

PROCEEDINGS



11TH ANNUAL

CONFERENCE ON HIGHER EDUCATION PEDAGOGY

January 30 - February 1, 2019

SYMPOSIUM ON TEACHING LARGE CLASSES

February 2, 2019

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CONVERSATION SESSIONS

Are We Friends? A Discussion about Faculty-Student Friendships

Elizabeth Muckensturm, North Carolina State University

This conversation explores the plausibility of a faculty-student friendship in both face-to-face and social media realms. Research shows that strong faculty-student informal contact can lead to higher academic achievement and fewer disciplinary problems. Much of the research shows positive outcomes from quality informal contact between faculty and students yet it still seems taboo in practice. Aside from academic research, faculty have varying thoughts on friendships and digital “friendships” with students and former students. Let’s face it, friendships between professors and students is a controversial topic (Chen, 2000).

Perceived power and authority constructs in the classroom often contradict friendship constructs between college students and professors. To maintain authority in the classroom many faculty members shy away from the concept of being “friends” with their students. It seems that too intimate of a relationship, like a friendship with students, can break down authoritative structures in the classroom and pose a threat to the standard dynamics of a faculty-student relationship. Interpersonal relationships have long been studied in various forms such as between romantic partners and within family dynamics. However, interpersonal relationships between students and college professors is an area that has scantily been researched since the turn of the 21st century.

Pascarella (1980) researched the concept of faculty-student friendship and its influence on college student outcomes at lengths. He concluded that “significant positive associations exist between extent and quality of student-faculty informal contact and students' educational aspirations, their attitudes toward college, their academic achievement, intellectual and personal development, and their institutional persistence” (1980, p. 545). Research on institutional persistence was further developed by Tinto, in which he concluded that informal interaction with faculty was one of the most important aspects of social and academic integration, which then led to stronger personal bonds, and fewer voluntary withdrawals (1975). Other researchers since this time have unmasked similar and other positive student outcomes resulting from face-to-face faculty-students interpersonal relationships (Baker, 1996; Chen, 2000).

While the early research surrounding faculty-student informal contact was researched in terms of personal face-to-face interactions, more current research includes computer-mediated friendships via social media sites. Mazer et al. (2007) concluded that students who viewed the instructor’s Facebook page with high amounts of self-disclosure indicated higher levels of motivation, affective learning, and a more positive classroom climate. Research has also shown that the frequency and quality of interactions with faculty is a key aspect in the academic success of minority students especially students of color (Lundberg & Schreiner, 2004).

Goals and Objectives for the Conversation Session: The goal of this session is to discuss the plausibility of faculty-student friendships as well as the ethical consequences. The conversation is intended to discuss both the positive student outcomes such as willingness to persist along with the negative student outcomes such as perceived lack of faculty credibility. In this conversation we will engage each other in thought-provoking dialogue about the pros and cons of faculty-student friendships. At the conclusion of this conversation participants will be able to:

1. Describe the impact of faculty-student friendships on student’s learning, student success, and classroom climate;
2. Discuss the ethical concerns surrounding faculty-student friendships.

Facilitation Techniques: The following strategies will be used to facilitate the conversation: a brief overview of the context of faculty-student friendships, followed by brainstorming between participants in pairs on the pros and cons of faculty-student friendships, followed by a group discussion in which we will discuss key ideas, ending with a summary of what was learned and a list of benefits and concerns we have outlined during our conversations.

- Baker, R. L. (1996). The ethics of student-faculty friendships. *New Directions for Teaching and Learning*, 66, 25-32.
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- Lundberg, C. A., & Schreiner, L.A. (2004). Quality and frequency of faculty- student interaction as predictors of learning: An analysis by student race/ethnicity. *Journal of College Student Development*, 45(5), 549- 565.
- Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007). I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education* 56(1), 1-17.
- Pascarella, E.T. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research*, 50(4), 545-595.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.

Barriers to the Adoption of Open Educational Resources in Teaching

Darren Maczka, Virginia Tech; Britton Hipple, Virginia Tech; Sarah Donnelly, Virginia Tech;
Leanna Ireland, Virginia Tech

Open educational resources (OER) have the potential to lower barriers for students, support instructors, and provide high quality peer-reviewed instructional content for use across institutional boundaries. However, adoption of these resources remains slow and existing repositories remain fragmented or even abandoned. As we begin to plan a prototype for a new teaching materials repository, we are exploring barriers to using open educational repositories. During this discussion session, we will explore reasons people have attempted to integrate OER into their teaching prep, and reasons why these attempts may have failed to change long-term behaviors for both faculty and graduate students.

Open educational resources (OER) are becoming increasingly common. These repositories have the potential to lower barriers for students, support instructors, and provide high quality peer-reviewed instructional content for use across institutional boundaries. However, adoption of these resources remains slow and existing repositories remain fragmented and in some cases abandoned. As we begin to plan a prototype for a new teaching materials repository, we are exploring possible barriers to using open educational repositories. Some of these barriers to adoption include the lack of information or awareness of the OER (Rolfe, 2012), evaluation of available resources, lack of OER quality (Belikov & Bodily, 2016), the lack of training in using the OER, and suitability of submitted material for reuse (Hassall & Lewis, 2016).

During this discussion session we will explore reasons that people have attempted to integrate OER into their teaching prep and reasons why these attempts may have failed to change their long-term behaviors. We will draw upon existing research and our own experiences, including personal barriers, challenges, and potential solutions in developing an OER for instructors.

- Belikov, O., & Bodily, R. (2016). Incentives and barriers to OER adoption: A qualitative analysis of faculty perceptions. *Open Praxis*, 8(3), 235-246.
- Hassall, C., & Lewis, D. I. (2016). Institutional and technological barriers to the use of open educational resources (OERs) in physiology and medical education. *Advances in physiology education*, 41(1), 77-81.
- Rolfe, V. (2012). Open educational resources: staff attitudes and awareness. *Research in Learning Technology*, 20(1), n1.

Civic Engagement through Community Conversations as Interdisciplinary Curriculum Project

Arla Bernstein, Mercer University; Carol Isaac, Mercer University

This conversation will engage participants in reflecting on approaches to designing problem solving assignments in the interdisciplinary curriculum. The goal of the research-based project is to civically engage university students in a place-based approach to revitalizing a poverty-stricken, marginalized area of the City of Atlanta by means of data analysis and program evaluation generated from “community conversations.” The project is centered on the principle that in order to prepare for an increasingly diverse society and to help students navigate diverse learning environments, many institutions of higher education have developed programs that support student learning and competencies around community-based projects.

This session will be conducted as a facilitated focus group discussion. The goals of the session are (1) to develop awareness of the opportunity for civic engagement through community conversations; and (2) to generate instructional strategies for an interdisciplinary, research-based curricular module. The interdisciplinary program will demonstrate productive linkages between the humanities and the social sciences, and students will experience the bridging of theory and practice as an interdisciplinary venture. Faculty research will generate community-based data for use in an interdisciplinary, experiential learning module for undergraduate and graduate University students. Faculty and students from several disciplines, including communication, education, and informatics will participate in the development of the curricular module. Qualitative data collected from community conversations and quantitative data collected from U.S. Census and City of Atlanta data records will be incorporated into an interdisciplinary learning module, which will be designed for University students to learn how to conduct (1) qualitative, narrative analysis related to a social justice issues; and (2) quantitative analysis of neighborhood data for the “community of focus.” Qualitative and quantitative data for the five neighborhoods within the “community of focus” will be integrated to assess the potential impact of the project on social and economic equity. These include studies of Atlanta neighborhoods, African American history, medieval arts and architecture, literacy, and digital humanities.

In terms of pedagogical discovery, the Planning Committee will need to address the following: (1) Will the interdisciplinary program call for new student learning outcomes and measurements for assessment; if so, how will they be assessed? (2) How can High Impact Practices be tailored to meet the needs of the program? (3) How will we use service learning and other experiential assignments and projects to advance the goal of the IDCEP? (4) How can digital humanities benefit from a civic engagement project? (5) Will we use interdisciplinary team teaching for some of the new and updated courses? (6) For curriculum development, what do we mean by interdisciplinary?

In Phase II of the project, faculty in each of the disciplines will be invited to engage their students in a workshop to discuss the community research and how and why the data will be analyzed. The workshop will be preceded by a reading assignment that will be prepared by Dr. Bernstein (Liberal Studies), Dr. Stapleton/Dr. Liu (Informatics), and Dr. Isaac (Education) for the purpose of (1) informing students about social justice issues in the community of focus; (2) informing students about qualitative and quantitative methods of analysis; and (3) requiring

students to conduct qualitative and quantitative analyses as a precursor to the development of a community action plan by community stakeholders (as identified by the City of Atlanta).

Session Agenda: 1. Presentation (10 minutes) 2. Conversation Handout (5 min) 3. Small-Group Conversations (20 min) 4. Large Group Conversations (10 min) 5. Round-up: Key Points from Conversation (5 min)

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Cognitive Behavioral Change: New Dimensions in Competency-based Education
Eric Pappas, James Madison University; Carly Blaine, Virginia Commonwealth University

Competency-based Education (CBE) instructional methods are gaining in use and popularity in the university classroom. While there are countless approaches to CBE, instruction using Cognitive Behavioral Change (as opposed to the clinical cognitive behavioral therapy) methods offer faculty new methods in which to evaluate and document student learning. Cognitive behavioral change methods require students to demonstrate what they have learned, not simply pass tests. This workshop explores the facilitators' 20 years' experience teaching, publishing, and evaluating students using cognitive behavioral change methods in the classroom. Workshop participants are welcome to offer their experiences with this methodology, as well.

Higher education supports the intellectual development of students, but the individual habits, routines, and lifestyles that foster a behavioral foundation for effective thinking and productive living remain enigmatic. Many academic approaches to cognitive, as well as individual, behavioral change suggest a product (or goal) for intentional change, but they do not foster the intentional and directed cognitive processes and behavioral changes that foster productive thinking and well-being (Ben-Shahar 2007; Fordyce 1977; Lyubomirsky 2005).

Cognitive Behavioral Change (not the clinical approach of cognitive behavioral therapy) is an instructional methodology supporting behavioral change that remains largely unexplored in higher education (Pappas 2011). Because students must demonstrate behaviors to complete assignments, cognitive behavioral change falls within the confines of competency-based education. Many theories and practices related to intentional self-development have found a "home" in positive psychology, generally referred to as the development of positive human functioning leading to increased well-being. Seligman and Csikszentmihalyi (2001) suggested that positive psychology should use behavioral interventions to enhance an individual's behavior. Several studies have used cognitive behavioral change as a method for increasing individual well-being (Fordyce 1977; Burton and King 2004; Gable and Haidt 2005).

Cognitive Behavioral Change for Intentional Self-Development/Intentional Change: Several decades ago, Rogers (1951) considered the motivation behind intentional self-development: "...to actualize, maintain, and enhance the experiencing organism" (p. 487). Maslow (1968) also discussed intentional self-development as the key to individual growth and change. Russell (1921) noted that oft-repeated intentional, positive behavior tends to establish a consciousness that establishes that specific behavior. Maslow (1968) described the "self as a project" (pg. 12), while Rogers (1969, 1980) described such change as "individuals in process" (1969, p. 105). Structured approaches to behavioral change require individuals to create a workable plan to be executed over a pre-determined period of time, to monitor progress, and to reflect upon and evaluate progress (Pappas 2002; Pappas 2004). In other studies, Stevens (1971), Faraday (1976), Rogers (1977), and Bolles (1980) applied intentional self-development practices to individual self-improvement and growth.

The instructional methodologies described in this workshop draw upon theory and practice in positive psychology (Seligman and Csikszentmihalyi 2001), intentional change theory (Bolles 1980; Faraday 1976; Rogers 1977), and intentional self-development (Brandtstädter 1998;

Prochaska 1997; Rotter 1982). This workshop focuses on 1) metacognitive and dispositional skills that promote the development of students' positive habits, routines, and behaviors that lead to successful intentional self-development; 2) whether students are willing to integrate this behavior into their daily routines and habits; and 3) if cognitive behavioral changes students make endure following course completion.

Workshop Goals: • To present the current theory on cognitive behavioral change in an instructional setting, including the strategies (and research) the presenters have used in the classroom for over a decade; • To discuss with workshop participants competency-based education strategies they use in their classes; and • To explore and examine how cognitive behavioral change approaches might be used in the classroom to enhance learning and behavioral change that foster continued learning. Faculty from all disciplines are welcome.

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Conflict Resolution in the Classroom: Strategies to Create Teachable Moments
Ayesha Yousafzai, Virginia Tech; MaggieMae Farthing, Virginia Tech; Noha Elsherbiny,
Virginia Tech

Conflicts can arise in a classroom between peers or between the instructor and student. Depending on how the conflict is handled, it may create a positive or negative learning outcome. Conflicts may occur in the classroom, one on one meetings, via email, or on an online learning platform (canvas discussion posts, facebook, etc). The goal of this discussion is for attendees to share their experiences with conflicts and as a group to develop strategies to turn conflict into teachable moments.

Introduction (3-5 Minutes): introduce the topic to the attendees, share personal experiences and examples of conflicts and how they were resolved.

Group Discussions (15 minutes): depending upon the number of people that attend, we will break the attendees into smaller groups (pairs to five people) to discuss the following questions: What conflicts have you experienced with your students from your courses and why did these conflicts arise? How did you address the problem? What strategies for conflict resolution have been successful? Why? What strategies have you seen that have not resolved the situation (or even made it worse)? Why? What do to move past the conflict and continue to create an inclusive classroom?

Regroup and Discuss (10 minutes): Once the groups have discussed the prompts, we will come back together and have the groups highlight the themes they heard throughout their discussions.

Wrap Up (10 minutes): Ask the group as large How did it feel to share these conflicts? What did you learn from this discussion? What was your one take away?

Conversation on Inclusive Pedagogy: Understanding Barriers of First-Year International Students

Homero Murzi, Virginia Tech; Maia Greene-Havas, Virginia Tech

International students represent a growing population in higher education in the United States. During this conversation session, we will expand on a conversation conducted last year in which we explored barriers that may affect the performance and retention of international students. During this conversation, our interdisciplinary team will share preliminary results from individual, semi-structured interviews conducted with first-year international students. We will further discuss what can be done from a pedagogical perspective (inside the classroom), mentoring perspective (as instructors), and advising perspective (formal support systems) to help support this population of students.

International students represent a growing population in higher education in the United States. They are important not only because they bring financial benefits to the economy, but also because they enrich academic programs by bringing unique perspectives. However, international students face several barriers when attending college in a different country for the first time. Furthermore, the lack of context in their college experience affects learning opportunities. Research has shown that sense of belonging is a crucial aspect of success in higher education. The purpose of this initiative is to continue a conversation on the perceptions that faculty members have about international students, and how to develop learning environments that will better support this population of students in order to help them best succeed academically.

The purpose of our research is to better understand the experiences of international students while attending college in the United States. In this conversation session, we plan to expand on a conversation session conducted last year where we shared our initial research approach and the struggles we faced conducting research with international students. Our interdisciplinary team composed of a faculty member and an academic and career advisor, plan to share preliminary results from individual semi-structured interviews conducted with first-year international students. We hope to continue the conversation on what faculty and administrators perceive as barriers, the support systems that should be implemented, and the pedagogical strategies and instructional interventions that could be developed to help this population of students smoothly navigate their academic programs. Furthermore, we plan to compare and contrast participants' perceptions with our preliminary findings after qualitatively analyzing the data.

Description of the concept to be discussed: The conversation will revolve around the barriers international students face and the support needed to increase rates of success. Participants will share their experiences working with international students and indicate what they have seen as potential barriers. We will discuss how these barriers might impact the performance and retention of international students in college. In groups participants will be asked to provide recommendations on what can be done from a pedagogical perspective (inside the classroom), mentoring perspective (as instructors), and advising perspective (formal support systems). Finally, we will share our research findings with all participants and provide recommendations.

Facilitation techniques: Following a short presentation, participants will have the opportunity to engage in initial individual reflection, and then participate in collaborative discussions throughout the remainder of the session. The conversation will engage participants in ideas

presented, introduce information from different perspectives, and lead participants to determinations of how these ideas could be implemented in their classrooms. Furthermore, participants will learn about the current research study, which will address what international students actually express as encountered barriers, so participants can compare and contrast their perceptions with the reality.

Conversation: Using Videos as Assessment in a Flipped Classroom

Caleb Adams, Radford University

The student-centered approach to instruction in the collegiate classroom has become a more common practice in recent years. The practice of using lecture videos has been a primary content delivery tool for instructors. Assessments in the flipped class may include note-checks, class participation, quizzes, homework and exams. During this conversation other methods of assessment in the flipped classroom will be presented. An examination of how student-generated videos may be used as a method of assessment and enhancement of student engagement in the flipped classroom will follow.

The move towards a student-centered learning environment has been a hot topic of education research for over the past two decades (Johnson et al., 2005). Increases in student achievement (Adams & Dove, 2016; Lawson et al., 2002) and decreases in student-learning anxieties (Tooke & Lindstrom, 1998) have been reported. Under the correct environment, the active learning approach leads to deeper thinking and improved peer-to-peer interactions (McLean et al., 2016). In the active-learning environment, an importance is placed upon student-centered activities. Content delivery by the instructor is often in the form of lecture videos placed through a learning management system or online to be viewed by students prior to a class session.

It has been well established that competency-based assessment that unites learning outcomes with specific objectives requires continuous and frequent assessment (Iobst et al., 2010; Holmboe, et al., 2010). Such assessment can include instructor-generated videos that provide feedback which may improve student perception and understanding of the assessment provided (West & Turner, 2015). What common forms of assessment are presently utilized in the active learning classroom? What student-centered activities can be modified to assess a student's mastery of the content?

This session will examine what instructors may do to improve content learning by their students and how student-generated videos can be implemented in an active learning classroom. The primary topic presented in the conversation is the use of student-generated videos used as an assessment tool within the flipped classroom. Instructors that have used this tool will be able to share their insights as to what makes this an effective assessment of student learning. Other instructors that are new to the active classroom model or instructors that have not implemented this tool will gain insights on methods of assessing their classes. The goal is to have instructors share what has and has not worked for them in assessing their active classroom and for instructors to learn about alternate forms of assessment. Even experienced instructors of flipped classrooms may be reluctant to let their students "learn by teaching," but can find such experience to be rewarding to both their students and themselves. This conversation will allow participants to share their experiences with assessing the active learning environment as well as open doors to new ideas on assessment to instructors with a wide range of experience.

Adams, C. & Dove, A. (2016). Flipping calculus: The potential influence, and the lessons learned. *The Electronic Journal of Mathematics and Technology*, 10(3), 154 – 164.
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Creating a Culture of Interprofessionalism with Beginning Healthcare Professionals

Saundra Penn, Queens University of Charlotte; Tiffany Shockley, Queens University of Charlotte

This session explores a collaboration between health sciences and human services faculty teaching beginning level majors the value of interprofessional health collaboration. In addition to a brief exploration of models and theories of interprofessionalism, this presentation highlights the presenters' practices of simulating interprofessional team meetings with fictive characters. As a result of this presentation, faculty can explore the application of this pedagogy to their discipline.

Enhancing communication between healthcare professionals is a central component to providing safe, efficient and optimal healthcare outcomes for clients. Unfortunately, many healthcare professionals only experiencing the value of other healthcare professionals once they complete undergraduate school and, in some cases, enter graduate programs in healthcare. Providing early exposure and experiential opportunities for human services and health sciences students reduce barriers to effective collaboration such as power differentials. Using active learning strategies allows students to create deeper knowledge of diverse health disciplines and simultaneously reflect on the thought process of other professionals in a safe setting.

Rowland, P., & Kitto, S. (2014). Patient safety and professional discourses: implications for interprofessionalism. *Journal of Interprofessional Care*, 28(4), 331–338.

<https://ezproxy.queens.edu:6464/10.3109/13561820.2014.891574>

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Johnson, K. F., Sparkman-Key, N., & Kalkbrenner, M. T. (2017). Human service students' and professionals' knowledge and experiences of interprofessionalism: Implications for education. *Journal of Human Services*, 37(1), 5-13.

Creating College Community One Conversation at a Time

Anne Barton, University of North Carolina - Greensboro; Christine Flood, University of North Carolina – Greensboro

One of the issues that we on college and university campuses face is how to find ways to teach students to form and participate in meaningful communities, an ability they will need as they enter new communities after college. In an effort to address this issue, the residential colleges at UNC Greensboro created a shell course, RCO 155, Seminar on the Art of Discourse. Using techniques from the field of rhetoric, each of these courses focuses on topics that create community within each residential college and that can help develop skills to create other campus communities.

One of the issues that we on college and university campuses face is how to find ways to teach students to form and participate in meaningful communities, an ability they will need as they enter new communities after college. In an effort to address this issue, the residential colleges at UNC Greensboro created a shell course, RCO 155, Seminar on the Art of Discourse. Using techniques from the field of rhetoric, each of these courses focuses on topics that create community within each residential college and that can help develop skills to create other campus communities.

One shell course focuses on the Discourses of Civility and exists in two versions. In the first, we discuss civility within the four broad contexts of social media, conversation, historical speeches, and news media. The students and the instructor study the uses of rhetorical techniques to create civil discourse. The course begins with a critical look at how we ourselves create our on-line personas and how, through those personas, we participate in various communities. The second version of Discourses of Civility focuses on understanding discourse within communities in the context of the First Amendment right to free speech. How do we engage in an ethical manner with these issues? In this our modern age, civil discourse is continually under threat from extreme rhetoric fueled by the broadening of modes of communication. By the end of the course, the question the students confront is: has the time for civil discourse passed? In both of these versions, the issue of how to create communities at a time when people seem more inclined to divide rather than to unite is at the center of the discussion.

A second shell course, the Rhetoric of the College Self, addresses those students who find themselves on academic probation after one semester. Rather than teaching an academic recovery course that only deals with the building blocks of academic success, we strive to create a course that allows students to discover what had been missing from their first semester through discussions, reflections, presentations, and assessments of individual motivators. The key to this course's mission is leveraging the community-orientated nature of the program to foster student's academic success, and to empower students to recover their own college careers. The theme of Art of Discourse is also carried through this course, as students are engaged in assignments that give opportunities to polish and practice their written and oral communication skills and their understanding of contemporary media literacies.

The ability to connect to one's self and to connect to the residential college community are talents to other contexts beyond the university. Our discussion, then, will center on how to teach our students how to build community by first looking at the ways they use rhetorical techniques

to present themselves to the world, how to read the rhetorical techniques of others, and finally, how to move past those techniques to create meaningful, connected communities inside and outside of college.

Embedded Within Your Syllabus: Student Leadership Competencies

Meghan Weyrens Kuhn, Virginia Tech

Participants will be exposed to the Student Leadership Competencies by Corey Seemiller and Thomas Murray. These competencies have been curated by Seemiller and Murray who assessed 475 academic programs within 72 academic accrediting organizations (Seemiller & Murray, 2013). Participants will learn about the Student Leadership Competencies and review their own syllabi for selected competencies. Then, participants will discuss how to enhance the learning of selected Student Leadership Competencies within their courses with projects and assignments already created from their own syllabi. Individuals from the VT Engage team will be available to consult.

Proposal: Individuals will be able to self-assess and work with a partner to review their respective syllabi to highlight key Student Leadership Competencies. VT Engage representatives will then work with individuals to review ways to enhance selected Competencies through already created assignment and projects. Through this process, the VT Engage team will be able to help identify different ways to assess how a student has enhanced their competency building through assessment opportunities. Using the work of Corey Seemiller (2014), individuals will have the opportunity to think critically of how a selected Student Leadership Competency is advanced through knowledge, value, ability, and behavior within an assignment or project. Participants will end the session with options of how to highlight Student Leadership Competencies that are already embedded within their syllabi. This proposal, if accepted would work in conjunction with Catherine Cotrupi and Kaylynn Hill's session concerning systems thinking.

Seemiller, C. (2014). *The student leadership competencies guidebook: designing intentional leadership learning and development*. San Francisco: Jossey-Bass.

Seemiller, C. & Murray, T. (2013). The common language of leadership. *Journal of Leadership Studies*, 7 (1).

How to Keep CALM? Conversation about Accessibility in Large Classrooms

Christa Miller, Virginia Tech; Martina Svyantek, Virginia Tech

Within the academy, supporting the inclusion of students with disabilities is typically not rewarded, in spite of the additional effort it requires from faculty members. This becomes increasingly complicated in large classrooms, online/hybrid classes, and implementations of emerging pedagogy. This guided conversation will cover universal design for learning best practices for any classroom environment and explore faculty concerns related to work loads, support structures, and recognition.

While there is a legal requirement to provide accessibility for students with disabilities, those with knowledge and training in this area tend to be few in number, widely dispersed, and located behind layers of gatekeeping. The labor required to create inclusive learning environments, both physically and digitally, has steadily increased as technology grows and changes while faculty time and resources have decreased.

This conversation-based session will cover two major areas: faculty perceptions and classroom accessibility. Guiding questions related to faculty perceptions of accessibility will cover topics such as: How do faculty feel best supported or appreciated for making their courses more accessible? Are digital badges or certificates a worthwhile time investment? What works against accessibility in your own experiences on campus? Guiding questions related to classroom accessibility will cover topics such as: What do you already know about accessibility, and what would you want to learn? What resources exist on campus to support instructors developing materials and practices? What can instructors do to enhance the accessibility of their courses and classrooms? Reflecting on access needs and solutions, what might work in current courses? What might work in the future?

Outcomes: The proposed outcomes of this session are

- Development of knowledge: concepts and terms associated with disability and accessibility in classroom environments, concepts of universal design for learning, and accessible course design.
- Development of experience: in writing accessible access statements, planning for inclusive classrooms, engaging in discussion on topics in disability and accessibility.

Hybrid: It's Not Just for Cars. Buckle Up, Academia

Kathleen Carper, Virginia Tech

Technology has changed significantly in the last decade. Traditional learning, or face-to-face learning, is no longer the standard. Online learning is common, but there is much debate about which mode is more effective. Within online learning, there are many terms: blended, asynchronous, online, e-learning, flipped, and more, yet most educators are unaware of the exact definition or implementation. Virginia Tech has another new approach and term: hybrid learning. By definition, hybrid is onsite and online learning; however, the parameters are somewhat undefined. This conversation will help further knowledge of the terminology and role of hybrid learning to affect pedagogy.

Goals and Objectives: Drawing from my experience teaching an undergraduate hybrid course at Virginia Tech, I will facilitate an interactive conversation around the subject of hybrid learning in academia. These are the goals for the conversation with participants: (1) explore the many layers of hybrid learning (2) share experiences with hybrid learning (or other similar forms), including approaches, successes, challenges, and lessons learned (3) collaborate with one another to develop ideas for future practice for hybrid pedagogies.

Description of Topic to be discussed: Discussion will revolve around the following questions: (1) What is hybrid learning? (2) Does your university or teaching location have hybrid learning? (3) What other words are associated with hybrid learning? (4) Where does hybrid learning fall on the spectrum of completely face-to-face versus completely online? (5) What are the strengths and weakness of hybrid learning? (6) What pedagogical practices in hybrid learning can be used to influence access to education? (7) What are the methods you use in technology-enhanced learning that seem to be positive pedagogical approaches?

Facilitation Techniques: The conversation session will begin with a brief (10-minute) presentation about my experience teaching an undergraduate hybrid learning course. I will discuss my reflections about the strengths and weaknesses of the learning format, which will serve as a 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 1) place a marker on a spectrum about where they think hybrid learning goes and 2) reflect on what they have heard and discussed with the group. The session will conclude with a “round-robin” share-out of participants’ thoughts.

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Is Your Teaching Inclusive? A Rubric for Higher Education

Deyu Hu, Virginia Tech; Michele C. Deramo, Virginia Tech

Higher education campuses are becoming increasingly diverse. Studies show that students benefit from being educated in diverse learning environments and inclusive teaching, in which all students are treated equitably and are valued and supported in their learning. Faculty, however, may find it is daunting to integrate inclusive teaching in their classes due to a lack of knowledge of why and how. By reviewing and synthesizing relevant literature and best practices, a set of inclusive teaching rubrics will be developed and shared to guide the design, development, delivery, evaluation, and improvement of inclusive teaching in higher education.

As the U.S. population becomes increasingly diverse, so do the higher education campuses. Research indicates that students can benefit from being educated in diverse learning environments, such as gaining more advanced cognitive and affective abilities, bearing more interest in public good, and becoming more competent in working within such diverse environments (Bowen & Bok, 1998; Gurin et al., 2002). To gain these benefits, universities and colleges must provide both diverse learning environments and effective education to all students, including students with various ethnical, racial, and cultural background. This kind of teaching is often referred to as inclusive teaching. The Center for Research on Learning and Teaching at the University of Michigan defines inclusive teaching as “deliberately cultivating a learning environment where all students are treated equitably, have equal access to learning, and feel welcome, valued, and supported in their learning” (University of Michigan Center for Research on Learning and Teaching, n.d.).

As universities and colleges serve as one of the major forces that educate and replenish the workforce, inclusive teaching is becoming more important than ever before. However, since the concept of inclusive teaching is relatively new, it is daunting to many faculty in higher education (Nguyen & Nolan, 2013). On one hand, when faculty are asked to infuse inclusive teaching into their classes, they are not clear on why. In fact, students simply do not check their identity at the classroom door. Their prior knowledge, experience, and many other characteristics play important roles in their learning. Studies show that helping students cope with stereotypes and supporting their social belonging can improve their persistence and academic success (Steele & Aronson, 1995; Walton & Cohen, 2011). Additional studies indicate other benefits of inclusive teaching, including enhancing the rigor and validity of a field and increasing student’s marketability in the global economy (Nguyen & Nolan, 2013). On the other hand, even when some faculty are interested in utilizing inclusive teaching in their classes, they do not know how. For example, some faculty state that their classes are about math, science, or engineering. They cannot see how inclusive teaching can be integrated into their classes.

To help faculty with their inclusive teaching endeavor, some higher education institutions have developed inclusive teaching strategies, such as the University of Michigan, the University of Washington, Cornell University, Yale University, and others. These strategies often vary from university to university and are organized differently across universities. To provide a more comprehensive guideline for the design, development, delivery, evaluation, and improvement of inclusive teaching, a set of inclusive teaching rubrics will be developed. The rubrics will be supported by literature review of what has been studied in inclusive teaching as well as best practices from the front lines. In this session, the presenter will introduce the framework of the

rubrics as well as basic standards developed for inclusive teaching in higher education. Participants will work in both small and full groups to discuss the standards and applicability to their courses.

- Bowen, W.G., & Bok, D. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions*. Princeton, NJ: Princeton University Press.
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Mistakes Teachers Make: Missteps and Misjudgments in the Classroom

Tay Tan, Radford University

Even with advanced degrees, specialized knowledge, and the experience of practice, educators routinely make mistakes; courses are badly designed, sensitive discussion poorly facilitated, and grades wrongly assigned. What can we do to minimize this human tendency to err? How can we respond to minor bona fide infractions and serious lapses in judgement? What can we best learn from blunders and even profit from them? This is a candid discussion on the art and science of dealing with mistakes, and how to empower educators to handle them honestly and humanely.

We work in universities with mistake-phobic cultures. Errors in judgement and blunders are often perceived to be an indictment of our competence, professionalism, and dare I say, moral fitness! While academics routinely pass critical judgement on mistakes made by students in grading their work or assessing their classroom interventions, they may be less willing to admit or scrutinize their own slipups.

The science of dealing with mistakes suggests that mistakes create some cognitive dissonance and may spur self-justifying responses in all people, including instructors. While we, as faculty members, expect students to own up to and take responsibility for their mistakes and, to learn from them, how do we (really) deal with our own errors and missteps? Carol Dweck's study on growth and fixed mindset postulates that intellectual ability is not fixed but it can be developed by learning from mistakes, reflection, and self-regulation. Authors like Daniel Pink (2018), Frank Partnoy (2012), Daniel Kahneman (2011), Chip Heath and Dan Heath (2010), Joseph Hallinan (2009), and Carol Tavis & Elliot Aronson (2009) suggest that there are pragmatic strategies that we can use to manage our proclivity to make mistakes, and even benefit from these experiences.

Some questions to be explored during this interactive session: What can we learn from the most poignant and serious mistakes we have made as instructors? Are there good ways and bad ways of dealing with such mistakes? What are the constructive attitudes and positive approaches for managing instructors' errors in the classroom and in course management? As educators, how can we foster a culture of handling mistakes honestly, professionally, and humanely?

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Non-Class Related Use of Electronic Devices in the Classroom

Anthony Kwame Harrison, Virginia Tech; Sharon Johnson, Virginia Tech; Alex Niemiera, Virginia Tech; Alan Weinstein, Virginia Tech

In this session, members of the Virginia Tech Academy of Teaching Excellence will lead a discussion about effectively and realistically managing non-class related technological (smartphones, ipads, laptops) use in classrooms. The aim of this session is to share strategies, best practices, and guiding philosophies toward the goal of developing a series of useful and flexible guidelines for college and university instructors. We invite both new and well-seasoned instructors to the conversation. We encourage participation from instructors who effectively incorporate advanced technologies into their learning design as well as from instructors who avoid these technologies at all costs.

Mobile technologies associated with smartphones and wireless networking saturate contemporary life. Pedagogically, college and university instructors are increasingly incorporating these technologies into their course designs and classroom strategies. For example, smartphone apps like Poll Everywhere and Kahoots enable teachers to incorporate real-time surveys or instructional competitions into their lectures; during class time, students working in small groups or individually can google pertinent contemporary events and report back on them in a matter of minutes; students also opt to take notes on their computers, stating they can type faster than they can write. Yet such technologies and their multifaceted capabilities are just as often unwanted distractions in educational spaces. Whereas technologies can be used to engage students, increasing their presence in the classroom, they can just as often capture students' attention in ways that are detrimental to even the most fundamental goals of learning.

In this session, members of the Virginia Tech Academy of Teaching Excellence will lead a frank discussion about how to effectively and realistically manage non-class related technological use in classrooms. The aim of this session is to share strategies, best practices, and guiding philosophies toward the potential goal of developing a series of useful and flexible guidelines for college and university instructors. We invite both new and well-seasoned instructors to the conversation. We encourage participation from instructors who effectively incorporate advanced technologies into their learning design as well as from instructors who avoid these technologies at all costs. We start from the perspective that non-class related technological use can occur at all points on this continuum.

- How can we be attentive to the fact that many institutes of higher education require that students own mobile technologies?
- Beyond strict regulations, how can we account for the fact that many students exclusively access course materials (including textbooks) through mobile technologies and are most comfortable taking notes and completing assignments on them?
- How do we limit students' unwanted use of technologies in an environment where the idea of asking students to pull out their phones to participate in an exercise is an everyday classroom expectation? In other words, how do we balance incorporating social media use with more conventional forms of class participation?
- How do we access and utilize the benefits of the most technologically advanced classrooms on our own terms?

Higher Education instructors consistently struggle with these issues. Furthermore, with the technological landscape perpetually changing, it is important for even the most technologically savvy instructors to revisit these questions and/or to share their up-to-date strategies and views.

Problem-Based Learning: Sharing Our Approaches and Insights

Ron Meyers, Virginia Tech

We seek to share our approaches to problem-based and/or experiential learning approaches to our teaching. This includes both techniques (the logistical details of teaching such a course), and educational philosophy. Some questions to explore are: Do you engage partners outside VT in your classes? If you do, how to balance honoring their needs with your course constraints? What problems are “eligible” for student study? How do you assess learning and grades? To what extent is foundational “knowledge” content important to address versus skills knowledge of learning to integrate and apply knowledge in a novel situation?

The goals for problem-based/experiential pedagogies are many, as are the challenges. We seek first to share our approaches to problem-based and/or experiential learning approaches to our teaching. This includes both techniques (the logistical details of teaching such a course), and educational philosophy. Some questions to explore are: Do you engage partners outside VT in your classes? If you do, how to balance honoring their needs with your course constraints? What problems are “eligible” for student study? How do you assess learning and grades? To what extent is foundational “knowledge” content important to address versus skills knowledge of learning to integrate and apply knowledge in a novel situation? The challenges we face in identifying community partners, the logistics of setting up meaningful learning experiences in the community for semester-long projects, are a few of the significant challenges we can face. What are your challenges, how do you address them, and what systemic changes might help your work?

Rescuing Time: Cultivating Listening (& Love) in an Era of Shouting

Daisy Breneman, James Madison University; Peggy Plass, James Madison University

In this conversation session, the facilitators, faculty from an interdisciplinary Justice Studies department, lead a discussion on cultivating listening skills in a cultural moment when listening is at risk. As Jim Corder notes in “Argument as Emergence, Rhetoric as Love,” “in our most grievous and disturbing conflicts, we need time to accept, to understand, to love the other [. . .] We must rescue time by putting it into our discourses and holding it there.” This session seeks to rescue time and to explore experiences and strategies for creating inclusive and brave spaces for listening.

In the current political climate, public conversations are increasingly polarized, mean-spirited, and even violent. This climate leeches into our classrooms. Many instructors are facing challenge of holding productive conversations in which voices are included, and are having to confront deep questions about the nature of meaningful civil discourse. For example, should all voices be included? The aftermath of Charlottesville can challenge that notion. Also, whose definition of civility are we using? How do our cultural backgrounds, as well as our positionality, power, and privilege, shape how we define and recognize (un)acceptable modes of discourse? And, what are our responsibilities as teachers, scholars, and citizens in such a polarized climate? Also, how can we balance our own needs for self-care with our responsibilities as instructors--how can we deal with our own trauma and conflicting emotions as we support students with their own?

According to a San Francisco State University study, 25% of students studies demonstrated signs of trauma and event-related distress in response to the 2016 election. (Hagan). The daily stress of panic-inducing headlines, hate-filled public discourse, and political turmoil takes its toll in many ways, including on our classrooms. And how, then, can we create productive and caring learning spaces that address not only our learning goals, but also the needs of the human beings present in our classrooms?

In this conversation session, the facilitators, faculty from an interdisciplinary Justice Studies department, lead a discussion on how to cultivate listening skills (amongst ourselves as students) in a cultural moment in which listening is at risk. Both facilitators have several decades of experience teaching in the college classroom, including in Justice Studies courses that address profound--and highly contested--issues, and diverse scholarly interest, which converge in many areas, including over the power of storytelling. The conversation will draw on Jim Corder’s classic work, “Argument as Emergence, Rhetoric as Love,” including his suggestion that “in our most grievous and disturbing conflicts, we need time to accept, to understand, to love the other. At crisis points in adversarial relationships, we do not, however, have time; we are already in opposition and confrontation. Since we don’t have time, we must rescue time by putting it into our discourses and holding it there.”

This session seeks to rescue time, to create a space in which participants can share experiences with difficult classroom conversations, as well as explore some strategies for creating space for student listening. Those strategies will also be grounded in multi-disciplinary work, including research on college student developing, such as Marcia Baxter Magolda’s foundational models for holistic learning. The panel will also draw on Brian Arao and Kristi Clemens’ approaches to facilitating social justice dialogues by creating brave (not safe) spaces. In addition, the

conversation will draw on panelists and participants research and experience in addressing challenging topics and fostering meaningful conversations in the classroom.

The Role of Caring and Compassion in College Instruction

Alison Barton, East Tennessee State University

An under-explored dimension of college instruction is the role of instructors' compassion and caring and its impact on student success. In this conversation, participants will consider the importance of caring and compassion in instruction, the limits of and challenges to instructor use of compassion, ways to cultivate compassion, and best practices (as defined by the conversation community) for demonstrating compassion or caring to students.

College instructors often encounter students in their classes who have difficulties – some which are legitimate and others that are less excusable. However, interacting compassionately with such students, as well as those without any obvious difficulties, can be important: Factors related to instructor caring and compassion, such as instructor approachability (Roberts & Styron, 2010) and positive student-faculty interactions (Pascarella & Terenzini, 2005), have been demonstrated to improve college student retention. Furthermore, the use of compassion indicates students are viewed from a whole-person perspective (O'Brien, 2010), rather than viewed as economic units (Liston & Garrison, 2004) or simply content learners.

Despite this promising association, instructor compassion and caring is rarely researched beyond individual categories of behaviors, and college instructors are rarely trained on this dimension when it comes to pedagogical strategies (Olson & Carter, 2014). After a brief presentation of information such as that above, the presenter will lead a guided discussion with Conversation participants, to address the following questions:

- How should we define compassion and caring for this context?
- Is instructor compassion/caring important? How important is it in the higher education context?
- Does instructor compassion seem to be undervalued in higher education? Why might that be so?
- What are the limits to instructor compassion? When is it appropriate, and when might it be inappropriate? What are challenges to its use?
- Compassion can be difficult in some circumstances with students. How can we strengthen our compassion in order to draw from it when needed?
- What are ways – both regularly and in atypical situations – we can demonstrate compassion to our students?

Objectives: Although the direction of a Conversation cannot be entirely predicted, it is hoped that participants will leave with the following: 1. A sense of trends among higher education instructors regarding attitudes towards instructor caring and compassion; 2. An understanding of when compassion and caring may be appropriate and when it may not be appropriate; 3. Methods for cultivating a spirit of compassion toward students; 4. Strategies for demonstrating compassion toward students; 5. Resources provided by the presenter for more information about caring in higher education and strategies for cultivating and demonstrating compassion; and possibly 6. Directions for research within the field of the Scholarship of Teaching and Learning related to instructor caring and compassion.

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Using Visual Data Sources to Explore Students Perceptions of Disciplines

Homero Murzi, Virginia Tech; Matthew James, Virginia Tech

In this session, we will discuss the effectiveness of using visual inquiry-based methods to explore how students perceive their discipline. More specifically, we present the results of a research where we ask first-year engineering students to describe “what is engineering?” using drawings. Data was collected on the first and last day of their first semester taking a foundations of engineering course.

The Department of Engineering Education at Virginia Tech is home of the First-year engineering (FYEng) program, where every student coming into engineering will take one year of general engineering courses before deciding their engineering discipline (<https://enge.vt.edu/undergraduate.html>). Goals of the Foundation of Engineering courses include helping students: (i) understand the engineering profession, (ii) understand the professional skills used in engineering, and (iii) make an informed decision on which engineering of the 14 available disciplines to pursue.

Selecting a major is not a trivial task and requires instructors in the FYEng program to provide substantial support to students. One of the most important aspects in helping students make effective decision is that they understand what the discipline entails and that they can overcome misconceptions they might have had about engineering. A typical class exercise to help the students with this understanding is to ask them “What is engineering?.” However, instructors have been frustrated by the lack of depth in students’ responses. Typical responses are “using math and science” or “solving problems.” Both statements are true; however, in order to help the students understand the discipline, it is important to more deeply understand their misconceptions.

The purpose of this conversation session is to discuss a new methodology to explore students’ perceptions of their discipline. To do that, we plan to present preliminary findings of our novel approach to explore students’ perceptions of what engineering is by asking them to draw the response to the question “What is engineering?.” The exercise follows art-based techniques (Driessnack & Furukawa, 2012; Hare et. al, 2018) using a visual methods qualitative approach (Shannon-Baker & Edwards, 2018). Finley (2003) suggests that art-based inquiry can be useful to deepen participant and researcher interactions. This can translate into a more meaningful conversation between the instructor and the students regarding their perceptions of the discipline. Similarly, Driessnack & Furukawa (2012) have been using drawings in their research with children because it gives the kids the opportunity to “tap into their internal, sensory cues and then use these cues to organize their thoughts before they are asked to share them” (p.4). We argue that by using drawings, engineering students can organize their thoughts and reflect beyond the typical responses to what engineering is. In addition, this will allow them to express themselves without the fear of what other peers and instructors will think about their responses.

In this conversation session, we plan to discuss our preliminary findings and the implications of using this technique with the audience as a way to collect deeper data on what students think about their discipline. We also plan to engage participants in the activity by having them draw their respective disciplines and having other people not familiar with those disciplines to try to characterize them. We will conclude the session by reflecting on the implications of using this methodology as a teaching tool to obtain a deeper understanding of relevant topics in courses.

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What Does “Keeping It Real” Look Like in the Classroom?

Stefanie Benjamin, University of Tennessee; James Williams, University of Tennessee

Co-teaching can be a challenge for some faculty. However, we wanted to “keep things real” for our students. So what does that really look like? And what does that really mean? This discussion will hopefully generate a dialogue around our co-teaching challenges, opportunities, and outcomes based on a first year student honors course. This was our first time co-teaching the course and we will discuss how mindfulness helped guide the class design.

