Proceedings
of the
36th Original Lilly Conference
Miami University
Oxford, Ohio

November 17-20, 2016
www.MiamiOH.edu/lillycon

Miami University
Oxford, Ohio
(513)523-9266
Table of Contents
Proceedings of the 2016 Original Lilly Conference on College Teaching

Application

Overcoming Student Resistance: Using Mini-Sermons to Promote Concept Mapping as a Learning and Life Skill.................................................................6 Margaret Cheatham, Tracy Herrmann, Ellen Lynch

Using Agile Team Techniques to Promote Entrepreneurial Thinking.................9 Michael Conger

Effective Knowledge Management Utilizing Digital Curation.........................11 Mark Deschaine, Sue Sharma

Active Learning Pedagogies and Whole Brain Teaching: Design to Increase Learning Outcomes.................................................................13 Alan Digianantonio, David Brobeck

Teaching for Deep Learning and Skill Development......................................16 Lynn Gillette, James Gillette

Using Exam Wrappers: An Example............................................................18 Krysi Leganza

Portfolio-Assisted Assessment Techniques...................................................20 Mysore Narayanan

Building a New Faculty Academcy at Ball State University: Best Practices.....23 Deanna Pucciarelli, David Concepcion, Kristen McCauliff, Melinda Messineo, Thalia Mulvihill, Michael O’Hara, and William Rodger

Creating and Utilizing Student Teams in Qualitative Research: An Autoethnography.................................................................26 Marie Radina, Sarah Rich, Mary Martin, Kaylie Kawamura, Lindsay Clark, Alyssa Oddo, and Lauren Ramsey

Teacher as Coach: Strategies for Deep Learning Outside the Classroom.................................................................28 Susan Robison
Latinos in Rural America: A Community-Engaged Learning Public Humanities Project .......................................................... 31
Clara Román-Odio

Beyond Page One of Google: Getting Students to Research and Write Towards Deep Learning .......................................................... 35
Sue Trout, Jason Lovvorn

Cross-Campus Collaboration in the Instruction of Research & Writing on a Regional Campus ......................................................... 38
Ping-Yuan Wang, Paul Campbell

Development of an International Model of Faculty Learning Communities ...... 42
Naoji Yamagishi

Innovation

Using Mastery-Based Testing in Undergraduate Mathematics, Science, and Other Courses .......................................................... 45
Alyssa Armstrong, Amanda Ramsey

Creating Games and Watching Imagination Come to Life ..................... 48
Leah Carruth, Carlos Flores, Edwin Cuenco, Raelye Self

Creating Accountability and Fostering Self-Assessment in the Private Music Lesson .................................................................. 51
Jennifer D’Agostino

Using Student and Faculty Feedback to Create Dynamic Online Learning Environments: Are We Connecting With Our Content, Communication, and ADA Compliance? ........................................ 54
John Huss, Shannon Eastep

Rethinking Rubric Design: A Methodology for Reducing Variations in Student and Teacher Assessments of Writing .......................... 57
Peggy Lindsey, Jinrong Li

We’re Not in Kansas Anymore, Toto: Pulling Back the Curtain on a New Institution .................................................................. 60
Nancy Sowers, Maggie Robillard, Connie Lamb, Beth Kelly, Sarah Jones, C. Anderson

Revisions to Student Evaluation of Teaching: Two Years of Experience and Some Remaining Challenges ........................................... 64
Timothy Spannaus, Rita Casey, Mathew Ouellett, Poco Kernsmith, Margaret Smoller, Monica Brockmeyer, and Laura Woodward
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrating Equity, Fairness, and Justice Through the Use of a Syllabus Contract</td>
<td>67</td>
</tr>
<tr>
<td>Carol Steinhaus</td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td></td>
</tr>
<tr>
<td>Navigating Student Mental Health Issues in the Classroom</td>
<td>70</td>
</tr>
<tr>
<td>Pam Cartor, Pattie Dillon</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Assessing Student Perceptions of the Emergenetics Profile and Workshop as a Study and Development Tool</td>
<td>72</td>
</tr>
<tr>
<td>David Brobeck, Carl Taylor</td>
<td></td>
</tr>
<tr>
<td>The Courage to Learn: Teaching Students How to Fail</td>
<td>76</td>
</tr>
<tr>
<td>Alex Crist</td>
<td></td>
</tr>
<tr>
<td>Faculty Development for Fostering Students’ Critical Thinking</td>
<td>79</td>
</tr>
<tr>
<td>Laura Edwards, Steve Snyder, Allison Sodo, and Laura Roggenbaum</td>
<td></td>
</tr>
<tr>
<td>A Process of Institutional Change in Online Learning</td>
<td>82</td>
</tr>
<tr>
<td>Nancy Evans, Rob Elliott, Ella Ingram</td>
<td></td>
</tr>
<tr>
<td>Can Online Manual Communication Labs Be Successfully Taught From a Distance?</td>
<td>85</td>
</tr>
<tr>
<td>Carlos Flores</td>
<td></td>
</tr>
<tr>
<td>The Community Classroom: Combining Scholarship, Teaching, and Service With the Centralized Service-Learning Model</td>
<td>88</td>
</tr>
<tr>
<td>Lauren Milton, Robyn Otty</td>
<td></td>
</tr>
<tr>
<td>Teaching Introductory Concepts Using the Flipped Classroom Model</td>
<td>92</td>
</tr>
<tr>
<td>Shamima Mithun, Nancy Evans</td>
<td></td>
</tr>
<tr>
<td>Self-Efficacy and Self-Esteem Student Characteristics and Transformational Leadership Teaching Style Rating</td>
<td>96</td>
</tr>
<tr>
<td>Lucinda Parmer</td>
<td></td>
</tr>
<tr>
<td>Graduate Students Preparing to Teach in Higher Education Settings: Lessons Learned From Research</td>
<td>98</td>
</tr>
<tr>
<td>Kirk Robinson</td>
<td></td>
</tr>
</tbody>
</table>
Feedback About Feedback: A Problem-Based Assignment Exploring Why Students Are Dissatisfied With Feedback
Carol Sisson, Kimberly Case

