for example, the primary role of UTAs has been to “facilitate student engagement by modeling successful intellectual practices and offering assistance to students with coursework” (p. 104). Similarly, studies by Crowe, Ceresola & Silva (2014) and others have been demonstrating the benefits of UTAs to student learning.

At the same time, there has been growing interest in higher education with the idea of inclusivity—as an extension of a broader concern with issues of diversity and tolerance—and with the potentially negative impact of micro-aggressions and stereotype threat on student performance. According to Alexander and Serpell (2015), stereotype threat is “the threat of being viewed through the lens of a negative stereotype, or the fear of doing something that would inadvertently confirm that stereotype” and can have a significant impact on student performance, particularly through the “mediating impact of self-handicapping.”

This project seeks to build upon previous research, which explored how undergraduate teaching assistants can fulfill a “mirror function” for students in the classroom, thereby contributing to student growth and empowerment (Murray 2014), in order to explore how UTAs might be of further benefit toward the goal of enhancing both acceptance of diversity and a climate of inclusivity in the classroom. Specifically, this project explores how the strategic *positioning* of UTAs in the classroom can simultaneously combat stereotypes (for students of a different gender, sexual orientation, race, ethnicity, etc.) and reduce stereotype-threat (for students of a different gender, sexual orientation, race, ethnicity, etc.).

Goals and Objectives

Participants should leave this session with:

5. A basic understanding of Heidegger’s concept of the “as structure” as an epistemological theory that can illuminate the mechanisms of stereotype and stereotype-threat in the classroom.
6. An understanding and appreciation of the potential ways UTAs can serve the broad institutional goals of enhancing diversity and fostering inclusivity by breaking “as structures,” thereby interrupting the automatic imposition of preconceptions upon experience and forcing a more authentic encounter with the Other.

7. Concrete ideas about ways to *position* UTAs in classroom activities—or alternatively, to selectively *position* students enrolled in the classroom—to function in this way to break students’ existing “as-structures” that may function as limiting stereotypes or self-handicapping stereotype threats.
8. Sensitivity for the ethical difference—and consequent practical challenges—of attempting to use enrolled students as opposed to UTAs in this manner.

Description of Practice

Following a brief theoretical review of Heidegger’s notion of the “as structure” of all human understanding, this session will invite participants to imagine ways in which UTAs (or selected enrolled students) could be *positioned* strategically within classroom activities to disrupt the operation of particular “as structures” at the point between a student’s preconception and their phenomenological encounter with the Other—i.e., the UTA or fellow student. To do this, session participants will be asked to generate hypothetical classroom scenarios, moving step-wise through: (i) a course-related topic that might be generative of an oppressive stereotype or self-handicapping stereotype-threat, (ii) the specific stereotype or stereotype-threat in question, (iii) translation of that stereotype or stereotype-threat into an “as structure” that could condition a student’s encounter with a particular UTA (or fellow student), and (iv) a strategy by which to *position* that particular UTA (or fellow student) within the classroom activity so as to maximize the likelihood of that stereotype or stereotype-threat inducing “as structure” to be broken. The intention is that session participants will be able to generate workable scenarios for their own classes; however, concrete illustrations of this “practice” will be readily available to share and discuss, if necessary.

Discussion

This exploration invokes Heidegger’s (1962) notion of the “as-structure,” by which all objects are encountered “as” something—i.e., human understanding is mediated through preconceptions. However, if a particular “as structure” is broken, then one can no longer understand the thing (through a preconception) but must resort to a more primordial encounter with the thing-in-itself. In the case of the classroom, if a preconception regarding gender or race, for example, is strategically disabled, then a student cannot encounter another student through that preconception, but must reconstruct their understanding from the new experience. Heidegger uses the metaphor of a broken tool to explain the effect. For example, when we pick up a hammer, we always already experience it “as something,” in this case as a “hammer.” But if the hammer breaks, if it does not function the way we expect, our “as structure” is disabled and we must now experience the object in-itself rather than “as” a this or “as” a that.

Courtot (1983) powerfully demonstrates the potential violence of such preconceptions in an essay on fat oppression: I wish that you could see me as I truly am. Instead . . . what you see . . . is a catalog of assumptions about fat women which manages to erase me from the situation. This is the experience of living with a spoiled identity. Have I let myself go? Am I lazy and stupid? Do I sit at home all day eating chocolates and hating myself? Am I not smart enough to understand what good nutrition is? . . . All of these assumptions come directly from your head to surround the real person I am. (p. 199)

These are precisely the sorts of (often unrecognized) “as structures” that need to be dismantled, and undergraduate teaching assistants offer a unique and powerful resource toward that end.