Co-teaching can be a challenge for some faculty. However, we wanted to “keep things real” for our students. So what does that really look like? And what does that really mean? This discussion will hopefully generate a dialogue around our co-teaching challenges, opportunities, and outcomes based on a first year student honors course. This was our first time co-teaching the course and will discuss how mindfulness helped guide the class design. During this course, we had 20 students in total ranging from various disciplines including nursing to engineering to sociology. Although our intention for the course was to be “structured” around learning mindfulness techniques and skills, our course unfolded differently. The students helped in co-creating the flow and design of the course that, holistically and naturally, took us to a different path. We found that our students had legitimate fears and feelings that weren't being addressed with their courses or on campus.

In creating a more open dialogue, we used reflexive journaling, mindfulness pedagogical techniques including a “walk-about” and yoga class, that helped to guide the course toward a different direction. Additionally, according to bell hooks (1994), “When professors bring narratives of their experiences into classroom discussions it eliminates the possibility that we can function as all-knowing, silent interrogators” (p. 21). Thus, by not only our students sharing their truths, we as professors, also became vulnerable and shared our fears, narratives, and truths. By doing so, they realized they weren't alone. This brave space co-created by students and us, became a space for reflexivity, critical thinking, and challenging moments that helped shape our understanding of “class structure” moving forward. For us, we learned more from our students and found that they needed a space, a brave space, to be vulnerable and share their fears. In this session, we would like to share our experiences of this “brave space” and our co-created course of “keeping it real.”

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PRACTICE SESSIONS

A Model for Underrepresented Minority Women Virtual Peer Mentor Training
Amanda Rockinson-Szapkiw, University of Memphis; Jillian Wendt, University of the
District of Columbia

This presentation focuses on the rationale, design, and development of the virtual Mentoring modules for peer mentors, which is part of a larger grant funded project supporting underrepresented minority women students enrolled in STEM programs to 1) aid their self-efficacy, 2) facilitate their success in the STEM degree and workplace, and, therefore, 3) help increase the number of women completing STEM degrees. The participants of the presentation will learn why training for mentorship is important and also design and development considerations for developing this training in an online medium. Pilot data will also be presented with lessons learned.

In the United States, the demand annually increases for more scientists, engineers, statisticians, and other STEM professionals to strengthen the economy and improve security. However, the number of students completing STEM degrees is not meeting the demand (U.S. DOL, 2007), and women and minorities are underrepresented (NSF, 2015). The literature supports the importance of women and minorities obtaining mentors to promote their persistence in STEM degrees and careers (Hill, 2016; Hill et al., 2010). Thus, a Virtual Peer Mentoring Program taking into consideration cultural and diversity needs of minorities and women was developed and implemented at two HBCUs. To ensure that the mentoring relationship is effective, it is important that the mentors develop skills and understand the function of the mentor (Galbraith & Cohen, 1995). Thus, the program included virtual mentor training.

Guided by the work of Galbraith and Cohen (1995) and others such as Byars-Winston, Pfund, and Branchaw, 6 modules were created covering 1) self-reflection on barriers and triumphs; 2) models of mentorship; 3) relationship skills; 4) information-giving, facilitative, and confrontational skills; 5) goal setting and vision for persistence; and 6) using technology to mentor. The modules were developed using authoring tools and hosted via a WordPress site. There are a number of factors that contributed to the design and development of the modules, including consideration of the universal design theory and “whole student” (Matteson, 2014). Illeris (2015) suggested that learning is the interaction among content (i.e. knowledge, skills, behavior, competencies), incentive (i.e. emotion and volition that drives learning), and interaction with the environment. Thus, each module contained three primary sections: 1) Topical Discussion 2) Case Study, and 3) Personal Application and reflection.

The application section provided a series of questions for personal reflection in a personal journal and in an online discussion forum for mentors. By engaging with content in the topical discussion, the student developed the knowledge, skills, and ability to mentor. The case study marshaled the students’ motivation, emotion, and volition by presenting relevant emotional and social scenarios and practical application. The development of emotional intelligence was also taken into consideration (Kousta, et al., 2011). Through personal application and social activities via a community forum, and then ultimately the mentorship experience, the student integrated. In consideration of cognitive theories (Mayer, 2009), the text, images, animation, audio, and video content of the modules are designed to minimize cognitive load. All narration includes relevant imagery while still considering learner accessibility where students are provided with text for all narration. Moreover, the modules contained visual and verbal cues to organize content.

Finally, students were given some control of content as the modules have search and navigation features to enhance user control. The 6 modules provide between 10-15 hours of self-paced formalized instruction and required approximately 3-5 hours of reflective assignment work. Student mentors participating in the modules significantly increased in their STEM self-efficacy and mentoring skills from the pre to post assessment. The module development and results of the pilot study will be discussed, along with lessons learned.

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An Applied Praxis for Developing Lifelong Learners and Self-Growers

Chaya Jain, Virginia State University; Aurelia Nicholas-Donald, Virginia State University

Distinguishing learning from self-growth, the purpose of this qualitative research is to offer a practical tool in developing lifelong learners. Traditionally, the focus of academe is to help students comprehend academic knowledge using problem-solving and critical-thinking skills. However, when aligned with self-growth processes, method and practice, the combination facilitates self-development as an indispensable, lifelong inclination. In addition to the overall concept of self-growth, the discussion focuses Process-Education theory's twelve deterrents and corresponding professional improvement practices to self-growth. A hands-on exercise helps experience this holistic learning model firsthand. The technique also helps elevate self-efficacy of any learner; educators and students alike.

Literature Review

The contemporary scholastic discourse consistently differentiates academic learning from self-growth based on the rationale that academic learning involves content knowledge and skills within a disciplinary curriculum. Self-growth, on the other hand, is a life-long pursuit involving a series of actions and choices to improve one's awareness and identity (Halik & Gunderson, 2017). Going a step further, Irving & Williams (1999) discern personal development as a process concerned with specific aspects of the individual while personal growth as a more generic one involving the totality of the individual. Expanding Process Education's (PE) philosophy's self-assessment concept (Apple & Baehr, 2007), Leise (2007b) notes, "Knowledge is the result produced from learning; self-growth is the result of personal development produced by self-assessment." Summarizing their decades of field research, PE proponents (Apple, Ellis & Leasure, 2018) articulate that for most individuals, risk factors such as fear of failure and procrastination are fundamentally conditional than intrinsic. Further, that combining learning with self-growth principles not only helps improve learning, it can also help establish a solid foundation as a lifelong self-grower. Reinforcing Carol Dweck's (2006) mindset theory of growth vs. fixed mindset, the PE theorists assert that a structured program can increase intellectual abilities thus help foster a growth mindset -- the focus of this inquiry.

Objectives

1. Using a PowerPoint presentation, the objectives are:
2. Articulate how a learner mindset can be cultivated in developing lifelong self-growers;
3. Administer a hands-on exercise to demonstrate PE-specific tools and techniques toward becoming a lifelong learner and self-grower; and,
4. Share PE's holistic pedagogical resources on the topic of lifelong learners and self-growers.

Methodology

This qualitative research focuses the question whether, "self-growth can be cultivated as a lifelong pursuit?" using two hypotheses, that: (1) the PE multidimensional set of self-growth principles can accelerate learning, and (2) the same set of self-growth principles can be cultivated to help create lifelong self-growers. The target sample involves 25 online participants who used PE's multidimensional self-growth principles in handling routine daily challenges and maintained a journal of their experiences. Participants' journal logs were used for the analysis.

Discussion

Process Education's (PE) step-by-step method to develop lifelong learners and self-growers is a culmination of over 25 years of theory and practice that includes field research of academic cultures, traits and practices. A multidimensional process, the practice requires development of a life vision (the motivational framework for the whole endeavor), metacognition, proficiency with self-assessment vs. self-evaluation, and persistence. Analysis of the participant journal logs reveals two discoveries: the importance of fundamental characteristics and skills -- particularly with developing a life vision; and, that PE process can help learn the key steps of the self-growth continuum. The process involves: (1) employment of critical thinking and metacognition as a method of reflection and introspection (2) identification of personal risk-factors (3) alignment of the corresponding PE professional success factors to temper the identified risk factor(s) (4) application of the corresponding success factors to the performance prone to the identified risk-factor(s), and (5) employment of the Strengths, Improvements and Insights (SII) assessment method to improve the future performance.

Findings and Conclusion

Contextualizing personal risk-factors in high-value performance areas and their reversal to professional success factors is the basis of lifelong learning and self-growth. Documenting the journey of reversal is equally critical because it helps one understand the self-improvement dynamic toward self-growth. Persistent employment of the five-step PE methodology can help anyone become a lifelong learner and self-grower. What begins as an initially conscious action eventually develops into a habitual, self-correcting lifelong practice of learning and self-growth.

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An Interactive Session on Increasing Peer Interaction in Online Classes

Nancy Knapp, University of Georgia

We know that peer interaction is vital to deep learning; it both encourages exploration and facilitates critical thinking. While even F2F instructors in higher education sometimes struggle to promote interaction, this problem is particularly acute in online classes, where many students feel disconnected from both peers and instructor. I will bring to this session three overarching strategies I use to promote authentic and useful peer interaction among my online students, so please come prepared to share your questions and strategies as well, so that we may all learn from each other how we can help our students learn better.

Lack of opportunity to interact with fellow students has been a serious concern since the early days of online learning (Kim, Liu, & Bonk, 2005; McInnerney & Roberts, 2004), and it remains a significant issue to this day. Even exemplary online teachers often struggle to build interactive learning communities among far-separated online students who also often have busy schedules and competing priorities (Baran, Correia, & Thompson, 2013). Yet, given the persistently worrisome rate of student attrition in online courses (Allen & Seaman, 2015, p. 25), if online education is not only to thrive, but also to offer an optimal environment for all students' learning, we need to find ways to facilitate frequent, useful interactions among our students.

Goals:

- To share strategies I and other participants have used to successfully promote learning-focused peer interaction among students in our online courses
- To consider which strategies may work better in different settings or subject areas, and for various types of students
- To form partnerships among participants for future SOTL research in this area, and encourage contributions to an ongoing open digital collection of online teaching strategies

Description of Practice: Since starting to teach mostly online five years ago, I have struggled to engage my students with each other as authentically and usefully as I previously could in my F2F teaching. I have developed three overall strategies, used in multiple ways, that encourage meaningful interaction, leading my students to make comments like these on anonymous course evaluations: I didn't feel the distance in this distance education. It felt like an in-person class. I felt like I was in a class, not just taking one.

Strategy 1: Videoconferencing. Videoconferencing can be used in multiple ways to enhance and encourage interaction, from synchronous whole class online meetings, to student-scheduled small group discussions and even virtual, student-led "poster-sessions."

Strategy 2: Authentic group projects. Several students propose educational problems they want to address in their own work or other settings, then 3-4 other students sign up to work with them to design solutions, based on what they are learning in the course. These real-life designs become their culminating course projects.

Strategy 3: Working groups. Students doing individual final projects can gain a lot from small ongoing working groups, who interact both spontaneously and around assigned project-related questions and assignments, providing each other with ideas, suggestions, concerns, and ultimately structured peer reviews, thus greatly enhancing the quality of each other's projects and their joint learning.

Strategy 4: Variety in interaction venues. Moving away from traditional Discussion Boards, regular asynchronous interaction benefits greatly from variety in both form and venue, including image-posts, video-commentary, screencasts, and threaded discussions via text or Voicethread.

NOTE: A session on interaction needs to be intentionally interactive! I will share the above strategies, including potential pitfalls and ways to make interaction run more smoothly in each, and will also structure specific opportunities for session participants to discuss and share their strategies, with the goal of encouraging both immediate and ongoing collaboration among participants.

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Kim, K. J., Liu, S., & Bonk, C. J. (2005). Online MBA students' perceptions of online learning: Benefits, challenges, and suggestions. *The Internet and Higher Education*, 8(4), 335-344.

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Applying the Framework to an Existing Credit-Bearing Information-Literacy Course

Sherry Matis, Virginia Wesleyan University

In this session, Sherry Matis, a librarian at Virginia Wesleyan University, will share how the library took an existing standards based, credit bearing info-lit course and restructured it to align with specific points in the ACRL information literacy framework. The Framework is often used as a guide for one-shot information literacy sessions, but this will be an example of how it was used to design a course and introduce theory into a beginning level library research course. Course design, open education resources and partnering with other campus services will also be discussed.

A presentation of how the course was realigned and what resources were used to inform the course design will be discussed. In the standards based model, the focus was more on product, but using the Framework approach rooted in theory, the focus shifts to the research process and its reiterative nature. Exercises overlap and are revisited during the course of the semester.

After the presentation, during this conference session, we will actively participate in classroom activities from the course and demonstrate how the research process includes a series skills that are transferable across disciplines. Activities are drawn from many openly available resources including CORA, the ACRL Sandbox, CC licensed worksheets /teaching tools.

Although this session is about librarians and credit bearing courses offered by library faculty, the session will be informative to any faculty member who has a research component in their course and may give faculty a better idea of how librarians may be able to help with teaching the research process. It will also discuss how related services on campus were brought into the course through guest lecturers from both the campus writing center and the campus speech lab, highlighting these services and making them a valuable part of the research process focusing on Scholarship as Conversation and Information having Value.

A brief introduction will be given to a new course that was developed by the library and the writing center as a result of the research from restructuring this course. This new course will be co-taught by a librarian and an adjunct faculty member from the writing center for the first time during winter session 2019. Suggested reading will be included.

Assessing Learning Outcomes for Undergraduate Peer Mentors and Teaching Assistants

Jeffrey Murray, Virginia Commonwealth University; Bonnie Boaz, Virginia Commonwealth University; Leslie Cohen, Virginia Commonwealth University; Joshua Galligan, Virginia Commonwealth University; Christian Horlick, Virginia Commonwealth University

This practice session will explore best practices for assessing learning outcomes for undergraduate peer mentors and undergraduate teaching assistants (UTAs). Presenters will share the learning outcomes of their first-year-seminar UTA program, and discuss results of an informal review of UTA “work plans” and survey of former UTAs to shed critical light on those learning outcomes, and invite participants to share their own experiences. Participants will be invited to collaborate on creating assessment rubrics for specific learning objectives targeted in typical peer mentor / teaching assistant activities: (1) leading a whole-class activity, (2) facilitating small group discussion, (3) mentoring students one-on-one.

The strategic use of undergraduate students as peer mentors and teaching assistants for the enhancement of student engagement and student learning in the undergraduate classroom has become much more commonplace in the last decade. The shared experiences of both presenters and participants at this conference in recent years is in itself ample proof. Moreover, there is a considerable, albeit not expansive, body of literature concerning the effectiveness of undergraduate peer mentors and teaching assistants on the learning outcomes of the students they serve. [Murray (2015) offers a brief overview of some of that literature.] But far less has been written about the learning outcomes of the students who serve as peer mentors or teaching assistants.

The objective of this practice session is to both share and stimulate discussion of best practices for the assessment of learning outcomes of undergraduate peer mentors and teaching assistants. This practice session will explore best practices for assessing learning outcomes for undergraduate peer mentors and undergraduate teaching assistants (UTAs). Presenters will share the intended learning outcomes for their first-year-seminar UTA program, and invite session participants to share their own experiences. Presenters will then discuss results of an informal review of UTA “work plans” (in which students discuss what they hope to learn in the program) and an informal survey of former UTAs (in which students are asked to reflect on what they got out of the program). Both the review and survey will provide context for and critical feedback on the program’s learning outcomes. Participants will again be invited to share their own experiences. Finally, participants will be invited to collaborate on the generation of assessment rubrics for specific learning objectives associated with three typical peer mentor / teaching assistant activities: (1) leading a whole class activity, (2) facilitating small group discussions, and (3) mentoring students one-on-one. Presenters will conclude the practice session by sharing their own assessment rubrics and opening the floor to discussion.

As discussed above, this practice session will be interactive in two ways. First, participants will be invited to discuss the set of learning outcomes provided as a template, as well as the “work plans” and post-program feedback of students who have served as undergraduate teaching assistants in one such program – and to also share their own similar or relevant experiences in the classroom. Second, participants will be asked to collaboratively generate assessment rubrics (both instructor-assessment and student-self-assessment) for targeted learning outcomes associated with three common pedagogical modalities: leading a whole-class activity, facilitating

a small group discussion, and working one-on-one with individual students. Finally, participants will be provided with copies of the learning outcomes template and sample assessment rubrics to use as models with which to create or evaluate their own resources for the assessment of undergraduate peer mentors or teaching assistants.

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Assessment: How I Learned to Stop Worrying and Love Accreditation

Robert Turner III, University of South Dakota; Matthew Turner, Radford University; Scott Turner, University of Wisconsin - Stout

Assessment is ubiquitous in the modern university. From individual assessment of students to institutional reviews by an accrediting agency (SACS, HLC, etc.), we are told to collect data. The real challenge is to use assessment for its ostensible purpose: improving student learning and outcomes. This session focuses on how to use the data we already collect to “close the loop” and effect meaningful change that will benefit our students. Participants will learn about meaningful assessment with examples provided, as well as discuss best practices and application of assessment materials.

Assessment is ubiquitous in the modern university. From individual assessment of students to institutional reviews by an accrediting agency (SACS, HLC, etc.), we are told to collect data. In theory, assessment exists to verify and promote student learning. Unfortunately, in practice much of the assessment process becomes a compliance issue. Students are assessed for memorization rather than learning, instructors are assessed by how well they entertain the class rather than success in teaching, program assessments are done to comply with university policy, which in turn mandates assessment because SACS or the HLC require it at the potential penalty of loss of federal funding.

What seems to be lost in the modern university is that educational assessment is ideally a means to measure and improve learning at all levels of the university. The presenters propose to discuss ways in which individual instructors, as well as programs, can regain control of the process and apply it for its original purpose: That is, close the assessment loop. The presenters propose to provide a session that offers pragmatic tools and skills to enable instructors and programs ways to meaningfully engage with the data that they already must collect.

The initial portion of the presentation will discuss the why of assessment, common types of data gathering, and their purpose. This includes individual, course, program, college, university, and system assessments. Secondly, there will be a brief discussion of the ostensible purpose of these various levels of assessment and some of the common problems that occur. The next portion of the session will include discussion of what types of assessment participants are conducting and the current uses of that data.

Following this initial portion of the session, the presenters will provide suggestions and discuss in concert with participants, various tools, techniques, and strategies to make concrete and positive use of the information being already gathered. This should be done with the long term goal of changing the assessment environment from one of forced compliance to one where assessment is used to provide data that can power student-centered change. The presentation will end with a brainstorming session for the participants and a final question and answer.

Upon completing this session, participants will be able to:

- Evaluate required assessment practices for their practical value for students
- Understand why and how to do assessment that has real value

- Plan strategies that will make assessment more effective for student learning while still meeting reporting requirements.

This session is inspired by discussions of assessment provided in such sources as:

Kuh, Ikenberry et al. *Using Evidence of Student Learning to Improve Higher Education*. 2nd ed., Wiley, 2015.

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Best Practices in the Construction of Multiple Choice Questions

Brian Hill, Edward Via College of Osteopathic Medicine

As instructors, we test our students regularly, often utilizing multiple choice exams. Many of us merely imitate our former instructors in terms of constructing multiple choice questions as we have had no formal training in this area. This session will focus on writing better exam questions by presenting the best practices for construction of multiple choice questions, and how to write items that test on higher cognitive levels. Particular emphasis will be placed on the item writing guidelines used by standardized exams such as the Medical College Admissions Test (MCAT) or Graduate Record Exam (GRE).

Multiple choice questions (MCQs) are ubiquitous to high stakes educational exams (ex. GRE, SAT, MCAT, etc.), most licensure exams, and continuing education courses. They are heavily used in many academic disciplines, particularly health-related disciplines. MCQs provide unparalleled efficiency in testing large numbers of examinees in a wide breadth of content. When constructed properly, MCQs can assess content knowledge at the levels of comprehension and application, and they can even be utilized to assess at higher orders of Bloom's taxonomy. As such, they can effectively discriminate between high, medium and low achieving students (1).

A survey of the literature produces over forty principles of MCQ construction, and these are well documented in educational textbooks (2-4). Item writing manuals for profession licensure exams are often concise and practical sources for best practices in MCQ construction. Technically flawed MCQs can affect the validity and reliability of the MCQ (5) and can have a negative influence on student performance (6). In spite of this, very few college faculty are trained in the best practices for writing multiple choice questions and this even holds true in disciplines where MCQs often dominate exams. This lack of formal training results in poor construction quality and an abundance of MCQs written to test lower cognitive levels or obscure, unimportant factoids (7, 8)

The literature contains multiple studies illustrating the faculty improvement following MCQ writing workshops (7, 9-11). While this proposed CIDER session will not be the equivalent to a full-fledged MCQ writing workshop, it will focus on correcting the most common technical flaws and how to write MCQs that test to higher cognitive function.

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3. Haladyna TM, Downing SM, Rodriguez MC. A review of multiple-choice item-writing guidelines. *Appl Meas Educ* 2002;15:309–333
4. Case SM, Swanson DB. *Constructing written test questions for the basic and clinical sciences*. Philadelphia, Pa: National Board of Medical Examiners, 1998
5. Campbell DE. How to write good multiple-choice questions. *J Paediatr Child Health* 2011;47:322–5
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9. Dellenges MA, Curtis DA. Will a Short Training Session Improve Multiple-Choice Item-Writing Quality by Dental School Faculty? A Pilot Study. *J Dental Education* 2017;81(8): 948-955
10. Iramaneert C. The impact of item writer training on item statistics of multiple-choice items for medical student examination. *Siriraj Med J* 2012;64(6):178–82
11. Naeem N, Van der Vleuten CPM, Alfaris EA. Faculty development on item-writing substantially improves item quality. *Adv Health Sci Educ* 2012;17(3):369–76.

Co-Teaching Diversity at a University that Really Needs It

Lola Aagaard, Morehead State University; Daryl Privott, Morehead State University

We teach a diversity segment in a required course to pre-service teachers who are predominantly white, female, and Appalachian. Many of them have been marginalized at times because of their sex, socioeconomic level, or accent, without knowing there was a term for what they experienced. We introduce the students to the terms that explain their experiences and use history and personal stories to expand their understanding to encompass other types of marginalization they may not have experienced personally. This session will engage the attendees in our interactive approach to these topics, including an exercise in making assumptions.

Our university is in Appalachia, an area that has a history of being marginalized (Heilman, 2004). Serving a largely White population of students, it is located in the county where the clerk defied a court order and refused to issue marriage licenses to same-sex couples in 2015. Diversity discussions here can be problematic, to say the least.

Appalachian students are subjected to widespread stereotyping based on dialect (Dunstan & Jaeger, 2015), so they understand what it is like to be marginalized in that way when they travel outside their area/region. However, they do not transfer that understanding to other types of marginalization they have not experienced. They have not developed a conscious White identity (Cook & McCoy, 2017), much less a conscious heterosexual or typically-abled identity with an understanding of the accompanying privileges. Previous attempts at getting students at our university to think differently about diversity topics have not met with great success (Asada, Swank, & Goldey, 1999; Riegle & Warsame, 2012).

However, we have chosen to take on the challenge, using a style more in line with Valdez (2004), who engaged Appalachian students in discussion of their own marginalization in order to encourage them to widen their understanding of other types of prejudice they had not personally experienced. Valdez contrasted his own experience as a gay Latino Californian with that of his Appalachian students using a cultural encounter technique and the students responded well, some showing evidence of becoming cultural change agents by the end of their semester-long diversity class (Valdez, 2004).

Although there is no mandated diversity course at our university, students in the human development course for preservice teachers read a wide variety of articles on diversity topics throughout the semester. To introduce the terms they will encounter in the articles and future discussions of diversity topics, we first engage them in an hour-long interactive discussion of the ideas of dominant culture and privilege, using our own personal narratives, the students' experiences, and U.S. history. As part of the interaction, we present students with a list of facts about the team-teaching professors (one White female and one Black male) and ask them to decide which fact is true of which professor, or whether some are true of both of us. The facts include things like: "Has a child with dyslexia;" "Was first in family to graduate from college;" "Married to a professor." This exercise in making assumptions is deeply uncomfortable for those who have been socialized that it is not polite to discuss differences of any kind (Michael, 2014), however the experience has always been well-received by our students by the end of the hour.

For our presentation, we propose to lead the attendees through this same interactive discussion, including the exercise in making assumptions. We believe its value is in humanizing the issues of diversity and race and making them personal in a non-threatening way. The strategies we will demonstrate could be used in diversity discussions with any group of students, not just White Appalachians.

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Critical Conversations in Curricular Design: Professional Neutrality versus Personal Authenticity

Breyette Covington, James Madison University

When designing and delivering course content in higher education, many professors struggle to strike a balance between 1) presenting a neutral or non-biased perspective in order to facilitate a safe learning atmosphere for students with varied moral/ethical viewpoints and 2) honoring personal convictions and speaking from a place of authenticity. This balance can be increasingly difficult/important within our current, emotionally-charged socio-political environment. This session is a guided discussion in which participants will explore various ethical perspectives on curricular design and delivery, using JMU's Eight Key Questions, the heart of flexible and open ethical decision-making framework designed by the presenter.

There is gap in the literature related to flexible and personalized professional development opportunities for professors in higher education to address ethical decision-making in the design and delivery of curricular content. This session aims to address that gap by presenting an ethical framework, designed by the presenter, and centered on JMU's Eight Key Questions. These eight questions were designed as an integral part of a campus-wide efforts to promote "understanding and discourse on ethical reasoning as a teachable, evaluative process."(1)

In this session, the flexibility and power of these questions are directed in service of professors themselves and center on important issues surrounding the balancing of personal authenticity and professional neutrality. The presenter will incorporate her own experience wrestling with these important issues as an ethics instructor in the Department of Health Sciences at James Madison University. This session will center on the following guiding question: What is a strategy for identifying and navigating ethical issues professors of higher education face in the design and delivery of their curricular content? The associated learning objectives are as follows:

- Describe personal experiences as academicians balancing neutrality and authenticity
- Apply a flexible and open ethical decision-making framework to personal ethical decision-making.

I will address the attainment of these learning objectives in three ways: 1. Through the presentation of literature-based finding related to flexible, professional development and personalized reflection on ethical-decision-making in academia. 2. Through both 1) modeling the techniques I present within the session itself and 2) leading participants to apply knowledge and skills described in this session to their own work.

For reference, the following is a list of JMU's Eight Key Questions:

1. Fairness - How can I act equitably and balance legitimate interests?
2. Outcomes - What achieves the best short- and long-term outcomes for me and all others?
3. Responsibilities - What duties and/or obligations apply?
4. Character - What action best reflects who I am and the person I want to become?
5. Liberty - How does respect for freedom, personal autonomy, or consent apply?
6. Empathy - What would I do if I cared deeply about those involved?
7. Authority - What do legitimate authorities (e.g. experts, law, my religion/god) expect of me?

8. Rights - What rights (e.g. innate, legal, social) apply?

Dr. Covington is a long-time educator, with over 20 years of experience in teaching and educational research K-12, community college and university settings. In addition, Dr. Covington holds a master's degree in Education (Curriculum and Instruction) and a doctoral in Education (Social Foundations). She teaches Ethics and Critical Thinking in the Department of Health Sciences at James Madison University.

(1) Ethical Reasoning in Action. The Eight Key Questions (8KQ).
<https://www.jmu.edu/ethicalreasoning/8-key-questions.shtml>

Cultivating Active Learning with the Flipped Classroom

Ashley Bentley, East Tennessee State University

The lecture has always been the primary means of content delivery in the college classroom. However, instant access to information has weakened attention spans and the traditional classroom is no longer suitable for the newest generation of learners. The flipped classroom is a pedagogical technique in which activities that typically occur during class are moved outside of the classroom. The design reduces the need for direct classroom instruction and allows opportunities for interactive learning activities. Participants in this session will gain an understanding of the principles of this instructional technique and will engage in exercises designed to demonstrate active learning.

College educators have the challenge of presenting complicated topics, while maintaining the students' attention and ensuring they understand and retain the information. The lecture has traditionally been the primary means of content delivery in a college classroom. The lecture can be beneficial for transmitting information, but it is limited in its effectiveness for achieving other learning objectives.

Studies have revealed traditional instruction may not lead to substantial learning gains. Research by Arum and Roksa reported no statistical difference in critical thinking in 45% of students after two years of college and 36% of students after four years of college (as cited in Chen, 2017). The work of educational psychologists has provided evidence that students do not learn in the same way they did previously (Synder, 2000). Instant access to information has weakened their attention span. Students begin to lose focus ten minutes into a lecture and they only retain approximately 20% of the entire lesson (Gilboy, Heinerichs, & Pazzaglia, 2015).

Inversed learning, also known as a flipped classroom, is an innovative teaching approach which promotes student engagement in the learning process. A flipped classroom is an instructional technique used to create an active student-centered learning space. Activities that traditionally occur during class time are moved outside of the classroom and vice versa. Students are exposed to the basic terms and concepts prior to attending class by watching pre-recorded lectures at home. If students find it difficult to focus, they have the ability to pause the lecture and return to it at a later time. Thus, it can be advantageous to students with a shorter attention span. During class time, instructors answer questions and elaborate on the fundamental ideas from the recordings. Students also engage in hands-on activities to apply the material covered in the videos. The course design reduces the need for direct instruction during class time and allows more opportunities for interactive learning and in-depth thinking.

Learning is not a spectator sport. Active learning engages the mind. Instead of listening to how something works, students experience it for themselves. Educators are able to capture the students' attention and simultaneously reinforce concepts from the pre-class learning tasks. Hands-on activities break up the monotony of the traditional classroom. When students are enthusiastic about learning, they are more inquisitive which can foster a deeper comprehension and ability to better retain information.

Learning does not occur in a vacuum. Students must have contextual references to construct a framework for understanding the new information. The engaging in-class activities of the flipped

classroom provide students the chance to process content through application while being supported by the instructor and peers. The literature related to inversed learning will be used to anchor a presentation focused on actively engaging students in the learning process. The presenter will emphasize the benefits of the flipped classroom and discuss common pitfalls associated with implementation of the flipped classroom. Further, the presenter will demonstrate the effectiveness of active learning by involving participants in “flipped” exercises during the presentation.

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Dealing with Student Writing: How to Craft Better Assignments

Breana Bayraktar, Northern Virginia Community College

Written assignments require a significant investment of time and resources - and that's just on the part of the instructor! How can we craft effective written assignments that engage students across a variety of disciplines, and which meet students where they are in terms of their development as student-writers?

Students come to us from a wide array of backgrounds - some more prepared than others to tackle high-level writing assignments. The session will focus on what instructors across a range of disciplines can do to craft writing assignments which effectively measure what we want to measure, which prepare students for future work in their professional or academic fields, and which are respectful of the time and resources needed by faculty to respond to all of that student work.

Good writing assignments are a way for faculty to get to know their students better, and to allow students to demonstrate mastery of content and skills that may not be captured by other measures. But too many writing assignments are not “good” assignments. Instead they are incredibly time intensive, for both students and faculty, and end up providing us with very little information about how the student is progressing. The session will address how we craft our written assignments, how we provide feedback to students, and what we can learn from looking at student writing.

Deep Learning in a Digital World

Krista Terry, Appalachian State University; Peter Doolittle, Virginia Tech

As focus in the higher education teaching world has shifted from teaching and technology, to teaching with technology, and now to digital learning, many shifts and advancements have caused the need engage in continued professional development and learning. Technology has developed and evolved quickly - has our knowledge and application of pedagogical practices kept pace? This session will investigate ways in which we can address the need to remain mindful of the practice of fostering deep and flexible learning, regardless of which technological approach is at our doorstep. Guiding principles for doing so will be provided.

In light of many of the technological advancements that are poised to impact college campuses such as adaptive learning, robotics, machine learning, and advanced analytics (cite Horizon report), it is critically important that educators keep student learning, and the methods by which to achieve deep and authentic learning, at the forefront of our practice. This session will provide participants with a framework and areas of inquiry (social presence, authentic assessment, affective learning), that will provide them with opportunities to both problematize and also consider robust applications of emerging technologies.

With the advent of adaptive, personalized, and data-driven approaches, how we leverage technological innovations appropriately is a complex endeavor. While some technologies may increase efficiencies, they may not necessarily facilitate deep and robust learning. How we decide to implement, and how we measure the success of implementations is a matter that deserves much consideration. Relying on methods and processes firmly rooted in the teaching and learning literature must remain at the forefront of consideration.

With an ever-increasing base of empirical and best practices literature, there is much to draw from to determine alignment with pedagogical practice and effective learning. While futurists such as Aoun (2017) call on educators to keep abreast of change in order to educate students to master the economic and societal challenges that will be brought on by robots, AI, and advanced machines, educators such as Mayer (2018) remind us that many years of focused inquiry into the learning sciences have brought us well-founded principles and guidelines from which we can draw when determining the appropriate pace and mechanism of change.

This session will focus on providing participants with a framework and principles that can be used to address the myriad challenges and potentialities related to digital learning. Drawing from a deep synthesis of the educational and cognitive psychology literature, principles of deep and flexible learning will be provided and discussion will be focused on addressing the potential of emerging technologies to facilitate authentic and active learning. A range of cognitive, behavioral, affective and social applications will be discussed.

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Design Thinking in Action

Kristin Machac, Virginia Tech

“Design thinking” is a common buzzword in both business and Learning and Development these days. Although the term is talked about at length, the actual process for design and the strategies associated are substantially less discussed. What makes design thinking so useful? What strategies do you need to keep in mind while using it? And, most importantly, how exactly can you use it to create better courses and content?

In this hands-on session, you’ll build an understanding of the design thinking process and learn how to apply it to the design and development of your learning content. Through reworking a real course or lesson plan that you bring with you to this session, you’ll learn various strategies to assist with gaining a stronger understanding of your learner, generating big ideas, and prototyping the learner experience. You’ll leave this workshop with a practical collection of useful strategies and a concrete beginning to a new course or learning experience! In this session, you will learn:

- The definition of design thinking and how it’s applied as a process to course design
- Strategies for researching and empathizing with your learners
- Methods for collaborating and generating ideas
- Approaches for prototyping
- How to apply these concepts to your own work

Embedding Culture and Diversity within Psychology Courses (with further applications)

Gabriela Martorell, Virginia Wesleyan University

The United States is a multicultural society and is becoming more so, due to demographic shifts in the population and the increasing globalization of business and technology. It is thus important that as college educators we incorporate diversity in our courses and provide a culturally responsive education. This is important for pedagogical, pragmatic and programmatic reasons. In this session, we will discuss these issues framed by an argument of the value of incorporating diversity within the college classroom. While from a psychological perspective, I will provide examples of classroom tools and activities that can be used in other disciplines.

The United States is a multicultural society and is becoming more so, due to demographic shifts in the population and the increasing globalization of business and technology. It is thus important that as college educators we incorporate diversity in our courses and provide a culturally responsive education. This is important for three reasons. The first is pedagogical. There are two issues here. The first is we require cross-cultural theory and data to tease out the relationship between cultural and universal aspects of human psychology. We cannot hope to understand human psychology without it. And, psychology is not alone in this; many fields require the incorporation of diverse perspectives in order to function effectively in the world of today. The second pedagogical reason is that adolescence and early adulthood is a time of rapid brain changes and identity development. This period of the life span affords college educators the opportunity to shape critical thinking abilities, and a consideration of diverse perspectives is an ideal means by which to do so.

The second reason for inclusion involves pragmatic considerations. We cannot promote wellbeing or positive outcomes, an implicit goal of many educators and students, effectively without research into what that means and how it can be achieved for diverse groups in diverse circumstances with diverse needs.

The third reason involves the teaching experience itself. Many colleges and universities struggle with retention rates and student engagement, a problem which is particularly pressing for students who hail from underrepresented groups. Issues of inclusion factor into the likelihood of these students' success, and the classroom climate is one of the issues at play. We must take cultural issues into consideration in the classroom in order to serve our students, and we must do this in a way that includes both majority group member students as well as students who hail from minority or marginalized groups. We must cultivate classroom norms of respect and openness, and encourage students to approach new ideas with a spirit of generosity while still holding true to their own ideals and values.

In this session, we will have a discussion of these issues framed by an argument of the value of incorporating diversity within the college psychology classroom. After I present data and a brief literature outlining the above, I will discuss specific classroom exercises which can be used to incorporate issues of culture and diversity in the college classroom including (a) theoretical challenges; (b) current events and Break the Patriarchy Chrome extension; (c) Miniature Earth; (d) urinals and proxemics; (e) the Hidden Rules of Social Class; and (f) Erikson's Psychosocial

Theory and autobiographies. While the perspective is that of a psychology faculty, these exercises can be easily modified for many other disciplines.

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Engaging Learners: Educational Brain Breaks and More

Julia Castleberry, Emory & Henry College

Engaging learners in lectures with active educational brain breaks will bring content to life. Energize yourself and your learners with a variety of kinesthetic activities used to enhance and to reinforce your learning objectives. You will take home activities appropriate for classroom learning with class sizes from 1 to 100. These activities can be used in a variety of content areas and among kids ages 5 to 100+. Take a chance on learning fun.

Brain Breaks are structured physical activities lasting three to five minutes occurring during short breaks in instructional time (Ferrer & Laughlin, 2017). Learners have to actively engage and participate. Brain Breaks are an effective and efficient way of energizing and focusing learners. You can positively impact learners' perceptions, concentration, and participation in class and health (Stapp & Prior, 2018).

How much time do we spend sitting every day? Stapp and Prior report that students spend up to 50% of each day being sedentary. Behaviors of sitting in class, sitting to study and using smartphones are barriers to physical activity (Stapp & Prior, 2018). Sedentary behaviors affect all aspects of life. The cost of not being active includes increasing the risk of obesity, diabetes, and depression (World Health Organization, 2018; State of Obesity, 2016). According to Stapp and Karr (2018), recess and physical activity breaks offer significant academic, physical, and social benefits. Participants' on- and off-task behaviors were observed and findings from the study indicated that providing daily physical activities within the school day significantly increased on-task behaviors for fifth graders in the classroom (Stapp & Karr, 2018).

With the use of electronics and the internet in the classroom, we have moved away from active interactions with our students. Engaged students learn. Brain breaks can include puzzles, games, tasks, and challenges which reinforce content and energize learners. We will discuss how to use Brain Breaks within content teaching and establish guidelines for their use. Objectives for the Brain Break Session include 1. Facilitating the incorporation of learner engagement strategies into your lectures 2. Creating a Brain Break Tool Box

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Engaging Students and Community through Immersion Projects

Eric Rice, Johns Hopkins University

Learning happens in communities as well as schools – in organizations in which people perform work, serve customers, employ residents, grow revenues and reputations, and function as part of community fabric. But how can the university provide students with an opportunity to gain a sense of those processes and benefit from learning life-lessons while engaging in robust education and training? This session explores a particularly useful technique – immersion projects – structured programs that insert students into community enterprises to perform projects, create new opportunities and assist on-going operations and demonstrates use of several new tools from JHU to manage the modality.

Abstract: Learning happens in communities as well as schools – in organizations in which people perform work, serve customers, employ residents, grow revenues and reputations, and function as part of the fabric of the locale. But how can the university provide students with an opportunity to gain a sense of that process and benefit from learning life-lessons while they are engaged in robust education and training? How can we engage the community in our teaching of entrepreneurship, engineering and other STEM subjects? And how can we avoid some of the customary problems that instructors face when involving students in the community?

The aim of this session is to explore a particularly useful technique – immersion projects – structured programs that insert students into community enterprises to perform projects, create new opportunities and assist on-going operations. At Johns Hopkins, we have been using community-based immersion projects as a means to teach entrepreneurship and engineering skills for 6 years and have learned a series of lessons from our experience. This session explores those lessons as guidance for this method of engaging the community in entrepreneurial and subject matter training. The findings offer a series of best practices from the literature coupled with tools from our experience that should save other institutions time and pain should they decide to use community-based instruction as a teaching modality. The session is grounded in published research on the topic, the experience of the facilitator and the practice of the participants.

Goals and Objectives

Objectives for the session include the following:

- Identify the reasons for and value of using community-based learning for instructional purposes.
- Discuss research findings of use of the technique.
- Generate a list of difficulties/issues associated with using community-based learning for instructional purposes and group the identified difficulties/issues into conceptual categories.
- Demonstrate techniques and tools useful as strategies to mitigate most critical issues.
- Suggest ideas for continuing research into the topic. Participant Interactivity The plan for the session, including expected interaction patterns follows:
- Conceptualize the issues in terms of potential value, prevalence and issues/difficulties of using community based learning for instructional purposes, especially in STEM

education. Introduce samples and data of ways presenter has used the techniques to address and mitigate various difficulties and the outcomes of efforts. (10 min)

- Collect, using guided discussion and small groups, samples of difficulties participants have experienced in their teaching practice and group ideas into categories. For example, there often are difficulties associated with at least interaction patterns; decision making; timing and deadlines; evaluation and grading; cultural diversity; inequitable distribution of workload; individual commitment; and dealing with conflict. (10 min)
- Reconvene and harvest ideas from each group for techniques to deal with specific issues. (5 min)
- Demonstrate how to employ several tools we have developed at JHU as techniques for resolving many of these issues with participants completing a series of exercises that they can employ in their teaching. (20 min)
- Invite participants to express samples of similar activity from their classes (as time allows).

Enhancing Student Learning Experiences through Reading Aloud

Charmaine Jake-Matthews, Purdue University Northwest; Oliver Pergams, Olive-Harvey College, City Colleges of Chicago

Students seldom complete assigned readings. Pergams, a biology professor, asked students why and two reasons surfaced: vocabulary and time. Pergams decided to address both issues by replacing lecture with reading aloud. This interactive session will explore the practice of reading aloud in the college classroom. The session will begin with a discussion of the attendees' opinions about reading aloud in college courses. Attendees will then participate in a brief read aloud session similar to those mentioned above. Finally, participants will examine the appropriateness of this teaching tool for their own courses.

Students entering college have diverse educational backgrounds and varied life experiences. This diversity is especially pronounced among community college students (Cohen, Brawer, & Kisker, 2014). In the context of the varied levels of academic preparedness found in a classroom, the faculty member is faced with the challenge of helping students to successfully grasp and master course concepts. In science courses, this task is especially challenging as students must master unfamiliar vocabulary (Snow, 2010) much like learning a foreign language. As such, it is imperative to use a teaching approach that allows students to master both vocabulary and course concepts. In an effort to address this matter, one of the presenters (Pergams) decided to employ reading aloud in college-level biology courses.

While the initial decision to do so was born from his experiences and interactions with students, the practice is also supported by learning theory. Specifically, the concept of scaffolding as described in Vygotsky's Social Development Theory is applicable. According to this theory, scaffolding, temporary support provided to a learner by a more knowledgeable individual, and descaffolding, the transition to independent demonstration of knowledge and skills, are important elements of learning (Collins, Brown & Newman, 1989). This basic educational concept has given rise to many teaching and learning techniques which include some combination of three key components: visual representations, social interactions and written prompts (Lin, et al. 2012). The practice of reading aloud (RA), paired with thinking aloud (TA) includes all of these components and as such seems to be an appropriate technique for enhancing student learning experiences (Pergams, Jake-Matthews, & Mohanty, 2018).

This three-part interactive presentation will allow participants to explore the value of RA-TA as it relates to the courses they teach. We will begin with a brief interactive survey (using Poll Everywhere) to assess participants' opinions, attitudes and beliefs about RA-TA. We will then transition into a summary and demonstration of the presenters' experiences with RA-TA as described in a recent publication. In this demonstration, participants will be asked to take on the role of students in an introductory biology course. Finally, participants will complete an evaluation of the RA-TA process and its applicability to the courses that they teach.

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Ethical and Inclusive Communication Practices in Domestic and Global Service-Learning

Lindsey Gleason, Virginia Tech

One component of engaging in ethical service-learning work is ensuring that instructors and students are trained to consider how to communicate the work in a thoughtful, nuanced way. This session will discuss how messaging, photographs, videos, and other media must be considered before, during, and after engaging in a service-learning experience. Inclusive and ethical communication practices will be discussed.

The goal of this session is to engage instructors in thinking about how to lead their students in reflective dialogue about how the way they communicate about service-learning work has the power to breakdown stereotypes about the “helping” industry, volunteerism, and service in vulnerable communities.

This session will cover ethical photography/videography, particularly asking students to consider their identities, power/privilege, and privacy/vulnerability of those they interact with during service experiences - and how that influences the type of photos and videos they take and share on trips.

The session will also discuss common messaging around service experiences and how to communicate in a concise, but more nuanced way about service-learning, including moving away from “savior” language and over-promising impact and results of service experiences. Participants will leave the sessions with ideas on practical application of the material and resources on how to lead these discussions.