Developing Critical Thinking Dispositions in the Way We Teach
Steve Snyder, Sierra-Kailin Mathews

Milieu Matters: The Social Context of New Learning Spaces
J. D. Walker, Paul Baepler
Overcoming Student Resistance: Using Mini-Sermons to Promote Concept Mapping as a Learning and Life Skill

Presenters:
Margaret Cheatham
Business and Economics, University of Cincinnati - Blue Ash
Tracy Herrmann
Radiologic Technology, University of Cincinnati - Blue Ash
Ellen Lynch
Teacher Education, University of Cincinnati

Abstract:
Concept mapping is an evidence-based strategy that helps students organize their thinking and identify important concepts. However, like any novel pedagogical approach to teaching that seeks to engage students in deep learning, student resistance can present challenges to the success of the strategy. This session describes one evidence-based approach to addressing this resistance, the “mini-sermon,” through encouraging students to see concept mapping as a life skill rather than simply as a new learning technique.

Outcomes:
1. Describe the basic structure of concept maps based on the theoretical work of Joseph Novak.
2. Explain a major challenge to the successful use of concept mapping: student resistance.
3. Describe an evidence-based strategy that can be used to decrease the potential for student resistance when implementing concept mapping as an instructional strategy.
4. Explore examples of the use of concept maps within and beyond the classroom that can serve to broaden students’ appreciation for their efficacy in personal and professional ways.
5. Identify technologies that can support the use of concept mapping in personal and professional contexts.

Keywords:
Concept Maps; Inquiry-Based Learning; Learner/Student Centered; Life Skills; Resistance, Student

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Concept maps are hierarchical representations showing the cognitive connections that students make among major concepts taught in class as well as their existing knowledge. Each map answers a focus question provided by the instructor; for example, students taking a teacher education class on disabilities might develop maps answering the question, “What strategies can be used to support learning for children who have autism?” Maps evolve as students enter or delete concepts over time and identify and refine the linkages between them. In this way, students become aware of what they
know and are able to modify what they know (McAleese, 1998).

Another powerful use of concept maps is as an evaluation tool, thus encouraging students to use meaningful-mode learning patterns (Mintzes, Wandersee & Novak, 2000; Novak, 2010). Concept maps are also effective in identifying both valid and invalid ideas held by students permitting instructors the opportunity to evaluate their students’ conceptual schemata.

While concept mapping has been used successfully in the college classroom for decades to promote meaningful learning, numerous challenges to effective use of this pedagogical tool have been identified (Bentley, Kennedy & Semsar, 2011; Seidel & Tanner, 2013). In this session, we present empirical and anecdotal evidence that can be used to minimize the potential for one such challenge—that of student resistance. We will share information from our 10 years of experience with concept mapping in three diverse disciplines: education, information systems/business, and radiologic technology. In particular, we will discuss what can be done to encourage students to embrace concept mapping by helping them view this strategy as a life skill rather than simply another active learning technique thrust upon them.

A question-and-answer period will be provided for participants; a bibliography of resources and related materials will also be provided.

**Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.**

The strategies we will be presenting can be used with students at every level in every discipline. Examples we will provide have been generated by undergraduates in the freshman through senior years in face-to-face classes. The three specific disciplines we represent are teacher education, business and radiologic technology.

**Application: How is your application different from ones that others have tried?**

There is a large body of research on the use of various active learning, student-centered teaching strategies such as problem-based learning (PBL), concept mapping, the flipped classroom, etc. Nonetheless, there currently exists a scarcity of literature addressing a very basic challenge to the effective use of these strategies: student resistance. This is an important challenge to understand due to the fact that when implementing a new learning approach, student motivation and perceptions about the strategy are critical to its effective use (NRC, 2000).