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Undergraduates and Academic-Textbook Reading

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Abstract: This conversation session is to discuss professors' and instructors' perception and reasoning regarding undergraduates compliance or lack of compliance when assigned coursework reading along with possible solutions. Academic expectations of professors in higher education most often includes required academic reading in order to comprehend course content. The underlying premise is that students will read and make connections between texts in order to learn. Therefore, assigned readings require in-depth text-to-text connections for reading comprehension (Jolliffe & Harl, 2008). Students are required to incorporate cognitive processing and comprehension skills that match the purpose for reading (Linderholm, 2006). The discussions will focus on three main questions. (1) What are professors' and instructors' perception of undergraduate students' reading abilities? (2) What are professors' and instructors' purpose for assigning academic reading? (3) What are we as professors and instructors doing to help undergraduates that have difficulty or lack of motivation for reading academic expository text?

Literature Review

The primary means of communication is the written word in colleges and universities. Textbooks are prominent as a major vehicle for conveying information and are in direct correlation with content students learn when attending college (McKeachie, 2002). Every semester professors and instructors select a textbook or set of readings for undergraduate students along with a schedule to complete the assigned readings. Yet, research reveals that most often undergraduate students do not read or complete their required textbook reading assignments (Burchfield & Sappington, 2000; Clump, Bauer, & Bradley, 2004; Sappington, Kinsey & Munsayac, 2002).

Ryan (2006) argues that poor reading comprehension is the cause for lack of motivation. Linderholm and Wilde (2010) assert that students' beliefs about reading performance and confidence contribute to the need for deeper cognitive processing when reading in order to learn. Inference making, paraphrasing, text repetition, reading speed, metacognition, and recall varies when reading for pleasure and reading for academic purposes (Linderholm, 2006; van den Broek, Lorch, Linderholm, & Gustafson, 2001). Adequate reasoning and metacognitive skills necessary for transference and application of knowledge is missing when considering academic reading (Linderholm, 2006). Such research infers that critical thinking when reading is missing.

Linderholm, (2012) determined that students read to memorize information for a grade on a quiz, test, or major exam. Whereas, reading for understanding requires engaging in the critical thinking process (van den Broek, et al, 2001). Arum and Roksa (2011) analysis of more than 2,300 undergraduates at 24 institutions found that between 40 and 50% of students demonstrate minimal progress in a range of skills that involve critical thinking, complex reasoning, writing and more within their first two years of college. Yet, Burchfield and Sappington (2000) determined that students in advanced college course may read required assignments. In other words, the lack of engaged reading results in a lack of students' ability to use critical thinking and complex reasoning.

Goals and Objectives for the Conversation Session

Upon completion of the session participants will be able to:

1. Define and describe current research regarding academic expectations, purpose for reading, and reading comprehension abilities at the college/university level.
2. Identify professors or instructors expectations for undergraduates' purposeful reading.
3. Determine strategies to help undergraduates that have difficulty or lack of motivation to read academic expository text.

Description of the Idea or Topic to be Discussed

Jolliffe and Harl (2008) analyzed students' ability to make connections with what they read: text-to-self, text-to-text, and text-to-world. They discovered that students were able to make connections with support, but lacked the ability to make connections between the texts they were reading. The key point is that textbook or academic reading offers increased reading difficulty (Linderholm, 2006). The lack of reading comprehension, critical thinking and minimal understanding of academic reading correlates with students' personal beliefs, abilities to use mental representations for reasoning and metacognitive processing, and self-esteem i.e. self-confidence. Therefore, undergraduates' expectations or purpose regarding academic reading appears to be the key element when determining their perception of abilities and purpose.

Fox (2009) identifies three reading characteristics for processing and learning from informational text. First, the reading process readers are expected to engage in are comprehension, monitoring and evaluating what has been read. Processing behaviors include strategies, metacognition, monitoring, goal setting and use of prior knowledge. Learning behaviors include engagement, interest, knowledge, goals and abilities. Secondly, readers' mental representation of text determines how readers extract and construct meaning. And third, readers' ability to transfer, apply, interpret, infer, and evaluate what was read – active comprehension. Therefore, readers need to interact with the text as they read in order to mentally represent text for meaning including relevance to background knowledge.

Facilitation Techniques

The discussions will focus on three main questions. (1) What are professors' and instructors' perception of undergraduate students' reading abilities? (2) What are professors' and instructors' purpose for assigning academic reading? (3) What are we as professors and instructors doing to help undergraduates that have difficulty or lack of motivation for reading academic expository text?

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