Exposing Students in a Data-Driven Cohort to Ill-Defined Problems

Jonathan Briganti, Virginia Tech; Anne Brown, Virginia Tech; Matthew Ritzinger, Virginia Tech

DataBridge pairs data-driven work with organically developed curriculum, HIP assessments, and experiential learning, adding skills not gained from traditional classroom settings. A sentiment from students has arisen: reflecting as a group on not only the research consults, but their experiences in working self-motivated schedules. This highlights the impact of interdisciplinary “unstructured” experiences to students still expecting concrete deliverables. We will discuss the rubrics utilized, impacts of self-reflection on soft skills, and provide an activity that highlights a typical data-driven student experience. Combining ill-defined problem solving with traditional classrooms can give students a new perspective while maintaining a facilitated environment.

DataBridge, a group formed in May 2018, in Data Services at University Libraries focuses on addressing the need for data scientists and engineers and pairs student consultants with clients from around Virginia Tech and across disciplines. By pairing data-driven work from clients across the Virginia Tech community with organically developed curriculum, high impact practice (HIP) assessments, and an emphasis on experiential learning we add crucial skills that aren’t gained from traditional classroom settings.

As this program has been piloted, a sentiment from students has arisen: specifically discussing and reflecting as a group on not only the research consults but their experiences in working self-motivated schedules. This self-reflection was surprising and highlights the broader impact of interdisciplinary, “unstructured” experiences to students that still expect concrete deliverables. Students with a strong aptitude in autonomous work and solving ill-defined problems tends to enhance career success. The challenge stems from creating learning environments that offer low-risk challenges for students to effectively frame and develop these skills.

As DataBridge exists in a nexus of student engagement type, with students opting for participation, a need to delineate both soft and hard skills was apparent. We sought to gauge and chart the impact and growth of students in the pilot process, and growth in student’s ability to articulate and complete tasks, work interoperably on a team, and as a data scientist. Coupled with this are surveys administered at the beginning and end of each semester to gauge the student’s view of their personal growth. The students are made aware of these rubrics and are given the results as a part of the reflection process. This is done to discuss areas for improvement, highlight strengths and achievements, and increase transparency.

As this is the inaugural group of students, our findings currently rest on student surveys and user stories. Clients have focused on how the work provided has helped further their research and workflow, and we have seen several return clients. Students feel that they are increasing a wide range of skills, and feel passionate about completing their projects in such an agile community-focused team.

In this practice session, we will deliver and discuss the rubrics utilized in this interdisciplinary group, the impact of self-reflection on soft skills in workforce development, and provide an activity that highlights a typical experience students have with clients. The activity is an example

of how we have attempted to organically weave these softer-skills into a data-centric problem. The activity tasks student teams to understand historical data of large ill-defined problems, such as the opioid epidemic or geriatric healthcare, to then find potential solutions, and culminates in a reflection piece where we discuss the issues the students faced. Pairing an activity that challenges students to think critically about solving an ill-defined problem with traditional classroom curriculum can help the students develop the skills and correct frame of mind concurrently. Combining ill-defined problem solving with traditional classroom settings can give students a new perspective while maintaining a structured and facilitated environment.

Faculty-Led Professional Development: Meeting Faculty Where They Are
Breana Bayraktar, Northern Virginia Community College; Nicole Tong, Northern Virginia
Community College – Annandale

Leading faculty professional development is a tricky proposition, especially when working with very limited resources. Over the past year, our institution began the process of building a new model of what faculty development would look like. Faculty representatives from each of our campuses came together to plan college-wide activities for all faculty, to offer monthly in-depth sessions for new faculty, and to facilitate a variety of campus-specific activities. This presentation will discuss the successes and failures of a group of faculty who took on the task of kicking off a new model of college-wide professional development.

The goal of this session is to share how we re-imagined faculty professional development as a grassroots model. In the process of building a new model of faculty-led professional development we had some successes and some failures. Using these experiences, we hope to provide a blueprint for engaging faculty in professional development that meets them where they are, and which meets the need for professional development that respects and works with each individual's local context.

Attendees will hear from a panel of faculty who were involved in the re-design process about what worked for college-wide and campus-focused initiatives to encourage faculty participation in professional development. Attendees will leave with an array of ideas, from small and focused to broad, to address professional development needs for themselves and their campuses. Looking at models of how different development opportunities can be developed and offered is of vital importance to our growth as teachers, scholars, and colleagues. Presenters will speak not only about their experience at a large and diverse institution, but will incorporate best practices in faculty development from current research.

This session focuses on professional growth not just from the perspective of the planners, but also from the faculty's perspective. The session addresses who faculty are life-long learners, with a focus on how faculty can balance competing roles as instructors, scholars, members of professional communities, and members of their college/campus community.

Gamefication of Courses by Skill versus by Topic

Anne Marie Zimeri, University of Georgia

The gamefication of courses, that is to say the implementation of the elements of games, may be on the rise, especially in online courses. One such technique in gamefication is a badge system in which students complete tasks to earn an digital badge. These badges indicate accomplishments and can be effective motivators in self-paced online courses.

The gamefication of courses, that is to say the implementation of the elements of games, may be on the rise, especially in online courses. The integration of games can give both the course instructor and the students an indication of learning achievement and it can enhance critical thinking skills when implemented with valuable assessments. It can offer feedback, self-perception, and valuable displays of student progression through a course.

One such technique in gamefication is a badge system in which students complete tasks to earn an digital badge. These badges indicate accomplishments and can be effective motivators in self-paced online courses. This presentation describes a study which will compare basing a badging system on skills to earn badges for aptitude in reading (book club badge), evaluating films (documentarian badge), becoming an eco-friendly consumer, and activities outside the classroom (adventurer badge), affecting environmental policy (activist), using purchasing power to be a better steward of the environment (savvy consumer), and using social media as a tool to educate their peers about environmentalism (hashtag expert) vs. discipline-specific topics that can be tailored to any subject.

The course that will use these badging systems is an online summer section of Introduction to Environmental Health Science. The second year of the badging will include discipline-specific topics, like climate change, toxicology, environmental ethics, water resources, emerging diseases, and energy, the oceans (marine ecosystems), food security, and global environmental citizenship. When the discipline-specific badging system is in place, each badge will combine elements from several of the skills badges. Essentially, the accomplishments to earn a badge will be the same each year, but the arrangement for the badge requirements will differ.

Badge assessments will include 4 short answer questions that will 1) show that the student completed the badge (read the reading, watch the film, completed the activity, etc), 2) can summarize the material, 3) critically think about the material, and 4) self-relate the material. Gamefication systems will be evaluated using student surveys, and qualitative and quantitative data based on the selection and quality of the badge assessments.

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Hanus, M. D., & Cruz, C. (2018). Leveling up the Classroom: A Theoretical Approach to Education Gamification. In I. Management Association (Ed.), *Gamification in Education: Breakthroughs in Research and Practice* (pp. 583-610). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5198-0.ch030

Kim S., Song K., Lockee B., Burton J. (2018) What is Gamification in Learning and Education?.
In: Gamification in Learning and Education. Advances in Game-Based Learning.
Springer.

Gaming and Composition: First-Year Writing as a Multiplayer Game

Christina Taylor, Virginia Tech

This presentation situates, summarizes, and models a First-Year Writing course that is formatted as a multiplayer game. It will cover research grounding the class format, an overview of the class structure and scaffolding, and data from student evaluations, all arguing that this particular class format helps students become more engaged and better able to meet the outcomes of the course.

This presentation will focus on both how I formatted my First-Year Writing course as a multiplayer game and how I argue the students were more engaged and able to meet the course outcomes than they would have been otherwise. The first thing I will do is explain the research surrounding gaming and composition as well as where my inspiration came from to format my course in the way I did. Then I will go on to explain my syllabus and the overall framework of the course and its mirrors with a multiplayer game, including a handout for audience members to complete that matches a handout I give to my students during the first couple of weeks of class. I will then briefly cover the basic scaffolding of the course.

After the detailed summary of my course and course format, I will go on to include data I have gathered from my students via SPOT evaluations and other surveys and reflections throughout the course in an effort to explain how effective the course format was. I will also go over some of the aspects of the course, as well as particular lessons, that went well, and some that I plan to improve upon for future classes. Finally, I will end the presentation with an overview of how this class format is not only valuable for Composition courses, but could also be applied to almost any class to improve student engagement and understanding.

Going Global with Virtual Reality in the Classroom

Michael Vaughn, Elon University; Carmen Monico, Elon University

Is virtual reality (VR) a technological fad? Over the past two years a Human Services Studies instructor and an instructional technologist have co-facilitated an in-class virtual reality (VR) experience for HSS students. Students engaged in direct practice prior to real-world experience through the use of immersive 360 videos about international migration crises and women's reproductive rights, paired with a guided in-class discussion. These experiences were tied into research-based instructional and learning practices. We invite you to join us for a similar experience and discussion, alongside a sharing of data we've gathered from students about whether this approach is effective.

Virtual reality (VR) training has been used in academia and various industries through the development of diverse scenarios and simulations with a wide range of benefits. The National Science Foundation has found that the use of VR in training and education strengthens learning and gives learners the opportunity to engage in a direct practice prior or during the real-world experience. The sense of "being there" when watching 360 videos allows HSS students to have an immersive experience with people and issues they intend to eventually work with, all while staying in their "learning zone."

A Human Service Studies faculty and an instructional technologist partnered over the course of three semesters to test this approach to learning. The VR experience is aimed at increasing students' ability to engage across cultures and in global settings, partially to help prepare them for study abroad and international placements. Students watch two or three 360 videos relevant to the international migration crises and women's reproductive rights. This is followed by a guided discussion of the virtual reality (VR) experience, which includes completing a form for individual reflection that incorporates several intercultural development and effective learning models. The writing exercise is followed by a group reflection of the VR experience. The virtual reality experience lasts an entire class period and was tested over the course of four semesters in human service and global experience courses that the HSS faculty taught in fall 2017, spring 2018, and fall 2018.

This 50-minute session will be an opportunity for attendees to participate in an abbreviated version of this VR experience and discussion, alongside a candid conversation about what we've learned from the student-reported data about its efficacy. We will also share the limitations and challenges encountered in the use of VR and 360 video.

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“Google it, Bro!”: Teaching Generation Z

Dorothy S. Conner, Virginia Tech; Emily Wilkinson Stallings, Virginia Tech

“It’s lit!” Those born prior to 1995 may not be aware of what “lit” means, except in “lighting a candle.” Young adults and teens today, the Gen Zers, (Cameron & Pagnattaro, 2017) use “lit” to mean something that’s “cool” or “fun.” It’s just one term that might confuse other generations. Generational differences are not a new-phenomena, and with every new academic year, teachers often wrestle with the task of engaging younger generations. With the distraction of advanced technology and ever-changing differences among generations, how do we interact with and instruct these students effectively? Join us and explore Gen Zers!

“Nine hours of media consumed per day,” and this doesn’t count school work. They weren’t the first generation exposed to social media; however, they are considered ‘digital-natives’ (Murphy, 2015.) Who are they? Generation Z, or Gen Zers, for short. Smartphones are no longer merely a distraction; they are an integral part of Gen Zer’s daily lives. Just a few years ago, teachers bemoaned their “millennial” students’ excessive texting in class and Facebook obsession, and though similar complaints about technology appear for students today, they now choose to use Snapchat and Instagram over Facebook (Kane, 2017; Google, 2017; Williams, 2017) and use their smartphones as a personal “computer and lifeline” (Cameron & Pagnattaro, 2017).

In 2008, students still used laptops more frequently than their smartphones, but now in 2018, a student can “almost simultaneously create a document, edit it, post a photo on Instagram and talk on the phone, all from the user-friendly interface” of their iPhone, as described by Hannah Payne, U.C.L.A. student and blogger (cited in Williams, 2018). Gen Zers grew up using smartphones and feel that technology can be a way to shape and change culture (Kleinschmit, n.d.). On the other hand, since access to information is almost instantaneous, sources say that “Generation Z’s attention spans have shrunk to eight seconds and that they are allegedly unable to focus for extended periods of time” (Cameron & Pagnattaro, 2017), which leads us to the question: How do we maintain our students’ focus while acknowledging the integral role technology plays in our students’ lives?

While advances in technology have certainly influenced the lives of Generation Z even more so than the Millennial Generation (Cameron & Pagnattaro, 2017; Grow & Yang, 2018; Kane, 2017; Kleinschmit, n.d.; Williams, 2018), it’s not the only defining factor about Gen Zers. As Cameron and Pagnattaro (2017) describe: “Unlike millennials who are viewed as having lost their innocence following the September 11 attacks and the economic crashes in 2000 and 2008, Generation Z is seen as having ‘its eyes open from the beginning.’” Other sources state that Generation Z tends to be more pragmatic than optimistic and often have more realistic career goals (Kane, 2017; Williams, 2018); yet, they are creative and divergent thinkers. Seventy-two percent of them want to create their own businesses (Paquette, n.d.). Gen Zers are also the most diverse generation in American history; they have witnessed the first African American become president and seen same-sex marriage become a constitutional right (Kane, 2017; Williams, 2018). These factors suggest that Gen Zers tend to be more open-minded about diversity and feel more strongly about equality than their predecessors.

How do we connect with Generation Z when their answer to almost everything is “Google it, Bro!”? Are we technology literate enough to meet them where they are? We will share an

overview of who Gen Zers tend to be, offer strategies for challenging them and keeping their attention, and provide ideas to help you meet the needs of these creative, entrepreneurial thinking students.

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Group Mentoring of Faculty to Build Competency, Confidence, and Community
Mark Barrow, Virginia Tech; Monique Dufour, Virginia Tech; Robert Flahive, Virginia Tech;
Leigh McKagen, Virginia Tech

University faculty are often unprepared to begin teaching. While they often gain experience as GTAs or even offering courses independently, most receive limited formal preparation to take on the complex challenges of independent teaching. To address this concern, more than a decade ago we created a mentoring/support group that brings together early career and more experienced faculty who meet regularly to discuss pedagogical literature and to share their successes and frustrations in the classroom. Our learning community not only fosters the acquisition of useful teaching skills but also the sense of confidence and community critical to faculty success.

Despite continuing calls for better preparation, many university faculty continue to enter the profession with little formal training in how to be effective in the classroom. While initiatives like the Preparing the Future Faculty Program have begun to address this long-standing problem, too often the prevailing assumption remains that the expertise acquired through years of rigorous disciplinary training is sufficient to be a successful teacher (Gaff, Pruitt-Logan, Sims & Denecke, 2003). Indeed, many students leave graduate school not only with limited teaching experience but also the message that research is much more important for career advancement than instructing undergraduates.

The lack of proper training for teaching is exacerbated by recent changes in the academic landscape—growing calls for assessment and accountability, increased pressure to obtain external funding, and demands for higher levels of research productivity—that today's university faculty often face in addition to their instructional responsibilities (Austin, 2002). To address this problem and begin providing early career university teachers with the knowledge, skills, and support they need to achieve success, some educators have begun experimenting with various forms of group mentoring (McMurtie, 2014; Huizinga, 2012; McCormack & West, 2007; Gaia, Corts, Tatum, and Allen, 2003; Cox, 2004; Darwin & Palmer, 2009; Boyle & Boice, 1998). Whether aimed at GTAs or newly hired faculty, these innovative mentoring programs attempt to foster a sense of community among participants, provide a venue for sharing successes and challenges in the classroom, and explore techniques and approaches that promote effective teaching and learning.

This practice session will highlight the experiences of a mentoring/support group for teaching that we first organized thirteen and one-half years ago and have continued since then, a learning community consisting of early-career faculty and a small number of more experienced teachers (not unlike the experiment outlined in Cox, 2004). With continuing financial support from the Virginia Tech Center for Excellence in Teaching and Learning and its predecessors, our group has met bi-weekly to explore together how effective teaching and learning takes place, to provide a safe space to discuss what's going on in our classrooms, and to offer emotional and intellectual support for each other.

Participants in this practice session will gain a sense of the factors that contribute to a thriving teaching mentoring/support group, the many useful functions such a group can serve, and some of the challenges and pitfalls associated with launching and sustaining such a group. Our hope is

that those who attend our session will not only be convinced of the value of teaching mentoring groups but will also be inspired to undertake similar experiments within their own institutional context. We will model our session on the bi-weekly discussions that we have as a group. This format will not only provide those who attend with a sense of how members of our mentoring group interact with one another, but also allow ample opportunity for audience participation, feedback, and questions.

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How to Prepare Students for Meaningful Careers: Enlist the Faculty

Paul Hanstedt, Roanoke College; Katherine O'Neill, Roanoke College; Barbara Rodriguez, Association of College and University Educators; Melissa Zantello, Association of College and University Educators

Students spend more time with their professors than any other college professional. And when The Chronicle of Higher Education recently asked how we can better prepare students for meaningful careers, “enlist the faculty” was among the recommended strategies, with the new Consortium for Instructional Excellence and Career Guidance, founded by The Council of Independent Colleges (CIC) and the Association of College and University Educators (ACUE), as an example. In this session, faculty from Roanoke College, one of 26 Consortium members, and ACUE will discuss the impact and relevance of this work to colleges and universities.

Students spend more time with their professors than any other college professional. Time together in class—be it face-to-face or online—is our best, sometimes only, opportunity to make a difference. And when The Chronicle of Higher Education recently asked how we can better prepare students for meaningful careers, “enlist the faculty” was among the recommended strategies, with the new Consortium for Instructional Excellence and Career Guidance as an example. Launched in 2018 by the Council of Independent Colleges (CIC) and the Association of College and University Educators (ACUE), with support from Strada Education Network, the Consortium supports over 500 faculty members from 26 institutions nationwide in learning to integrate career guidance into their classes and implement long-term projects that cultivate students’ career-ready or “soft” skills. Faculty also develop core teaching competencies articulated in ACUE’s Effective Practice Framework, endorsed by the American Council on Education as a leading statement of the teaching skills and knowledge that every college educator should possess. In this session, faculty from Roanoke College, a Consortium member, and ACUE will discuss the impact of this work to date and the relevance to colleges and universities.

Integrating CATs into Learning Activities and Assessments for Active Learning

Dawn Hathaway, George Mason University; Hong Wang, Northern Virginia
Community College

Assessment is often associated with summative, norm-referenced, criterion-referenced, and benchmark assessments. We tend to neglect formative assessment, which refers to students' performance during instruction that usually occurs throughout the teaching process. Classroom assessment techniques (CATs) are a commonly used approach for formative assessments. They are designed to help instructors find out what students are learning and how well they are learning in the classroom, a physical classroom or an online classroom. This presentation will share classroom assessment techniques (CATs) and examples from presenters' real-world practice, with or without technology, which make it fun and engaging for students to learn.

It has long been established that a mismatch exists between pedagogical intentions of the instructor and what learners actually take away from an instructional experience (Angelo & Cross, 1995; Block, 1996; Nunan, 1995). Yet, the gap in perceptions of the instructor and learners is often undetected until summative assessments such as final exams are scored and far too late for remedies. Assessing learning as it is developing or forming is a strategy designed to help instructors find out what students are learning and how well they are learning. Formative assessment is an active and intentional learning process in which instructors and learners “continuously and systematically gather evidence of learning with the express goal of improving student achievement” (Moss & Brookhart, 2009, p. 6).

Formative assessment provides information to the instructor and learner about meaning-making and signals the learner to move forward in the learning process. Classroom assessment techniques (CATs) are approaches used for formative assessments. The following characteristics describe this approach:

- Learner-centered
- Teacher-directed
- Mutually Beneficial
- Formative
- Context-Specific
- On-going
- Rooted in Good Teaching Practice

Characteristics such as learner-centered, mutually beneficial, and rooted in good teaching practice indicate that an effective CAT seamlessly integrates teaching, learning, and assessment while engaging learners. In other words, CATs are instantiated as learning activities. Derived from activity theory (e.g., Engeström, 1999), learning activities are specific interactions of learners with others using specific tools and resources (the learning environment) oriented toward achieving specific outcomes (learning objectives) (Beetham, 2013). The elements of learning activities are interdependent and understood as a system (Goodyear & Carvalho, 2013) of relevant, meaningful, and significant actions (Hasan & Kazlauskas, 2013; Reeves, 2011)). To be relevant and meaningful, learning activities must align with a foundation of domain-specific

objectives and work activities situated in the context of that domain (Messmann & Mulder, 2015).

This practice session will focus on providing participants, both instructors and curriculum developers, with a basic understanding of CATs and use in both face to face and online environments. Examples presented will be from the presenters' teaching practice and represent contemporary interpretations and alternatives to those originally published by Angelo and Cross (1993). After this session, participants will be able to:

- demonstrate an understanding of CATs
- develop learning activities with CATs
- identify free technology resources for implementing CATs

The presenters will begin the session with an interactive activity using a CAT, followed by a brief overview of formative assessment and CATs. Presenters will showcase contemporary, real-world examples of CATs from their practice and discuss the benefits and challenges associated with CATs. Free technology resources used for implementing CATs will be shared. The presenters will end the session by engaging participants in a CAT to facilitate formative assessment of the session as well as discussion. Both presenters have taught undergraduate and graduate courses in instructional technology and in face-to-face and online environments. They have facilitated professional development programs for higher education faculty and K-12 teachers, using a variety of strategies including CATs.

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Integration of Undergraduate Research Assistants into Programmatic Assessment Research

Stephanie Lewis, Virginia Tech; Lori Blanc, Virginia Tech; Megan Underwood, Virginia Tech; Lanie Eppers, Virginia Tech; Madeline Hughley, Virginia Tech; Justin McKinney, Virginia Tech

Virginia Tech's Curie and Da Vinci Science Living Learning Community forms a multi-year experiential learning program designed to complement students' content-based courses. This experiential learning program gives science students increasing levels of opportunity to develop transferable professional skills and personal qualities that will complement their disciplinary knowledge as they become good practitioners of science. In this practice session, faculty and students present this student-centered approach to engagement in programmatic assessment research through the lens of teaching and learning. After the formal presentation, we invite informal discussions about the programmatic structure, training and assessment process, and student learning outcomes.

Our cultural shifts in workplace requirements is translating to a need for shifts in how students learn to be professionals. One aspect recognized as pivotal to the success of individuals entering the job market is an ability to assess problems, strategize solutions, and evaluate the efficacy of one's work (AAC&U, 2007; Hart Research Associates, 2015). Much of what is taught in experiential learning programming is the development of "T-shaped professionals," who possess disciplinary depth and transdisciplinary capabilities (Donofrio et al., 2009; Gardner & Estry, 2007).

As a high-impact practice, undergraduate research holds the potential to walk students through the full ideation and decision-making process and drive their development toward life-long learning (Kolb, 2015; Kuh, 2008). As a research institution, research experiences sought after by students often challenge their understanding of applied research methods, but not necessarily theoretical approaches to addressing complex questions within the realm of undergraduate education. How does one include undergraduate students in the scholarship of teaching and learning? How might that inclusion translate to student interest in pursuing research in that realm? How do these efforts translate to purposeful and valuable pedagogical evolution?

In this practice session, faculty and students will present the design process for a qualitative research study where student responses to prompts about their course experience and observational data are combined to implement changes to an annual course for students in the Curie and Da Vinci Science Living Learning Communities. Scores are applied to responses collected before and after a semester-long project designed as an instructional tool for problem solving skill development.

In this project, first-year students are tasked with development of a deliverable based on client needs (e.g., prosthetic limb for an animal). Second-year students serve as project mentors, who guide the students through the problem solving process with group discussions. Students recruited to serve as research assistants for the assessment process have previous experience as first-year students completing the projects and second-year students mentoring others through the projects. In this third role as researcher, the students tie summaries of response scores to personal reflections on their experiences in their two previous roles in order to make recommendations on how to improve the assignment and scoring process for the following year.

By the end of this session, participants will be able to: understand the structure of the peer-to-peer projects implemented as a teaching tool for problem solving skill development, understand how to incorporate undergraduate research assistants into evaluating a course-embedded assignment as a part of the program improvement process, and understand how to combine high-impact practices into a lengthy student-centered professional development process.

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Intentional Design Strategy for Experiential Learning Outcomes: A Case Example

Hannah Scherer, Virginia Tech; Susan Clark, Virginia Tech

Experiential learning activities must be aligned with desired student outcomes. The Civic Agriculture and Food Systems (CAFS) Taskforce comprised of faculty, community partners and students used a three stage ‘backward design’ process to develop unified CAFS programmatic service learning (SL) outcomes which articulate what students should gain from service learning activities embedded throughout the curriculum. The purpose of this instructional design practice session is to 1) illustrate how the CAFS Taskforce used a backward design process to develop SL outcomes; 2) share the SL outcomes developed; and 3) engage participants in discussion about the application of this process.

Interest in experiential learning in higher education continues to be strengthened by the Academy and various national organizations focused on promoting high impact practices. As students engage in experiential learning, activities, assessments and student learning outcomes need intentional alignment. The interdisciplinary, experiential-based civic agriculture and food systems (CAFS) minor integrates service learning (SL) activities across its four required courses. SL is intended to prepare students to become engaged citizens and connect them to communities in mutually beneficial ways that evoke deeper, more sustainable, committed, and meaningful learning.

Although the CAFS minor is framed by six core values, two specifically relate to SL, “civic engagement and democratic participation”, and “collaborative teaching and experiential learning” (Clark et al., 2013). The CAFS SL uses an asset-based community development model which enhances these core values. This approach allows students to identify their own strengths/interests yet also look deeper into a community’s assets and needs to discern mutually beneficial SL activities. This practice session will 1) illustrate how the CAFS Taskforce comprised of faculty, community partners and students used a backward design process to develop CAFS program SL student learning outcomes (SL-SLOs); 2) share the SL-SLOs developed; and 3) engage participants in discussion about the application of this process in their own instructional context.

Over two years, three workshops plus virtual discussions were held to define what the program expects students in all the CAFS courses to understand/gain from SL activities. Wiggins & McTighe’s (2005) backwards design process consists of three stages: Stage 1, desired outcomes for learners are identified and described; Stage 2, appropriate assessment evidence is determined; and Stage 3, the learning plan is developed. Although, the actual design process is often iterative and any stage may be an entry point.

Since SL activities were already part of the learning plan for each course, the CAFS Taskforce focused on Stages 1 and 2. In workshop 1, the group brainstormed around the question: What big ideas will students come to understand as a result of participating in fieldwork with community partners? This effort generated 4 central “big ideas” with draft enduring understandings and essential questions for each big idea. In workshop 2, drafts were refined into student-facing statements that articulate the SL-SLOs via small and large group iteration. In workshop 3, Stage 1 was finalized by interrogating the draft SL-SLOs to ensure all the initial big ideas were represented and that there was group consensus on the final language. We also determined that

the existing critical reflection rubric utilized across CAFS courses aligned with the SL-SLOs such that it could be used as an assessment tool (Stage 2).

In follow-up to the workshops, course teaching teams incorporated the SL-SLOs into 2018-2019 syllabi and used a backward design planning template to articulate how SL-SLOs are operationalized (Stage 1), assessed (Stage 2), and supported through activities (Stage 3) in each course. Ultimately, this intentional SL design process will produce graduates ready to become engaged citizens within the community.

Clark S, Byker CB, Niewolny K, and Helms J. (2013). Framing an undergraduate minor through the civic agriculture and food systems curriculum, *North America Colleges and Teachers of Agriculture Journal*, 57(2):56-67.

National Academies of Sciences, Engineering, and Medicine. (2017). A design thinking, systems approach to well-being within education and practice: Proceedings of a workshop. Washington, DC: The National Academies Press.

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Keeping CALM - Implementing Universal Design Practices in Courses

Martina Svyantek, Virginia Tech; Christa Miller, Virginia Tech

The Keep C.A.L.M. campaign is all about Choosing Accessible Learning Materials (C.A.L.M.) for your courses. Do you use videos to make your course more exciting? Explore how to Keep C.A.L.M. and Caption On! Put together slide decks or online material to share content? Practice with tools designed to help you Keep C.A.L.M. and Check Contrast! This presentation will share Accessible Technologies' 2018-2019 C.A.L.M. campaigns, demonstrate how to incorporate these two methods into your own work, and provide resources for additional on-campus support.

While there is a legal requirement to provide accessibility for students with disabilities, those with knowledge and training in this area tend to be few in number, widely dispersed, and located behind layers of gatekeeping. Accessibility issues, in both the physical and digital environments, require dedication of both time and resources; finding and working with energized allies is an important method to increase advocacy and prevent burnout.

Accessible Technologies invites you to discover how you can Keep Choosing Accessible Learning Materials (C.A.L.M.) for your own courses. Do you use videos to make your course seem more exciting? Explore how to Keep C.A.L.M. and Caption On using no- and low-cost solutions already available. Put together slide decks, handouts, or online material to get content to your students? Practice with tools designed to help you Keep C.A.L.M. and Check Contrast. This practice-based session will explain the 2018-2019 C.A.L.M. campaigns, demonstrate how to incorporate these two methods into your own work, and provide resources for additional on-campus support.

Outcomes: The proposed outcomes for this session are: Development of knowledge: with regard to the Keep C.A.L.M. Caption On and Keep C.A.L.M. and Check Contrast campaigns, tools, and further resources Development of experience: in utilizing C.A.L.M. resources and tools to enhance accessibility within their own course materials.

Large Class Iterative Real Time Search Engine Development

David Goldsmith, Virginia Tech

This in-class exercise was designed specifically because it is best suited to and becomes more effective the larger classes become. The class as a collective; using teams, and individuals; develop a search engine algorithm similar to popular Internet search engines. The exercise is intended to demonstrate applications of rapid iterative algorithm development, debugging, databases, and fuzzy query returns.

This proposal is presented to share a unique class exercise intended for any level of student in a variety of fields that emphasize iteration and logic. The program has been developed and implemented successfully with First-Year General Engineering students successfully. The exercise utilizes the principles of implicit or unconscious learning pedagogies. In this model the participants don't completely understand what processes they are learning or the remarkable results achieved. The exercise is conducted as a collective non-competitive class exercise with performance increasing with larger classes. The exercise allows for what we usually think of as 'small' class experiences but designed to work at the larger class scales and even perform better in those circumstances.

Intended proposal type is 'practice session' where I'd like to present the exercise, provide class results, and make available the exercise program for others to utilize. The program is implemented without the use of any technology; using only the participation of the class. In a class period of about one hour the algorithm developed has consistently resulted in reliable identification of at least one of the three topic areas making the resulting algorithm functional for general database searches. Participants in the proposed session would be introduced to the pedagogy, be walked through the objectives of the exercise, and have the group conduct a sample run of the activity to demonstrate its effectiveness.

Living-Learning Communities: Integrating Curricular and Co-Curricular Experiences

Matt Kwiatkowski, Virginia Tech; Amanda Eagan, Virginia Tech; Matt Ebert, Virginia Tech

Living-learning communities (LLCs) are a concept which extend the traditional concept of a “learning community,” into the realm of on-campus housing. In LLCs, students live together on campus in a community with similar interests--whether those be directly tied to a major requirement or an interest area. At Virginia Tech, currently one-third of on-campus students are living in LLCs and over the next 10 years, that number will grow to two-thirds. Come learn more about these exciting initiatives and how you can get engaged!

Learning Objective 1: Participants will learn about what living-learning communities are at Virginia Tech and why they are considered a high impact practice in higher education.

Learning Objective 2: Participants will learn about the process for creating new living-learning communities at Virginia Tech.

Learning Objective 3: Participants will understand similarities and differences between various living-learning communities at Virginia Tech.

1. Introductions (5 min)
2. What are LLCs? (5 min)
 - a. Presenters will provide an explanation of LLCs as a concept and best practice in higher education.
3. What are LLCs at Virginia Tech? (10 min)
 - a. Presenters will share information about LLCs at Virginia Tech including types of LLCs, important aspects of LLCs, and benefits of LLCs from faculty and student perspectives.
4. Creation of LLCs (10 min)
 - a. Virginia Tech has an expressed commitment to grow the number of students engaged in LLCs over the next 10 years. To do this, we need to both a) continue to grow and invest in our current LLCs
 - b. Create new and innovative LLCs which students want to be a part of. In this section, presenters will detail the process for creating a new LLC at Virginia Tech.
5. LLC Panel (20 min) a. Representatives from several LLCs will be present to talk about similarities and differences between their LLCs so that participants can understand the nuance from community to community.
6. Q&A (10 min) a. Participants will have schedule time to ask questions of the panel and/or presenters.

Baxter Magolda, M. B., & King, P. M. (2004). *Learning partnerships: Theory and models of practice to educate for self-authorship*. Sterling, VA: Stylus.

Inkelas, K. K., Jessup-Anger, J. E., Benjamin, M., & Wawrzynski, M. R. (2018). *Living-learning communities that work: A research-based model for design, delivery, and assessment*. Sterling, VA: Stylus.

Making the Most of Assessment through Data Visualization

Courtney Vengrin, Iowa State University

In this session, participants will gain practical skills for harnessing assessment data for practical use through data visualization. Whether the data is at the course, program, or institutional level, the purpose of the data we collect is that it be used in some fashion. By visualizing our assessment data we will be able to make our data work for us. Participants will learn about free tools and websites that will assist them in creating visuals that allow their data to make the maximum impact.

Now more than ever we have data at our fingertips. Through our Learning Management Systems, application systems, and offices of institutional research we are constantly capturing data at all levels of our institutes. But how is this data being used? Is this data being used for maximum impact? By utilizing data visualization techniques, we can better investigate trends in our data and spot potential issues to correct or highlights that we want to celebrate. Data visualization makes the most out of the data that we collect and allows us to more rapidly make decisions around assessment and evaluation data. Is there a trend in our exam scores in Biology 101? Are students making significant gains within their degree program? Did we make a change to the curriculum that is now furthering student achievement? By visualizing our data we can quickly answer these questions, point out the highlights, and make critical decisions for student success.

This session will cover free online tools as well as practical applications of software available to most individuals associated with a college or university. Participants will have time for hands-on practice if the session and space allow. We will cover all manner of data from course evaluations of teaching to research data to institutional level data. Participants will walk away empowered to harness their assessment data and utilize that data for maximum impact. The author of this presentation is not affiliated with any software or tools mentioned in this presentation or otherwise. All software and tools are resources that the author has found to be useful. This is not a sales pitch.

Messing About at the Phenomenological Heart of Teaching

Katherine Greenberg, University of Tennessee; Neil Greenberg, University of Tennessee; Sandra Thomas, University of Tennessee; Brenda Murphy, University of Tennessee; Brian Sohn, Carson Newman University; John Smith, Mississippi State Community College; Lauren Moret, University of Tennessee

This practice session addresses the frequently overlooked heart of teaching and learning: in the lifeworld of the classroom, what teachers and students live through—not merely think (Merleau-Ponty, 1945/1962). In particular, we focus on ways to honor each teacher's intuitive tact and ingenuity in knowing what to do and say when with students (face to face or online) that goes beyond sharing expertise related to course content. We will engage in messing about with ideas about teaching that focus on the significance of a phenomenological attitude and awareness of what one is about as a teacher.

This practice session addresses the frequently overlooked heart of teaching and learning: what teachers and students live through—not merely think (Merleau-Ponty, 1945/1962). We focus on ways to honor each teacher's intuitive tact and ingenuity in knowing what to do and say when with students (face to face or online) beyond sharing expertise related to course content. We will engage in messing about, the creative engagement of imagination in exploring ideas in relation to some established principles, which we will limit to:

1. The significance of a phenomenological attitude that opens to the mystery within course content, the subjective presuppositions we naturally bring to our understanding of abstract knowledge, and the ethos within the lifeworld of the classroom.
2. The awareness of what one is about as a teacher that honors the lifeworld of the classroom through personal tact and ingenuity.

These ideas are based on extensive research and its implications for teaching and learning as discussed in our forthcoming book, *The Phenomenological Heart of Teaching and Learning* (Greenberg, Sohn, Greenberg, Thomas, Smith, and Pollio (in press)). We conducted a comprehensive case study of the lived experience of a professor and his students in an advanced graduate seminar. Our research indicated that the professor embedded these ideas in his teaching and display of a phenomenological attitude through his view of teaching as improvisational jazz. He continuously intertwined descriptions of lived experience with abstract knowledge that often led to better understanding, to students answering their own questions, and negated the need for him to provide explanations of course content. And we found that almost all case study students perceived the seminar as a transformative learning experience. These students described how their worldviews were expanded through the diverse experiences shared by the professor and other students.

Further in our text, six teachers shared how they opened to the lifeworld of the classroom through a phenomenological attitude. We will draw upon examples from them as we mess about with ideas shared by participants. Our six styles include:

1. Teaching as interpretative dance: synchronous online master's course.
2. Teaching as a cyberspace salon: asynchronous online doctoral course.
3. Teaching as abstract art: undergraduate and graduate interdisciplinary seminar.
4. Teaching as a balancing act: teacher education course.

5. Teaching as a math missionary: remedial and introductory mathematics and statistics courses.
6. Teaching as getting comfortable in the discomfort: doctoral required research course.

These teaching styles contrast with other research in which students shared their experiences with teachers who hindered their learning when not attending to the lived experience of the lifeworld of the classroom. The studies included students who were African American undergraduates on a predominately white campus Davis et al., 2004; Thomas, et al. 2007), Community College students (Smith, 2016), and international, non-native English speakers in graduate school (Halic, Greenberg, Paulus, 2009; Muller, 2015). Together, they strengthen the need to of honoring the tact and ingenuity at the phenomenological heart of teaching and learning.

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- Thomas, S. P., Thompson, C., Pollio, H. R., Greenberg, K., Conwill, W., Sall, A., Klukken, G., Davis, M.W., and Dias-Bowie, Y. (2007). Experiences of struggling African American students at a predominantly white university. *Research in the Schools*, 14(2), 1-17.

Multimodal Assessments: Designing and Integrating Digital Creative Course Assignments

Adam Barger, College of William and Mary

Digital tools and resources are an integral aspect of higher education pedagogy. However, successful planning, design, and integration of digital teaching and assessment practices often reveal affordances and constraints for instructors who leverage these tools in their courses. Considering course level objectives, intended student learning experiences, rigor, and relevance are all challenges of successful digital technology integration. Similarly, emphasizing meaningful digital communication skill development requires intentionality. This session reports on strategies and provides a framework for implementing multimodal creative projects in a liberal arts university setting. Specific attention to faculty use-cases and integration examples ground this approach to multimodal assessment.

As digital tools and resources become an integral aspect of higher education pedagogy, affordances and constraints emerge for instructors who leverage multimedia for creative projects in their courses. Re-framing multimedia tools as part of a multimodal design strategy draws attention to design-based needs in course and assessment planning. Affordances for multimodal and web-based projects must be balanced with practical aspects of assignment design and assessment.

This presentation reports on strategies for implementing multimodal creative projects in a new interdisciplinary curriculum at a mid-sized public liberal arts university. Case studies from recent courses will frame the challenge and an emerging framework for application will be presented to equip attendees with actionable next-steps in their own course development. In an effort to reflect on and share innovative pedagogical strategies, this session will focus on real classroom scenarios and the digital tools and resources leveraged to support the teaching and learning goals of the course and assignment. Furthermore, attention to the intended and unintended consequences of multimedia assignments will be addressed through reflective feedback from the co-educators from William & Mary that regularly collaborate with faculty members.

Attendees will receive an assignment-building checklist and provide feedback on an emerging framework, based on ongoing action research and related extant literature, for structuring multimodal assignments for assessment in their own courses. Session attendees will explore multimodal project design using the CASPA model for multimodal assessment (Blum & Barger, 2018) and consider classroom or institution-level challenges and solutions. With a particular focus on scaffolding multimodal assessments as part of course design, attendees will gather specific strategies for crafting assessment stages to enable more personalized student learning and promote meaningful learning experiences. A final discussion on how these strategies and assessment plans may support the institutional teaching and learning context will allow participants to situate their ideas and form an implementation action plan.

Blum, M. & Barger, A. (2018). The CASPA Model: An Emerging Approach to Integrating Multimodal Assignments. *Journal of Educational Multimedia and Hypermedia*, 27(3), 309-321. Association for the Advancement of Computing in Education (AACE).

Revamp Your Review!

Tara Vanderveer, Nunavut Arctic College/Dalhousie University

Is your game-show quiz getting a bit old? Learners not appreciating your cleverly-named categories? Well there is hope! Whether reviewing information for an upcoming exam, or reviewing yesterday's lecture, it is time to revamp your review! This workshop discusses, demonstrates and provides instructions for new review strategies that make the process more enjoyable and increase its efficacy for learners. So while we all love Alex Trebek, it is time that he retired from your classroom and that you move forward with a toolbox (literally, there is a toolbox involved in this workshop) of review strategies that work.

To solidify concepts and understanding, learners need to engage with material in a variety of ways, and usually many times. This calls instructors to create a variety of unique opportunities for learners to review the material and engage with it collaboratively in an active learning environment. In this workshop we will discuss, demonstrate and provide instructions for a variety of ways to revamp the review process to make it not only more enjoyable, but also increase its efficacy for learners.

This workshop/presentation will empower instructors with a variety of techniques to engage learners in the review process. While the tools will be presented in the context of a pre-exam review, these tools can be employed to review any content, at any time. This versatility means that these tools can serve as useful engagement strategies throughout a course as simple review exercises, formative assessments or team-building exercises. The techniques in the workshop will encourage review and learning that is learner-based, active and engaging. Many of the strategies presented require critical thinking and collaboration but place the content in a fun and interesting context. This makes this presentation and the techniques it shares important in higher education because it will help instructors add something new and exciting to their instruction, engage learners in a way that promotes learning and retention, and helps foster a sense of community in the classroom.

This workshop will deliver engagement and review techniques that can be easily applied to all content areas and to faculty development. The strategies contain a mix of “analogue” and “digital” options that can work in a variety of situations. This content is also highly applicable in a flipped classroom environment as information presented ahead of lecture can easily be reviewed, in a fun manner!

This presentation is designed as a workshop. Participants will be experiencing the review strategies presented to as the learner would. The goal is to demonstrate and have participants try 6 different strategies. All strategies are active, call for participants to move around, require participation, and most require collaboration with peers. Participants will leave with a tool kit and a plan to implement one of the strategies the next time they plan a review.

SPECIAL: A Universal Design for Inclusive, Equitable and Effective Course

Naomi Petersen, Central Washington University

Instead of responding to a few students with special needs requiring accommodation, instructors can use this handy acronym to recognize the factors all people have that affect learning and contribute to self-regulation. The result is less need to make changes for students with disabilities while all students benefit from inclusive practices, as reflected in higher satisfaction measured by end of course surveys as well as higher levels of thinking. In this workshop you craft realistic expectations for students for such policies and practices as due dates, feedback, grades, and absenteeism as well as tactics for creating a 'community of learners'.

In this workshop you can 1) draft a syllabus making classroom engagement explicit, 2) identify vulnerable points with which students struggle, and 3) prepare noncoercive, equitable response strategies that promote self-regulation. The acronym introduced helps focus on factors key to effective learning and personal development. It is student-centered in that the focus is on whether students are successful. Incorporated are elements necessary for self-regulation: autonomy, competence, and affiliation (Bandura, 1991; McClelland, 1988; Vander broeck et al, 2016) which assumes a growth mindset (Dweck, 2017).

Your syllabus is most effective if it acknowledges the range of diversity likely to occur among your students and establishes concrete, realistic expectations. This student-centered, inclusive approach recognizes wellness (Social, Physical, and Emotional) crucial for readiness to learn (Cognition). It acknowledges the importance of student perspective (Individuality) and engagement (Imagination) when monitoring learning (Assessment) through their performance (Literacy). Each of these factors will be explained in theoretical and practical terms. We will 'walk the talk' of effective practices our students appreciate by providing many examples of key concepts in multiple modalities including graphic organizers in iconic metaphors, plus explanations, and opportunities for feedback in an environment of mutual interest.

According to new survey results released by the National Survey of Student Engagement (NSSE, 2017), students in courses with more inclusive practices reported greater learning and engagement. Students in courses with more inclusive classroom practices reported greater emphasis on higher-order learning, engaged more in reflective and integrative learning, perceived greater institutional contributions to their learning and development, and had more favorable perceptions of institutional support.

Inclusion refers to the intentional practices that recognize diversity among students, that is, the range of differences associated with culture, language, lifestyle, and ability. The instruction is considered inclusive if the students with special needs are automatically accommodated and if students of diverse characteristics are treated equitably. Inclusion confronts the pervasive problems of exclusion due to systematic ableism, hegemonic privilege, and elitism. Thus, instructors must consider students' perspectives and proactively structure interactions for a productive and satisfactory pace through a course of learning.

Your syllabus is a contract, albeit tentative, outlining in advance the components necessary for student autonomy and competence: course goals and requirements, course session topics and assignments, and standard procedures for clarifying information and requesting help.

Communicating the structure clearly and in advance helps students plan their very complex lives and helps them anticipate their learning. This also establishes realistic expectations for your students, thereby increasing trust in the instructor and minimizing confusion and anxiety that lead to correspondence fraught with tension and end-of-course surveys laden with dissatisfaction.

In this workshop, you are invited to share lessons learned and troubleshoot drafts. It is appropriate for all instructors, novice to expert: it introduces the first group to effective syllabi elements and opportunities for mentoring; the second group reflects on and refines old habits--informed by new research and examples. Both benefit by the interaction with each other (Shabani & Ewing, 2016).

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Specifications Grading: A Strategy for Inclusive, Meaningful, and Transparent Assessment

Adriana Streifer, University of Virginia; Michael Palmer, University of Virginia; Dorothe Bach, University of Virginia

Specifications grading is an alternative method of evaluating student work that increases transparency in teaching and learning, and focuses on mastery of course learning objectives. Specifications grading has the potential to address many common grading challenges, including cultivating efficient and meaningful practices for faculty, and promoting greater motivation and self-efficacy for students. Participants will learn about different models for implementing specifications grading in various contexts. Participants will then practice designing a specifications grading scheme for a hypothetical course, and consider situational factors that impact the decision to implement specifications grading.

The purposes, processes, and consequences of grades and grading have long been a topic of research in higher education. Conversations have focused on the meaning and validity of grades, efficacy of various grading practices, and the intended and unintended impacts of grades on student motivation, self-efficacy, minority student retention, etc. [1]. Given these challenges, it is no wonder that faculty may struggle to create “meaningful, moral, and manageable” grading schemes [2]. For students, grades can shift their focus away from learning, and toward extrinsic rewards and box-checking. When poorly designed and implemented, grading practices may in particular negatively impact struggling students, who may worry that they do not belong in college, or will lose scholarships. These last factors are also especially likely to impact low-income, minority, and/or first-generation students.

Given these weighty implications, the benefits of fair, meaningful, and efficient grading extends far beyond those for faculty, such as improving teaching and lightening the workload. The benefits redound to students as well by fostering equity, inclusion, and deep learning. We believe that specifications grading promotes learning-centered, well-aligned, and transparent practices. Specifications grading is a method of evaluating student work that increases transparency in teaching and learning, and directs students’ efforts toward mastery of course learning objectives [2].

Research demonstrates the importance of transparency in supporting the educational success of all students, and particularly that of minority and first-generation college students [4]. Specifications grading emphasizes formative feedback, gives students choices about which assignments to complete, and offer the possibility of involving students in creating assessment criteria. In brief, in a specifications grading framework, instructors do not grade individual assignments; rather, students get credit for work that meets all of the specifications articulated for each assignment. Instructors bundle together assignments by quantity and/or complexity, and students earn a course grade by completing (according to the specifications) all assignments within the designated bundle for that grade. By refraining from grading student work, specifications grading aims to divert students’ attention away from grades and refocus it on learning.

Participants in this session will explore several models of specifications grading, and practice critiquing and designing a specifications grading scheme for a hypothetical course. Participants will also join in conversations about the situational factors that may impact the decision to adopt a

specifications grading approach, and about the relationship between specifications grading, inclusive teaching, and meaningful assessment practices. As a result of this session, participants will be able to:

- describe basic principles, theory, examples, benefits, and challenges of specifications grading;
- identify conditions conducive to specifications grading;
- employ a basic framework to design and evaluate well-integrated and aligned specifications grading schemes in their own teaching.

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3. Nilson, L. (2015). *Specifications grading*. Sterling, VA: Stylus Publishing.
4. Winklemes, M. et. al. (2016). A Teaching intervention that increases underserved college students’ success. *Peer Review*, 18(1-2) <https://www.aacu.org/peerreview/2016/winter-spring/Winkelmess>

Strategies to get Students to Engage in The Classroom

Kevin Ayers, Radford University; Tiesha Martin, Radford University; George Philippi, Radford University

This practice session will focus on strategies to engage students in the learning process, have them take greater responsibility in their own learning, and reduce teacher workload. Current literature on the learning process will be discussed and multiple examples of teaching strategies will be shared. Participation from audience members will be requested and open dialogue encouraged.

Goals and Objectives

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

1. Understand current thinking on the learning process and what constitutes effortful learning.
2. Explain and understand the concepts of the active learning process that includes, desirable difficulties, proper feedback, frequent low stakes testing, the interleaving of information, and elaboration and reflection.
3. Be able to use rubrics that students can use to self-evaluate.
4. Design online tests and quizzes that are low stake, frequent, interleave material, and deepen accumulated knowledge.
5. Develop lectures and reviews with technology that engage students to become active members instead of passive listeners.
6. Develop strategies and teaching principles that allow teachers to never again work harder than their students.

Description of Practice

Participants who attend this session will learn about principles of learning and how to facilitate deeper learning through specific teaching principles and strategies. This practice session is meant to empower the teacher to design assignments that create active learning opportunities for students, require greater responsibility, and requires students to participate actively in a self-evaluation and the reflection process. Ultimately, the purpose of this session is to teach teachers to get more from, their students by having them do most of the work. Whoever does the work learns the most.

Participant Interactivity

Participants will actively engage in the presentation by taking an active role in the lecture portion by both prepared information and answering questions using the Socratic Method. Participants will be given handouts containing examples rubrics that are used by students and faculty to help students with a self-reflection and self-evaluation process. Participants will be encouraged to share any other teaching strategies or techniques they have had success with at improving students participation, learning, self-reflection, etc. Other examples from audience members of lessening teacher workload and improving students learning will be encouraged.

Bain, K. What the Best College Teachers Do. Cambridge: Harvard University Press, 2004.

Bean, J. Engaging Ideas. The Professors Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom. San Francisco, California: Jossey-Bass 2011.

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Doyle, T. Learning-Centered Teaching. Putting the Research on Learning into Practice. Sterling, Virginia: Stylus Publishing, LLC. 2011.

Systems Thinking and Student Leadership Competencies in the Classroom

Catherine Cotrupi, Virginia Tech; Kaylynn Hill, Virginia Tech

Utilizing Systems Thinking activities, attendees will learn how to better understand complex social problems and determine their role in both creating and resolving them. According to David Peter Stroh, “Systems thinking motivates people to change because they discover their role in exacerbating the problems they want to solve” (Stroh, 2015, p. 21). During this workshop participants will think critically about their ability to affect change through Systems Thinking and the Student Leadership Competencies. This interactive workshop will include individual and group activities aimed at deepening participants’ understanding of the topics and take-home action steps for greater impact and social change.

Learning Outcomes:

- Participants will be able to define Systems Thinking
- Participants will be able to diagram a systems map and apply it to societal issues they are passionate about resolving
- Participants will be able to evaluate their role in a social issue through a Systems Thinking lens
- Participants will be able to describe the 8 Student Leadership Competencies
- Participants will be able to apply Systems Thinking and the Student Leadership Competencies to their own courses

Timeline:

- 5 Minutes: Introduction to myself, my role at Virginia Tech, and the topics we’ll cover (lecture)
- 15 minutes: Systems Thinking Bathtub Activity 1 (in small groups with large Post-It paper and markers about a broad topic like Poverty, Homelessness, Pollution, etc.)
- 10 minutes: Systems Thinking Bathtub Activity 2 (individually with large Post-It paper and markers about their individual social/environmental issue interests)
- 15 minutes: Student Leadership Competencies- Introduction, Application to course syllabi, Reflection (worksheet, pair & share, then large group report out)
- 5 minutes: Wrap-up, application, reflection, now what? (Large group reflection and then individual action commitments.)

Stroh, D. P. (2015). *Systems thinking for social change: A practical guide to solving complex problems, avoiding unintended consequences, and achieving lasting results*. Chelsea Green Publishing.

Seemiller, C. (2017). *A competency-based approach for student leadership development*. San Francisco: Jossey-Bass.

Teaching Habits of Mind in a General Education Curriculum

Jeffrey Murray, Virginia Commonwealth University; Christopher Jackson, Virginia Commonwealth University; Andrew Marx, Virginia Commonwealth University

This practice session will discuss a pilot project aimed at implementing a habits-of-mind-centered pedagogy into a core-education curriculum, sharing the rationale for, design of, and experiences from this project. Participants will be invited to discuss which habits of mind might constitute the foundation of core-education curriculum (or other courses), and to critique the habits of mind that were selected for the pilot project. Participants will then be invited to work collaboratively to design classroom activities or course assignments that aim to develop selected habits of mind, and to share those assignments and activities with the entire group.

Discussions concerning teaching “habits of mind” in higher education are not new. Indeed, there is a plethora of literature on the subject when one considers not only habits of mind but also related discourses of “moral character,” “holistic learning,” education of “the whole person,” and “formation by design.” [Murray (2016) provides an overview of these literatures.] Yet most of this work centers on pedagogical theory or on the general need to address students’ habits of mind, rather than efforts to actually implement a habits-of-mind-centered curriculum.

Three colleagues at Virginia Commonwealth University (with the help of other members of a “Habits of Mind Faculty Learning Community”) are in the process of adopting a habits-of-mind-centered pedagogy into a three-course Core Education sequence – comprising a two-semester first-year seminar and a second-year research writing course. One purpose of this practice session is to share the rationale for, design of, and experiences thus far in this project and to discuss possible applications of habits-of-mind-centered pedagogy to other courses or curricula.

This pilot project considers how foundational courses could be re-conceived and re-structured based primarily on habits of mind rather than more traditional academic skills. It seeks to foreground habits of mind such as curiosity, introspection, and civility in supplement to (rather than replacement of) skills such as written communication, critical thinking, and collaborative work. The project developed out of shared speculation about whether students would be more engaged if the work of the class were presented in the language of personal and moral development rather than of professional skills development.

Following a brief overview of the project and discussion of particularly salient issues and concerns with the attempt to “teach” habits of mind, session participants will be invited to discuss which habits of mind they believe should constitute the foundation for any such endeavor, be it core-education or other courses, after which they will be invited to discuss and critique the habits of mind that we selected for our pilot project. Participants will then be invited to work collaboratively to design (anew or based on existing) classroom activities or course assignments that centrally aim to develop selected habits of mind, and to share those assignments and activities with the group for discussion.

As discussed above, this practice session will be interactive in two ways. First, participants will be invited to discuss the habits of mind chosen as the primary learning objectives of the pilot project, as well as the experiences of the faculty members engaged in the pilot – and to also share their own similar or relevant experiences in the classroom. Second, participants will be asked to

collaboratively generate classroom activities or assignments (either anew or based on existing activities or assignments in their own courses) that foreground one or more habits of mind, and to share those ideas with the larger group. Finally, participants will be provided with copies of our (still in progress) habits of mind curriculum map as a guide with which to implement their own habits-of-mind-centered pedagogy.

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Teaching Professionalism: Thinking Outside of the 'Internship Box'

Laura Vernon, Radford University; Amy Rubens, Radford University

Teaching professionalism does not only mean training students to acquire a particular job; it also encompasses helping students to develop the skills, abilities, and cognitive frameworks needed to excel in an ever-changing workforce. Internships offer students excellent opportunities to professionalize. However, internships are not always the best or only means for facilitating students' professional development. Outside of internships, how do educators help students? In this discussion-based session, participants will: (1) explore the latest research about professionalism, (2) share their experiences with teaching professionalism in the classroom, (3) discover new strategies for helping students better prepare for work outside the classroom.

Teaching professionalism does not only mean training students to acquire a particular job; it also--and perhaps most importantly--encompasses helping students to develop the skills, abilities, and cognitive frameworks needed to excel in an ever-changing workforce (Hora, 2017). As recent studies indicate, employers echo this sentiment (Hora, 2017; NACE, 2016, NACE 2017; National Research Council, 2012). In addition to valuing technical knowledge and expertise (and the ability to apply it in practical situations), today's employers also place a premium on work ethic, lifelong learning, and problem solving (Hora, 2017). Significantly, these attributes also prepare students to be productive members of their local communities as well as the larger, globalized world.

Internships offer students excellent opportunities to professionalize in the aforementioned ways. However, internships are not always the best or only means for facilitating students' professional development. For instance, students often participate in internships during their junior or senior year in college. They might benefit more from these experiences if they had earlier guidance in developing their professional skills set. In addition, some students may never have internship experiences prior to graduating from college. Programmatic constraints, financial concerns, and geographic location (as determined by students' residences as well as the location of their collegiate institution) all can impede students' abilities to secure and/or participate in internships.

Outside of internships, then, how do we as educators help students develop the professional skills needed for future success? In other words, how do we "teach professionalism" in the classroom? In this discussion-based session, participants will: (1) explore some of the latest research about professionalism, (2) share their experiences with teaching professionalism in the classroom, (3) discover new strategies for helping students better prepare for life and work outside of the classroom. Instructors from across the disciplines are invited to attend, including those who do and do not oversee internships for credit.

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Technology Secrets from Undergraduates

Dawn Rauscher, Flathead Valley Community College; Gretchen Thomas, University of Georgia

Selecting technology tools to engage students and support teaching and learning in our classrooms can be challenging. Fortunately, our students have done much of the work for us. Undergraduate (and graduate) students are self-selecting tools that support communication, collaboration, and presentation. In this session, participants will learn more about tools students are choosing on their own, explore some tools that are new to undergraduates to keep us one step ahead, and share additional tools and strategies that support teaching and learning in our classrooms.

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). Undergraduates have figured out how to use technology to support their own learning through tools that allow them to communicate, collaborate, and share their work. As higher education faculty, we can learn what works best for our students directly from them and encourage more opportunities to use technology to support communication, collaboration, and sharing. When we use the technology tools students are already familiar with, this provides students with the chance to have a voice in their learning experiences while giving them the option to explore the tools in depth as lifelong learners.

During this session, presenters will share vignettes of undergraduates discussing self-selected technology that helps them to be successful in various learning environments. Presenters will then share examples of how undergraduates use tools such as Google Docs/Sheets/Forms, GroupMe, Remind, various online study aids, and similar technologies to support their learning goals. In addition, tools and strategies that undergraduates might not yet know about will be explored. Participants will also be encouraged to share additional tools and strategies that have been beneficial for the students with which they work.

For the bulk of the session, facilitators will use the think, pair, share model to encourage independent and group brainstorming among participants to identify tools and strategies. Allowing opportunities for individual brainstorming combined with small and large group sharing will allow participants to hear ideas from a wide range of content areas and experiences. Session ideas will be collected in real time and shared with participants. Attendees will leave this session with a technology toolbox full of tools that are a good fit with the learning needs of their undergraduate (and graduate) students.

The NMC Horizon Report 2015 Higher Education Edition. (2015, February 9). Retrieved September 14, 2015.

The Case for Authentic Measures of Teaching: Context Matters

Kelly Parkes, Teachers College, Columbia University

Teachers in higher education have been evaluated with mostly static measures for decades. This presentation uses an analysis of the model of student-teaching evaluation to expose the importance of authentic context. Current purported measures, such as ‘teacher performance assessments’ and student perceptions of instruction, will be examined. Critique will be made to illustrate the importance of including context and student outcomes as part of the higher education teaching evaluation paradigm. Tools and techniques for establishing relevant criteria, including reflective self-assessment, focused student learning outcomes, and contextual information, will be experienced with a view toward improved measurement of higher education teaching.

For over 25 years the nature of evaluating faculty in higher education has remained static with dominant features such as (a) observations of teaching quality and (b) student perceptions of teaching (Kulik & McKeachie, 1975; Seldin, 1999) yet the American Educational Research Association (AERA, 2013) recommends that the focus of teaching evaluation should be on relevant student learning outcomes. This model can be seen in higher education when we examine those students learning to become teachers themselves; students enrolled in teacher education programs or ‘pre-service teachers’.

These pre-service teachers undergo a battery of professional and content tests to indicate some degree of readiness, but the cumulative assessment of their ‘teaching readiness’ is the student teaching experience or practicum; an experience that places the developing teacher with an experienced teacher. This focuses on the most important outcome (teaching) and provides evidence of skill and competencies within a specific context. This experience provides the pre-service teacher with a teacher model, with feedback, and with opportunities to directly apply the skills learned. This event is sometimes also seen in the doctoral corollary with the ‘teaching assistantship’ (TA), where doctoral students are ostensibly mentored by faculty in both the art and science of teaching in higher education.

There are positives to this method but there are also drawbacks (Muzaka, 2009; Robinson, 2018), whereby teaching assistants are seen to inhabit uncertain spaces where they are expected to be teachers, researchers, students and employees, with significant pressures developing as a result of the contradictory expectations. There is often little attention on the desired outcome; the specific and contextual competencies needed to be successful in a classroom in higher education. There are many forms of classrooms in higher education; large, small, lecture, tutorial, studio, and digital settings. In the arts, for example, their studio classroom of higher education looks different to those across the wider university. Faculty in studio settings are often assessed, evaluated, and measured differently, to other faculty, based on the outcomes or goals they have set for their students (Parkes, 2014). Generally speaking, all faculty are measured with observations of teaching and student perceptions of teaching but these may not yield enough information for all faculty, regardless of content or setting, to develop professionally as teachers, particularly if they did not encounter a robust or rich teaching assistantship experience.

The purpose of this presentation is to argue for ways in which faculty can focus on determining student learning outcomes and engage in systematic self-assessment, as part of a rich

professional development approach. Taking the undergirding principles of the student-teaching experience, the presenter will provide illustrative examples of the methods in which higher education faculty can demonstrate authentic teaching competencies both in themselves and in the learning outcomes of their students. Participants will be encouraged describe their current evaluation processes. Participants will engage in determining an area of their teaching they would like to focus on or improve and then participate in focused self-study, syllabus study, peer conversations, video scoring and discussion.

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The Magical History Tour - Providing an Immersive Learning Experience

Bill Grose, Wytheville Community College

I redesigned a US History class to eliminate the cost of textbooks, incorporate site visits, and place near total control of the learning experience in the students' hands. The class is a holistic learning experience that challenges preconceptions about the content & about the process of learning.

I will share my lessons - good and bad - in finding and using low cost/no cost content, how to leverage college's resources, and expand students' learning opportunities and thus students' success in ways that foster student-driven/student-centered authentic learning through an innovative and participatory setting. Student success and true learning is directly tied to how much agency a student has over their own learning. Likewise, the greater relevance and immediacy that content has to the student's life experience, and the level of interest a student has in a given subject translate into deeper learning and greater content retention. Allowing students to select their content (within certain parameters), define their own goals, and share these with their peers helps inspire and validate their learning process.

We live in a global society. We need to approach our student's worlds in a way that will broaden and enrich them, especially now that Civic Engagement is one the new SCHEV core competencies. Our students need to learn that learning is a process; indeed, it's often more about the journey than the destination (no pun intended.) Last but not least, the cost of an education is always increasing. Book prices go higher, tuition rises, fees increase, but the reward remains the same. My redesign adds new dimensions to their learning - getting more for their money's worth, I'd argue.

Some years ago I chaperoned a field trip to New Orleans. I was astounded by how many students hadn't been more than a few hours' drive from home, let alone out of state. This inspired me to look at ways I could broaden their horizons and do so in a meaningful way. Likewise, History is often thought of dull, staid "boring old dates." Redesigning the course as a seminar, heavy use of primary sources, and incorporation of travel impart a sense of immediacy and relevance to their studies. Students in my class take turns teaching the class through shared writings, student-defined/designed lesson plans, student-led discussions, and even student-led site tours.

The Studios Model: Designing Open Spaces for Creativity and Innovation

Sara Sweeney, Virginia Tech; Patrick Tomlin, Virginia Tech

The Studios at Newman Library are a series of spaces designed to support students developing 21st century skills and a stronger understanding of emerging technologies, regardless of their academic affiliation. Come learn about the philosophy and values that drive the development of these spaces and engage in an activity to get you thinking about how you might use the studios model to address a learning need on your campus.

Our official philosophy explains: “The Studios exist because we believe that creativity is as critical a skill as literacy. We believe that students require new ways to create, collaborate, and engage emerging technologies in order to be successful in the 21st century. We also believe that well-designed learning spaces can be tools to shape meaningful interactions, make innovation tangible, and spark community.

By following these principles, we strive to create an integrated experience across the Studios and empower students to unlock their creative potential.” As such, the design and management of these spaces are rooted in the following values:

- People-centered - our users’ needs drive the design of our spaces and the services therein
- Accessible - the studios are free and available for everyone regardless of their academic affiliation or skill level
- Hands-on - learning in these spaces is informal and often occurs peer-to-peer
- Playful - we encourage prototyping, experimentation, trial-and-error, and risk taking as necessary aspects of the creative process
- Community - creativity is a collective endeavor, and thus we strive to build partnerships and support collaboration as part of our service
- Adaptive - the studios are constantly evolving based on changing technologies and the changing needs of our users.

The creation of the studios was guided by a number of theoretical and pedagogical principles that will also be explored in the session. These include: theories of community of practice (Wenger, 1999), predicated on peer learning and collective knowledge through domain exploration; the iterative processes of design thinking developed over the past decade by IDEO and the d.School (Kelley, et al., 2001; Brown, 2009) to foster innovation and creativity in education; and the language of interaction design, specifically as applied to user experience of emerging technologies (Kolko, 2011).

For the first 15-20 minutes, we hope to explain the philosophy and values of the studios network, the scholarship in which they are rooted, and how they play out in reality (warts and all). For the last 30-35 minutes, we will use a small-group activity to engage participants in a miniature version of the process by which we design a new studio. First, each group will choose an emerging technology or 21st century skill that they believe would benefit students across their campus. They will then apply the studios model to create a one-page proposal for that space. Finally, we will give a few teams an opportunity to present their proposal for feedback.

The goal of this session is to get participants thinking about the needs of their campus bodies and how they might work with their own library (or other un-affiliated space) to address those needs. The Studios at Newman Library hardly exhaust all emerging technologies and 21st-century skills, and we hope participants will be inspired to think about how their campus might benefit from broadly accessible spaces with low barriers for entry.

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Transferring Skills and Theories into Civic Engagement: Expanding Your Courses

Denise Wilkinson, Virginia Wesleyan University; Kathy Stolley, Virginia Wesleyan University;
Robin Takacs, Virginia Wesleyan University; Brian Kurisky, Virginia Wesleyan University

In this interactive session, an interdisciplinary team representing our Center for Innovative Teaching and Engaged Learning and Wesleyan Engaged: Center for Civic Leadership and Service Learning will focus on practical, theoretically-based strategies for incorporating 21st century skill-building into civic engagement courses and projects.

Teaching strategies that engage today's student are experiential, learning-centered, and problem-focused. Projections suggest that higher education will change more in the next ten years than it has in the last forty years put together. Academic cultures are changing rapidly due to new modes of knowledge production, a greater need to work collaboratively, and the growing impact of a new generation of scholars. Today's global citizens and employees must possess transferable knowledge and 21st century skills as well as disciplinary knowledge.

Twenty-first century skills are a set of abilities that students need to succeed in the information age and include learning new skills (i.e. leadership, communication, time management and organization), literacy skills and life skills. A growing body of literature demonstrates that civic engagement is a beneficial vehicle to build these skills in venues that promote not only student development but also explore or identify community needs and encourage civic responsibility. Civic engagement approaches can also be designed and expanded to encourage transformative and life-long learning.

The presenters will ground this presentation with a brief review of the literature on twenty-first century skills, with an emphasis on their theoretically-based connection to civic engagement. The core of the session will include activities, projects, and community engagement course components illustrating different levels of engagement - appropriate for different purposes, classes, students, partners, and faculty.

Participants will learn activities that may begin in the classroom through a disciplinary lens, and be expanded to build transferable skills. These examples will encourage activities building on considerations such as: What skills do students already have? What have they practiced in class? What skills can they/want to/need to/should develop through community engagement activities? How can community engagement help them expand their skill sets? How can they document and sell those skills to employers, and use them elsewhere in their personal or civic lives? How will this be purposeful? What is the role of reflection in both the short and long-term?

Examples will build on these introductory/low level illustrations that can be conducted in one class session to higher level projects and activities that encourage deeper, transformational learning. Additionally, the presenters will share a personal skills inventory worksheet approach and information on E-portfolios which incorporate service learning, civic engagement, and reflection to help students share their experience through artifacts (uploaded links, photos, projects, papers, and arts) that demonstrate their skills, abilities and accomplishments.

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Transforming Education with Infographics as Assignments

Kristen McAuley, Pennsylvania State University; Tinukwa Boulder, Pennsylvania State University

Infographic assignments can be valuable tools to encourage problem-solving and information recall. Infographics encourage students to think about the course content in different ways, aiding in comprehension and understanding. Attend to learn how to incorporate infographics in your course.

Abstract

This session aims to both highlight educational theories that support the use of infographics as assignments in the classroom and provide examples of how to successfully implement infographic assignments. Kristen McAuley is a lecturer in marketing and uses a variety of technological tools in her courses to promote digital fluency. Tinukwa Boulder is an instructional Designer in the Center for Teaching Initiatives and supports faculty in course design and research initiatives. Incorporating infographics into assignments can help students interpret and understand course content in meaningful ways. In this session, we will present relevant learning theories and discuss how infographics can fulfill learning objectives. We will also review best practices for introducing the concept and discuss evaluating the outcomes.

Proposal

Graphics like mind and concept maps help with information recall because “graphics convey information more efficiently than text” (Nilson, 2010, p. 19). Using graphics means that we use less working memory resulting in reduced cognitive overload. “Graphics are less taxing on the mind to comprehend, and people can make inferences from them more easily” (Nilson, 2010, p.18). In coursework, an infographic assignment can be a valuable tool to encourage problem-solving and information recall. Infographics encourage students to think about the course content in different ways, aiding in comprehension and understanding.

Proponents of dual coding theory assert that there are two types of long-term memory systems, semantic and episodic. Semantic memory refers to long-term memory that stores ideas, facts, and concepts such as countries and capitals, names of colors, etc. Episodic memory stores personal experiences and associated emotion, time and place, etc. According to Nilson, using graphics helps store information in both semantic and episodic memory systems (Nilson, 2010). When created successfully, infographics can effectively convey data in more interesting and concise ways than traditional reports and assignments.

Graphics such as concept and mind maps have been shown to enhance complex cognitive processes such as processing, organizing, developing, remembering and storing information. Graphics provide a way to help structure information in a meaningful way (Novak, 2008). Another added advantage of graphics is that they can be “communicated across cultures” (Nilson, 2010). Graphics like advance organizers can be used to organize current knowledge as well as make connections to new information.

Goals and Objectives

Participants will gain an understanding of learning theory and its application to infographic assignments. Participants will have an understanding of the various software tools available for

infographic design and how to use them. Participants will learn the basics of assessing scholarly infographic assignments.

Description of Practice

This session will begin with an overview of supporting learning theories, examples of infographic assignments, and an overview of best practices for assessment. Presenters will go over current infographic software including beginner and advanced options. Attendees will be given a prompt and then will have the opportunity to use the knowledge gained from the presentation to design an infographic using a template. Attendees do not need to bring a computer to participate; the template will be on paper.

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Using Data to Design Learning Opportunities that Improve Student Engagement
Brett Jones, Virginia Tech; Trudy Harrington-Becker, Virginia Tech; Stephen Biscotte,
Virginia Tech

Instructors are more likely to improve students' engagement in their courses when they are equipped with knowledge of research-based principles of student engagement and collect data from their students. The purpose of this session is to (a) present research-based principles for improving student engagement; (b) outline a process for collecting student data, analyzing the data, and implementing strategies to improve engagement; and (c) share an instructor's experience of using these processes to improve students' engagement in her large introductory history course. Attendees will have the opportunity to reflect on engagement in their own course and consider strategies for improvement.

The MUSIC® Model of Motivation (Jones, 2009, 2018) is a model created for instructors to use to develop instruction that will motivate students and engage them in their learning. 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: eMpowerment, Usefulness, Success, Interest, and Caring (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, 2. understand why what they are learning is useful for their 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, 2018). Instructors can assess their students' perceptions of the five MUSIC model components by using the MUSIC® Model of Academic Motivation Inventory (Jones, 2017). The MUSIC Inventory helps instructors determine their strengths and weaknesses related to motivating students by measuring 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, 2016).

In this session, we will begin with an interactive activity that helps faculty learn about their personal teaching strengths and weaknesses related to motivating students. They will complete a brief questionnaire related to one of their courses and we will explain how to interpret the responses. Next, we will walk through the learning design process that can be used by an instructor to collect data on student engagement, analyze the data to look for problem areas, and then explore evidence-based strategies that can be used to engage students. One presenter will share how she participated in this process to examine problem areas (e.g. usefulness and interest) and implemented strategies (e.g., incorporating more videos and interaction into lectures, relating content to modern world) to improve student engagement in her introductory history course. Results will be presented from before and after she implemented these new strategies in her course. Finally, we will offer attendees the opportunity to analyze their own data and consider strategies that might improve student engagement in their classroom. Participants will be encouraged to share ideas and ask any questions related to the model, process, or own perceptions.

By the end of the session, participants who pay attention will: (1) have a better understanding of their strengths and possible weaknesses as a motivating instructor, (2) be able to describe some

evidence-based principles of motivation science that explain why students are motivated to engage in their courses, and (3) have identified and shared some teaching strategies that they can use to motivate their students.

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Using ePortfolios as an Assessment Tool for 21st Century Skills

Miguel (Miko) Nino, Virginia Tech

In this sessions, participants will become familiar with the use of electronic portfolios (ePortfolios) in the classrrom as an evidence of learning and assessment tools for 21st century skills such as communication, creativity, critical thinking, collaboration, expertise in technology, and others. Participants will also learn how to build sound rubrics, group work, and instructional activities as part of formative and summative assessment in ePortfolio implementation. Participants will develop an assessment plan that they can implement in their classes and instruction.

One of the most important challenges in teaching and learning is the fostering and assessment of 21st century skills. These skills that include communication, creativity, collaboration, and critical thinking, are important for students in the learning process and are necessary to become strong and competitive professionals. Besides designing instruction that fosters these skills in students, it is important to design assessment strategies to determine if students have met the learning outcomes aligned to these skills. One of the reasons why ePortfolios have become stronger in higher education is because of their potential to foster and asses these 21st century skills in students.

In this session, participants will learn how to integrate ePortfolios into their instruction and teaching create learning experiences that allow students to practice and acquire these 21st century skills. Furthermore, participants will be able to use ePortfolios to assess students' knowledge, skills, and abilities, focused on 21st century skills. As part of these assessment strategies, participants will learn how to develop sound rubrics, how to assess in-person and online group work, and how to use open and free technologies related to ePortfolios to assess students' work and to provide timely feedback. During the presentation, participants will develop an assessment plan, using a course or class of their choosing to apply the principles discussed by the facilitator.

Using High and Low Tech Tools for Student Assessment

Nancy Luke, Western Carolina University

This session will present and encourage sharing and discussion on various innovative tools and strategies to gather formative and summative assessment data in the college classroom (face-to-face and online). Ways to leverage technology to assess students will also be shown with specific examples from the presenter's teacher education courses in which Padlet, Tricider, EdPuzzle, FlipGrid and other free, web-based technology tools are used for formative and summative assessment. Attendees will be encouraged to share their own innovative ideas and approaches to assessment both with and without technology.

Assessment is an essential part of college instruction that goes well beyond scoring student work and assigning a final grade for the class. Both formative and summative assessment can provide students with information (scores as well as feedback) that helps them focus their energies and attention to be most successful in the course while insuring they are meeting learning outcomes. These assessment data can also give instructors relevant and, in some instances, just-in-time data upon which to base instructional decisions both while the course is being taught and subsequent to its completion at the end of the term. Assessment data can guide instructors to effectively respond to the needs of students in the midst of teaching the class and provide a rich source of information for future course modification and refinement.

As innovative faculty, we can go beyond the traditional approaches to gathering assessment data (e.g. scores on quizzes and tests, use of rubrics for class assignments) and use technology tools to formatively assess how students are learning in the moment as well as summatively assess their progress at key points in the course. As a teacher educator, I have gathered formative assessment data using low tech methods such as student responses on the class attendance sheet as well as exit tickets asking for the "muddiest point". I have also found useful a collection of high tech tools such as Padlet and Tricider to support a KWL (what do you think you Know, what do you Want to learn, and what did you Learn?) formative assessment strategy. To summatively assess student learning outcomes (SLOs), I have used technology such as EdPuzzle and Google Forms successfully with students. In this session, I will share examples of how I have used low and high tech tools for formative and summative assessment with my students and encourage conversation among the attendees to contribute their own ideas and practices for formative and summative assessment across their disciplines.

Visualizing Justice: Graphic Novels and Citizenship Education

Angelo Letizia, Notre Dame of Maryland University

Graphic novels and comics may be a fruitful way for faculty and students to wrestle with the skills and dispositions needed for citizenship in a republic. This session is intended for both social studies methods instructors as well as any other instructor looking for ways to teach these concepts and/or broaden their research capabilities. I will provide practical strategies for facilitating discussions on graphic novels and citizenship in the classroom, as well as guides for student comic creation. I will also provide insights for faculty who want to use the graphic novel format to present their research.

A number of scholars have examined the use of comics and graphic novels in the classroom. Thompson (2018) has students create their own graphic novels to help them understand the writing process and such elements as character development and world building. Hoeness-Krupsaw (2018) examined the merits of Congressman John Lewis' memoir *March*, told in graphic novel form. Chisholm, Shelton and Sheffield (2017) looked at the impacts of Gettysburg: The Graphic Novel in the classroom. Cromer and Clark (2007) examined how graphic novels can be used to teach historical concepts. Meyer and Jimenez (2017) looked at different reading strategies to enhance graphic novel instruction. As such, there may be great potential for using graphic novels in the classroom. I specifically look at this potential in the social studies.

While some of the above scholars examine the use of graphic novels in understanding concepts from the social studies however, my proposal argues for the use of graphic novels to help students understand a crucial aspect of the social studies: preparation for citizenship (Banks, 1999). I draw on the notions of skills and dispositions (S/D) needed for citizenship (Banks, 1999; Cohen, Levine & Pickeral, 2010). The use of graphic novels may help students and faculty exercise these S/D. While the list of S/D needed to function in a republic varies, some common skills are cooperation, listening, critical thinking, evaluating information and flexible problem solving, whereas some dispositions are belief in equality, belief in human dignity, social responsibility to name a few (Banks, 1999; Cohen et al., 2010).

I argue for three components below that I will demonstrate in the practice session which can help faculty and students develop these S/D. The S/D framework is a compilation of ideas from a number of sources which outline the S/D of the social studies and combines them with insights from graphic novel creation (McCloud, 2006). This framework can be used to guide student analysis of graphic novels and discussions of them in relation to S/D and how the art and words of a graphic novel either promote or hinder them. (Some examples of prompts are: Does a leader's stoic face hinder her ability to cooperate despite her words? Are characters drawn to highlight their inequality?) I will provide graphic novel excerpts and the framework and facilitate a discussion with attendees. The second component is the creation of a mini-comic (Thompson, 2018), as a way to visualize certain S/D. Graphic novels can be thought of "writing with pictures," (McCloud, 2006, pg. 8). Following this insight, we will write about S/D with pictures and explore new ways of understanding and presenting S/D. The final method is an examination of three graphic novels created by academics (my own graphic novel, *Toward the Real*, which is under consideration, Sousanis' *Unflattening*, and Ayers and Tanner's *To Teach*). I will use these sources to facilitate a discussion of how the graphic novel format can be used by academics and researchers to promote S/D of the social studies in new ways.

VTDITC: Hip Hop Pedagogy Meets Transdisciplinary Experiential Learning
Craig Arthur, Virginia Tech; Freddy Paige, Virginia Tech; Kimberly Williams, Virginia Tech;
Anthony Kwame Harrison, Virginia Tech

#VTDITC: Hip Hop Studies at Virginia Tech, established in 2016, is a groundbreaking program that connects our communities' interests with the resources available to them. Fifteen partner organizations have created a series of programs that celebrates creators. Our mission is to remove barriers to entry, to recognize art as scholarship, to learn by doing, and to have fun. Join an anthropologist, an engineer, the Director of our Black Cultural Center, and a librarian as we guide you through a process you can use to start a similar program. We look forward to sharing what we have learned with you.

#VTDITC, or Digging in the Crates: Hip Hop Studies at Virginia Tech, now in its third year, is a groundbreaking program that connects our communities' interests with the resources available to them. It is a multi-faceted, culturally-enriching, and adaptive series of experiential learning co-curricular programs that largely take place in our university libraries. The series is cosponsored by a diverse group of roughly fifteen organizations; the crew includes several creative arts-focused student organizations, the campus radio station, the Women's Center, the Department of Africana Studies, the Black Cultural Center, a living/learning community, several academic programs, numerous other campus units, and, of course, the University Libraries.

At the time of this proposal, we have designed, developed, and assessed roughly 100 co-curricular programs. For example, we host weekly open studio hours in a makerspace in the main campus library; local hip hop arts practitioners and guest artists from across the globe have been kind enough to share their craft with the community. Additionally, through our monthly seminar series, we have explored topics dealing with issues of mental health, gender, race, fair use, and entrepreneurship - to name but a few. Through our programming, #VTDITC intentionally prioritizes students as active creators of information rather than mere passive information consumers. The Leadership Board strives to center student and practitioner voices while also including academic perspectives. The program's core guiding mission aims to remove barriers to entry, to recognize art as scholarship, to learn by doing, and, most importantly, to have fun.

After three years of regular programming, we look forward to sharing the lessons we have learned from this ongoing project with you. Join an anthropologist, an engineer, the director of our Black Cultural Center, and a librarian as we guide you through a process that you could use to start a similar co-curricular experiential learning program at your institution. Participants will leave this session able to articulate how a do-it-yourself ethos can be used to create meaningful and potentially transformative co-curricular programming. Additionally, they will have a chance to identify strategic and meaningful partners at their own institutions. Participants will be guided through a process they can use to design a rough draft of a collaborative, culturally-enriching co-curricular program that is responsive to the needs of the various communities their home institution serves.

Wellness Framework for Next Leveling Education through Indigenizing the Curriculum

Mae Hey, Virginia Tech

This workshop introduces a wellness framework that assists with aligning contemporary teaching with ancestral Indigenous pedagogy. We will then implement the framework into enhancing lesson plans the participants currently use.

Learning Objectives:

1. Introduce the wellness framework for aligning curriculum with traditional Indigenous pedagogy.
2. Use the wellness framework to enhance a lesson, unit, or curriculum the participant is already using or plans to use with students.
3. Share ideas with peers.

Materials:

Computer connection, LCD projector, screen, lessons participants wish to work with relevant to their work.

Process:

The wellness framework will be introduced. They will look at a lesson, unit, or curriculum they are currently developing and use the framework to consider how their lesson fits into and can be enhanced by attending to all the quadrants: 1. supporting natural learning instinct, 2. balancing the experience through the intellectual, physical, social, and emotional, 3. building identity, and 4. looking to how the lesson encourages behaviors for becoming a better being.

The participants will explain their lesson, unit, or curriculum to thought-partners in their table groups. The participants will reflect by answering the following questions: 1. Describe the wellness framework presented, 2. What are some things that you want to remember from this session?, 3. What will you use from this session in your current projects?

Implications:

1. Relevance for participants--the participants will get to work collaboratively on curriculum directly relevant to the lessons they are orchestrating for students. The participants will network with each other to build professional connections and thought-partnerships with peers.
2. Relevance for students and education--the lessons being orchestrated for learning experiences in use today will be enhanced through their alignment with the teaching wisdom of the ancestors.

RESEARCH SESSIONS

Can a Social Intervention Improve Student Learning?

Kevin Ayers, Radford University

The purpose of this study was to determine if a social intervention between a faculty member and a student would improve student evaluation scores and improve student learning outcomes. Results indicate that establishing a “social” relationship between student and faculty can have beneficial impacts on student self-reported satisfaction, faculty course evaluations, and learning outcomes.

Research Questions

1. Can a social intervention, sharing a meal with students, positively impact learning outcomes for a Sport Management course?
2. Can a social intervention positively improve course evaluations from the perspective of the student?
3. Can a social intervention improve the student’s perceived learning for a course?
4. Can a social intervention increase the work load effort as reported by students?

Description

In an introductory sport management course students signed up for and met with their professor for either breakfast or lunch during the first nine weeks of the fall 2017 semester. In a second section of the same course no such intervention took place. The professor met with students and shared a meal and allowed the students to dictate the conversation during the meeting. By the end of the 14 week semester the professor met with a total of N=27 students for a meal.

At the end of the term students completed course evaluations and items from the evaluations were analyzed. From the student evaluations, averages and standard deviations were compared from three areas and two items. The three areas were: Global Index Score; Instructor Evaluation; Course Evaluation; and the two items were *learned a great deal in this course*; and *I put in a great deal of effort into this class*. Student perceptions on these three areas and two items were evaluated on a five point Likert scale corresponding to the following: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree.

The Global Index Score combined answers from student perception about the course and about the professor. The Instructor Evaluation Score came from seven questions about instructor effectiveness and the Course Evaluation Score came from five questions concerning course content, delivery and course demands. In addition to the three areas and two items, class averages between the two separate class sections were compared. Finally, the author look at historical scores on all measures from the fall of 2012 until present and compared them to the intervention class scores.

Discussion

This study suggests that student perceptions of courses and instructors can be positively influenced by a social intervention with the instructor. It also indicates that students perceive that they work harder and learn more when a social intervention with the course instructor takes place. Unfortunately, there was no significant improvement on final grades with the introduction of a social intervention. Another important outcome of this study was how much the instructor enjoyed getting to know his students better. It was one of the most enjoyable semesters this instructor has ever had in his twenty-plus years of teaching at the collegiate level. Currently, all

students enrolled in the introduction to sport management class are invited to have a meal with their instructor. Bon appetit!

Can Empathy Be Taught?

Peter Eubanks, James Madison University

Can empathic thinking be taught in the classroom? Recent studies suggest that today's college students may be more isolated, less empathetic, and more narcissistic than previous generations, at a time when the world is increasingly shrinking yet also becoming more insular and divided at the same time. The capacity for placing oneself within another's worldview—empathy—is thus becoming an invaluable skill. This workshop provides models for engaging students in empathic thinking through discussion-based learning, assessments articulated by scholars and teachers of empathic pedagogy, and in-class exercises that encourage students to engage with different viewpoints and worldviews.

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Faculty participants will make progress toward these program outcomes: understanding some of the current pedagogical research available on teaching empathy in the classroom; creating classroom activities and assessments that engage students in empathic thinking. Faculty participants will make progress toward these teaching outcomes: Appreciating pedagogy—the art and science of teaching and learning—as a significant higher education endeavor, Identifying factors that influence pedagogical choices, and Creating assignments and/or courses that support higher-level learning (deep learning).

Can They Learn without Grades? A Phenomenological Approach to Assessment

Brian Sohn, Carson-Newman University; John Smith, Pellissippi State Community College;
Kathy Greenberg, University of Tennessee; Neil Greenberg, University of Tennessee; Sandra
Thomas, University of Tennessee

College grades present problems for instructors who understand the discrepancy between what students gain from a course and how they perform on course assessments. Authors in this session describe examples of self-reported learning from a graduate seminar without grades. The lack of grading was a part of a phenomenological approach practiced by the professor. Using case study and phenomenological methodology, data were collected during the course in the form of written post-class session reflections, focus group, and individual interviews. These data include rich descriptions of spontaneous application of abstract content to the personal and professional lives of participants.

From K-12 to higher education, grades vary among teachers and departments. The multi-dimensional nature of grades is well known and well documented (Brookhart et al., 2016). Grades influence students and instructors to prioritize performance over deep learning (Pollio & Beck, 2000). A checklist mentality towards courses, in which students see each course as simply a requirement along the way to completion of a degree (Johannsen & Felten, 2014), encourages a kind of gaming of grading systems (Muller, 2018). Alternatives exist, such as pass/fail systems, in use at various colleges and universities across the country (e.g., The Colorado College). There are also instructors that do not assign grades at all. The research in such situations is rare—a search in Education Source revealed only a handful of case studies (e.g., Medrick, 2015). The need for knowledge about the potential outcomes of a gradeless course is clear.

The study described here is drawn from a larger study on just such a course. On the first day of the course, the professor told students, “You will have to work hard not to get an A in this course.” Despite the lack of grades, students attended and participated both inside and outside the course. In fact, (AUTHORS) found that students experienced transformative learning. No direct connection to lack of grades was noted in the study, but here we take an opportunity to examine what learning was reported by students in the course.

The research was conducted at a large university in the southeastern United States. Participants were graduate students enrolled in a variety of programs. The 21 students enrolled included an undergraduate, 11 females, 10 males, two students of color. The well-regarded professor of the course had emeritus status and practiced a phenomenological approach (AUTHORS). Data collection included written post-class reflections for each class session, focus groups, and interviews. Analysis of the data followed (AUTHORS) and categorical inductive analysis (Saldaña, 2015).

There were three major themes of the study: students gained A New Way of Seeing, expressed Openness, and saw the Interconnectedness of All Things. The presentation will share subthemes and examples of quotes to support them. The categorization yielded information that fell outside the phenomenological analysis. Students reported learning that was private and public; personal and professional. Noted within each instance of reported learning were the influence of the instructor, the content, or other students in the course. Due to the fact that a single reported outcome may fall into multiple categories, exact percentages would be meaningless. However,

among participants, trends were evident and will be shared. The evidence of transformative learning supplied by students should be eye-opening for any instructor who insists on the necessity of grades and grading. While it is not possible to corroborate all of these self-reports, the evidence in the reports may not be unique. The lack of existing research on courses without grades gives no evidence upon which to make a claim. Future research could provide more information to scholars of teaching and learning in higher education.

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Communicating Performance: First-Year Writing Syllabi as Rhetorical Contact Zones

Olivia Sederstrom, Virginia Tech

This presentation seeks to provide an analysis of first-year writing syllabi as rhetorical contact zones. It seeks to answer several questions regarding not only the scholarship surrounding the study of syllabi, but also provides a clear rhetorical foundation from which users of syllabi—instructors and students alike—can build a better discussion on how the genre functions as both communicative and performative. I address the many voices at play within the genre of first-year writing syllabi and how those multi-voices are assembled to create new literacies.

This presentation seeks to provide an analysis of first-year writing syllabi as rhetorical contact zones. Ross Collins in “Genre in Discourse, Discourse in Genre: A New Approach to the Study of Literate Practice” calls for genres to be discursive performances rather than sterile containers for classification. To accomplish this, Collin introduces an idea well-known in composition studies: contact-zones as sites for discourse. My project answers several questions regarding not only the scholarship surrounding the study of syllabi, but also provides a clear rhetorical foundation from which users of syllabi—instructors and students alike—can build a better discussion on how the genre functions as both communicative and performative.

Fortunately, much of the scholarship in composition studies involving genres discusses how genres can be seen, not only as sites for invention, but as sites whose strict guidelines and structure, stifle creativity. However, most of this scholarship focuses on the relationship between genres and students, very little has been published addressing how educators are learning to navigate this genre and create sites for invention and creativity. My research would help in opening up a small window for further study into the overlooked relationship of academic genres and the educators required to use them, specifically the genre of first-year syllabi. These connections are implied in syllabi scholarship, but rhetorical consideration is never explicitly stated. I tend to think of this implicit versus explicit stating of frameworks not existing as a gap in the research, but rather as an opportunity to reinterpret the existing research.

Using the framework of the rhetorical contact zone, I will address the many voices at play within the genre of first-year writing syllabi and how those multi-voices are assembled to create new literacies. In regards to how the genre functions rhetorically within first-year writing programs, I ask: 1) In what ways are these generic devices being used to create a barrier for learning, 2) In terms of engagement between author and text, what space is there for engagement in a discourse—syllabi—that is so heavily surveyed and, 3) How does reading the genre this way—looking for instances of regulation and surveillance—connect with ideas concerning procedural and tactical rhetorics?

Comparing Pink Time in South Korea and the United States

Timothy Baird, Virginia Tech; Eunbae Lee, Catholic University of Korea

Diversity is growing in university classrooms bringing together students from dramatically different cultural contexts who have wide-ranging perspectives on teaching and learning. Unsurprisingly, this shift creates new challenges – and new opportunities for instructors. Here we apply a new-type of assignment, called Pink Time, in university classes in United States and South Korea – and ask the question: how will students from comparatively individualistic and collectivistic societies respond to a course assignment that offers them a radical degree of autonomy? Regression analyses show that the assignment can bridge cultural divides, especially when instructors create supportive learning environments.

In an increasingly global educational landscape where university students are regularly crossing borders to attend school, study abroad, or seek internships, classroom strategies are needed to promote course engagement, intrinsic motivation, and critical self-reflection across socio-cultural divides. Diversity is growing in university classrooms bringing together students from dramatically different cultural contexts and who have wide-ranging perspectives on teaching and learning. Unsurprisingly, this shift creates new challenges – and new opportunities for instructors.

Here we apply a new assignment, called Pink Time, in university classes in comparatively individualistic and collectivistic societies - specifically the United States and South Korea, respectively. The assignment, which asks students to “skip class, do anything you want, and grade yourself” provides a radical degree of autonomy and corresponding opportunity for self-regulated learning (Zimmerman, 1990). The assignment, which was first developed in 2013 (Timothy D. Baird et al., 2015) has been used with hundreds of students, in dozens classes at several universities in the US. Ongoing study of the assignment has found that it can be adapted to suit different course types and instructor preferences (T. D. Baird et al., In review). As far as we know, this is the first application of the assignment outside the US.

One concern with an assignment like this, which promotes individualism and self-authorship in the learning process, is that it is poorly suited for cultural and/or educational contexts that are traditionally more collectivistic and where educational norms and expectations are more top-down and rigid. Here we ask the question: How will students from comparatively individualistic and collectivistic societies respond to a course assignment that offers them a radical degree of autonomy? To address this question, we ran the assignment in two courses – one in large, public university in the US and one in a smaller university in South Korea. We then conducted a structured end-of-semester survey in each course. Altogether 108 students were included in the study. The survey instrument collected demographic information (i.e., gender, age, and year) as well as students’ responses within several thematic constructs drawn from Self-Determination Theory (Deci & Ryan, 2000). Included are an intrinsic motivation inventory (IMI) to assess students’ level of engagement with Pink Time; a relative autonomy index (RAI) to measure whether students’ motivation toward the course was more autonomous or controlled; a learning climate questionnaire (LCQ) to indicate students’ perceived autonomy support from their instructors (Black & Deci, 2000); and measures of students’ individualistic and collectivistic sensibilities (Sharma, 2010).

Simple stratified means tests showed significant differences between the US and South Korea for most measures. In addition, we fit linear regression models estimating the effects of multiple factors on IMI. Our findings indicate that while measures of IMI (representing student's positive experiences with Pink Time) vary significantly between countries, differences are attributed to variation in the learning climate, gender, and individual measures of relative autonomy. These findings show that Pink Time can be an effective tool to promote course engagement and intrinsic motivation in diverse contexts, especially when instructors create supportive learning environments.

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Creation of an Interdisciplinary, Data-Centric Training Program for Students

Jonathan Briganti, Virginia Tech

Utilization, manipulation, and visualization of data are quintessential skill for students entering the workforce. Student programs that focus on curating interdisciplinary, applied skills are essential in obtaining skills necessary for student success, regardless of discipline major. To support experiential experiences in data sciences for students, DataBridge was formed to expose and engage students in research projects across all disciplines while centered as a hub for interdisciplinary, data-centric learning. Utilizing pedagogical-focused frameworks for program creation, we have developed a model program using high impact practice rubrics, to provide a students with necessary workforce and career development in the data sciences.

Hands-on, applied training in data sciences, regardless of major discipline, presents as a necessary and required experience as students enter the workforce and professional schools. To meet the needs of students and provide experiential learning experiences to enhance career success upon graduation, a new program called “DataBridge” has been created. Beginning in May 2018, DataBridge was formed in Data Services at University Libraries, and focuses on utilizing student consultants to assist in data-driven work stemming from clients across the Virginia Tech community. The uniqueness of centering this program in the library allows students to work in interdisciplinary teams, across all disciplines, on problems and in domains that some students will not interact with during their college careers.¹

DataBridge has been designed to incorporate high-impact practices within a structured framework² that is theory-based to facilitate experiential and organic learning, while providing training and experience in data sciences. To facilitate students entering the program from any discipline and with no previous data science training, we have incorporated additional teaching elements onto the foundational and training curriculum in data sciences. These elements include introduction to basic research methodology, critical and problem solving skills, and consult communication strategies. Additionally, the DataBridge framework rests on the tenants of curriculum and training that has been developed from past experiences in consulting and is created for individuals with no experience.

The curriculum stems from the understanding that data-driven problems are typically ill-defined and require an understanding behind the logic of data, programming, and developing practical solutions. To address this, we have converted past projects into a curriculum that creates a foundation of knowledge for students to learn before they begin client work. Students learn skills in data visualization, analysis, data cleaning, programming logic, and consulting practices. Students are encouraged to be autonomous and independent workers, while having a peer-peer and mentee-primary investigator relationships.

To quantify the development of student skills and workforce preparedness, high impact practice(HIP)-based rubrics have been implemented to assess deliverables and reflections of students.³ Centering on HIP-based outcomes enables us to frame learning objectives that apply to all disciplines. Rubrics and assessments are applied to student-client interactions and solutions implemented, and are paired with surveys given at the beginning and end of each semester. Assessment on reflections focus on the student’s perception of Data Bridge, the work they are

doing, skills they would like to develop, and how applicable the program is to their career path. As this program was piloted over Summer 2018 and Fall 2018 is its first semester with full implementation of the framework, conclusions are drawn from student perceptions towards the program. Students from across disciplines have highlighted the data-centric skills they have developed, the positive impact having unique problems to add to resumes, and an increase in drive to mentor others around them. This research session focuses on the theory behind building this program, its implications in workforce development, and its preliminary outcomes, methods for implementation, and future directions.

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²Brown, Anne M., Stephanie N. Lewis, and David R. Bevan. “Development of a structured undergraduate research experience: Framework and implications.” *Biochemistry and Molecular Biology Education* 44.5 (2016): 463-474.

³Finley, Ashley, and Tia McNair. “Assessing Underserved Students' Engagement in High-Impact Practices. With an Assessing Equity in High-Impact Practices Toolkit.” Association of American Colleges and Universities (2013).

Eliminating Barriers and Creating Inclusivity

Denise Barton, Wake Technical Community College

This program demonstrates training provided to faculty that enhances their abilities to become culturally responsible teachers. It includes extensive research from multiple sources. It includes a focus on diversity, inclusion, equity, and access. In depth topics include types of cognitive bias, implicit and explicit bias, and micro-aggressions. Information on application of Title IX, teaching to different generations, and culture and cultural competency are discussed. The goals of the training is to develop knowledge, skills, and strategies to teach current and future students who will enter a global world.

As our student population becomes more diverse and the need to ensure equity and inclusion increases, so does the need for faculty to evolve into culturally responsive teachers. Culturally Responsive Teaching is a pedagogy that recognizes the importance of including students' cultural references in all aspects of learning (Ladson-Billings, 1994). They must be provided with training on diversity, inclusion, equity, access, cognitive biases, and micro-aggressions.

Understanding how to appreciate differences and be open-minded in accepting students who may look, feel, and think differently from them requires training to ensure inclusivity. One important way to become more culturally responsive is to be aware of cognitive biases. Cognitive Bias is a systematic mistake in thinking that affects decisions and judgments that individuals make and some can be related to memory and affect how you remember an event based selective attention (Cherry, 2018). In addition, the need to know more about Title IX and how it is applied, their responsibilities under this law, and how to ensure students are in a classroom and college environment where they feel included and supported is vital to student success and persistence. Title XI has become an important law that may be misunderstood by faculty and knowing more about this law will help faculty become more comfortable in addressing student issues of diversity and equity.

As faculty teach multiple generations, the strategies used must engage these student populations and knowing more about how each generation learns is a requirement for teacher success. As millennials are the majority population in colleges currently, the Generation Z will require adjustments in teaching style to ensure student engagement. Knowing how each generation learns and prefers to be taught will be covered. Strategies to enhance the multi-generation classroom compiled by Dipplod (2017) will be presented. This research session will present information on how a faculty training program was created and provide multiple scholarly resources that can be used to create your own training tailored to your college. Information about the creation of this training, the implementation, and the immediate outcomes of this training will be discussed. Information on possible research questions for future application will be provided.

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Exploring Students' Subjectivities in Environmental Health Science with Q Methodology

Lloyd Rieber, University of Georgia; Anne Marie Zimeri, University of Georgia; Tong Li,
University of Georgia

This presentation describes a project designed to help students in an environmental health science course understand the various subjective perspectives held by their classmates on several course topics. The project used the Q sorting technique found in Q methodology. Although Q sorts are typically done on paper, a special digital tool was developed to facilitate data collection and scoring so that the results of the Q sort activity could be shared with the class quickly. This enabled rich classroom discussions to take place based on the evidence presented by the Q sort.

The discipline of environmental health science (EHS), like many disciplines that address the environment and sustainability, is tasked with educating its students on the basics of preservation of the environment 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 can lead roommates or family members by example in imparting sustainable behaviors. Previous work has suggested that imploring a sense of responsibility has been an effective way to impart behavioral change. Understanding students' impressions about EHS after an introduction course is imperative to assess whether students will use that material to self-adjust to environmental conditions that involve better stewardship behaviors.

There are many ways to explore impressions and subjectivities of students. One could simply ask them for their opinions. However, a person may find it difficult to express their opinion on a topic because they might not yet be able to articulate themselves in a new realm of study. It is also difficult to generalize common viewpoints or discriminate distinct points of view among the group. Another common approach would be to build a survey using a typical rating scale of 1-5 ranging from agree to disagree. However, this approach has several drawbacks, including easily rating items with little reflection or thought. Furthermore, each statement is rated independently of the other statements, thus making a holistic interpretation of the survey difficult.

There is a survey approach designed to reveal subjectivities on a topic in a way that takes all of the survey statements into account to reveal distinct points of view held by a group on a particular topic. This technique, Q sort, is used for data collection within the Q methodology. Q methodology, based on factor analysis developed by Dr. William Stephenson in the 1930s, is a means for the scientific study of subjectivity. In a Q sort, a participant is asked to sort a group of statements using a grid that resembles a normal distribution. There are as many slots on the grid as there are statements, thus forcing the participant to make difficult choices about preferences among the statements. A typical Q sort would ask a participant to sort the statements from "most agree to least agree."

Q methodology is rarely used as a classroom teaching technique largely due to the logistical challenges of creating and administering paper-based Q sorts and then analyzing the data in a timely fashion appropriate for classroom discussion. To meet these challenges, Rieber developed a digital Q sort tool for classroom use. In this presentation, we present the results of a collaboration in which the digital tool was field tested in three environmental health science

classes from 2016 to 2018. The Q sort activity proved to be a useful strategy for eliciting student subjectivities on environmental science topics for classroom discussions.

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Grouping Students by Type of Motivation: Theoretical Implications for Instruction

Jessica Chittum, East Carolina University; Brett Jones, Virginia Tech; Devin Carter, Virginia Tech

We investigated how undergraduates could be grouped together based on their motivation perceptions in a large course. Using cluster analysis with 552 students, we identified four different types of students based on their perceptions of empowerment, usefulness, success, interest, caring in the course. We found that some types of motivation were related to important variables (e.g., exam scores, course and instructor ratings, effort, engagement). This study extends the research on student motivation in college courses by providing a multidimensional and dynamic illustration of patterns in students' motivation within college courses, which may have implications for specific instructional strategies.

Students' perceptions of courses have been shown to predict their motivation in those courses (Reschly & Christenson, 2012). Motivation theorists have identified a variety of important perceptions, like self-efficacy (Bandura, 1986), value (Wigfield & Eccles, 2000), autonomy (Deci & Ryan, 2000), and interest (Hidi & Renninger, 2006). We studied patterns in students' perceptions of the five MUSIC Model of Motivation components (Jones, 2009, 2018; Table 1): empowerment, usefulness, success, interest, caring. Researchers typically use variable-centered approaches to study relationships between motivation constructs and outcomes. However, studies using person-centered approaches (e.g., cluster analysis) have become more common because they allow researchers to identify patterns within students' perceptions of multiple constructs (Bergman, 2001).

Our aim was to investigate the pattern of relationships among undergraduate college students' motivation-related perceptions in an Introductory Psychology course. In addition, we studied whether patterns were related to theoretically-correlated variables (e.g., achievement, engagement). Investigating students' profiles and relationships to achievement is important because perceptions in a course are changeable (McGinley & Jones, 2014), which means they can be influenced by teachers. Thus, we also related the clusters to relevant teaching strategies to inform instruction and improve student motivation.

Research Questions

1. Can students' psychology class perceptions be used to categorize them into groups of students with similar perceptions?
2. If different profiles can be identified, are they associated with students' performance, instructor ratings, course ratings, effort, cognitive engagement, and perceived cost?
3. If profiles can be established, does membership in the profiles vary among students based on whether their major is psychology or not?

Method

552 students completed an online questionnaire (53.2% response rate; Table 2). We used the MUSIC® Model Inventory (Jones, 2016) to measure motivation in the course. Confirmatory factor analysis (CFA) indicated acceptable fit. We measured cognitive engagement, course effort, and cost using well-known scales with acceptable reliability. We computed final exam and learning using the results of exams completed during class. We used cluster analysis to identify patterns in students' MUSIC model perceptions of the course: hierarchal agglomerative

(Ward's) followed by k-means cluster analysis (Bacher et al., 2004). We validated the cluster solution using a double-split cross-validation procedure (Breckenridge, 2000). Then, we used one-way ANOVA to study relationships with the theoretically-correlated variables. Finally, we used Pearson chi-square tests to examine significant differences based on choice of major.

Results/Discussion

We identified four clusters: (1) somewhat high motivation with somewhat low success, (2) somewhat high motivation with high empowerment, (3) high motivation, (4) very high motivation with high success (Table 3, Figure 1). ANOVA indicated significant differences (Table 4). Post hoc tests revealed statistical differences indicating that, in general, the “higher” clusters (3,4) were associated with more positive outcomes and the “lower” clusters (1,2) were associated with inferior outcomes (Table 5, Figure 2). Pearson chi-square tests showed that more motivated students had more intentions to pursue a psychology, $\chi^2(3, n = 533) = 13.320, p = .004$. In our presentation, we will focus on the practical teaching implications of our findings for motivating students in college courses.

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Honors College Mission Evaluation through the Assessment of Topics Courses

Raymond Thomas, Virginia Tech; Desen Ozkan, Virginia Tech; Stephanie Lewis, Virginia Tech;
Anne-Lise Velez, Virginia Tech

During spring 2018, VT Honors College surveyed students in UH4504 to understand perceptions of successes in achieving both overarching goals based on the HC mission and on specific outcomes from the course description. Preliminary analysis shows that overall the college is successfully building lasting relationships between students and faculty, but has room for improvement in developing undergraduate research skills or providing problem-focused experiences. But, students indicate that they have developed skills around problem-focused experiences and research in the individual UH4504 class sections. We present suggestions for clarifying for students the connections between class activities and overall course and college-level goals.

As part of its ongoing mission to inspire and facilitate experiences for those who seek to be active learners at Virginia Tech (VT), the Honors College (HC) has developed a number of different course offerings. Here, we look at outcomes related to UH4504 “Discovery and Innovation Studio” classes. These classes give undergraduate students opportunities to work in small seminars, allowing them to engage problems in a global context through the implementation of a transdisciplinary approach. These courses are designed to foster strong relationships between students and faculty in ways that are beneficial to highly motivated students.

During Spring 2018, the HC surveyed students in UH4504 to understand perceptions of successes in achieving both overarching goals based on the HC mission and on specific outcomes from the course description. Data collection is ongoing, so our analysis here represents preliminary results from one semester of data. Students were surveyed at the beginning and end of the semester to collect feedback on their experiences in the HC and in UH4504 in particular. This practice has been used to evaluate a wide variety of undergraduate experiences and university mission statements in the past (Palmer and Short, 2008; Allen et al., 2015). Students were asked to rate agreements with statements based on the HC mission and UH4504 description on a 5-point scale, and open-ended feedback was encouraged.

Preliminary analysis related to VT HC mission shows the college is successfully building lasting relationships between students and faculty. Students generally agreed the HC allowed them to build relationships with faculty that their major departments have not been able to offer them, and that this has translated into better development of their academic skills. However, students report lower levels of agreement that HC is developing undergraduate research skills or providing them with problem-focused experiences.

Interestingly, some of the goals students do not perceive as being met in the HC courses they have taken overall are seem to be met by their participation in UH4504. For example students indicate that they have developed skills from problem-focused experiences and research in the individual class sections, but do not perceive that the courses offered by the HC meet these goals in general. Student responses specific to UH4505 indicate these courses have been less successful at empowering students to individually problem-solve or engage in experimentation.

Overall, survey results indicate that HC UH4504 classes do engage students along the lines set out by the Honors College mission statement. However, students' experiences in these courses seem to have limited influence on their perception of their overall HC experience. Thus far these classes have not clearly communicated to undergraduate students that this is part of an overall college effort, and not merely a course-specific goal. Further work remains to be done to determine how these classes and other HC offerings may approach closing this gap in the future. We present suggestions for explicitly stating college and course level goals for undergraduate students, and clarifying connections between class activities and overall course and college-level goals.

How Men and Women in Doctoral Program Integrate Their Families

Amanda Rockinson-Szapkiw, University of Memphis; Jillian Wendt, University of the District of Columbia

While higher education has focused attention on work-family research and policy for faculty, the integration of family and the doctoral degree has not been given much attention despite its importance. Thus, a causal-comparative design was used to investigate how men and women in distance and residential doctoral programs integrate their degree and family. Multivariate analyses demonstrated that distance education students reported having lower satisfaction with the integration of the two domains and more impermeable boundaries between their degrees and their families than their residential peers. Women in comparison to men reported poorer balance and more inflexible boundaries.

While higher education institutions have focused attention on work-family research and policy for faculty and staff (Wolf-Wendel & Ward, 2014), the integration of family and the degree for doctoral students has not been given much attention despite its importance (Lester, 2013). Integrating the doctoral degree and family affects both distance and residential students' persistence, well-being, and degree satisfaction (Brus, 2006; Mason, Goulden, & Frasch, 2009; Offstein, Larson, McNeill, & Mwale, 2004; Rockinson-Szapkiw, Spaulding, & Lunde, 2016; Stimpson & Filer, 2011). It is unclear however how doctoral students in distance and residential doctoral programs manage boundaries and experience satisfaction with their family and degree.

Based on research on remote workers, noting the difference between them and their residential counterparts (Gajendran & Harrison, 2007), it is likely that boundary management and experiences of distance and residential doctoral students differ. Understanding how doctoral students in both types of degree programs integrate family and academics and experience this phenomenon differently is foundational to providing the support needed to promote success, including achievement and persistence. Moreover, no research on academic-family integration is complete without considering gender, given the gendered roles in families (Folbre, 2004; Hochschild, 2003).

Therefore, in this research study, we sought to investigate how men and women in doctoral programs in education integrate their work and family domains. A casual comparative research design was employed. A total of 177 students enrolled in the doctorate of education programs, both residential and at a distance, across four universities participated in this study. Students were invited to participate in the study via an email. Potential participants used the link embedded in the invitation to access the online survey, consisting of the Doctoral Academic-Family Integration Inventory (Rockinson-Szapkiw, 2018) and experience and demographic questions. Multivariate analyses of variances (MANOVAs) were used to analyze the data.

Results demonstrated that distance education students and residential students differ in their academic-family integration. Distance doctoral students report significantly lower academic-family balance than their peers in residential programs, indicating that distance education students have lower satisfaction and functioning in integrating academic and family domains. Distance education student also reported significantly lower scores on the boundary scale; thus, they were more likely than their residential counterparts to have impermeable and inflexible boundaries between their degrees and their families. However, the residential students perceived

slightly higher scores on the interference scale indicating that they perceived that they experienced more family and academic domain interference.

Gender differences were also examined. Women in comparison to men reported that on the integration and segmentation continuum, they tended to segment more than men. That is, women tended to create, more than men, inflexible and impermeable boundaries between their family and academic domains. As normative gender roles tend to associate men with academics and women with family (Hochschild & Machung, 2012), women may feel the need to hide or segment the two domains more than men. Women had moderately lower ratings for academic-family balance than their male peers; women were not as satisfied with their academic-family interactions and functioning.

“I Refuse to Die”: Persistence among African American PhD Candidates
Kerley Perminio Most, Liberty University; Joy Mwendwa, Liberty University

African American doctoral students experience the highest levels of attrition (60%) in America and the most social and academic challenges in higher education. Concurrently, Afro-descendants are considered the most spiritual people in America. This session presents the findings from a quantitative study that explored the relationship between spirituality and persistence among African American doctoral students (N = 179). Tinto's model of attrition, the Institutional Integration Scale and the Spirituality Scale, were utilized. Surprising findings revealed that African Americans with high levels of spirituality were three times more likely to finish their program than those with low levels of spirituality.

America's ability to thrive for the next several decades might be threatened by the deficit in racial minorities' completion of their graduate degrees (Sowell, Allum, & Okahana, 2015). In fact, more than any other racial minority in higher education, African American doctoral students experience the highest levels of attrition (60%) in the nation and the most social and academic challenges in higher education (Cook & Cordova, 2006).

Concurrently, research supports that African Americans are among the most spiritual people in America (Billingsley & Caldwell, 1991). This study investigated the relationship between spirituality and persistence among African American doctoral students. Tinto's model of attrition, a systematic framework to predict degree completion based on suicide theory, and literature on spirituality among African Americans and was employed. Tinto's (1975) theory of attrition advocates that initial commitment, initial characteristics, social integration, academic integration, and goal commitment are fundamental for student degree achievement. According to literature, African American students, due to social economic circumstances, seem to encounter barriers to attain such characteristics (Eyerma, 2001; Heckman & LaFontaine, 2010; Jasienska, 2009; Ohl & Potter, 2013). Interestingly, literature also indicates that African Americans employ spirituality as a coping skill regarding challenges in education (Brown McManus, 2012; El-Ghoroury et al., 2012; Jett, 2011; Park & Millora, 2010; Patton & McClure, 2009).

Intriguingly, Terenzini et al. (1985) found that in Tinto's model, individuals utilized academic and social compensatory strategies to achieve degree completion. Hence, this quantitative study explored the relationship between spirituality and degree completion and applied hierarchical regression to inquire whether spirituality served as a moderator for challenges regarding Tinto's determinant characteristics of academic success and attrition prevention among African Americans.

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Implementing a Professor Written Text in a Math Education Classroom

Sara Lenhart, Christopher Newport University

The presenter has written a textbook for her math education class. The issues in writing revolve around the fact that the class is taught in a flipped format. Previously, outside of the classroom, the students would read an online text, do the associated online homework, and watch videos made by the professor. This book is different because the reading, homework, and videos are all embedded into one document/assignment.

The presenter teaches a content based course for those wanting to be elementary school teachers. The course used to be strictly assessed based on student knowledge of elementary math topics. In the previous years of teaching this course, the presenter has moved the class to a flipped model in order to have class time to dive into more pedagogical concepts. Previously, outside of the classroom, the students would read an online text, do the associated online homework, and watch videos made by the professor. During the class, the professor would give a short quiz to make sure students read the book and watched the videos. The quiz would take at least 15 minutes every class. The rest of class time was spent doing more pedagogical activities. The hope of this new book that the presenter has written is that the outside assignments of reading, watching videos, and doing homework will be made more concise by all being in the same integrated text. The presenter will discuss the difficulties in writing the text and how the implementation in the classroom went.

Integrating Social and Accelerometer Data to Examine Informal Learning Spaces

Erin Fosnocht, Virginia Tech; Timothy Baird, Virginia Tech

This study seeks to identify previously unobserved patterns of human activity within an informal study space by pairing participant observation with data taken from embedded accelerometers. We observe a decreasing linear relationship between average acceleration per capita and the density of individuals in the space. This relationship was observed both for individuals working alone and in groups. Our findings may point to the potential for sensor-rich environments to inform the design and maintenance of informal study spaces to best promote student learning outcomes.

Students spend many more hours studying in informal learning spaces than in formal classroom environments, however, little is known about how these spaces are used or how they may contribute to learning. Much attention is paid to classroom design and activities, but informal learning environments and patterns of use may be as important in shaping educational outcomes. These spaces, however, are difficult to monitor and study without disrupting student activities. In addition, informal study spaces are used by different people, at different times, for different tasks, and with different outcomes.

Still, research opportunities remain. The proliferation of low-cost sensors, like accelerometers, provides new opportunities to discretely examine human behavior with the intended goal of nudging students towards positive outcomes. Here, we seize an opportunity to leverage a university building, outfitted with accelerometers, to evaluate student activities in a single study lounge. Given that few examples of related scholarship are available, we structured our study around a single, modest research question: Can building-based accelerometers help identify previously unobserved patterns of human activity within an informal learning environment?

To address this question, we integrated social science and sensor-based data collection strategies to examine a single, informal study lounge in Goodwin Hall at Virginia Tech. First, we made discrete, in-person observations of lounge users routinely throughout the fall semester, 2018. Participant observation, conducted by a member of our team, focused on the number of occupants in the lounge as well as their general movements and behaviors (e.g., working independently or in groups, typing, reading, texting, foot-tapping, etc.) Observations were time-stamped and later coded with the proper assemblage type. Coded observations were then compared with measures of acceleration from embedded sensors for the corresponding time intervals.

Two preliminary findings are of interest here. First, we find a decreasing linear relationship between attendance and average acceleration per capita. This indicates that individuals move less as the density of occupants in the area increases. Second, controlling for the total number of individuals, we find no significance difference in acceleration between individuals working independently or in groups. This suggests that even when occupants are working in groups, they move less as the density of occupants increases. While this set of analyses is preliminary, and other analyses of this data are ongoing, our findings may point to the potential for sensor-rich environments to inform the design and maintenance of informal study spaces to best promote student learning outcomes.

Model for Implementing and Validating Undergraduate Research and Other HIPs

Amanda MacDonald, Virginia Tech; Anne Brown, Virginia Tech; Keri Swaby, Virginia Tech

Conversations have emerged in higher education surrounding high-impact practices (HIPs) and experiential learning. Undergraduate research presents itself as an excellent HIP to integrate the strengths of a research intensive university and exceptional student learning. We propose a scaffolded approach to tracking, assessing, and connecting undergraduate research to the best HIP practices and student outcomes. The model presented is designed to be discipline agnostic and conceptualized as a university-wide program. The framework of this Undergraduate Research Excellence Program highlights the need for strategic development and implementation while also highlighting the adaption of this model in other curricular and co-curricular contexts.

Conversations locally, nationally, and internationally have emerged in higher education surrounding high-impact practices (HIPs) and experiential learning. Accordingly, offices, initiatives, and programs supporting HIPs have become common at research intensive institutions (RIs). For units on campuses supporting HIPs, such as university libraries or offices of undergraduate research, it can be extremely challenging to make direct connections with students and to develop and sustain interdisciplinary programming, while also tracking short- and long-term impact to prove value. This challenge can be exacerbated when the units' educational support and programming offered is almost entirely in a co-curricular context.

There is great value in highlighting and framing HIPs like undergraduate research in a community context, as to emphasize cross departmental partnerships and collaborations between students. A variety of approaches and experiences are necessary for students to fully engage in the entire process of research. Often, students are not exposed to the critical thinking and methodologies of research until their more advanced coursework. Thus, a need exists for strategic programming at the earliest introduction stages (e.g. freshman year) that frames the multiple components of research (e.g. Managing and Utilizing Data, Citation Management, Proposal Generation, Research Ethics, and Literature Assessment), while also integrating experiences across an undergraduate student's career.

The first step in addressing the needs of students learning basic research skills was the creation of the Advanced Research Skills (ARS) Program, a co-curricular workshop series that prepares students to participate in formal undergraduate research experiences. While the ARS program serves as an excellent introduction to undergraduate research skills and opportunities on campus, it does not provide students with an avenue for reflecting upon or recognizing the impact of their undergraduate research experiences. Additionally, retention is extremely difficult to maintain because students' completion or failure to complete a semester-long co-curricular program will not impact their transcript.

Recognizing these limitations and building upon the successful ARS program, University Libraries and the Office of Undergraduate Research collaborated to develop a student-centered model for a new university-wide program that would give recognition to students' varied undergraduate research endeavors while also incentivizing students to participate in co-curricular programming opportunities like the Advanced Research Skills program related to undergraduate

research. This new model would also provide an avenue for programmatic assessment and for tracking participation, an aspect often lacking in the assessment of undergraduate research.

Launched as a pilot in Spring 2018, the Undergraduate Research Excellence Program is a novel way for any undergraduate student in any major to connect with undergraduate research resources and support and to receive recognition for engagement in undergraduate research at graduation. During this presentation, the speakers will share this model and the theoretical framework in which it is grounded; discuss the development, implementation, assessment, and evaluation of the pilot; and show how this model can be adapted and used in other curricular and co-curricular contexts.

Perceptions of Construction Students and Professionals of a Studio-Based Model

Saeed Rokooei, Mississippi State University; George Ford, Mississippi State University

This paper addresses the results of the first two phases of a research project conducted in the Building Construction Science (BCS) Program at Mississippi State University (MSU). Exploring the perceptions of different individuals involved in the construction program such as students, instructors, and professionals about the studio-based model was the main objective of this study. This paper reports how students and professionals in the construction management field perceive the studio-based educational model. The similarities and differences between the perceptions of these two groups are discussed, and it is reported how the layout and structure of a studio impact students' perceptions.

Studios are the backbone of many educational programs with a design theme. The advent of studios in American higher education (mainly architecture) in the twentieth century stemmed from the renowned architecture programs at Ecole des Beaux-Arts in Paris (Lackney, 1999), and thereafter the major features of the studio-based model remained largely unchanged. These features include studio physical layout such as individual tables, papers, books, and models; spaces with wall hanging possibilities; the limited number of student seats; and facilities to support students during non-class times (Schon, 1983).

.Although studio-based learning is still a dominant learning method in architecture, other disciplines are incorporating studios into their curricula, which can result in positive educational outcomes. For instance, studios have been successfully adopted in computer science and information technology educational programs (Carbone, Lynch, Arnott, & Jamieson, 2000; Jabi, Hall, Passerini, Borcea, & Jones, 2008; Mathews, 2010). Construction programs are an ideal platform for the studio notion to burgeon. (Rokooei & Hall, 2018; Rokooei & Hal, 2018).

The main objective of this study was to explore the perceptions of students, instructors, and professionals of the studio-based education model. Knowledge of these perceptions will assist planning necessary program modifications to adopt the studio method in programs which currently do not integrate studios into their curricula. The first phase of the study focused on BCS students and was designed, conducted, and reviewed in Fall 2017, and results were disseminated and discussed with construction educators. Following the first phase, the second phase, with a concentration on professionals' perceptions was initiated. After performing a literature review, a survey was designed to collect construction industry perceptions feedback. To maximize comparison and to draw meaningful outcomes, the survey was designed to correspond to the students' perception survey.

Participants were selected from companies who attended at the MSU BCS career fair in Spring 2018 as well as professionals on the BCS advisory board during 2018. After collecting the data, a statistical software package was used to compile, organize, and analyze the data. In addition, various comparisons were performed to show the similarities and differences of professionals and students' perception toward the studio-based model. Two separate surveys conducted revealed the differences and similarities between the perceptions of students and industry professionals. The results indicate a few notable points. The industry group overall had a higher positive perception of studio characteristics. Both groups rated Group Work as the most important aspect of a studio, which is a well-received studio feature in general, however, the

perception of the industry about other more important aspects of studio differed considerably from the students' perceptions.

In general, analyzing the perception of all parties involved in a studio model helps educators to have a more realistic and efficient understanding of a studio-based education model which is a new and emerging learning method in the construction education area. Although generalization of results needs further study with a larger sample population, results of this research can be considered as a good starting point for planning and development of studio-based construction programs.

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Potential Applications of VR in Online Learning Environments

Yonghua Feng, Henan University; Eric Stauffer, James Madison University; Juhong Liu,
James Madison University

Virtual reality (VR) holds the promise to enrich the context of online learning and bring new perspectives to potentially solve online learning problems with simulations, real-time feedback and interaction, and immersive experiences. As an emerging environment, VR in online learning requires careful design to optimize its effect. Through a content analysis of published literature and emerging technologies related to VR, the authors of this paper propose a conceptual framework in terms of pedagogical and technological decision making in design with VR for online learning. This review can help instructors gain a further understanding of using VR in online learning.

Current research suggests that increasing learner engagement may prevent elevated dropout rates in higher education (Feng, 2018). Virtual Reality (VR), a subset of immersive learning that recreates or invents new environments through advancements in optical and sensory technology, may provide one outlet to create more learning engagement with interdisciplinary, collaborative, and multi-sensory participation (Monahan, McArdle, & Bertolotto, 2008). In at least one recent study, VR has been found to provide a very precise representation of reality (Alhalabi, 2016) and support learners to discover knowledge, and improves learners' motivation and attention (Alfalah, 2018). VR may be an additional avenue to reach students with these attributes but research on design and implementation is lacking.

Based on a content analysis of literature and applied research about VR technologies, the authors of this paper propose a conceptual framework about using VR in online learning, including the key elements for instructional design, the relationships of these elements, and the practical application of these elements for instructors and instructional designers. The audience will take away forward-thinking suggestions related to instructional design with VR technologies for online learning.

Instructors, learners, learning objectives, learning content, learning activities, VR scenes, and feedback constitute indispensable factors for the continuous creation of online learning environments with VR integration. Online faculty are already familiar with varying levels of transactional distance with their students but may not be prepared to engage in the design of instruction in immersive environments. Purposeful course design can promote interaction, participation, and communication in online learning (Czerkowski & Lyman III, 2016). In a VR-facilitated learning environment, the decisions and choices made by teachers will be critically instrumental to learning experience (Levinson, Weaver, Garside, McGinn, & Norman, 2007). As instructors conceptualize how students might construct meaning in VR in online courses, a reimagining of interaction will be needed to scaffold experiences within an environment that offers a close-to-real immersive environment which allows learners to learn through interactions with virtual worlds (Huang & Liaw, 2018), which may be otherwise impossible (Cortiz & Silva, 2017).

Feedback is the one of factors of self-efficacy in online learning (Peechapol, Na-Songkhla, Sujiva, & Luangsodsai, 2018), which can be enhanced with VR-enabled interactive mechanism. The dialogue between instructor and learner or learner to learner constitutes the source of

meaning creation in the immersive situation of VR. This invites a reexamination of interaction within these environments. To fulfill learning goals, the VR scenes need to be designed to dynamically adjust to the interactivity and continuity that are constituted by teachers, learners and other elements.

The open experience created by VR, including diverse subjects, transcending centrality, accepting interference, and non-linear transformation, can promote the formation of emerging cognitive and interpersonal networks. Adapting to the learners' needs within online classes with effective visual design is critical to guide them toward success (Davis, 2015). Proper interpretation and construction of connection is an important way for subject interaction and establish element correlation.

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Q Methodology and Its Potential for SOTL

Lloyd Rieber, University of Georgia

In this presentation I propose the idea of using Q methodology as a strategy for higher education faculty to begin engaging in the practice of scholarship of teaching and learning (SOTL). This methodology becomes feasible and practical for SOTL due to the available of a free digital software application that streamlines the building, management, administration, and scoring of Q sort activities. Q sorts are the principle means of data collection in Q methodology and offer much potential for both studying student points of views on course topics and improving teaching based on student perspectives.

The scholarship of teaching and learning (SOTL) is a recognized way for faculty of all disciplines to engage in the research of teaching and learning while at the same time improve their teaching. This presentation will discuss an innovative way for higher education faculty to begin or enhance their practice of SOTL by exploring their students' subjective perspectives of course topics while also exploring a lesser known research methodology. The approach uses Q methodology. Q methodology is a means for the scientific study of subjectivity. It was created by Dr. William Stephenson in the 1930s and is based on factor analysis. The principal technique for data collection within Q methodology is the Q sort in which participants are asked to sort a group of statements using a grid that resembles a normal curve. There are as many slots on the grid as there are statements, thus forcing the participant to make difficult choices about preferences among the statements.

Q methodology is rarely used as a classroom teaching technique mainly because Q sorts are typically done on paper. Consequently, the logistical challenges of creating and administering paper-based Q sorts and then analyzing the data in a timely fashion appropriate for classroom discussion becomes a major obstacle. However, I have developed a free digital Q sort tool for classroom use. I have reported on the design of this tool along with an accompanying instructional strategy for the past few years at CHEP. The tool's current capabilities make it a viable approach for enhancing classroom instruction and also for use in SOTL research.

Q methodology studies do not require large samples and it is common for Q research to focus on the subjective perspectives of a targeted audience, rather than attempting to generalize to a sample's population. This makes Q methodology an ideal approach for any faculty interested in researching and reporting on the distinct opinions or points of view held by students in their course. These data then become important sources of feedback for improving the course.

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Questionnaire Design: Problems Related to Surveys Development

Roofia Galeshi, Radford University; Hamidreza Taimoori, Virginia Tech

Designing a survey is a complex task, yet most survey studies fail to report the required psychometric consideration. Technology has improved the field of educational research in a variety of ways. However, there are increasing concerns among researchers and policymakers about the implication of incorporating technology in reaching the relevant population and collecting data. The rapid growth of survey software has made it possible to develop and distribute low-cost surveys. While new opportunities are created for conducting surveys, new issues emerge.

Technology has improved the field of educational research in a variety of ways. However, there are increasing concerns among researchers and policymakers about the implication of incorporating technology in reaching the relevant population and collecting data. The rapid growth of survey software has made it possible to develop and distribute low-cost surveys. While new opportunities are created for conducting surveys, new issues emerge. Any changes to public policy and practices are often determined and measured by some sort of study implemented by a survey or educational measures and often these surveys are administered online. Despite online surveys' popularity, there have been debates over potential biased findings that could result from administering surveys online. According to Duda and Nobile (2010), if online surveys are not well-designed, they could potentially generate invalid, unreliable, and biased data. Similarly, Pew Research Center has disclosed several plausible web surveys' shortcomings that are often related to the inaccurate assumption of true probability sampling bringing about biased findings that do not represent the population's view on the topic. Most online surveys use web-based questionnaires that the target population can complete over the Internet.

The purpose of this article is to offer a practical psychometric based analytic framework for developing and evaluating web-based multi-construct survey instruments and evaluating its validity and interpretability, and to make a continuous contribution to the survey methodology literature that focuses on quality criteria for the design and use of online surveys. This presentation will consist of three parts – (i) potential threats that are specific to the validity of online instruments, (ii) conceptual framework for validating online surveys with Rasch Models in the process from constructing to administering an online instrument, and (iii) demonstration of how to use a psychometric diagnostic approach to evaluating online surveys. In this presentation, we propose a simple framework for psychometric-based instrument development with emphasis on online surveys. The framework will include a description of multiple evidence for establishing validity and reliability. The following questions will guide this study and presentation:

1. What is the potential validity treats specific to online surveys?
2. How does an Item response model is used to validate an instrument?

STEM Scholars Program at VWU: Lessons on Retention

Gabriela Martorell, Virginia Wesleyan University; Deirdre Gonsalves-Jackson, Virginia Wesleyan University

Student retention in STEM areas is a challenging problem, particularly in traditionally underrepresented groups. In 2012 Virginia Wesleyan University provided need-based scholarships for such a group. These students lived in the same residence, took classes together, and engaged in collaborative research. Annual surveys on academic indices were collected from students and matched controls. Findings indicated no significant differences in GPA between scholarship and control students, however, significantly more students stayed in STEM majors than did control students. Moreover, significantly more scholarship students successfully graduated than control students. Characteristics of the program believed to have affected this process will be discussed.

Low student retention and high attrition rates in science, technology, engineering and math (STEM) areas of higher education are a challenging problem. Thus, it is important that programs that have been successful in ameliorating this issue share factors they believe to have been important. In 2012 Virginia Wesleyan University was awarded a six-year NSF S-STEM grant to create a Science & Mathematics Scholarship Program. Students were selected based on their high school GPA, math scores, and estimated family contribution (EFC), and were primarily from underrepresented groups. Those selected were provided with 4-year scholarships and academic and career planning resources. Students in each of four cohorts lived in the same residence hall, took classes together, and engaged in collaborative, multidisciplinary research. Annual surveys on academic attitudes, study strategies, and perceptions of learning gains were collected. Data were also collected concurrently from matched controls for cohorts 1-3.

In the final year, data showed that scholarship students were more confident in their abilities than control students ($t(33) = 2.79, p = .02$), were more likely to see themselves as having a future in STEM areas ($t(32) = 3.75, p = .00$), and perceived themselves as having fewer obstacles to success in STEM areas ($t(33) = -2.22, p = .00$). Overall findings indicate that there were no significant differences in GPA between scholarship and control students at the conclusion of the study. Rather, estimated financial contribution pre-college ($r(68) = .34, p = .00$) and high school GPA ($r(67) = .35, p = .00$) predicted final GPA. However, participation in the scholarship program did impact student persistence in STEM areas and overall retention and graduation. At the conclusion of the study, significantly more students remained in STEM majors than did control students ($\chi^2(1, N=71) = 10.87, p = .001$). Of the 41 scholarship students, 31 had either graduated or were finishing their degree in STEM majors. In the control group, only 11 of 30 students met that description.

Moreover, significantly more scholarship students either graduated or were in good academic standing at the conclusion of the study than control students ($\chi^2(2, N=71) = 7.65, p = .02$). Additionally, when two students who switched majors and dropped out of the scholarship program but nonetheless graduated in good standing were excluded from the analysis, scholarship students who stayed in STEM areas were still significantly more likely to graduate or be in good academic standing than control students ($\chi^2(2, N=69) = 6.89, p = .032$). At the conclusion of the study, 30 of the scholarship students had graduated, 2 had switched majors and graduated, 8 had withdrawn from the university, and 1 was currently enrolled and in good

standing. The control students numbered 30 total, with 14 graduated, 15 withdrawn, and 1 currently enrolled and in good standing. Thus, the scholarship program seemed to have a strong effect on students' likelihood of staying in STEM majors, and of graduating in good standing overall. Characteristics of the scholarship program believed to have affected this process will be discussed.

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Strategies to Evaluate Informal Learning Spaces Using Sensor Based Methods

Mark Villarreal, Virginia Tech

This research deals with using sensor technologies and social data collection to provide insight into what resources within informal learning environments, and which informal learning environments, students perceive to be the most ideal in Goodwin Hall. Sensor technologies are not often used in educational research, and this proposal aims to provide insight into how research can be done by combining social and sensor data. Authors: Mark Villarreal, Timothy Baird, David Kniola, Pablo Tarazaga, Rodrigo Sarlo.

Sensors currently monitor humans from space through satellites, from against our skin through smart watches, and from inside of us through pacemakers. Sensors are ubiquitous with our daily activities. Sensors, however, have not been frequently utilized in educational research. The bulk of the research on learning environments has used three main methods: case studies, interviews, and surveys (Sawchuk, 2008). Learning environments have a strong relationship to students' academic success, and improving research on such spaces could benefit both faculty and students (Brooks, 2010; Lizzio, et al. 2002).

This study aims to further the methodologies used in learning environment research by using qualitative social data, along with quantitative sensor data, to compare how students use and perceive different informal learning environments. Being geographic research, our aim for this study is to apply theories from ecology and geography into an indoor educational setting. For this research, we are viewing Goodwin Hall as being analogous to a grazing area, informal learning environments as being analogous to grazing patches, and students as being analogous to herders, and are applying resource use models to analyze the use of space within Goodwin Hall. We are interested in examining how students value different informal learning environments, and how they value different resources within informal learning environments. This study will also examine if people of different genders, academic years, or academic studies value things differently. Moreover, it will examine if values change based on the time of day and the day of week.

This study is being conducted in Goodwin Hall, an ideal space for this research due to the 240 accelerometers on 136 sensor mounts (Goodwin Hall). The first, second, third, and fourth floors of Goodwin Hall offer 10 different distinct informal learning environments. Goodwin Hall is an ideal study area for three main reasons. First, having multiple floors allows for more students to work in the building, thus expanding the amount of participants taking place in the study. Second, having multiple floors allows for an increase in variation of study areas, allowing for people to pick a spot more ideally suited to their perceived needs. Third, having a greater variation in the resources within informal learning environments allows for a more in-depth examination of what students perceive to be useful.

This research will use quantitative and qualitative analysis. Students perceived values of informal learning environments are being collected through qualitative measures. 50 interviews were conducted with students in Goodwin Hall to gain an understanding of what informal learning areas, and which resources within those areas, students preferred. The interviews are being used to construct a survey to gain a more in depth understanding of students' perceptions of informal learning environments. Students' use of informal learning environments are being

collected through quantitative measures. Accelerometer data from three weeks, over a span of three months, will give us measures of activity from 6 a.m. until 10 p.m. Our aim is to see if students perceived rankings of informal learning environments correlates with levels of activity within those spaces.

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Teaching Responsible Innovation through Scenario Analysis and Design Fiction

Emily York, James Madison University; Shannon Conley, James Madison University

In this talk, we will present an approach to teaching responsible innovation in an undergraduate STEM course in which we guided students through a process of scenario analysis, design fiction, and ethical reasoning. Having piloted this approach using two different variations across five sections of the same course, we will present our preliminary data and analysis of what was effective, along with what we believe could be improved. Finally, we will lay out our plans for modifying our approach as we prepare for a second iteration.

Engaging undergraduate STEM students in the ethical and societal dimensions of technology is not only required by ABET accreditation standards but is critical to the broader imperative of doing innovation in ways that promote human flourishing. Yet, finding ways to do this that connect to students can be challenging, particularly in a STEM environment where students may not regard this portion of the curriculum as being as valuable or relevant as their science and engineering classes.

With the goals of promoting anticipatory ethical reasoning about emerging technologies, we wanted to develop an approach that would be hands-on, highly integrated into students' science and technology projects in other classes, and fun. To that end, in Spring 2018 we piloted an approach using scenario analysis and design fiction as preliminary steps in an ethical reasoning module with approximately 125 students, split into 5 different sections. Scenario analysis is a method originating in business consulting for identifying and analyzing the key drivers that may shape plausible future trajectories of a phenomenon (e.g., an industry, a technology). We lead students first through scenario analysis activities that helped them to better understand their assigned technology and to identify plausible scenarios for that technology's trajectory over the next 20 years. Design fiction refers to a mix of science, science fiction, and design prototyping in which a plausible future technology is embedded in narrative in order to flesh out the societal dimensions of the technology.

Once our students had selected a scenario from their scenario analysis, we asked them to produce a design fiction that would help to start a conversation about the possible social, political, and environmental implications of the technology over the next 20 years. Finally, we asked students to draw on different ethical frameworks to reason about this design fiction with the goal of understanding how it might or might not promote human flourishing. Having conducted pre- and post-tests in each of our five sections, and having experimented with two different approaches to this process, we would like to share our assessment of this framework for engaging students in anticipatory ethical reasoning. We will share examples of students' work and their reflections. Finally, we will propose several variations we intend to experiment with this year and solicit input and feedback from those in attendance.

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Using Conferencing to Support Dissertation Design in Online EdD Programs

Sarah Capello, University of Pittsburgh

This presentation suggests utilizing individual student conferencing in online EdD programs to support dissertation design and research. A study of a capstone EdD methodology course found that, despite increasing the workload on instructors, student conferencing resulted in the pedagogical benefits of personalizing student learning, offering students rigorous feedback on course assignments, and helping students overcome feelings of isolation in the hybrid course format. In this session, the researcher will describe the context, methodology, findings, and conclusions of the study and include a discussion on utilizing technology to foster online conferencing.

Online and hybrid courses have long been criticized for being impersonal and lacking in academic rigor due to difficulty building relationships, watered-down course assignments, and minimal feedback from instructors (Chen, Lambert, & Guidry, 2010; Heirdsfield, Davis, Lennox, Walker, & Zhang, 2007; Murdock & Williams, 2011). Despite the challenges of distance learning, many education doctorate (EdD) programs rely on online or hybrid course models to accommodate working practitioners (Lowery, Geesa, & McConnell, 2018). This paper reports how two instructors used digital conferencing in a hybrid EdD course to personalize instruction and provide detailed feedback on major assignments.

The capstone methodology course referenced included approximately 60 EdD students, was focused on dissertation research design, and occurred the summer before the students began their dissertation research. The course context provided several challenges. First, the 30:1 student-teacher ratio resulted in an intense workload for course instructors. Secondly, the course met in-person only four times throughout the semester and those sessions were focused on content delivery with limited opportunities for discussions of individual students' work. While some students communicated electronically with the instructors for assistance on their projects, most had not in past iterations of this course.

Faced with these challenges, the instructors implemented required 30-minute conferences with a course instructor to review and discuss students' dissertation research designs in order to personalize student learning. Although not initially designed as a research study, reflections on the student conferences led to a reexamination of the role that they had on advancing students' work, preparing students for their dissertation year, and relationship building in the hybrid format. Data sources included annotated conversations between the course instructors across two years of teaching the course, documentation and artifacts stemming from the student conferences, student work, and feedback from students on the course.

While the conferences actually increased the instructors' workload, they were pedagogically beneficial in several ways. First, they personalized instruction for the students by meeting the need for individual attention on the dissertations. We encouraged students to lead the conferences, thus positioning them as active agents of their learning. Secondly, we provided individualized, specific, and rigorous feedback to the students on their dissertation research plans so most were able to enter their dissertation year with finalized research designs. Thirdly, we were able to build positive relationships with the students by getting to know their work and

them a little better and vice versa, thus diminishing feelings of namelessness and isolation in the hybrid course.

While individual conferencing can be time-consuming, doctoral students need individual attention and personalized, rigorous feedback to progress their dissertation research. This becomes even more important in online or hybrid programs where students can easily fade into the shapeless space of online education. Setting aside substantial time for individual student conferences can be a way of supporting EdD and other doctoral students in similar programs as they near their dissertation work.

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Using Explanatory Data Collection Methods to Study Online Course Participation

Melissa Ingram, Texas Tech University

Participants in this qualitative case study were Air Force Acquisition personnel currently taking computer-based online courses. Air Force personnel were interviewed about their experiences with online courses and observed while engaging in an online course. The data were analyzed and themes emerged. Keywords: AFA; computer-based training; case study; interview; student feelings

The overarching purpose of this study was to determine if there was a relationship between the teacher-centered format of online course delivery and Air Force Acquisition (AFA) personnel (hereafter named “student”) participation. AFA personnel were particularly of interest, as they have been tasked with taking 3 to 30 online courses that are required to gain Air Force job certifications (Defense Acquisition Workforce Improvement Act, 2017). By determining students’ feelings toward the offered online courses, the courses can be modified (if necessary) to improve participation, which would be significant to class designers. Greater participation can lead to greater achievement which leads to less time spent taking courses and greater retention of knowledge learned. Greater participation can ultimately save the Air Force time and money.

The findings of this study could also be extrapolated to better understand participation in other online certification courses. Other companies and/or professional organizations can learn how to construct online courses using participant feedback to better fit the needs of the student and the end user. From an academic standpoint, this study will add to the body of knowledge on an under-investigated field. The theoretical framework used to ground this study includes behaviorism, constructivism, cognitivism, situated learning, connectivism, motivation, and adult learning in the 21st Century. The utility of new literacies was also compared to the given learning theories to determine how digital media can support a variety of learners. The results of the pilot study will be discussed.

Using Student Reflections to Examine Key Competencies for Sustainability

Melissa Ray, University of Georgia; Ron Balthazor, University of Georgia

What do we hope students take away from sustainability education? What does it mean to be sustainability literate? This presentation explores qualitative data collected from graduates of an undergraduate-level sustainability certificate program to determine the program's efficacy in producing desired learning outcomes and expanding and deepening sustainability literacy among students. Written reflections and exit interviews are analyzed using the five key competencies for sustainability as proposed by Wiek et al. (2011) as a guiding framework. The results of this analysis will inform a quantitative scale for continued assessment of outcomes among similar educational programs.

At the University of Georgia, sustainability has always been student-centered. The core energies, the enthusiasm, and many of the best ideas come from students. The first part of our presentation will focus on the evolution of sustainability on our campus, particularly the development of our certificate program, and how students have been central throughout. The second part will focus on our continuing development of thoughtful and student-focused assessment to facilitate improvement as the expansion of our sustainability pedagogy continues.

In 2008, a coalition of student organizations formed the Go Green Alliance, marking the start of a momentum for sustainability at UGA that has since paved the way for the Green Fee, The Office of Sustainability, and the Certificate, with an emphasis on providing students with the support and tools needed to integrate sustainability on campus. As cross-campus interest in sustainability grew, students called for the integration of these concepts and practices into the curriculum. After four years of development, the certificate was approved in the spring of 2016 and now has over 170 students from more than 12 colleges and 50 majors. This diversity of students shares a common cause: a desire to implement sustainability.

Of course, we cannot hope to improve that which we cannot measure. Education for Sustainable Development (ESD) continues to expand across universities, yet there exists a lack of in-depth, student-focused assessment of learning. Current sustainability literacy assessment tools often emphasize specific content knowledge and behavior change, while ignoring the higher-order cognitive outcomes which generate critical skills needed to facilitate continued change and self-reflection.

This study explores qualitative data collected from graduates of the UGA Sustainability Certificate to determine if students are demonstrating Wiek et al.'s (2011) key competencies for sustainability: systems thinking, strategic thinking, futures thinking, values thinking, and interpersonal competencies. We will also discuss how this thematic analysis of students' written and verbal reflections will inform a quantitative scale for continued assessment of program outcomes with the potential for application among institutions wishing to assess sustainability literacy as a result of targeted ESD.

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Work Involved in Reusing and Remixing Open Educational Resources

Darren Maczka, Virginia Tech; Britton Hipple, Virginia Tech; Sarah Donnelly, Virginia Tech;
Leanna Ireland, Virginia Tech

While Open Educational Resources (OER) promise to lower barriers for students and support faculty in their teaching prep, adoption of OER into curricular development and course preparation has been slow. In this study, we explore one potential barrier: the work required to re-use existing material developed for one course context in another. We paired graduate instructors together and observed them over several sessions in their adoption of participant A's pedagogical content to participant B's classroom context. All pairs then came together for a focus group to discuss their challenges and strategies in adopting content across disciplines and contexts.

The Open Educational Resources (OER) movement has gained steady ground over the years, with more and more institutions and agencies developing and supporting teaching and learning resources for higher education. OER repositories are often shared on a public domain with no-cost for access, adaption, or redistribution (UNESCO, 2012). They provide lower barriers for students and support for faculty in their teaching preparations, and promote enhanced quality in teaching resources and encouragement of transdisciplinary pedagogy. Despite these promises, the adoption of OER into curriculum development and course preparation has been slow. One such barrier to adoption surrounds the reusing of existing material developed for one course context in another. This reuse depends on relevancy, accessibility, and open-sourced permission for remixing (Abeywardena, 2012). Yet, remixing faces another barrier: the work required by the instructors.

In this study, we explored this potential barrier by pairing graduate instructors together and observing them over several sessions in their adoption of participant A's pedagogical content to participant B's classroom context. Instructors were paired across and within disciplines to observe both intra- and trans-disciplinary barriers in content-sharing. All pairs then came together for a focus group to discuss their challenges and strategies in adopting content across disciplines and contexts. During this session, we will discuss the main barriers and strategies that our paired instructors either faced or incorporated in their reusing of existing pedagogical material as well as provide suggestions for OERs.

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POSTER SESSIONS

3M3S: Three Minutes Three Slides Presentation

Samrat Thapa, University of Lynchburg

Educators in upper-level undergraduate science courses often spend bulk of the semester on foundational concepts and little time on current research. Student's exposure to the recent advances in scientific research facilitates application and higher understanding of the foundational concepts. Despite this being a high impact teaching practice, limited lecture time prevents many instructors from implementing it. We present an instructional strategy we call 3M3S. It consumes minimal lecture time and disseminates current research in the classroom setting. Each student orally presents a current research using three minutes and three slides. They are graded on comprehension, engagement, and communication.

Week 1: Each student is assigned a recent peer-reviewed article on the first day of class.

Week 6: They submit a report that contains the article summary, the importance of the research, the novelty of the method, and the potential for new research.

Week 7 onwards: 3M3S presentations begin on the seventh week. Seven minutes of every lecture is reserved for two presenters. Depending on the class size, the presentations typically last for 4-6 weeks. Each presenter gets three minutes and three slides (3M3S) to present their article. They must present using no more than three slides. Presentation shorter than 2:45 minutes and longer than 3:00 minutes is penalized. The presenter is asked to stop when they reach 3:15 min time. No time is allocated for questions, but the audience may ask questions after the lecture. There is a 15 seconds interval between presenters for grading. 3M3S is graded on comprehension, engagement, and communication. Instructor and the students participate in grading. The grading rubric is available on Google-sheets, and it is accessed using cellphones or laptop.

A Place for Rhetoric and Composition in Modern Engineering Curriculum

Alisha Scott, Virginia Tech

While much of undergraduate engineering writing is often focused on genres such as lab reports and research papers, current studies point to the need for engineers to employ a variety of rhetorical practices and composition genres that are commonly utilized in the engineering workplace. This session will detail research-based underpinnings that point to a need for reconsideration of the importance of understanding rhetoric and mastering writing skills for engineering students. Additionally, it will allow for discussion on the topic and encourage the audience to participate and offer their own experiences, insights, and suggestions for fostering more fruitful cross-department collaboration.

While engineering writing is often focused on lab reports and research papers, current studies point to the need for engineers to employ a variety of rhetorical practices and composition genres that are commonly utilized in the engineering workplace. This session will detail research which shows that engineering employers place a high value on an engineer's communication skills, from the ability to showcase persuasive writing to a familiarity and comfortability with writing memos, press releases, funding proposals for venture capitalists, and other genres. In order to aid

engineering students as they develop and improve their rhetorical and compositional skills in ways that will help them navigate their future workplaces, it is wise to consider fostering across-the-aisle collaboration between engineering departments and English departments, an area ripe for discussing new ideas and potential directions.

This session will explore topical research that showcases specific writing skills engineering employers value, and briefly venture into studies that examine common expectations of professors in the field and how student perceptions on the importance of writing change once they enter their professional careers. There will also be pedagogical discussion on emerging practices in this promising area for writing teachers interested in better serving engineers, as well as acknowledgements of the difficulties and complex issues surrounding this topic. Open engagement with the audience will be encouraged and facilitated. This session seeks not only to discuss prior research and proposed pedagogical adjustments, but also hear from those interested in the topic on ways that we, as a community invested in continually improving teaching practices, can better teach writing to engineering students in ways that will engage them better and help to prepare them for practical career skills in composition and rhetoric.

An Expectancy X Value Model of Motivation for Online Learning

Nancy Knapp, University of Georgia

Motivation is a well-recognized problem in post-secondary online education. Quite a few students simply don't complete online courses, while others finish courses by just "checking the boxes," without real engagement, and therefore, without real learning. Many believe that online education is appropriate only for "some students," those who are highly motivated or more self-disciplined. But perhaps the fault lies not in the students, but in the usual online course? This presentation uses a current expectancy-by-value motivation model to look at why online learning may typically be less motivating for students, and what we as instructors can do about that.

Online learning in higher education has a motivation problem. The number of students taking online courses keeps growing (Seaman, Allen & Seaman, 2018), but the attrition rate in online learning continues to be significantly higher than in comparable F2F coursework (Allen & Seaman, 2015). Recent research suggests that only 'some' students can be expected to be successful in online learning, typically those who are highly motivated, self-disciplined and have higher GPAs (Bacolod et al., 2018; Gaytan, 2015).

Unfortunately, many students who really need online learning opportunities, students who have failed in traditional higher education and those with jobs and family responsibilities, don't necessarily match the profile of this "ideal" student. But what if we re-vision this problem: perhaps the fault lies not in the students, but in the usual online course? This presentation uses a model of motivation for learning (Knapp, 2018; adapted from Wigfield & Eccles' (2000) currently accepted model of achievement motivation) as a guide to why online learning may typically be less motivating for students, and what we, as instructors, can do about that. Some highlighted elements include:

- Self-efficacy: We are more motivated to learn when we feel competent in both course topics and methods; however, due to differing admission criteria, online learners may lack essential pre-requisite knowledge, and technology glitches & navigation problems can easily make online learners feel incompetent.
- Growth mindset: We are more motivated to learn when we believe our ability is not fixed, but will grow with effort and experience; however, online learners can easily become discouraged by early failure/frustration.
- Locus of Control: We are more motivated to learn when we feel in control of what, how and how quickly we learn; however, online classes are often very lock-step and linear in design, incorporating little student choice.
- Support: We are more motivated to learn when we know help is available if we run into problems; however, online learners often feel isolated, “left on their own” with no way to ask questions or get help when they need it.
- Intrinsic Interest: We are more motivated to learn things that spark personal or situational interest; however, online courses can be really boring (click, read, quiz; click, read, quiz; click, read....).
- Relational Value: We are more motivated to learn when learning facilitates or enhances relationship(s) with people we care about; however, online courses often lack opportunities for peer interaction, and teacher presence is frequently less/less obvious as well.

Theory and research related to each of these and other key motivation-related areas will be briefly discussed, but the focus will be on potential solutions. I will present several strategies I’ve used effectively in each area, and time and space will be deliberately structured for other session participants to share their own issues and solutions as well. The goal of the session is for all of us to walk away with new ways to reduce motivational barriers in our online courses, and thus encourage not only successful course completion but real, useable, deep learning for all our students.

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Applying Gamification Strategies for Instruction and Assessment

Miguel (Miko) Nino, Virginia Tech

In this session, participants will explore a wide variety of gamification strategies and how they can be used to enhance engagement, motivation, and knowledge retention and transfer. In addition, participants will use gamification as an assessment tool in the classroom.

Gamification, or the use of gaming elements into non-game situations, can be a powerful and effective mechanism to increase engagement and motivation in the classroom. In addition, gamification can help instructors and teachers to foster a higher level of knowledge retention and transfer in students. However, it is important to have a sound instructional design process in place to determine when gamification can be appropriate in teaching and learning and the strategies that should be applied. Contradictory to common belief, gamification is not always an effective strategy and it can work against the instructor when poorly implemented. The reasons why to use gamification can include to motivate students, to reward outstanding behavior, to foster competition, to gain attention, and others. It is important for instructors and teachers to align the use of gamification with the needs or gaps they are having in the classroom.

In this session, participants will explore the scenarios when gamification can be used effectively and how to design instruction, based on their particular needs. In addition, participants will become familiar with specific strategies to implement gamification, as well as open and free software that can be used to gamify any learning experience. The idea is for participants to implement gamification without financial or technological barriers; therefore, all of the content of the presentation will focus on free to low-cost resources that can be available to anyone. The principles of this session can not only be applied to in-person instruction and classes, but also to online environments, giving online instructors and teachers tool to build communities, connect with remote students, and assess their work online. Finally, participants will engage in discussion activities and will complete a gamification plan, applying the content of the lessons to their classes and instruction, giving them a sound course design and assessment plan to take with them.

Citizen 21 | A Program to Develop Students' 21st Century

Nicole Wilson, James Madison University; Elaine Kaye, James Madison University; Michelle Hayes, James Madison University

As faculty implement digital projects and scholarship through experiential learning opportunities, it is imperative that students are able to practice and develop 21st century skills. Faculty are often concerned with being ill-prepared as the technology experts in their courses and want to ensure that students have the resources needed to succeed. The goal of this session is to share the work that has been done to develop, implement, and evaluate the Citizen 21 program. Participants will be able

to explore and imagine how 21st century skills could be developed at any level - from course assignments to the entire curriculum.

In the 2018 Educause Horizon Report “Improving Digital Literacy” is identified as a solvable challenge. Specifically, the report states that: “academic experiences are increasingly influenced by the ways in which students discover, gather, and use the information they encounter. This creates challenges in terms of institutional innovation and resource allocation, and it also ushers in opportunities to prepare students for knowledge work” (p.26). As faculty integrate digital pedagogy and scholarship into their courses, there is a clear opportunity to integrate instruction that will develop 21st century skills.

Over the past four years, a pair of instructional designers has led an initiative at James Madison University to address the complicated challenge of developing students’ 21st century skills. The purpose of the Citizen21 program is to provide support directly to students that focuses on developing specific 21st century skills. The Citizen21 courses do not currently cover all 21st century skills that have been identified in the literature but have been developed through a synthesis of various research models and frameworks around 21st century skills. The design of the program is intentional in that each Citizen21 course is meant to be immediately transferable to a current digital assignment but also allows for the scaffolding of the specific skill throughout the curriculum.

This initiative also includes an exploration into the use of digital badging (micro-credentialing) as a way to record student accomplishments that are aligned with clear learning outcomes related to 21st century skills. Implementing digital badging allows students to demonstrate to prospective employers and graduate programs their 21st century skills. Through this exploration, the presenters have also found that badging serves as a valuable way to frame conversations about the scaffolding of 21st century skills into the curriculum at the academic program level.

Being situated in an academic library and on a team that focuses on digital pedagogy and scholarship provides an interdisciplinary space to engage various stakeholders in the development of the Citizen21 program. As faculty implement digital projects and scholarship through experiential learning opportunities, it is imperative that students are able to practice and develop 21st century skills. Faculty are often concerned with being ill-prepared as the technology experts in their courses and want to ensure that students have the resources needed to succeed.

The goal of this session is to share the work that has been done to develop, implement, and evaluate the Citizen 21 program. During this session, the presenters will share the timeline of project development, including the process, research, and methods used to garner leadership support. Participants will have the opportunity to view and discuss the pedagogy and design choices through a presentation of specific Citizen21 courses. The presenters will review the program outcomes, course objectives, instructional materials, and assessments. Finally, implementation strategies and future plans will be shared with participants to engage the group in a discussion of how to address the complicated challenge of developing students’ 21st century skills at their own institutions - from course assignments to the entire curriculum.

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College2Youth: Design of Interdisciplinary Undergraduate Research Experience Georgianna Mann, The University of Mississippi

This poster details the design and implementation of College2Youth, an undergraduate research experience based on school health. Adolescents residing in the northern region of the Mississippi Delta face many disadvantages such as persistent poverty, few economic opportunities, and poor health outcomes. College2Youth seeks to empower Mississippi Delta adolescents by using a community-based participatory research model to engage undergraduate researchers from the University of Mississippi. Undergraduate researchers elicited middle school student perceptions of barriers to health using qualitative research methodology and developed programming specifically designed to meet adolescent needs within the school setting for future implementation.

Undergraduate research experiences are in high demand, as undergraduate research can develop soft skills such as problem-solving, critical thinking, and communication that are attractive to future employers. These skills can also make students more competitive for selective graduate and professional programs. Undergraduate research experiences can foster mentoring relationships and provide a safe arena to learn how to manage unexpected setbacks. This pilot research program, College2Youth, was developed to train undergraduate students in community-based participatory research through the lens of middle school student health behaviors and school programming to create a healthier environment.

College2Youth is an undergraduate research training program housed in multiple departments including Sociology, Criminal Justice, and Nutrition and Hospitality management at the University of Mississippi. The interdisciplinary component adds increased collaborative opportunities, as wicked problems faced by society are multifaceted and complex, requiring many professions to work together synergistically. The overarching goal of this interdisciplinary research initiative is to train undergraduate researchers, hereafter “researchers”, by designing and implementing a school wellness programming project in a Mississippi Delta middle school. Researchers (n=6) enrolled in three credit hours of independent study led by three faculty

mentors in fall of 2018. Enrolled researchers had a variety of emphasis areas including criminal justice, psychology, and pre-medicine studies. Researchers received training in research involving human subjects, research ethics, community-based participatory research principles, policy/program development, and evaluation. Prior to data collection, researchers were required to complete literature reviews on school programs targeting mental and physical health.

After once weekly training sessions, researchers ran a series of focus groups with students in a Mississippi Delta middle school to determine perceived barriers to positive mental and physical health behaviors. These focus groups provided crucial cultural and resource-specific insight for researchers to synthesize the current body of literature and develop program ideas that might be feasible in this particular school system. After creating three possible initiatives, researchers returned to the middle school and proposed their ideas to adolescents in another series of focus groups where researchers asked adolescents for open-ended constructive feedback regarding program proposals. Researchers in this study completed pre-/post- surveys on self-efficacy and reflective writing prompts. Outcomes noted by researchers included increased research confidence, a greater awareness of those in need, and have enjoyment of the experience.

College2Youth is a strategic interdisciplinary method to train undergraduates to become proficient in research while supporting involvement in diverse surrounding communities. This undergraduate research program will be continued, allowing researchers the opportunity to implement the best program in collaboration with the school and evaluate its efficacy. This undergraduate research experience is an adaptable model that can be used in other universities and colleges to create a rich community-based interdisciplinary undergraduate research experience.

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Connecting the Liberal Arts & Environmental Communication through Community-Engaged Learning

Sonya DiPalma, University of North Carolina at Asheville

This poster illustrates how linking the liberal arts core with community engaged pedagogy for a senior-level environmental communication course encourages ethical and responsible reporting and public relations practices. Through partnerships with regional environmental non-profits, students apply their reporting and public relations knowledge in low stakes and high stakes projects. Student written reflections and final projects signal increased agency and understanding of emerging environmental issues within the context of a global society.

Linking the liberal arts core with community engaged pedagogy for a senior-level environmental communication course encourages ethical and responsible reporting and public relations practices. Through partnerships with regional environmental non-profits, students apply their reporting and public relations knowledge in low stakes and high stakes projects. With their chosen community engaged partner, students exceed 20 hours of applied research to create a strategic communications plan, a scholarly paper, or a multimedia package that includes a photo story, video story, and two feature articles.

Through the application of their knowledge and interaction with key members of a non-profit, students better understand how environmental issues are communicated to the publics served by the organization. By requiring students to write three reflection essays at the beginning, middle and end of the course, they synthesize and critique their learning experience. In addition to their projects, students submit one feature article or op-ed to the university's student newspaper. Final projects presented at the university's Undergraduate Research Symposium demonstrate reflexive thinking and signal increased agency and understanding of emerging environmental issues within the context of a global society.

Cross-Curricular Collaboration in College Classes

Christine Terry, University of Lynchburg; Erin Friedman, University of Lynchburg

Because team-based, collaborative scientific research is expected in academia and industry, necessary skills should be taught and practiced in the undergraduate classroom. Additionally, inquiry-based learning is a high-impact practice that is expected in undergraduate research. To address these and other important needs, we adapted a yeast-based variation of the Nobel prize-winning Luria-Delbrück experiment to a cross-curricular collaborative experiment between students in two upper-level Biology courses. In addition to completing the experiment and

analyzing results, students in the courses had to work together to professionally present their results to an outside audience.

Scientific research is best approached as a team-driven process (Jeffrey 2003). Collaborations across disciplines are strongly recommended by academic institutions and are often required by external funding agencies (Bennett and Gadlin 2013). Group work in the classroom can be used to model this team-based approach and can also facilitate the practice of social skills necessary in the workplace: e.g., organization, decision making, communication, giving/receiving feedback, and conflict resolution; the demand for these skills in the job market has steadily increased over the past 20 years (Deming 2017). It is also critical to model inquiry and discovery as part of the scientific process, as noted in the Vision and Change report from the American Association for the Advancement of Science (AAAS 2011).

To address these needs, we had students carry out a yeast-based variation of the Luria-Delbrück experiment (Luria and Delbrück 1943; Smith et al. 2015). We further modified the experiment into a cross-curricular collaboration involving group work in two upper-level biology courses. This project incorporated peer review (Topping 2015) both within each course and between courses and culminated in a professional presentation (Stuart 2013). Students in each course virtually collaborated on a single presentation using Google tools (Long and Meglich 2013; Moore 2016). Upon completion, the students in both courses demonstrated specific knowledge of both the experiment and the impacts of its results on the fields of genetics, cell biology, and evolution.

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Diversity and Inclusion Activities for a Study Abroad Program

Brian Hunter, University of Cincinnati - Blue Ash College

Foreign language students who participate in study abroad language and culture programs are presented with the opportunity to immerse themselves into the native language and culture of their host country. However, with short-term study abroad language and culture programs, making personal and lasting connections to the native language and culture needs to happen at a much quicker pace. Presented will be a series of 7 diversity and inclusion activities that guided each student on program to jump start their language and cultural immersion experience by providing them a channel to compare, contrast, negotiate, engage and reflected on their immersion experience.

Study abroad is an ideal cultural diversity and inclusion experiential learning opportunity where students have the ability to express themselves and improve their second language skills through a new cultural lens. As educators, it is crucial that we provide a background for students where they can learn about diversity and inclusion as a key, to foster a comprehensive and supportive steppingstone for students moving into a different living and learning environment while they prepare to travel abroad and learn to adjust to the host culture. For a short-term study abroad language and culture program to Costa Rica, three learning modules with a total of 7 diversity and inclusion activities were designed for each student to complete. The modules are: 1) Introduction to Diversity and Inclusion Concepts and Perceptions, 2) Integration and Development of Diversity and Inclusion Concepts for Study Abroad and 3) Reflections and Discussion about Diversity and Inclusion Application during Study Abroad.

The modules with their activities were designed taking into consideration the need to provide a channel for identifying, comparing and contrasting, engaging, negotiating, reflecting, and finding new ways of relating to others between the new host culture and their own, while adapting and having a sense of belonging, as they gain proficiency and live this experience through their second language perspective with activities that integrate ideas from a diversity and inclusion perspective. By the return of their immersion experience abroad, students gained a unique cultural and linguistic reflectivity that resulted from their involvement in these activities. These activities also led them to continue to compare, reflect and further develop their second language skills, and provided a diversity perspective that helped them become a global citizen.

Emerging Intellectuals: Anti-"Weathering" Strategies, Strong Voices at a PWI

Diana Rios, University of Connecticut; Graciela Quiñones-Rodriguez, University of Connecticut; Luis A. Loza, University of Connecticut; Lilia Falcon, University of Connecticut; Catherine Ramirez-Mejia, University of Connecticut; Norwyn Campbell, University of Connecticut

We posit that support components during the college experience are protective in nature, and have potential to mitigate deleterious impact of "Weathering" as hypothesized by Geronimus (1992; 2004; 2006) for our young adults. Weathering describes a process of wearing away by long-term experiences with racism. We

highlight ways in which a unique living-learning community program, and interrelated partners, contribute skill-building and compassionate support mechanisms for diverse students of La Comunidad Intelectual (LCI). Team leaders, LCI alumni, and undergraduate LCI students voice experiences at a predominantly white institution (PWI). LCI, in its 5th year, now has a critical mass of graduates.

We seek to document and highlight ways in which a unique living-learning community program, and interrelated partners, contribute skill-building and compassionate support mechanisms for La Comunidad Intelectual (LCI) students. The undergraduate learning community is a welcoming, open atmosphere on one floor in a dormitory. The program is geared to first-years with some spaces left for more advanced students. We posit that a variety of support components during the college experience are protective in nature, and have potential to mitigate the deleterious impact of “weathering” as hypothesized by Geronimus (1992; 2004; 2006) for our young adults. Programs such as LCI can add plates of protective armor.

Research in health sciences focuses on long-term weathering (wearing out or wearing down) effects and epidemiology of mostly African American populations in U.S. society. Effects are long term accumulations of micro and macro aggression based on racial bias and intolerance, and are imbedded in social, economic, political, educational, and health structures. We are applying the weathering hypothesis to higher education and diverse, mostly Latinx, students at a research university. Weathering is a suitable framework because students of color already arrive at the university having experiences with racism, anti-immigrant hate, classism, sexism and homophobia. They know what weathering feels like as it impinges on their spirits. They also know what it feels like to far surpass expectations. At their new institution they face different kinds of structural “isms” that must be navigated, along with tough coursework, in order for them to continue high levels of success beyond high school.

New tools, skills and affinity groups can assist students. The living-learning community offers practical (e.g. essay styling, irresistible résumé, calendaring, creativity), pre-professional (e.g. public speaking tips, corporate meet and greet, leadership council) and emotional support mechanisms (e.g. Mental Health Services, course mentors). These are especially important for underrepresented, undergraduate, students as they adapt to college life at the PWI. Their long-term cultural adjustment and negotiation of “weathering” pressures demands developing new roles, identities, social networks, and a strong pre-professional life.

As students progress beyond the first year in the community and leave the floor, they achieve other roles on campus that afford them more independence and pre-professional leadership experiences. These on-campus positions have the titles of chair, director, president, etc.

LCI is in its fifth year and now has a critical mass of alumni. This examination will include strong student voices from current students of LCI, students who had the LCI experience, and professional alumni who were active in LCI while they were undergraduates. We will also include updates on campus diversity enrollments as they are related to national trends.

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Exploring Equity in Education: Skills and Understandings for College Students

Rachelle Kuehl, Virginia Tech; Tiffany LaCroix, Virginia Tech

In this interactive session, attendees will participate in an opening activity designed to perturb college students’ thinking with regard to equity in education. We will then share a framework of understandings and skills needed by future teachers, social workers, and community organizers to engage successfully with diverse K–12 school communities. We will provide suggested activities to aid in developing college students’ skills in the areas of awareness, knowledge, attitudes, collaboration, and experiences surrounding diversity in education. A small-group discussion focused on how university programs work to increase students’ understanding of topics surrounding racial and cultural diversity will follow.

Universities across the globe have recognized the need to prioritize preparing college students seeking education-related careers to work with an increasingly diverse K–12 student population (Anderson & Stillman, 2013; Bennett, 2012; Larson, 2015; Sleeter, 2001). Particularly with regard to race and ethnicity, new members of the work force must be ready to successfully engage with families from a wide range of backgrounds and lived experiences. Programs have moved to requiring experience in schools serving larger populations of historically-minoritized students, courses geared toward increasing cultural competence, and class-embedded assignments meant to help college students think critically about their own positionality in a diverse society (Anderson & Stillman, 2013; Bennett, 2012; Brewley-Kennedy, 2005; Cochran-Smith & Villegas, 2015; Cochran-Smith et al., 2015; Darling-Hammond, 2010; Ronfeldt, 2012; Sleeter, 2001; Sobel, Gutierrez, Zion, & Blanchett, 2011).

Drawing on the work of Anderson & Stillman (2013) and Cochran-Smith & Villegas (2015; 2016), we share a beginning repertoire of understandings and skills surrounding racial and cultural diversity for college students of all backgrounds who are considering education or community-oriented professions. Within the framework, “I Understand” and “I Can” statements are presented for each of five themes: Awareness, Knowledge, Attitudes, Collaboration, and Experiences, which emerged from a comprehensive literature review on the topic of preparing preservice teachers to educate an increasingly-diverse population of students. Examples of key understandings include the harm in purporting a colorblind ideology, the need to develop affirming views of all students, and the recognition of the school community as a source of strength. Examples of key skills include the ability to participate respectfully and receptively in conversations surrounding race/ethnicity, the ability to create instructional experiences that emphasize critical thinking over summative assessment, and the ability to cultivate caring and inclusive classrooms.

Ideas for skill-building activities consistent with the framework will be both modeled and explained during the presentation. We will then offer a vision of how university programs can work with local school personnel to create communities of practice where pre-professionals can learn to be sensitive to racial diversity and equity in schools (Anderson & Stillman, 2013; Bennett, 2012; Larson, 2015; Sleeter, 2001) using the areas of awareness, knowledge, attitudes, collaboration, and experiences. A small-group discussion focused on how university programs work to increase students' understanding of topics surrounding racial and cultural diversity will follow.

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Faculty Members' Use of Blackboard Collaborative Tools: A Phenomenology

Stephen Kitoo; Liberty University

To facilitate learning of the growing numbers of students in higher education, institutions have invested in learning management systems; Blackboard is among the widely used learning management systems. Studies have shown that faculty

members are not fully utilizing collaborative Blackboard tools. Faculty members tend towards this behavior based on the perceived ease of use and perceived usefulness of the various Blackboard tools to their teaching goals. This session will present findings from a pilot phenomenological study where faculty members will describe the meanings they ascribe to their underutilization of Blackboard collaborative tools while teaching at their various universities.

Institutions of higher education are grappling with soaring numbers of students. To facilitate learning for these many students, higher education institutions have invested in learning management systems; Blackboard is among the widely used learning management systems (Dahlstrom, Brooks, & Bichsel, 2014). Studies have shown that faculty members are not making full use of the various features on Blackboard; specifically, they are not fully utilizing collaborative Blackboard tools (such as blogs, journals, wikis, among others) (Chow, Tse, & Armatas, 2018; Schoonenboom, 2014). Previous studies have demonstrated that faculty members tend towards this behavior based on the perceived ease of use and perceived usefulness of the various Blackboard tools to their teaching goals; the studies used quantitative methods to arrive at this conclusion (Rienties, Giesbers, Lygo-Baker, Ma, & Rees, 2016; Schoonenboom, 2014).

The problem to be sought in the proposed study was the lack of studies giving voice to faculty members regarding less utilization of Blackboard collaborative tools. The purpose of this proposed phenomenological study is to describe the meanings faculty members ascribe to their underutilization of Blackboard collaborative tools while teaching at their various universities that utilize the Blackboard learning management system. The theory guiding the study is the unified theory of acceptance and use of technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003) as it relates the four core constructs to the above-stated phenomenon. The proposed study will use a qualitative method, phenomenology, as the research design, which will give faculty members an opportunity to describe their experiences of this phenomenon. Faculty members drawn from various universities in Virginia will be the participants of this study. Data will be collected using semi-structured interviews, focus groups, and document analysis. Data will be analyzed using Atlas.ti computer software and a report of findings generated.

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Fostering the Development of Scholars through Collaborative Learning & Practice
Mariah Rudd, Virginia Tech Carilion School of Medicine; Shari Whicker, Virginia Tech Carilion
School of Medicine; Sarah Parker, Virginia Tech Carilion School of Medicine

Continued advancement of high-quality health professions education (HPE) research is dependent upon the development of educators who can design research with the same rigor demanded in basic science or clinical research. To support this need, our teaching academy used a social constructivist approach to develop an interdisciplinary program comprised of a HPE research curriculum in conjunction with an internal resource supported and mentor-guided, peer-review quality education research element. The inaugural year of this program will ultimately improve the execution of HPE at one institution, build a coalition of skilled medical education researchers, and ultimately contribute to academic research on HPE.

Continued advancement of high-quality health professions education research is dependent upon the development of educators who can design research with the same rigor demanded in basic science or clinical research. To support this need at our institution, our teaching academy used a social constructivist approach to develop an interdisciplinary program comprised of a health professions education research curriculum in conjunction with an internal resource supported and mentor-guided, peer-review quality education research element as the final project.

The authors developed the Health professions Education Scholars (HERS) program, a 1-year intensive, mentorship-guided program designed to facilitate participants through individual health professions education research project. A competitive selection process was established, with online applications being reviewed by program Course Directors, to identify program participants. The course directors invited a small group of experts to serve as mentors and several critical internal resources to provide ongoing, local guidance and support throughout the duration of the program. The program curriculum included foundational courses from the AAMC Medical Education Research Certification (MERC) program, a nationally recognized professional development program.

In parallel to formal didactic instruction and hands-on training, participants were actively mentored through the design and execution of a health professions education research project of peer-reviewed publication quality. The course directors (in cooperation with Department Chairs) selected eight accomplished and motivated clinicians who were interested in pursuing a health professions educator track to participate in the first year of this program. Participants represented a diverse group of health professions educators from across the health system. Participants were each matched with an experienced mentor and were required to protect one designated day per month to devote to participation in the program. At the end of the year-long program, participants will have completed a mentor-guided project of peer-review quality and will be certified through the Association of American Medical Colleges (AAMC) Medical Education Research Certificate (MERC) Program.

The primary goals of the HERS program were to provide participants with instruction in health professions education research principles and practical skills to do so effectively, foster collaboration within health professions education research, and develop our participants as leaders in academic medicine. The authors hope that the inaugural year of this intensive, mentorship guided program will improve the execution of health professions education at their

institution, build a coalition of skilled medical education researchers, and ultimately contribute to national and international academic research on health professions education.

Graduate Students' Perceptions of Explicit Instructional Tools to Teach Reading

Elizabeth Lanter, Radford University; Karen Davis, Tennessee State University; Alison Maruszczak, Radford University; Abbey Collins, Radford University

Children with speech and language deficits are at very high risk for reading difficulties. Not surprisingly, when doing their student teaching, graduate students in speech-language pathology treat many children who not only mispronounce words, but also struggle with reading and spelling. This presentation reports on the perceptions held by graduate students in speech-language pathology afforded access to an explicit phonemic awareness and phonics-based instructional program to teach reading to children with language-based learning difficulties. Survey results revealed favorable impressions about the accessibility of scripted instructional materials with reports that use increased their confidence and improved their ability to teach reading.

Reading necessitates children be aware of individual sounds within the oral speech stream; thus, it should not be surprising that children who struggle with speech and language often struggle with reading and spelling (Denton & Al Otaiba, 2011). Children with language impairments often struggle with reading because reading is spoken language presented in the printed form (Stanovich, Siegel, & Gottardo, 1997). When we hear speech, the individual sounds in spoken words and phrases run together. Children with language deficits tend to have less developed awareness of the sounds in speech; their limited awareness of individual sounds often contributes to their challenges learning to read.

Teaching struggling readers phonemic awareness (individual sounds in language) and phonics (mapping sounds to letters) is a recommended course of intervention (National Reading Panel, 2000; Vaughn, Gerten, & Chard, 2000; Wanzek, Wexler, Vaughn, & Ciullo, 2010). One-to-one phonics-based programs have shown to be highly effective (Denton & Al Otaiba, 2011; Ehri, Dreyer, Flugman, & Gross, 2007; Torgesen et al., 2001), and are often feasible for speech-language professionals who might see children individually. It takes time, however, to develop the expertise needed to teach phonemic awareness and phonics to children with language-based learning difficulties. Yet, speech-language pathology graduate students are routinely engaged in clinical or community placements where they are expected to teach struggling readers with language-based learning disabilities. Given the recognition that it takes time for pre-professionals to develop the skills and expertise to effectively teach reading, it can be understood why scripted instructional programs might seem attractive. Scripted instructional programs to teach phonics ideally provide a structured sequence of literacy skills, such as phonemic (sound) awareness, phonics (letter-to-sound correspondence), and sound blending for the purposes of decoding (Torgesen et al., 2001).

This presentation reports the perceptions held by pre-professional graduate students in a speech-language pathology program that were afforded access to an explicit instructional program to teach reading. Students in the program were not previously provided access to explicit

instructional materials to teach reading; thus, a survey was designed to consider their impressions of using an explicit code-based instructional teaching program. Survey results revealed favorable impressions about the accessibility of explicit instructional materials; students felt access to a scripted program increased their confidence and improved their ability to teach struggling readers. The survey discussed in this presentation suggests access to explicit instructional teaching programs, designed to promote phonemic awareness and phonics, may be useful in helping pre-professional speech-language pathologists teach reading.

Survey findings suggested use of an explicit phonics-based teaching program calibrated knowledge, deepened knowledge constructs, and encouraged the use of recommended practices and reflective thinking about how practice impacts children's learning. Whilst the use of packaged programs is not a substitute for professional competencies, the survey results lent support suggested access to scripted program might support the teaching efforts of graduate students. Findings encourage thoughtful consideration of the tools and instructional supports provided to pre-professional graduate students who teach children who struggle with reading.

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Helping Students to Learn and Remember Using Research-Based Principles

Brett Jones, Virginia Tech; Mia Jones, Blacksburg High School

Instructors can become frustrated when students don't remember what was taught. Although students are ultimately responsible for their own learning, instructors can play an important role in helping students learn and remember information by using

effective teaching methods. In addition, instructors can help students learn by teaching them how to learn. The purpose of this workshop is to provide instructors with research-based principles that they can use to (a) help students learn and remember what is being taught, and (b) help students learn how to learn, so that students can use their time effectively when studying.

Researchers have identified strategies that individuals can use to remember and learning information. Sometimes, however, instructors either don't know about these strategies or don't think about the variety of teaching methods that are available to them to help students learn and remember effectively. The purpose of this workshop is to provide instructors with research-based principles that they can use to (a) help students learn and remember what is being taught, and (b) help students learn how to learn, so that students can use their time effectively when studying.

Researchers have identified several research-based principles that people can use to learn and remember information more effectively, including connecting new information to their existing knowledge, organizing new information, using visuals, elaborating on new information, and practicing the information over time (Ormrod & Jones, 2018). These research-based principles can be applied by instructors to help students learn more in their courses. In this session, participants will be given examples of teaching strategies that are consistent with these research-based principles. For example, participants will discuss how concept maps can be used to help students construct their knowledge and organize it in ways that can help them remember information. In addition, participants will receive example rubrics that can be used to assess students' concept maps.

Researchers have also identified study strategies that students can use to study more effectively, such as selecting appropriate times and environments for learning, setting goals for study sessions, and scheduling periodic study times to review what they have previously learned (Ormrod & Jones, 2018). In this session, participants will be shown how they can share these strategies with their students to help students improve the effectiveness of their studying. Participants will be given handouts they can use to share with their students. Throughout the session, participants will: (a) be shown teaching strategies that relate to research-based principles, (b) be given specific examples from real courses, (c) be given resources that they can use, and (d) be asked to consider strategies they already use or that they could use to make their instruction more consistent with these research-based principles (and participants will share their ideas with one another).

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How Impactful is Globalization on International Students' Learning?

Pinar Gudal, Virginia Tech

This presentation comprises the author's research on globalization in the eyes of students in an international education environment and her action research study with her English as a second language learners. The study will examine to what extent the author's research findings are reflected among her students. The session

will include exchange of ideas, experiences, and thoughts between the author and her audience.

In this action research study, the author tries to exhibit how aware our international students are of the demands of a global society and how they expect their studies to ensure them stability in the midst of complex global changes. The author hopes by engaging her students, whose majority are college-bound high school graduates, to explore the factors that shape their motivation and decision-making. Our international students carry successfully tackling language learning requirements as their primary concern. That challenging process lays the foundation for becoming university students while providing an opportunity for appreciation of cultural diversity, personal growth, and development of skills and attitudes. Influence from their parents and friends is another factor that international students respond to. Parents, governments, or financial organizations can be support components in the students' lives; at the same time, students can feel bound in the direction those sources of security lead them.

The author's questions in this action research aim to distinguish between the relationship that students have with the language of English and what role they believe an education in English plays in their life in today's global society. Students are asked to elaborate on what appeals to them in the United States in terms of their career plans, changes in the global economy, environmental considerations, and personal values. The author, most importantly, will try to see whether studying in a foreign educational environment can be perceived as a choice solely self-based or whether it is a choice that reflects being more in tune with the rest of humanity in a global age.

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How One Library Reorganized to Support the Digital Assignment Life Cycle

Jamie Calcagno-Roach, James Madison University; Grover Saunders, James Madison University; Kevin Hegg, James Madison University; Andrea Adams, James Madison University; Erika Peterson, James Madison University

James Madison Universities Libraries recently reorganized to bring previously siloed services together in one unit. This presentation will examine several class assignments that illustrate how this reorganization is transforming how Libraries supports non-traditional forms of scholarship in the classroom. The typical workflow starts with a kickoff meeting and ends with a public event celebrating the students' work. Throughout the semester, Libraries staff provide instructional design consultations, training workshops, maker spaces and VR rooms, specialized equipment, and a publication platform. Libraries are able to embed its people and technologies in the classroom and simultaneously bring more students into its public spaces.

James Madison Universities Libraries recently reorganized itself to keep pace with a world of emerging technologies, evolving best practices, and changing user expectations. This presentation will examine four case studies that illustrate how bringing previously siloed services and experts together in one unit is transforming the way Libraries supports non-traditional scholarship in the classroom. We will examine the entire lifecycle of four assignments built around four different 21 Century technologies. These technologies are 3D scanning, modeling, printing and publishing; 360 VR video consumption and production; the virtual restoration of historic buildings and sites; and storytelling with maps.

The typical life cycle starts with a pre-planning kickoff meeting and ends with a public event in which students present their finished products. Throughout the semester, Libraries staff provide instructional design consultations for scaffolding and assessing assignments; workshops for student training; spaces and hardware for content creation, 360 film viewing, audio recording, 3D printing, and VR experiences; an equipment loan services to provide students with access to specialized equipment such as 3D scanners, 360 cameras, tripods, and microphones; and a publication platform for sharing student work. The benefits are twofold: Libraries is embedding its people and technologies in the classroom while at the same time bringing more students into its public maker spaces and VR rooms.

Interactive Assessment: Asynchronously Evaluating the Rule of Thirds

K. Westmoreland Bowers, Radford University; Samuel Jennings, Radford University

Development of interactive assessment methods provides a better form of evaluation that allows students and instructors deeper insight into what knowledge or skills the student has acquired. It is necessary to provide students with assessment methods that more accurately measure their skills and are more realistic evaluations of their skills in practice. This project highlights a sophisticated assessment tool that measures students' understanding of the rule of thirds in image composition.

As online instruction becomes more prevalent through the use of asynchronous and hybrid courses, methods of assessment must be adapted to accurately evaluate students' understanding of course concepts. Interactive modules can be created to asynchronously assess student progress using analytic tools. The results can be automatically recorded into a progressive web app or a learning management system grade book allowing for instantaneous feedback to both instructor and learner. Also, increased interaction and engagement expands a learner's long-term memory of content resulting in a more robust learning experience. This pedagogical approach is in-line with the constructivist paradigm, allowing the student to build on concepts in real time. This also allows the instructor a chance to reevaluate delivery methods in instances where students demonstrate a lack of understanding of the concept.

For an undergraduate course on digital imaging the concept of the Rule of Thirds is an important aspect in understanding image composition. This module was created in HTML5 and provides an interactive interface that can be accessed through any device as it is responsive. The module uses SCORM 1.2 tracking which is compatible with the D2L (Desire to Learn) learning management system. This type of assessment follows Boyle and Hutchison's (2009) description of a sophisticated e-assessment in that it contains media-rich stimulus material and the student interacts with the stimulus in a variety of ways. Meaningful assessment can go further in engaging students and gives the instructor deeper insight into the students' skill acquisition, allowing them to alter the content to better serve the students' needs.

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Living-Learning Communities: Integrating Curricular and Co-Curricular Experiences

Matt Kwiatkowski, Virginia Tech

Living-learning communities (LLCs) are a concept which extend the traditional concept of a "learning community," into the realm of on-campus housing. In LLCs, students live together on campus in a community with similar interests--whether those be directly tied to a major requirement or an interest area. At Virginia Tech, currently one-third of on-campus students are living in LLCs and over the next 10 years, that number will grow to two-thirds. Come find out more about these exciting initiatives!

As a complement to our practice session of the same title, we would also like to develop a poster with information about LLCs if participants cannot make it to the practice session. The poster would cover similar information as in the presentation: basic information and an overview of LLCs at Virginia Tech.

Multi-Disciplinary Assessment Using Portfolium: Lessons Learned

Sandra Ewell, Virginia Wesleyan College; Paul Ewell, Virginia Wesleyan College

Assessment has been and will continue to be a top priority for educational institutions at all levels. Two significantly and distinct academic programs at Virginia Wesleyan University (Education and Business) have engaged the Portfolium platform as a means by which to effectively and efficiently operationalize assessment strategies. This poster summarizes the logistics' processes of implementation and provides valuable lessons learned for future assessors considering similar endeavors. This topic is highly relevant as assessment directives aren't going away and increasing faculty and staff workloads, due to financial streamlining in higher education, require efficient user processes.

Assessment has been and will continue to be a top priority for educational institutions at all levels. Two significantly and distinct academic programs at Virginia Wesleyan University (Education and Business) have engaged the Portfolium platform as a means by which to effectively and efficiently operationalize assessment strategies. This poster summarizes the logistics' processes of implementation and provides valuable lessons learned for future assessors considering similar endeavors. This topic is highly relevant as assessment directives aren't going away and increasing faculty and staff workloads, due to financial streamlining in higher education, require efficient user processes.

The researchers involved in this effort were the leading team members in creating and supervising assessment strategies in their respective departments. The Education Department had previously used LiveText to assess its program outcomes while the Business Department had developed an in-house approach to program evaluation and review. Both departments recognized that their assessment procedures were both inefficient and ineffective and sought technologies that might make the evaluation efforts more malleable. The university decided to purchase access to Portfolium, an online e-portfolio and assessment platform, for assessment purposes. The researchers have identified numerous lessons learned from the modification of their respective assessment efforts (some similar between the two departments, and others not) and are hopeful that these lessons learned might, 1) be helpful to others considering the use of the Portfolium platform, and 2) generate discussion that might help the researchers continue to improve their own assessment processes.

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Nutrition and Engineering Interprofessional Education: A Multidisciplinary Product Development Project

Georgianna Mann, The University of Mississippi

This multidisciplinary project is a collaboration between nutrition and chemical engineering students with the goal of creating a preliminary design for a scalable food product. The design required a scale of 10 million units per year as designed by both nutrition and engineering students. This poster describes the product development project, recent results, and future plans for interprofessional education through collaborative multidisciplinary efforts. Perceived student benefits through a pre- and post- evaluation as well as student reflections are also presented. Multidisciplinary projects are one avenue to open employment opportunities for students and offer unique, attractive, and educational experiences.

Rarely can the world's wicked problems reach solutions through the efforts of one discipline alone. Multidisciplinary approaches to teaching can take many forms with the over-arching goal to provide interprofessional development. Multidisciplinary projects can help to foster student skill development, advance problem-solving skills, and create an appreciation for other disciplines (Eliot & Kolasa, 2015; Kusnoor & Stelljes, 2016).

This food product development project is a collaborative effort between two seemingly unrelated departments: nutrition and chemical engineering. The emergence of a multidisciplinary approach was driven by student desires to work in food industry, yet the University at which the project took place does not currently offer food science courses. Nutrition students enrolled in Experimental Foods and chemical engineering students in Plant Design II participated in this

interprofessional project in the spring of 2018. Nutrition students worked through the process of product generation, testing, and analysis. Chemical engineering students met with nutrition students in paired groups of 4-6 to work through the process of scaling up proposed products to produce 10 million units per year. While nutrition students' primary foci was product nutritional value and sensory quality, engineering students' foci was cost effectiveness and process flow.

Student outcomes were measured using a mixed-method approach through surveys and reflective journals. Students in both courses (total enrollment 57) completed pre- and post- surveys (n=47) developed from the Interprofessional Socialization and Valuing scale (IVS-21). Perceptions of skills gained through the course were determined using paired t-tests. Specific differences between classes were determined using an analysis of variance (ANOVA). All students completed two reflective journals (n=100 total) and were coded and analyzed using a thematic analysis approach. Students in both courses expressed a greater appreciation for the intricacies of other disciplines while learning more about food industry through different perspectives.

Survey results indicate that students felt an increase in communication, leadership, and decision-making skills. Student reflections showed students felt they learned more about effective communication, conflict resolution, and understanding group roles. They also noted that their expectations from the project were exceeded. Students not only learned about the product development process, but also about the complexity of food industry. Students would have liked more information on what their peers in other disciplines were assigned for the project. Students also expressed some frustrations with knowledge barriers due to the crossing of professions.

Findings presented here suggest the important role that multidisciplinary educational experiences can play for skill development. This project in particular is a unique and marketable experience for students, especially for those desiring to work in food industry. Future iterations of these courses should be offered at similar times to allow more opportunities for student interaction.

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- Kusnoor, A. V., & Stelljes, L. A. (2016). Interprofessional learning through shadowing: Insights and lessons learned. *Medical Teacher*, 38(12), 1278–1284. <https://doi.org/10.1080/0142159X.2016.1230186>
- Sharma, B., Steward, B., Ong, S. K., & Miguez, F. E. (2017). Evaluation of teaching approach and student learning in a multidisciplinary sustainable engineering course. *Journal of Cleaner Production*, 142, 4032–4040. <https://doi.org/10.1016/j.jclepro.2016.10.046>

Outside Resources in the Teacher Education Classroom

Sara Lenhart, Christopher Newport University

Teacher education classes are for preparing future teachers for what they can expect in their classrooms. They are also for giving strategies for teaching certain topics. An interdisciplinary approach is important in the teacher education classroom, especially for elementary teachers where topics can be overlapped. Population is one of those topics that can be used for math, social studies, and science. In this

session, attendees will be lead through several population activities aimed at K-12 students that can be used in many teacher education classes.

Teacher education classes are for preparing future teachers for what they can expect in their classrooms. They are also for giving strategies for teaching certain topics. It is important that future teacher educators are exposed to activities they can use in their classrooms one day. An interdisciplinary approach is important in the teacher education classroom, especially for elementary teachers where topics can be overlapped. Topics can also overlap in secondary classes, too. Population is a topic that can be used for math, social studies, and science. The presenter is a certified facilitator for Population Education. In this session, attendees will be lead through several population activities aimed at K-12 students that can be used in many teacher education classes.

Pedagogical Strategies for Teaching Empathy and Vulnerability

Saundra Penn, Queens University of Charlotte

Increased empathy and emotional intelligence has been noted as a developmental imperative for traditional age college students. Quite often, students lack practical life experiences for empathizing with complex client narratives. As such, this session will explore the presenter's behavioral and cognitive strategies for teaching and processing empathy with experiential activities (e.g. role-plays and mock counseling techniques). While the presenter teaches in human services, these strategies are applicable to faculty in education, social justice as well as those engaged in community-based learning. Attendees will process the use of these instructional strategies in one of their current classes.

A central component to the collegiate experience is aiding students in understanding diverse perspectives and increasing their empathy towards others' lived experiences. The stakes for students aiding vulnerable populations is higher as they often assess, support, and make recommendations for treatment. Therefore, human service students in training are required to go beyond simply learning about different vulnerable groups and engage in practices that require them to reflect on their assumptions, values, and biases about different vulnerable populations. Moreover, having students engage in role plays and micro-counseling triads challenges them to engage in higher learning related to complex human experiences. For instance, they are challenged to ask themselves what means to be an inmate, an inactive parent, an at-risk teen, or person in recovery.

Mariska, M. (2015). The client role in a pre-practicum counseling skills course. *Journal of Counselor Preparation and Supervision*, 7(1) doi:<http://dx.doi.org/10.7729/71.1067> This qualitative study examines the development of master's level counseling students when they assume the client role in mock-counseling session. This study is useful to undergraduate helpers in training as they are often first responders. Warren, C. A. (2014). Towards a pedagogy for the application of empathy in culturally diverse classrooms. *The Urban Review*, 46(3), 395-419. doi:<http://dx.doi.org/10.1007/s11256-013-0262-5> This phenomenological study explores

the developmental experiences of four seasoned teachers. An outcome of this study, a two-phase model is presented on gaining empathy with students.

Dolby, N. (2014). The future of empathy: Teaching the millennial generation. *Journal of College and Character*, 15(1), 39-44. doi:<http://dx.doi.org/10.1515/jcc-2014-0006> Dolby discusses the reduction of empathy among college aged students in light of social media.

Pedagogical Strategies That Help Retain Students in Mathematics

Alexandra Kurepa, North Carolina A&T State University

We describe the pedagogical strategies developed as a part of a Math S-STEM project at North Carolina A&T State University with the goal to increase the number of underrepresented students in the mathematical sciences. The development of a faculty-mentored learning community for a cohort of undergraduate and graduate students in mathematics and the implementation of faculty and peer mentoring, advising and tutoring, as well as student research, and faculty-student collaboration has resulted in increased retention and overall positive professional effects on the cohort.

This proposal is focused on developing a faculty-mentored, student-cohort learning community as part of the greater initiative to improve recruitment and retention of students in the mathematical sciences and thus increase the number of students entering STEM fields. The NSF-supported MATH S-STEM program at North Carolina A&T State University is only open to mathematics majors. The students are required to participate in carefully selected research projects and enrichment activities. In addition, regular activities in the program include problem sessions and study teams. The students also participate in vertical peer mentoring, tutoring, and advising, all of which are required.

Three faculty members (grant PI and co-PI's) serve as special advisers to the group. The students have access to these advisers in addition to their "regular" assigned adviser. The Program has physical space available to the students for presentations, meetings advising sessions, peer tutoring, and "hanging out". The majority of program participants are minority students that are traditionally underrepresented in the STEM disciplines. This provides the advantage of bringing the knowledge and experience of previously under-utilized groups to bear on mathematical problems facing society today.

Relevancy of All the President's Men with Today's Tweetstorms

Mary Helen Millham, University of New Haven; Diana Rios, University of Connecticut; Karin Haberland,
University of Connecticut

Communication undergraduate students are shown *All the President's Men* and then challenged to relate this 40-year old movie to present day political situations and events. Students are asked to consider/think about if social media could have affected how Woodward and Bernstein covered (and researched) Watergate and if

they see any parallels between the reporting being shown in the film during the early days of Watergate and present day reporting on the current administration.

The election of Donald Trump in November of 2016 gave us a president with an extremely active social media profile, especially on his platform of choice, Twitter. Today's college students have grown up in an era of a 24-hour news cycle, with falling ratings for legacy broadcast news and the shuttering of daily newspapers. Like college students in the Watergate era, they are living in the shadow of war, strained international relations, and economic disparity. They are accustomed to getting their news in short bursts in the form of alerts on their phones, rather than reading or listening to lengthy pieces. This all leads us to ask: In the twelve years since the introduction of Twitter, how has social media influenced the way stories are covered? How do platforms like Twitter allow news figures to direct the coverage of their stories and perhaps change the narrative?

Students are provided background information on the current events surrounding All the President's Men so that they can place the movie's events into proper context and more fully understand what they are seeing on-screen. Students are told to pay close attention to the technology that did or did not exist in 1972. In other words, no Google, no cell phones; but pay phones, landlines (with cords!), big thick phone books, library card catalogs, note-taking on every single scrap of paper, and so on. The fact that "Woodstein's" three editors, Harry Rosenfeld, Howard Simmons, and Ben Bradlee all push the two reporters for more: more clarification, more confirmation, more verification, etc. can be contrasted with reporting today where the push to be first can often override being accurate, especially with social media.

Sensitive, Controversial: Unpacking Hierarchy, Power using HBO's The Young Pope

Diana Rios, University of Connecticut; Victoria Reid, University of Connecticut

Popular culture and online news allow for starting points in critical thinking conversations about sensitive topics in college classrooms. Of interest is the TV series "The Young Pope" where a quirky pope cleans-up a church-empire. Recent 2018 headlines announced the Catholic Church crisis concerning abuses of power and exploitation of followers. Catholic community members take action about problems. In public and faith-based college classrooms, let's harness media to discuss embarrassing, uncomfortable, abhorrent issues that are with us. Let's also talk about the good in the world and our compassionate plans to remedy socio-structural problems and make the world better.

Popular culture and global online news headlines (Goldstein, 2018; BBC, 2018; NBC25News, 2018) allow for starting points in critical thinking conversations about sensitive and controversial topics in college classrooms. Of unique interest is the internationally distributed series "The Young Pope" (2017) where a freshly minted pope reorients structures of a church-empire to gain more control and recreate his church. His church knows deceit, sexual exploits and greedy machinations for power. Within the series there is also evidence of goodwill, innocent joy, and untainted conviction among characters and story arcs. Recent 2018 headlines across the U.S. and world have announced the Catholic Church crisis concerning abuses of power and exploitation of faithful followers, including children, teens and seminarians. Catholic community members are

not sitting still about problems (Schlumpf, 2018; Forliti & Vergara, 2018). They and their Church have invested in good works by helping people with shelter, asylum, housing, food, counseling, uplifting workshops, and highly valuable academic scholarships.

Within the realms of public college classrooms and faith-based institutions, how can we harness popular culture and online news media to discuss embarrassing, uncomfortable, abhorrent issues that are with us today? Let us discuss this together as teachers and scholars. How can we talk critically about power structures, power relationships, exploitation, gender and faith, gender and power, gender and leadership? How do we talk about the good in the world and our mutual, compassionate, plans to remedy socio-structural problems and make the world better? Let us brainstorm together. Teaching strategies include: Pre-notifying students of the sensitive topic used for critical thinking and discussion; students need a chance to opt-out of the learning “module” or topic and replace it with something else; instructor self-examines viewpoints and opinions in order to work toward effective facilitation; through guiding questions, have students examine their own personal assumptions and belief systems in order to gain more awareness of these; pre-select clips and describe story arcs from popular media program(s) and news media to accompany questions; students work in small groups to share perspectives and then review with the larger class; rotate membership of small groups; “silent discussion” can be conducted where students write opinions on topics anonymously and these are used for facilitation by instructor at a next meeting; students are encouraged to agree to disagree. What techniques have you used on sensitive and controversial topics? Share these with other educators in our session.

- BBC News (Aug. 20, 2018). Child sexual abuse and the Catholic Church, what you need to know. <https://www.bbc.com/news/world-44209971>
- Forliti, A. and Vergara (2018). Catholic faithful demand change after sex abuse scandals. US News and World Report. <https://www.usnews.com/news/us/articles/2018-09-08/catholic-faithful-demand-change-after-sex-abuse-scandals>
- Goodstein, L. (Sept. 13, 2018). Fall of a West Virginia bishop widens the Catholic crisis over sex abuse. <https://www.nytimes.com/2018/09/13/us/bishop-bransfield-pope-francis.html>
- NBC25News (Sept. 2, 2018). Cardinal Wuerl addresses priest abuse allegations at mass, interrupted by "shame on you" congregant. <https://www.facebook.com/NBC25/videos/catholic-church-sex-abuse-scandal/255091498476832/>
- Schlumpf, H. (2018). Young Catholics stay to fight for church reforms in wake of scandals. <https://www.ncronline.org/news/accountability/young-catholics-stay-fight-church-reform-wake-scandals>

Shaping Student Identity Development for Community Engagement

Jessica Davis, Virginia Tech; Mary Case, Virginia Tech; Kaylynn Hill, Virginia Tech

This session is designed for participants to gain a better understanding of student identity development and its importance for students who are engaging with the community. The presentation will give an overview of identity development and critical service learning. Participants will also have the opportunity to engage in an identity development activity and discuss how to include these discussions in curriculum.

The session will begin with a 15-20 minute introduction of college student development theory, identity development, and critical service learning. Facilitators will discuss how multiple identities and sociopolitical perspectives impact community engagement and therefore should rely on identity development within the class coursework. The next 15-20 minutes the facilitators will guide participants through a social identity wheel activity showcasing an activity for the participants to utilize. Additionally, during the activity participants will have small group discussion based on how they see this activity impacting their class. The last 5-10 minutes will be for questions and for the facilitators to give additional resources and reflection of previous implementations of identity development for both curricular and co-curricular programming.

- Jones, S. and Abes, E. (2013). *Identity Development of College Students: Advancing Frameworks for Multiple Dimensions of Identity*. San Francisco, CA: Jossey-Bass.
- Patton, L. D., Renn, K. A., Guido, F. M., & Quaye, S. J. (2016). *Student development in college: Theory, research, and practice* (3rd edition). San Francisco, CA: Jossey-Bass.
- Hernandez, E. (2015). Utilizing Critical Race Theory to examine race/ethnicity, racism, and power in student development theory and research. *Journal of College Student Development*, 57(2), 168-180.
- Chickering, A. W. & Reisser, L. (1993). Establishing identity. In A. W. Chickering and L. Reisser, *Education and identity* (2nd ed.) (pp. 173-208). San Francisco, CA: Jossey-Bass.
- Watt, S. K. (2007). Difficult dialogues, privilege and social justice: Uses of the privileged identity exploration (PIE) model in student affairs practice. *College Student Affairs Journal*, 26, 114-126.

Socrates Already Said That!

Doris Kincade, Virginia Tech; Peggy Quesenberry, Virginia Tech; Elizabeth Dull, High Point University

Although unlike our visions of traditional teaching with an instructor spouting knowledge to a roomful of orderly and passive students, the Socratic Method does provide instructors with a method for teaching students. With its roots in work performed over 2,000 years ago, researchers questioned if the Socratic Method could be germane to today's classroom. The posters at the CHEP conference not only support the benefit of the Socratic Method but they also provide instructors with ways to promote dialog, self-reflection and transformative knowing – all keys to helping a student learn.

The Socratic Method is a method of inquiry, and thus teaching, based upon the practices of the Greek philosopher, Socrates (470-399 BC; Garrett, 1998). Although unlike our visions of traditional teaching with an instructor spouting knowledge to a roomful of orderly and passive students, the Socratic Method does provide instructors with a method for teaching students. Shared dialog, self-inquiry, and probing questions are all fundamental to the Socratic Method (Reis, 2018). In addition to helping the student learn information, the Socratic Method helps learners to learn about themselves, to be reflective about what they are learning, and to be proactive in their learning (Phillips, 2002).

With its roots in work performed over 2,000 years ago, researchers questioned if the Socratic Method could be germane to today's classroom. This study used content analysis to make an examination of the 76 abstracts for the posters presented at 10th Annual Conference on Higher Education Pedagogy (CHEP; Poster Sessions, 2018). For 11 abstracts the content was too brief for analysis. Key words such as engagement, dialog, feedback and self-inquiry were used to represent concepts or the Socratic Method. Of the remaining 65 posters 50% revealed findings with foundations in the Socratic Method. Most of those abstracts not resulting in Socratic Method findings were studies investigating administrative issues within an educational setting. An example of relevant findings, which emanate from the Socratic Method, is as follows. "Fostering that lifelong learning attitude in higher education allows us educators ... [to] awaken students to become more in tune with themselves as learners" (Hao, 2018, p. 254).

Researchers also reported on the success of various techniques used to foster learning through inquiry, or the Socratic Method. Exploratory writing as well as face-to-face dialog in the classroom, social setting or chatroom was noted by several researchers to be helpful in furthering students learning and thinking (e.g., Ayers, 2018; Jackson, 2018; Young, 2018). According to researchers presenting posters at the CHEP conference, technology does not have to be a deterrent to inquiry but can rather be a tool to enhance dialog and the self-learning promoted by the Socratic Method (Young, 2018). Lyles (2018) noted that "[s]tudents learn best through knowledge construction, active learning, practice, confronting errors in reasoning, the use of technology tools, and consistent, formative feedback" (p. 274-275).

Although the Socratic Method is not mentioned directly by any of the researchers making poster presentations at the CHEP conference, key-word content analysis revealed that the practice of student-instructor dialog and inquiry is alive and well in today's educational settings and continues to be proven as beneficial to student learning. The posters at the CHEP conference not only support the benefit of the Socratic Method but they also provide instructors with ways to promote dialog, self-reflection and transformative knowing – all keys to helping a student learn.

Garrett, E. (1998). The Socratic Method. The Law School, The University of Chicago. Available from <https://www.law.uchicago.edu/socratic-method>

Hao, Y. (2018). A new goal for higher education: Fostering students to become lifelong learners. In Poster Sessions. Conference on Higher Education Pedagogy Proceedings. 10th Annual Conference. Center for Excellence in Teaching and Learning. Available from https://chep.cider.vt.edu/content/dam/chep_cider_vt_edu/CHEP_2018_Proceedings_Final.pdf

Jackson, J. (2018). Encouraging interdisciplinary critical thinking using exploratory writing. In Poster sessions, Conference on Higher Education Pedagogy Proceedings. 10th Annual Conference. Center for Excellence in Teaching and Learning. Available from https://chep.cider.vt.edu/content/dam/chep_cider_vt_edu/CHEP_2018_Proceedings_Final.pdf

Lyles, C. (2018). Teaching anxiety-producing content: Practical applications from the literature. In Poster sessions, Conference on Higher Education Pedagogy Proceedings. 10th Annual Conference. Center for Excellence in Teaching and Learning. Available from https://chep.cider.vt.edu/content/dam/chep_cider_vt_edu/CHEP_2018_Proceedings_Final.pdf

Phillips, C. (2002). Socrates cafe: A fresh taste of philosophy. New York, NY: W. W. Norton & Company. Poster Sessions. (2018). Conference on Higher Education Pedagogy

- Proceedings. 10th Annual Conference. Center for Excellence in Teaching and Learning. Available from https://chep.cider.vt.edu/content/dam/chep_cider_vt_edu/CHEP_2018_Proceedings_Final.pdf
- Reis, R. (2018, February 23). The Socratic Method: What it is and how to use it in the classroom. Stanford University Tomorrow's Professor Postings. Message Number: 810). Available from <https://tomprof.stanford.edu/posting/810>
- Szpara, M. (2018). Working towards social justice skill outcomes: Higher education assessment. In Poster sessions, Conference on Higher Education Pedagogy Proceedings. 10th Annual Conference. Center for Excellence in Teaching and Learning. Available from https://chep.cider.vt.edu/content/dam/chep_cider_vt_edu/CHEP_2018_Proceedings_Final.pdf
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Starting and Ending with Why: A Question-Centered Pedagogy

Anthony Szczurek, Virginia Tech

Pedagogical considerations of question formation too often focus on the types of questions the teacher asks. In contrast, a question-centered pedagogical approach aims to cultivate the student's ability to form and pose deep, insightful questions. This presentation explores both the usefulness of a question-centered pedagogy as well as strategies for employing it.

Pedagogical considerations of question formation, such as the Socratic approach or problem-based learning, too often focus on the types of questions the teacher asks. In this way, students implicitly associate question-formation as an issue for the authority figure, regardless of context. In contrast, a question-centered pedagogical approach aims to cultivate the student's ability to form and pose deep, insightful questions (Bowker 2010, Duluty 2010, Tofade et al. 2013, Bowker & Fazioli 2016). The student, rather than the teacher, takes control of the inquiry process and so learns how to be an agent responsible for asking about the parameters of an issue or problem. The "question" becomes less about imposing ways of thinking the world as-it-is and more about considering new possibilities, interrogating how the world could-be, a creative act. This presentation explores both the usefulness of a question-centered pedagogy as well as how it can be integrated with other approaches. It explores how a question-centered approach contributes to critical thinking skills and cultivates a relational orientation between the student and her learning.

Bowker, Matthew H. 2010. "Teaching Students to Ask Questions Instead of Answering Them." *Thought & Action*. 127-134.

Bowker, Matthew H. and K. Patrick Fazioli. 2016. Rethinking Critical Thinking: A Relational and Contextual Approach. *Pedagogy and the Human Sciences*. 6.1, 1-26.

- Duluty, Evelyn Wortsman. 2010. "Asking Questions: Cultivating the Habit of Inquiry." *Thought & Action*. 135-139.
- Tofade, Toyin, Jamie Elsner, and Stuart T. Haines. 2013. "Best Practice Strategies for Effective Use of Questions as a Teaching Tool." *American Journal of Pharmaceutical Education*. 77.7
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STEM Scholars Program at a Small Liberal Arts Institution

Deirdre Gonsalves-Jackson, Virginia Wesleyan University; Margaret Reese, Virginia Wesleyan University;

Gabriela Martorell, Virginia Wesleyan University

In an attempt to address the low numbers of STEM majors, Virginia Wesleyan University was awarded a five-year NSF STEM grant to develop a Science & Mathematics Scholars Program (\$600,000) for need-based scholarships and programming for undergraduates majoring in STEM. Overall, this project contributed to a broad understanding of how to attract and, especially, how to retain academically talented students in STEM disciplines at a small, private liberal arts university. The purpose of this study is to present the results and profiles of students in the STEM Scholars program at VWU to gain insight on the successful STEM student model.

In 2012 Virginia Wesleyan University (VWU) was awarded a six-year NSF S-STEM grant entitled Science & Mathematics Scholars Program: Science and Math Students in a Liberal Arts College in the amount of \$600,000 to create the Science & Mathematics Scholarship Program (STEM Scholars Program) for need-based scholarships and programming for talented undergraduates majoring in Biology, Chemistry, Computer Science (CS), Earth and Environmental Sciences (EES), or Mathematics. Emulating successful cohort programs in existence at VWU, the STEM Scholars Program focused on small-group and inquiry-based learning. Improved educational opportunities included individualized mentoring, early research training, utilization of modern laboratory and computing equipment, and the university's marine research vessel. These opportunities provided scholarship recipients with educational experiences that will leverage them into STEM-related employment. Innovative programming was designed to address factors that may contribute to retention in the STEM disciplines; viz., early exposure to career choices, academic support and small group collaboration (Seymour & Hewitt, 1997).

Students were selected and provided with vital academic and career planning resources. We aggressively recruited three cohorts of students through site visits, partnerships with high schools, open houses, and electronic networking. Selection of applicants was based upon aptitude for success and interest in STEM. Students in each cohort lived in the same residence halls, took classes together, and engaged in collaborative, multidisciplinary research. Faculty and Career Services specialists created workshops and a network of STEM professionals to assist students with career placement. Annual surveys and interviews with recipients were designed to explore attitudes about academic support, advising, teaching, and depth of commitment to STEM careers.

Overall, this project contributed to a broad understanding of how to attract and, especially, how to retain academically talented students in STEM disciplines at a small, private liberal arts university. Recent graduates in our STEM majors include 18% minorities and 65% women. Thus, this program will naturally impact the participation of historically underrepresented groups. The purpose of this study is to present results and profiles of students in the STEM Scholars program at VWU to gain insight on the development of successful STEM student model.

- Burke, R. J. and Mattis, M. C. (2007) *Women and Minorities in Science, Technology, Engineering and Mathematics: Upping the Numbers* (pp. 159-183). Cheltenham: Edward Elgar.
- Nicholls, G. M., Wolfe, H., Besterfield-Sacre, M., Shuman, L.J. & Larпкиattaworn, S. (2007). A method for identifying variables for predicting STEM enrollment. *Journal of Engineering Education*, 9(1), 33-44.
- Seymour, E. & Hewitt, N. M. (1997). *Talking about Leaving: Why Undergraduates Leave the Sciences*. Boulder, CO: Westview Press.

Strength in Numbers: Using Group Peer Review for Grant Review

Mariah Rudd, Virginia Tech Carilion School of Medicine; Shari Whicker, Virginia Tech Carilion School of Medicine; Alisa Nagler, American College of Surgeons; David Musick, Virginia Tech Carilion School of Medicine

The peer-review process is commonly an independently driven activity. Alternatively, group peer review relies on the complementary expertise of a small team, requires the active exchange of ideas, and necessitates ongoing collaboration. Instead of performing independent reviews for a national grant review process, a group of several experts came together to review and come to a collective consensus for recommendation for each. By bringing together individuals with different levels of experience and unique but complementary areas of expertise, the review process evolves into a more holistic faculty development opportunity with the end result of a more thorough, quality review.

Background: The expertise of multiple reviewers is often sought for the review of manuscript, grant and other scholarly submissions for purposes of quality control and assurance. The peer-review process, a commonly independently driven activity, has recently been flipped upside down with the advent of Group Peer Review. Group review relies on the complementary expertise of a small team, requires the active exchange of ideas, and necessitates ongoing collaboration. A team of health professions educators recently deployed the Group Peer Review process for the review of national grant submission.

Methods: A study team member (DM) was asked to independently review a group of proposals for a national grant. Instead, a group of several experts was recruited to independently provide a score and comments for each grant proposal. The individual scores were averaged and comments from each reviewer were distributed amongst the group. The group came together to summarize, discuss, dissect, and share thoughts on each proposal. The group came to a consensus for a recommendation.

Results: Anecdotal feedback from members of the grant review team demonstrated the value of participating in a group peer review exercise. Contributions from all members of the group resulted in an aggregate score for each proposal as well as robust feedback. The process served as a meaningful faculty development exercise for all reviewers who ranged in levels of experience with the peer review process.

Conclusions: By bringing together individuals with different levels of experience and unique but complementary areas of expertise, the review process evolves into a less siloed, more holistic, faculty development opportunity with the end result of a more thorough and quality review.

Dumenco, L., Engle, D. L., Goodell, K., Nagler, A., Ovitch, R. K., & Whicker, S. A. (2017). Expanding group peer review: a proposal for medical education scholarship. *Academic Medicine*, 92(2), 147-149.

Student Poster Sessions within an Online Delivery Format

Craig Jackson, Virginia Wesleyan University

The advantages and challenges of a conference-style poster assignment and end-of-term poster session within an online undergraduate psychology course are discussed. Student evaluation data are summarized and recommendations for improvements and implementations in other courses are provided.

Poster sessions at academic conferences are ubiquitous. Poster sessions as class assessments instead of traditional term papers are becoming commonplace as well (e.g., Baird, 1991; Hughes, 2005; Menke, 2014; Stegemann & Sutton-Brady, 2009). Poster assignments allow students to participate in a conference-style professional activity that can provide them with an opportunity to develop and practice research, writing, communication, technological skills, as well as express their creativity. The proposed poster will review the literature on the advantages of student poster assignments generally and those specific to online formats. In addition, the poster will highlight experiences in the development and delivery of an online poster session assignment used in an upper-level undergraduate industrial/organizational psychology course. Contents will include descriptions of scaffolded assignments, an online gallery design format, a method of peer-evaluation, and a grading rubric. Results of student surveys assessing the effectiveness of the poster assignment will be presented. Conclusions regarding the applicability of poster skill to graduate school or work environments, recommendations for improvements, and other types of courses will be discussed.

Baird, B.N. (1991). In-class poster sessions. *Teaching of Psychology*, 18, 1, 27-29.

Hughes, A. (2005). A poster project for an undergraduate sensation and perception course. *Teaching of Psychology*, 32, 1, 58-59.

Marek, P., Christopher, A.N., & Koenig, C.S. (2002). Applying technology to facilitate poster presentations. *Teaching of Psychology*, 29, 1, 70-72.

Menke, J.L. (2014). Implementation of an online poster session in online and face-to-face classrooms as a unique assessment tool. *Journal of Chemical Education*, 91, 3, 414-416.

Stegemann, N., & Sutton-Brady, C. (2009). Poster in marketing education: An empirical examination. *Journal of Marketing Education*, 31, 3, 219-229.

Supporting Faculty Needs with a Teaching Development Seminar Series
Courtney Vengrin, Iowa State University; Lisa Gestrine, Iowa State University

Pedagogical training is critical for faculty in higher education, but often these individuals enter the world of teaching with little to no prior training. To support faculty in this area, Iowa State University College of Veterinary Medicine has implemented a teaching development seminar series. Professionals in education cover topics such as assessment of learning, educational technology, and lesson planning to help faculty create a well-rounded course with objectives that can be adequately assessed each semester.

Veterinary Medicine in Higher Education is a very unique environment where many educators find themselves in a classroom with a lack of pedagogical training. Often these individuals come to the world of education as a secondary career path, after working in a clinical practice for several years. Developing services to support teaching and engage faculty as leaders in the classroom is critical to both faculty and student success. To meet this need at Iowa State University College of Veterinary Medicine, a pilot summer series was developed with the aim of supporting teaching practices and addressing topics such as assessment of learning, educational technology, instructional design, lesson planning, syllabus design, and objective writing.

During the summer pilot seminar series, a new topic was provided every two weeks. The sessions were one hour in duration over the lunch hour given that faculty at the College have somewhat inflexible schedules given the nature of veterinary medical education. Topics went in a sequential order in which faculty could build their classroom preparations over the course of the series, and each seminar took them step by step to make all the tasks that come with teaching and building a course, more manageable.

The first seminar focused on developing a complete syllabus and the necessary and required information that a syllabus needs to construct and dictate a course. The second seminar focused on how to write proper learning objectives that could then be included into the syllabus they constructed at the prior seminar. The next seminars focused on how to create lessons plans based on the learning objectives they created and how to motivate and engage students in the classroom. We then finished the summer pilot seminar series with seminars on integrating educational technology into the classroom and building a class on a learning management system. Every seminar included a packet of information that they would interact with during the seminar, which also served as a resource they could refer to in the future. To accommodate faculty that could not attend, a recording of the seminar and an electronic copy of each packet was sent out via e-mail.

The summer pilot seminar series was a success with our faculty, and a fall seminar series has now been planned and implemented to continue our goal of providing pedagogical training for the College. Faculty, through a survey, suggested the topics for our fall seminar series. We also expanded our resources to reach as many faculty needs as possible. We created a small teaching

development library that faculty can check out books from to help them with many different topics that we cover during our seminars. A website was also developed that provides the current seminar schedule and all resources and recordings from past seminars.

Teachers as Boy Scouts: Preparing with the Power of "Pre-suasion"

Laura Morrison, College of the Albemarle

The Boy Scout motto is "Be Prepared." Instructors can better prepare for class by considering their role as persuaders. In this session, participants will learn techniques Robert Cialdini termed, "Pre-suasion." Working collaboratively with the facilitator, attendees will explore ways to integrate the techniques in their classrooms. Participants will leave the session with two "merit badges" (activities), based on Cialdini's pre-suasion techniques, to increase student learning in their classrooms.

Instructors, like Boy Scouts, are expected to be well-prepared for class. Many instructors face frustration when they realize their students are not well-prepared scouts. As instructors, our metaphors for teaching matter. Being prepared to teach should encompass being prepared to employ persuasive strategies in the classroom. Students have so many persuasive messages and media available to them, that as instructors, we need to acknowledge persuasion as part of our job. When we do, we will be better prepared to serve our students.

Robert Cialdini in "Pre-suasion: A revolutionary way to influence and persuade" provides business people ways to employ persuasive strategies in sales and marketing. As instructors, we can employ these same techniques to engage and motivate students to learn. The goals of this session for participants include:

1. Identify Cialdini's two "Pre-suasion" techniques.
2. Describe how these two techniques fit in an overall teaching as persuasion model.
3. Create two activities that employ Cialdini's two-step influence model to use in the participants' classes.

Cialdini, R. (1984). *Influence: The psychology of persuasion*. New York: William Morrow and Company.

Cialdini, R. (2016). *Pre-Suasion: A revolutionary way to influence and persuade*. New York: Simon & Schuster.

Teaching Strategies and Methods to Increase Engagement in Millennials

Kanika Bryant, College of the Albemarle

This poster will seek to open discussion regarding instructional strategies including the use of instructional technology, gamification, and the integration of popular culture and trending topics into the higher-education classroom to facilitate multi-modal learning and engagement in millennial and Generation Z students who are stereotypically disengaged.

While numerous secondary education teachers across the nation vie to increase engagement in their classrooms through personalized learning experiences and dynamic instructional strategies to reach the in coming generations of disengaged pupils, many higher education faculty simply are not concerned with the same praxis. Higher education is about research. We attend conferences to learn more about discipline specific content to publish, to share, to grow in knowledge—but not necessarily how to implement effective instructional strategies. This must change. This poster will seek to open discussion regarding instructional strategies including the use of instructional technology, gamification, and the integration of popular culture and trending topics into the classroom to facilitate multi-modal learning and engagement of millennial and Generation Z students who are stereotypically disengaged.

The Hate U Give: Exploring Social Identity, Racism, and Cultural-Trauma

Sherri Woods, Youngstown State University

The Hate U Give will engage the audience in hands on instructional methods, teaching tools, and dialogues that explore social identity, cultural-based trauma, and prejudice through literature. The Hate U Give is a #1 New York Times Bestseller young adult novel by Angie Thomas full of rich content that opens the door to transformational conversations about race, social identity, conflicts of interracial relationships, and social and economic justice. Social Work, Counselor, Criminal Justice, English, and Teacher Education audiences will benefit from this workshop.

The Hate U Give is an engaging young adult novel #1 New York Bestseller. It follows Starr's journey of life as an African-American 16-year-old who is drawn to activism after witnessing the police shooting of her friend. This novel provides opportunities to engage in the controversial but necessary topics of race, social identity, cultural-based trauma, interracial relationship conflict, and cultural stereotypes. Session participants will have the opportunity to explore trauma-informed approaches to controversial topics through the lens of The Hate U Give novel. The instructional tools of trauma-informed SELF (safety, emotional management, loss, and future story), cultural assessment, and discussion based teaching explored during this workshop will equip participants in how to engage students in consciously avoided controversial issues within the classroom.

Participants will explore how dissension can be a useful, powerful, and extraordinary tool to promote learning. Participants will engage in planning discussions, designing questions that utilize Bloom's Taxonomy, implementing strategies for leading discussion sections, developing small group activities, exploring value testing questions, and techniques to arrive at closure of discussions. Participants will participate in hands-on exercises they can immediately implement into the teaching and learning process.

The Hate U Give session is unique in that it will model for participants a process of bringing difficult discussion about race to the classroom so that educators can expand understanding and acceptance of racial differences. The Hate U Give session explores pre-conceived racial biases, and how this lack of understanding can lead to racial conflict, strife, discrimination, as well as racial discomfort. White fragility will be introduced and explored; a cultural assessment template

will be introduced to facilitate needed discussions about this phenomenon as well as other identified race-related-fragilities. A controversial topic template will be used to assist participants in exploring and appreciating how divergent opinions can find common ground. The Hate U Give explores diversity and inclusive pedagogy in a non-threatening and engaging format while equipping participants with tools for exploring social identity, racism, and cultural-trauma.

Thinking Long-Term: Does Introductory Course Success Impact Degree Completion?

Eric Lovik, Radford University

The first year of college is critical for retention and graduation. Overall first-term and first-year GPA are key indicators, but what about academic success in specific introductory courses? Does it matter if a student earns an average or above average GPA but gets a low grade in certain 100 and 200 level courses? The purpose of this study is to explore the long-term impact of first year grades, particularly in relation to graduation. The results indicate that earning at least a final course grade of B in certain courses can be an early indicator of students' long-term success.

The first year of college is critical for retention and graduation. We know that overall first-term and first-year GPA are key indicators, but what about academic success in specific introductory courses? Does it matter if a student earns an average or above average GPA but gets a low grade in certain 100 and 200 level courses? The purpose of this study is to explore the long-term impact of first year grades, particularly in relation to graduation. There has been growing focus on the importance of the first year experience and the role of programs and services to enable incoming undergraduates to have a successful transition into higher education (Upcraft, Gardner, & Barefoot, 2005). Aside from the first year experience, however, there may be particular introductory level courses that relate to degree completion.

In this study the researcher analyzed the outcomes of 100 and 200 level general education courses taken by the entire first year cohort that started in fall 2011 in comparison to their graduation status at the end of six years. The results indicate that A and B grades in certain subjects relate to successful graduation outcomes. Specifically, earning at least a final course grade of B in particular general education courses can be an early indicator of students' long-term success.

Transformative Learning in One Health: Strengthening Educational Research Abroad

Alisha Farris, Appalachian State University

In health professions, new approaches to research abroad are needed to deepen understanding of One Health. This pilot study evaluated the understanding of One Health and transformative learning for previous students who participated in research abroad experiences in Madagascar through a survey. The majority (67%) were from a health major. Students felt confident in their understanding of environmental health impacts, but least confident in human health impacts. Language barriers were the most challenging aspects, and suggestions for

improvement included structured conversations between fields and language courses. These results will be impactful in designing learning experiences for future research abroad students.

Background: Increasingly, there is a push for encouraging students to become global citizens and develop global civic responsibility. Study abroad participation correlates with meaningful learning through exposure to novel geographies, cultures, and worldviews. Within the health professions, new educational approaches to study abroad are needed to push students beyond meaningful learning to a deeper understanding of a One Health approach. A One Health approach recognizes the complex interplay between human, animal, and environmental health and that solutions lie in collaborative approaches that draw on expertise from many disciplines. For students to be effective leaders in their professions, they need have an appreciation for both systems thinking (human, animal, and environmental health), as well as the social, political, and cultural environments in which they work. One Health experiences are increasingly becoming more important and valued for health professions, but there is little known about how it shapes transformative learning. The aim of this pilot study was to evaluate the impact on the understanding of One Health concepts and transformative learning for students participating in a research abroad experience in Madagascar.

Methods: Students who previously participated in a research abroad experience from 2015 to 2017 in Madagascar were recruited to complete a retrospective pilot survey on aspects of transformative learning and One Health knowledge. Descriptive statistics were used to evaluate differences in answers. For Likert scale questions, frequency of agreement was determined by combining responses from “agree” and strongly agree” for each factor. **Results:** A total of 6 students completed the pilot survey. Half of the students had traveled internationally prior to participating in the research abroad. The majority of students (67%) were from a health related major. For One Health competencies, students felt most confident in their understanding of how environmental health impacts animal and human health, but least confident in how human health impacts animal health. Overall, language barriers were reported as the most challenging aspects of the research abroad experience, and suggestions for improvement included structured conversations between fields and language courses.

Conclusion: Evaluating One Health research abroad experiences will enhance educational opportunities offered to students, optimizing learning impacts, preparing students globally for their future professions, and putting them at the forefront of One Health experiences. These results will be helpful in designing impactful learning experiences for future research abroad students.

U.S. Incarcerated Adults’ Educational Status

Roffia Galeshi, Radford University; Hamidreza Taimoori, Virginia Tech

Policymakers who are concerned with the problems presented by recidivism such as economic costs, safety issues, and community instability, should consider the saliency of the argument that improving prisoners’ social outcomes by increasing their education—a form of human capital—may lead to an increased likelihood of successful reintegration into the society. Recidivism can be the result of many

factors including a lack of social skills needed to reintegrate into the social structure of the community and structural barriers such as lack of employment and housing. Social problems related to the reintegration into the society can be addressed during incarceration.

The United States has the largest prison population, per capita, than any other nation, with approximately 1.5 million prisoners at yearend 2015 (Carson & Anderson, 2016; Wagner & Rabuy, 2017). While each year many individuals are sentenced to serve time in prison, an equally large number of prisoners are released. In 2015, federal and state prisons admitted a total of 608,300 prisoners, while just over 640,000 inmates were released (Carson & Anderson, 2016). Due to the large number of prisoners that are re-entering society each year, it is important that we determine what factors contribute to a reduction in their likelihood of recidivating. One possibility is that increasing prisoners' level of education and skill proficiency and thus their human capital may increase their social outcomes, which, in turn, may potentially increase their likelihood of successful reintegration and decrease their likelihood of recidivating.

When discussing human capital, researchers often investigate the effect of education on economic productivity (Lau, Jamison, & Louat, 1991). Yet the positive outcomes that result from education and training is a multifaceted phenomenon. It goes beyond a simple direct relationship of education to human capital. Studies have shown that education can increase social outcomes in the form of civic engagement, healthy behavior, and volunteering (Hanushek, Schwerdt, Wiederhold, & Woessmann, 2013). Such social outcomes represent a human resource that has been attributed to improvement in productivity and earnings (Jenssen, 2001).

Research Question: Policymakers who are concerned with the problems presented by recidivism such as economic costs, safety issues, and community instability, should consider the saliency of the argument that improving prisoners' social outcomes by increasing their education—a form of human capital—may lead to an increased likelihood of successful reintegration into the society. Recidivism can be the result of many factors including a lack of social skills needed to reintegrate into the social structure of the community and structural barriers such as lack of employment and housing. Social problems related to the reintegration into the society can be addressed during incarceration. If education and training affect social outcomes, then access to readiness classes and education become even more important for this population. Education may have an effect on increasing employability and integration of the incarcerated population into the society as a productive member. This leads us to explore the relationship between skills, educational and vocational training, and social outcomes for both the prison and general population. Our specific research questions were as follows:

- How do formal education, literacy and numeracy skills, and adult lifelong learning associate with prison inmates' social outcomes such as political efficacy, interpersonal trust, and health?
- How the impact of formal education, literacy and numeracy skills, and adult lifelong learning on social outcomes compares across the prison and household populations?

Use of Technology to Improve Anatomy and Physiology Teaching Laboratory

Jessica Juarez, Iowa State University

Pedagogy in domestic animal anatomy and physiology laboratory setting is challenging due to classroom design and available space. To enhance student learning and improve the learning environment for students, a camera system, nine monitors and a touch screen display was installed in the animal science laboratory classroom at Iowa State University. Through the use of the camera system and monitors, students are better able to view the specimens being used during the laboratory session, and the instructor is able to show and demonstrate greater detail to the class and ensure consistency and accuracy of information presented to the students.

In an effort to improve pedagogy in domestic animal anatomy and physiology laboratory, the use of technology was implemented to enhance the learning environment and overcome challenges of teaching using specimen based instruction. Domestic animal anatomy and physiology laboratory is a required class for all sophomore students in the Department of Animal Science at Iowa State University. High student enrollment (over 150 students a semester) combined with a challenging teaching environment due to laboratory space constraints and lab bench placement resulted in a less than ideal laboratory classroom.

The classroom contains nine lab benches that seat four students at each table, however, the view of the instructor at the head table is obstructed for many of the students. Because of the lab bench distribution combined with utilizing detailed domestic animal specimens, each lab section employed eight teaching assistants to better disseminate information to the students from the instructor because of the challenging teaching environment. Furthermore, due to animal specimens used and storage and shelf life, little opportunity existed for students to be able to review or study specimens once outside of the laboratory.

To overcome challenges, technology was installed and utilized in the domestic animal anatomy and physiology laboratory to actively engage all learners in the laboratory and provide enhanced visual and audio capabilities to the students via nine overhead display screens and 20 ceiling mounted speakers. Through the use of a large touch screen display (86 inches) and a video capturing system, images from specimens can be saved, annotated and delivered to students outside of the laboratory classroom. The instructor can stand at a stationary table where a camera is mounted, displaying the image of the specimen to all nine monitors in the classroom that allows students to see detail of the specimen regardless of their seating location throughout the laboratory.

The ability to record lectures and specimens used during each lab has led to a decrease of animal specimens needed for the laboratory which has resulted in a cost savings to the department. When a student is absent from the laboratory, it is possible to send the student a recording of lecture and of the laboratory session so they are able to learn the material that they missed during class time. The use of a camera system, touch screen display and monitors above each laboratory table has enhanced the delivery and consistency of teaching in the domestic animal anatomy and physiology laboratory at Iowa State University. The technology installed in the classroom has

improved the learning environment and subsequently enhanced the ability of the instructor to meet learning objectives within the domestic animal anatomy and physiology lab.

Ut Prosim and Building Collaborations with Historically Traumatized Populations

Mae Hey, Virginia Tech

Traumas endured by marginalized People have complicated this process through the repeated attempts by outsiders to ‘rescue’ them from ‘discovered problems’ and ‘prescribe solutions’ that do not honor specific cultures and worldviews. Despite this, marginalized Peoples, must learn how to make alliances that not only optimize their access to external resources but also promote collaboration for addressing collective healing. This workshop presents and puts into practice a wellness framework for the creation of projects that emerge and assets be mobilized from within unique communities to create both relevant and sustainable solutions.

Purpose:

This workshop will explore strategies for successful engagement between historically marginalized communities and potential allies in works of social activism.

Learning objective:

1. The participants will learn about and consider a framework that may be useful in creating, facilitating, and evaluating projects of social activism.
2. The participants will use the model, with the help of their peers and the facilitator(s), to critically frame a project in which they are currently engaged.

Process:

1. Engage: The wellness framework for the session will be briefly explained to the participants. Participants will watch two short videos of examples of projects of social activism.
2. Explore: The participants critically examine the case studies through using the wellness framework presented.
3. Explain: Participants will share their thoughts on this case study with use of the wellness framework activity.
4. Elaborate: Participants will then use the model to examine a project of social activism in which they are currently engaged.
5. Evaluate: On an exit slip, each participant reflect on and answer the following:
 - What are some approaches to social activism you observed in the case studies that you noted and how are they relevant to guiding your work?
 - What are some parts of the wellness framework that you would like to implement into your works of social activism.

Goals:

1. Discuss strategies for social activism
2. Explore a wellness framework for improving approaches to creating successful collaborations

3. Use the model to strategize the building of relationships between marginalized communities and external thought-partners and/or monetary resources
4. Conceptualize this wellness framework as a tool for facilitating the process of the re-establishment of balance, harmony, and empowerment by honoring who we are and where/what/ who we are from, so we can make better decisions on where we are going together.

Implications:

The tools used will be easily learned through actual use in the session, enhancing human empowerment through limiting individual's isolation. Additionally, it should be an interactive session that should facilitate authentic networking.

Why Academia Should Teach Students about Psychedelics

Lesley Richardson, Virginia Wesleyan University

The Liberal educational objective for a course on psychedelics and Psychoactive substances would help teach students to think critically (analyze information, evaluate opinions and use higher level cognitive processes), broaden their intellectual horizons (by exposing them to new ideas from across disciplines, through time, and from different cultures and perspectives), and promote self-awareness (especially awareness of how their own mind functions).

Psychedelic research may be the field with the greatest gap between the information scholars, what scientists have discovered, and what the general public knows. A course in psychedelic studies will help bridge that gap by surveying psychedelic and psychoactive substances' history from archaeological times to the present and by examining their implications for psychotherapy and mental health, religion, and various academic disciplines and professional interests. Students will learn about these substances through archeology, anthropology, history, psychology, sociology, botany, chemistry, religion, philosophy, the arts, literature and language, and the implications for professional practices such as health, law, education, and similar fields.

If we are going to continue to offer classes on drugs of abuse, then students must be exposed to the other side, the side of the new research and studies that are being done today. A psychedelic renaissance is happening now and students and professors need to be educated about what these drugs can do, the research that is being done, how they are helping people who are suffering from mental and physical disorders and the unique opportunities that are available in a wide range of fields. I am developing an interdisciplinary course introductory course that can be taught at any college or university. It is personally important to me to get this information into the mainstream educational programs, so students know there are options in this growing field of study.

Zooming into the Classroom

Brandi Quesenberry, Virginia Tech; Zack Sowder, Virginia Tech; Dorothy Conner, Virginia Tech; Laura Purcell, Virginia Tech; Blayne Fink, Virginia Tech

Faculty who have incorporated groupwork into their classes recognize that collaborative assignments have many benefits for our students. This use of pedagogy can enhance learning and prepare students to participate in the many groups they'll encounter in their professional lives. When creating or adjusting course assignments for use in a virtual, flipped, or traditional course, the addition of online synchronous meetings, can be the key to success. This poster will showcase how Virtual Public Speaking was designed to offer relevant group-based assignments to teach students how to best prepare for and deliver messages via a video conferencing program, Zoom.

Faculty who have incorporated groupwork into their classes recognize that collaborative assignments have many benefits for our students. The use of this pedagogy can enhance learning and prepare students to participate in the many groups they'll encounter in their professional lives. When creating or adjusting course assignments for use in a virtual, flipped, or traditional course, the addition of online synchronous meetings can be the key to success. "Of the advantages of synchronous interaction, teacher immediacy and dynamic interaction are highlighted by researchers as elements benefiting students" (Park, 2007, p. 308).

This poster will showcase how the Virtual Public Speaking (VPS) course was designed to offer relevant online group-based assignments to teach students how to best prepare for and deliver messages via a video conferencing program, Zoom. Using Zoom for small and large group meetings is convenient, and it allows people to meet synchronously without having to reserve a physical room. Students who took VPS stated that taking the course online was more convenient. By using Zoom, students were able to go home during breaks without having to meet in-person on campus. Both students and instructors also found Zoom easy to access and user-friendly. Furthermore, it provides a benefit to students in their future careers. Students often partake in online interviews, and the knowledge, practice, and feedback they receive in the course helps them feel confident during an online interview.

Conference systems require new skills and knowledge on how to be proficient and effective when in an online meeting. Students can practice and learn from others on speech delivery, creating a professional image online, and sharing relevant information using technology. While the convenience and relevance of VPS is attractive to students, many also take the class because of performance anxiety. To overcome this common phobia, students need to practice in front of a supportive yet objective audience. Zoom provides a realistic virtual environment that allows students to connect to their classmates and instructors in meaningful ways. Instructors arrange synchronous and asynchronous meetings and assignments, and set a tone that is friendly and encouraging. This intentional course design is important, as undergraduates have used computer mediated technology for most of their lives, but may have never received instruction about how to successfully communicate and connect with others using technology. "Synchronous virtual classrooms also help to promote and maintain interaction" (Martin & Parker, 2014, p. 193).

In VPS, students engage through low-stakes discussions and icebreaker activities before delivering their planned speeches. As students disclose some of their interests, goals, and

apprehensions, they connect to one another on an emotional level. This allows them to build a supportive online community, which is important to successful learning. The use of Zoom allows for online groupwork that is relevant, convenient and interactive, resulting in higher levels of learning and overall satisfaction. “Considering its ability to share screens, as well as download meeting transcripts, not only are Zoom and video meetings becoming an acceptable substitute for in-person meetings, they are quickly becoming the ‘superior’ option” (Stolzoff, 2018).

Martin, F., & Parker, M. A. (2014). Use of Synchronous Virtual Classrooms: Why, Who, and How? *MERLOT Journal of Online Learning and Teaching*, 10(2), 192-210. Retrieved from <http://jolt.merlot.org/>

Park, Y. J., & Bonk, C. J. (2007). Is Online Life a Breeze? A Case Study for Promoting Synchronous Learning in a Blended Graduate Course. *MERLOT Journal of Online Learning and Teaching*, 3(3), 307-323. Retrieved from <http://citeseerx.ist.psu.edu/index>

Stolzoff, S. (2018, October 17). Why all work meetings should be video meetings, even the in-person ones. Retrieved from <https://qz.com/work/1421523/why-all-work-meetings-should-be-via-video-call/>

SYMPOSIUM ON TEACHING LARGE CLASSES

A Collaborative Assignment that Increases Student Learning in Large Classes

Debra Sutton, James Madison University; Terri Prodoehl, James Madison University; Margi Stickney, James Madison University; Erika Collazo Vargas, James Madison University; Lesley Lemons, James Madison University

For many years, all sections of a general education personal wellness course have required a campus wide collaborative assignment called the Wellness Passport. Each semester, this assignment provides 1,600 students with engaging out-of-class learning experiences offered by representatives of several Academic Departments and Offices within Student Affairs. Hundreds of passport programs options correlate with the broad definitions of one or more of the dimensions of wellness and uniquely complement course goals and objectives. The faculty who have implemented this assignment will provide specific details, including "lessons learned" and facilitate a discussion on ways to adapt it to other academic disciplines.

The purpose of this presentation is to discuss a campus wide collaborative assignment that extends learning and engages thousands of students enrolled in large sections of a general education health course. In addition, faculty with experience in implementing the assignment will facilitate a discussion that will include ideas for adapting the assignment for use in other large classes in other academic disciplines.

Since 1997, the Department of Health Sciences has required in all sections of HTH 100 - Personal Wellness, an assignment called the Wellness Passport. This assignment has been so successful that in the fall of 2014 during an opening faculty meeting, the University President mentioned the Wellness Passport to illustrate "engaged learning," one of the planks of the campus strategic plan. The Wellness Passport assignment began through collaborations with five offices in Student Affairs: University Recreation, Health Center, Counseling Center, Academic and Career Planning, and the Center for Multicultural Student Services. University Recreation has always contributed the most event options for the assignment. In fact, their partnership with the Wellness Passport assignment played a significant role in planning the 2016 multi-million-dollar facility addition and renovation.

Over the years, faculty from academic departments have joined in collaborating with HTH 100 to offer programs to the Wellness Passport assignment. These have included History, Political Science, Justice Studies, Psychology, Sociology, Philosophy and Religion, English, Business, and Libraries and Educational Technologies. Additionally, as the University community has grown, so has the participation in the Wellness Passport assignment. The Center for Global Engagement, the Office of Environmental Stewardship and Sustainability, Ethical Reasoning in Action, and the Center for Civic Engagement continue to offer multiple program options every semester.

In order to offer a Wellness Passport program, pre-approved groups submit their program proposals to the HTH 100 - Personal Wellness course website at: <http://wellness.healthsci.jmu.edu/index.html>. Once the Wellness Passport coordinator approves the proposal, the program is added to the website's Events Calendar. All HTH 100 students are required to attend four programs throughout the semester that relate to the intellectual, emotional, social, spiritual, occupational, and environmental dimensions of wellness. They visit

the website's Events Calendar to select which programs they would like to attend to complete the assignment. Student attendance and participation is documented on a verification page that they must take to each event. The verification page requires students to cite general program criteria and answer three questions that include summarizing content, describing specific learning, and discussing how the event related to a dimension of wellness. If this proposal is accepted, the HTH 100 faculty look forward to sharing how the Wellness Passport assignment can add enhanced and engaged learning experiences to large lecture classes.

A Flipping Alternative in a Large Lecture Class

Jim Campbell, Virginia Tech; Santosh Rijal, Virginia Tech

Improving instruction for a large remote sensing class presents a substantial challenge because usual strategies for re-directing (“flipping”) a class are not effective with challenging content and concepts that are often unfamiliar to students. This presentation outlines an experimental strategy that condenses key content, presents it in brief units, mixes presentation formats, and uses frequent short quizzes. We regularly assign students to deliver short presentations to the class, briefly describing topics content in short presentations, and use of short quizzes. From using these strategies, we look to refine their effectiveness and seek improvements.

Until recently, I taught my remote sensing course (think aerial photography/satellite imagery) as two separate lecture sessions, about 30 students each, with a matching lab session of about 60 students. Because of continued growth in demand, the department restructured the course as a single lecture session, at a capacity of 120 students, with two 60-seat lab sessions. (Current enrollment is typically about 75 students). In this context, I am not satisfied with the use of my previous instructional format, so I am now applying a strategy that differs greatly from my previous (traditional) approach. I can briefly outline this approach as follows:

Here I describe here two aspects of my revised format.

Lecture: I now teach the lecture in this format- Intended to be about 20 minutes in length. Assign students in advance to review the audio PowerPoint prior to Monday’s lecture.

(a) Each lecture day begins with a review of the week’s activities, written on the backboard.

(b) Take TopHat attendance.

(c) Review a short video w/ topic that pertains to the week’s lesson- about 3-4 minutes).

Discussion follows (if class is interested).

(d) Then, move to short discussion of the assigned audio PowerPoint.

(e) About 2/3rd of the time through the period, stop lecture. Call student presenters to podium—these students, in a group of three, present a short lecture on assigned topic related to the week’s topic (each student shares presentation duty). Students field questions (if any). I comment briefly on key points of student presentation.

(f) Time then for daily TopHat quiz (usually two or three multiple-choice questions).

Lab: Lab meets twice a week, in the afternoon (1/12 hrs. twice a week.). Two separate labs of 60 student each.

Previous Lab Format: Instructor speaks from podium to instruct class on use of software system to master basic image analysis skills. Some activities individual, others, team assignment. TAs work to address student questions. Team assignment at end of semester.

Current Lab Format: For much of the semester’s lab activities, follow basic practice as described above. But, every 2nd to 3rd week, split lab class into two groups (30 ea.). For example--

Monday Lab: assign half of class to follow field-based activity as prepared in advance for that week (such as, temperature survey, NIR photography, field data collection, map prep activity, etc.) -- Friday Lab: Repeat by swapping activities for each group. Last two weeks of semester classes, group presentations.

Notes: So far, believe this approach far better than my previous practice. Requires a lot of prep time, hard to anticipate successes/failures. Looks as though we will have to revise existing materials for use in subsequent semesters. NB: My colleague/partner Santosh Rijal (who has been leading Lab sessions) has offered suggestions and supported revision to create new activities.

Building Productive Teams in a Large Class: Strategies for Success

John Chermak, Virginia Tech

We have been using team projects in an Earth Resources, Society & the Environment Geoscience class for more than 3 years. Class size has ranged from 75 to 300 students. The culmination of these team activities is a Group poster session where students present their findings to the class and the community. We will be sharing the details on lessons learned through time and sharing student impressions and student learning data.

We feel that Faculty would benefit from seeing the details of how to implement group projects (e.g., posters) in large classes. Time is given in class before working together outside of class to allow a more productive group dynamic to form. We will describe how groups are formed, how students sit in their groups during class, how they are encouraged to learn from each other in a 'low-stakes' way. This includes reflecting on given questions in groups, followed by discussions and then a share out, videos, and clicker questions. We will detail the process of group formation through presentation (Cradle to Grave) starting with the strategy of the formation of the groups, check-in activities, milestones, peer evaluations of work, and peer to peer evaluation.

Creating Community: Extending University Culture into the Online Classroom

Barbara Hoopes, Virginia Tech, Holly Gillcash, Virginia Tech

Life online is changing all the time – and these cultural changes affect online education. Communication expectations in a 24-7 world are challenging, especially when teaching large groups of online students. How can we interact with so many students in a manageable, fair way? How can we encourage students to interact with each other in a “learning community” when the virtual room is so large? Many such questions arise in the administration of Virginia Tech’s top-ranked Master of Information Technology online degree program. Join the program director and an experienced faculty member in discussing online challenges, trends, and best practices.

Over the last few years, online culture, and its role in society, has changed considerably. Digitalist Magazine included a short article by Sandeep Raut in Jan 2017 titled “Why Culture Change Is Essential for Digital Transformation.” In the article, the author notes that constant change is the online norm, stating that, “due to consumers’ increasing adoption of digital lifestyles, every business must change how it operates and interacts with customers every day.” He goes on to emphasize that we tend to underestimate the importance of culture, the human element, in a digital transformation. Involvement, cooperation, feedback, transparency – these are some of the elements the author proposes must be present for a digital transformation to be successful.

As universities seek to transform education by adopting a digital model, many of the same changes and challenges that businesses are facing are mirrored in our student interactions. Students’ expectations with regards to speed of feedback, personalization of educational experiences, ethics, and even civility, are constantly evolving. The Virginia Tech online Master of Information Technology program serves 1000+ students from around the world. Over the last 5 years, the average class size has steadily increased from around 30 to over 50. A handful of classes have 100+ students. And yet, the program has consistently been ranked in the top such programs across the nation and around the world – at least in part, arguably, because the program is successfully instilling “Hokie culture” in a geographically distributed environment, bringing the online students into the community that is Virginia Tech.

This facilitated discussion will explore the evolving challenges of large online classes in the areas of communication, learner characteristics, instructional support, assessment, and other topics of interest to the audience, from the perspective of both a program director and a faculty member experienced in teaching classes of 100+ online learners. Seed questions will be used to initiate discussion and participation among attendees.

Creating Equality and Student Success in Large Class Learning Environments
Kelly Hogan, University of North Carolina at Chapel Hill; Viji Sathy, University of North
Carolina at Chapel Hill

Teaching strategies that emphasize structured active learning can create more equitable classrooms and improve learning for all students. As an introduction to inclusive teaching techniques, Professors Kelly Hogan and Viji Sathy of the University of North Carolina will ask participants to reflect on inequities and diversity in their classrooms through interactive, hands-on activities. After providing a framework for inclusive design and their own research results, Hogan and Sathy will lead participants through active learning exercises and case studies that explore inclusive techniques. Drawing upon their own teaching experiences and educational research, they will model approaches that can be readily implemented with any discipline or class size to help all students achieve to their potentials.

Leap of Faith: Mass-Lecture to Online

Jean Lacoste, Virginia Tech

My plunge into teaching online was very much a leap of faith. Since I don't enjoy learning online, I had little faith that I could produce an online course that would benefit my students as much as the live class. I had even less faith that my students would do their part to contribute to a successful experience. Now that I've made it to the other side, I say, "Have faith and take the leap!" There are surprising benefits to online teaching and learning, especially for large classes.

I'd like to share my experience moving from very large mass-lecture to learner-centered, online instruction and the benefits and drawbacks encountered along the way. I'd like to begin by describing what mass-lecture looked like for me and why I believed changing the delivery mode could improve learning for a portion of my student body. Then I'd like to briefly present the three different online/hybrid course designs I've developed: multi-modal, online asynchronous, and online synchronous.

I changed the delivery mode of my course because I was hoping for improved learning. The results I encountered surpassed my expectations. I'd like to share not only my findings, but also the factors that contributed to this success and why I believe these factors, especially student-choice, are key to a positive outcome. To be fair, I can't gloss over the tremendous amount of time this transition required. I'd like to share some ideas I've learned to reduce this effort, and why I believe this labor is well worth undertaking. I'd like to leave a little less than half the session to address questions. Depending on the interest of the group, I can elaborate on student motivation, pedagogy, technology tools, faculty learning curve, logistics or anything else the audience wants to know more about.

Mischief Managed: Teaching Shared Professional Responsibility without Resorting to Transfiguration

Mike Nappier, Virginia Tech

How do you teach 125 students to become student-doctors? Positive play and group competition is being used to aid the transformation of veterinary students in assuming the professional responsibilities of a doctor. The “Surgical House Cup” competition modeled on the Harry Potter series allowed students to learn individual and group professional responsibility as fun instead of using strict rules and corrections. They also learned that professional behavior and fun aren’t mutually exclusive.

How do you teach 125 students to become student-doctors? Students in a professional curriculum have almost universally excelled at being students. Good study habits, note taking, digesting, memorizing, and regurgitating volumes of facts are all things they have learned to be exceedingly good at. However, many if not most of them haven’t realized that there is more to being a medical professional than just the science of medicine. At some point in their student career, they need to learn the professional responsibility of accepting care of a patient. In combination with this individual responsibility, they need to learn that patient care happens as a care team and not as an individual.

At the College of Veterinary Medicine, the time point for the initiation of this transformation from student to student-doctor happens spring semester of their second year. During this semester is when the students first learn surgical techniques on live animals whose care they are responsible for. In assuming responsibility for this semester of the surgical curriculum last year, I brought the involved faculty and staff together and did a program debrief. In going through their comments, the biggest challenge I heard was a lack of assumed responsibility which ranged from small things like cleaning up after themselves, to larger lapses in patient care. The previous approach was a correction/punishment only model with ever more detailed rules and consequences. This was clearly not having the desired outcome. I decided that I wanted to find a way to implement the student-doctor transition using a positive instead of punitive method while teaching professionalism can also be fun.

The solution presented itself in a somewhat unusual way: Harry Potter reruns. Last year we instituted the first annual Surgical House Cup competition. At the beginning of the semester students were “sorted” by the “sorting hat” into their respective “houses” which corresponded to one of the four surgical lab sections. Over the course of the competition houses could win or lose points based on performance during their course time and by completing weekly “challenges”. Challenges could be purely academic, just for fun, or more often fun with disguised learning objectives such as the “hospital scavenger hunt”. Points could be given or subtracted by any course faculty or staff and were summarized in a weekly points update email. House “prefects” were elected by the houses to help organize the game play.

Students were allowed to help expand the game by using their imaginations. Contributions included suggesting new challenges, dressing in costume, and creating original artwork. All involved noted a greater acceptance of professional responsibility as well as significantly smaller need for negative correction. Unintentionally, the efficacy of the concept was challenged. Due to scheduling issues the competition ended after the first half of the semester. Faculty, staff, and

students involved noted a decrease in professional responsibility and more correctable incidents. It was requested by all involve that the game be played for the entire semester the next year.

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Peer Learning Strategies in Large Classes

Carly Blaine, Virginia Commonwealth University; Eric Pappas, James Madison University

Peer learning strategies are not often employed in large class settings. Considering the increasing number of large classes (70+ students) being taught at U.S. universities, exploring a variety of teaching methodologies seems timely. This workshop will provide participants with the presenter's 13 years of experience teaching 300-student classes....and is meant to 1) introduce peer learning strategies, 2) encourage participants to share their peer learning strategies, and 3) explore some new ideas for large class peer learning (especially those employing technology). The session facilitators will provide a handout (and their recent article) on peer strategies for large classes.

Peer learning does not naturally lend itself to effective instruction in large classes. The methodology can be, however, a welcome addition to other methods employed in such classes. While peer learning strategies are not often employed in large class settings, the juried literature has begun to address the topic. Considering the increasing number of large classes (70 or more students) being taught at universities across the country, exploring a variety of teaching methodologies seems timely (Lynch and Pappas 2015). This workshop will provide participants with the presenter's 13 years of experience teaching 300 student classes.

The session is meant 1) to introduce a variety of peer learning strategies, 2) encourage participants to share their peer learning strategies, and 3) perhaps even come up with some new ideas for large class peer learning (especially those employing technology). The session facilitators will provide a handout on peer learning strategies for large classes and their recent article on large class teaching practices. Boud et al. (2001) describes peer learning as being dependent upon students sharing mutual experiences and ideas which act as a method for them to contribute to each other. Nichol & Boyle (2003) note, however, that students who engage in critical thinking and problem solving in large classes "...often have difficulty learning these concepts and applying them to problem solving tasks" (p. 459).

In large classes, peer learning strategies improve students' conceptual understanding (Mazur 1997; Crouch & Mazur 2001), and motivation and quality of classroom discussion (Dufresne et al. 1996)...especially when workshops and group discussions allow students to interact with each other and engage the material (Price & O'Donovan 2006; Harrington et al. 2006). Mazur (1997) has shown that students who normally score below the 50% mark on traditional exams benefit significantly from peer instruction. Peer discussion, according to Nicol & Boyle (2003), "provided opportunities to think about the problem in more detail, to explore alternative viewpoints and problem solving approaches, and to ask for and hear different explanations" (p. 8).

Workshop Goals: •To present the current theory on large class peer learning, including the strategies (and research) the presenters have used in the classroom for over a decade; •To discuss with workshops participants peer learning strategies they use in their large classes; and •To explore and examine how new peer learning approaches might be used in the classroom to enhance instruction that fosters continued learning (including those that use technology). Faculty from all disciplines are welcome and encouraged to explain and discuss their own methods for peer learning in large classes.

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Responsible Community Engagement for Large Class Service Learning

Mary Case, Virginia Tech

This session will be a facilitated discussion about responsible community engagement when working with large classes. The session will begin by how VT Engage, Virginia Tech's center for leadership and service, has provided support for service learning courses including, facilitation of faculty and student connections with community partners, and the development of orientation, reflection, assessment and curriculum materials as a model. The facilitators will then lead small group discussions about methods for focusing student connections to community, service, volunteerism, and civic engagement. Conversations will consider direct student service vs. student identity development and indirect exploration of community.

The session will begin with a 10-15 minute overview of the ways VT Engage, Virginia Tech's center for leadership and service, has provided support for service learning for large courses, as a model. This overview will include facilitation of faculty and student connections with community partners, and the development of orientation, reflection, assessment and curriculum materials. This introduction will include an overview of two suggested models for large class service learning with an emphasis on responsibility to the community and the pros and cons of sending large classes out for service. The facilitators will then lead a discussion on methods for focusing student connections to community, service, volunteerism, and civic engagement. Discussion will be small group based, with facilitators floating to guide conversation, and brief sharing among groups. The session will also model reflection techniques, and provide resources for curriculum development. Conversations will consider direct student service vs. student identity development and indirect exploration of community. Time will be provided at the end of the session for questions.

Strategies for Effectively Engaging Students in Large Classes, Part III

Gary T. Green, University of Georgia; Lori Sutter, University of Georgia

Research indicates that passive learning strategies are less effective at promoting learning than active approaches. Unfortunately, many instructional techniques aimed at engaging students in smaller classes face challenges due to practical issues, such as classroom management, time restrictions, and the pressure of completing timely grading when they are tried to be implemented in larger classes. Thus, more often than naught, traditional lecturing becomes the default practice for large classes, and this practice will likely continue as pressure to increase class sizes continues. Hence, this practice session will share, through examples, new and fun, active learning strategies and tools that are effective in engaging students and also manageable in large class settings.

Large classes at most universities are often viewed as a necessary obstacle for many students at the undergraduate level in introductory classes. These large classes also present many logistical and structural challenges for the faculty who teach them. In fact, the sheer number of students in a large class is often perceived as a major barrier or constraint too many of the pedagogical and assessment approaches that many faculty attempt to utilize. For some, these perceived barriers or constraints often lead to the use of traditional, power-point lectures and multiple-choice examinations as the standard default practice. With that said, research has clearly indicated that students learn more in active learning environments if rich, active, and diverse pedagogical approaches are employed versus passive learning techniques (e.g., Freeman et al., 2014; Hake, 1998; Light, 2001; McKeachie, Pintrich, Lin, Y.G. and Smith, 1987).

Given the challenges and constraints of teaching a large number of students in a single class, what does or could active learning look like in a large class setting? This practice session will describe and share hands-on strategies, tools and applied experiences as answers to this question. In fact, attendees of this session can expect to leave with concrete, manageable and active learning practices that may be successfully utilized in any size classroom.

This session will provide attendees with a selection of effective, interactive teaching strategies aimed at initiating and building relationships with students (during regular class), enhancing communication and creating greater class participation by students, methods for recognizing, acknowledging and documenting student's class participation, methods for removing perceived barriers or constraints to active teaching and increasing and maintaining class attendance. These strategies will be actively demonstrated with attendees along with a discussion on their strengths and weaknesses, and the underlying rationale for using them.

Strategies, tools, applied examples and materials will be shared with attendees along with a discussion concerning the strengths and weaknesses of their ability to successfully engage students in large classes. Attendees will also be encouraged to create their own strategies and examples during mini-break-out sessions.

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Strategies for Supporting Metacognitive Abilities in Students in Large Classes

Breyette Covington, James Madison University; Leslie Lemons, James Madison University

Supporting the development of metacognitive abilities is central to helping students improve many types of learning and especially learning related to critical thinking. In this session, we will present strategies for supporting metacognitive abilities in students in large classes. This interactive session will begin with a comprehensive literature review of instructional strategies used to support metacognition among college students. We will then describe specific strategies we have successfully used in our own classes at James Madison University, before leading participations through an interactive exercise in apply session content to their own classes.

The effectiveness of a metacognitive approach to instruction at different educational levels is well-documented (Bransford, Brown, & Cocking, 2000). Metacognitive strategies have been shown to enhance learning in many ways within higher education from vocabulary development in English-language instruction (Cubukcu, 2008) to supporting students with learning disabilities (Trainin and Swanson) to enhancing achievement for at-risk liberal arts students (Applegate, Quinn and Applegate, 1994) to addressing students' mathematics anxiety (Kesici, et al, 2009.) to increasing self-efficacy beliefs related to musical ability (Nielsen, 2004).

The guiding question we address in our presentation is: What are effective strategies for supporting metacognitive abilities in students in large classes? We will address this question in three ways: Through the presentation of a comprehensive literature review of instructional strategies and related metacognitive practices within large classes at the college level. Through sharing our personal expertise, garnered through 42 years of combined teaching experience, engaging students in metacognitive work. Through both 1) modeling the techniques we present within the session itself and 2) leading participants to apply knowledge and skills described in this session to their own work.

Dr. Covington and Ms. Lemons are long-time educators, with over 42 years of combined teaching and research experience in education, including work in K-12, community college and university settings. In addition, Dr. Covington holds doctoral and master's degrees in Education and a Ms. Lemons holds a Bachelors in Social Work and a Master's in Education.

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The Art of Teaching: Using Acting Techniques in the Teaching/Learning Process

Greg Justice, Virginia Tech

There are hundreds of parallels that exist between how performers communicate with their audience and teachers with their students. One definition of acting is when a live performer presents a story, subject, or topic to a live audience. That actor then presents their story multiple times and each time they perform, they try to make the event seem as if it was happening for the very first time. The definition of teaching is very similar. Actors are able to make their audience stay tuned in on them for long periods of time and they can get audiences to remember material for long periods of time. Greg shares these acting techniques with teachers to accomplish the same results in the classroom.

Greg's approach to improving teaching focuses on the practical of teaching – using the body and voice more effectively when communicating with students. Research statistics on communication effectiveness breakdown as follows:

50% of effective communication comes from the physical

40% of effective communication comes from the vocal

10% of effective communication comes from the words

Examples of workshop topics covered include; learning to not be nervous in front of crowds, learning to use nervous energy in positive ways, using the teaching space more effectively, improving nonverbal communication, movement, and use of body language to keep listeners engaged, learning to use one's self as the teacher and supplemental teaching aids as what they are intended to be, improving diction, vocal phrasing, and using vocal energy in ways to make the listener remember the words, and more.

Greg's workshops are highly participatory. They are never intimidating, nor is anyone ever put on the spot. Participants learn techniques by doing them. They have fun, they laugh, and they become better at teaching. They leave with take-aways they can begin using the very next day. Most participants that take Greg's workshop state that it is the best, or among the best, workshops they have ever taken.

The Science of Resilience and Recovery: How Educators Deal with Mistakes and Bounce Back

Tay Tan, Radford University

Large classes are not conducive to close supervision and regular and constructive interaction between instructors and students that might address the mistakes (both in action and judgement) made by instructors in the classroom. The anonymity of the setting and the lack of closer contact between faculty and students can prevent opportunities for addressing, rectifying mistakes made and for lesson drawing and proper recovery from them. Research data on recovering from mistakes will be discussed in this close-door session on the art and science of dealing with mistakes, on how to empower

In universities with mistake-phobic cultures, blunders by educators are often perceived to be an indictment of our competence, professionalism. While there are a few books on mistakes grade school teachers make, there are very few books and publications on the science of mistakes in the institutions of higher learning. Articles on mistakes tend to focus on prevention of mistakes, rather than the strategies on response and recovery to blunders already committed. How do academics deal with our own errors and missteps? Carol Dweck's study on growth and fixed mindset highlighted the learning and growth that can follow mistakes, using reflection and self-regulation. Authors like Daniel Pink (2018), Frank Partnoy (2012), Daniel Kahneman (2011), Chip Heath and Dan Heath (2010), Joseph Hallinan (2009), and Carol Tavis & Elliot Aronson (2009) suggest that there are evidence-based approaches that can mitigate the impact of the missteps, restore relationships and a sense of internal justice, and adapt teaching practices to lessons learned.

The questions that will be explored during this interactive session are: What can we learn from the further mistakes made by public figures in their response to their mistakes made public in the unfolding of public scandals? What are some of the most poignant and serious mistakes in their denial and cover-up? Are there good ways and less effective ways of responding to such crises, such as the making of apologies and restitution or the resort to recrimination or resignation? What are the constructive attitudes and positive approaches for managing errors in the classroom?

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Waking Up the Large Lecture with Group Work to Motivate Learning

Brian Helmke, University of Virginia

Do you want to energize your large lecture classes with activities that encourage students to learn and to make meaning together? Are you concerned that taking time away from lectures will compromise the amount of content you can "cover"? Group work ranging from short, in-class, active learning activities to semester-long projects can motivate students to learn by sharing expertise and to build communication and decision-making skills. In this interactive workshop, we will build a toolbox of strategies to overcome challenges to implementing group work in large classes, including in-class activity design, group formation, peer evaluation, and assessment of the learning process.

Conference on Higher Education Pedagogy & Symposium on Teaching Large Classes

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