As faculty members in three diverse disciplines, we have experienced this resistance firsthand over the past 10 years with both concept mapping and PBL. Moreover, we have relied heavily on suggestions from the literature regarding the need to address these challenges by providing adequate time and opportunity to learn a new skill, reducing the potential impact of working in groups, and providing timely feedback.

Within the past several years, we have added a “mini-sermon” strategy to our arsenal, discussed briefly by Felder (2007, 2011) and Felder and Brent (2016), as another tool to combat our students’ resistance to concept mapping. With this strategy, each of us shares with our students not only the basics of how to do concept mapping, but also spends time attempting to convince our students why this strategy is invaluable to their learning. Moreover, we have expanded on this basic strategy by showing our students how concept mapping can be used in the rest of their academic careers as well as in their future personal and professional lives.

In short, we are attempting to explore those factors that motivate our students to embrace concept mapping as a valuable tool to support their learning as well as to plan other aspects of their lives.
Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.
Assessment has involved analyzing our students' concept maps as well as reviewing our course evaluations (quantitatively and qualitatively) at the end of the semester. For those of us who have had opportunities to teach a cohort of students during more than one semester, these results have been shared with the students to provide evidence of thoughtful reflection and revision of concept mapping experiences in their courses. Moreover, the three presenters have compared and contrasted their experiences across their disciplines to ascertain similarities and differences, with our ultimate goal being to learn how to best characterize the presence of student resistance and to identify the most effective strategies to reduce its presence.

References (required, APA Style):


Organization:
Due to time constraints, the presenters will use PowerPoint to present key points. We will begin by presenting what constitutes concept mapping as there is considerable confusion about the difference between concept maps and other types of graphic organizers. We will then discuss some of the challenges to the effective use of concept mapping, and will focus upon what can be shared with students to increase the potential for them to embrace this pedagogical strategy. Actual examples of student concept maps and presenter concept maps (both personal and professional) will be integrated throughout. Opportunities for Q&A will be included and a bibliography of related resources and research will be provided.
Using Agile Team Techniques to Promote Entrepreneurial Thinking

Presenters:
Michael Conger
Entrepreneurship, Miami University

Abstract:
Entrepreneurship is a pattern of concrete actions to pursue new opportunities that may create value (Shane & Venkataraman, 2000). Teaching entrepreneurship as a “method” of developing and practicing these habits of entrepreneurial thinking is now the mainstream pedagogy (Read et al., 2010). I teach student teams to use Agile techniques to self-organize and practice the decision-making and behaviors that experienced entrepreneurs use. The Agile approach can be helpful in other disciplines.

Outcomes:
Understand the methods by which I teach student teams to use Agile techniques to self-organize, set objectives, and take action to develop and practice the decision-making and behaviors that experienced entrepreneurs use (Michaelsen et al., 2014; Pope-Ruark, 2012; Read et al., 2010; Sarasvathy, 2001, 2008)

Keywords:
Agile; Collaborative Learning; Entrepreneurial; Group Work/Learning; Team-Based Learning

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Student teams are asked to find a problem that requires entrepreneurial action (i.e., one requiring innovative solutions and for which the potential future value is uncertain) and develop a business model to solve it.

As a result of my intervention, I hope to see my student teams

- Identify and pursue opportunities that require more entrepreneurial action.
- Apply the principles of effectuation in their projects (see context section below).
- Make important decisions as a team more effectively and in a more timely fashion.
- Better identify and prioritize tasks.

Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.
I teach an entrepreneurship course (ESP201) focused on ideation and business model development. This is the introductory course to the entrepreneurship major and minor at Miami University.
Application: How is your application different from ones that others have tried?

This approach differs from others in that I will apply Agile methodology to the entrepreneurship teaching context specifically for the purpose of encouraging student teams to engage in entrepreneurial thinking and processes (as described above). The attempt to implement team work and decision-making methodologies to make student teams in the entrepreneurship classroom more effective at doing this has, to my knowledge, not been attempted by others.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.

Baseline
As of Spring 2015, a colleague and I have been teaching an identical curriculum for the ESP201 course. I use assignment submissions from four sections of the course taught one semester prior to the study as a baseline. Several colleagues and I review and code these assignments, assessing the extent to which they indicate application of effectual logic (Sarasvathy, 2001, 2008) and how quickly/effectively they progressed toward their final solution/business model. We will test our coding for inter-rater reliability and refine the protocol to get the most reliable baseline assessment possible. There were a total of 12 teams in the four sections taught in Spring 2015.

Assessment
I repeat the assessment described above (baseline) with the team assignments from the sections I taught during the treatment semester.

References (required, APA Style):


Organization:
I will present the theoretical basis and methodology for my study, a pseudo-experiment comparing a cohort of student teams taught to practice Agile techniques to a prior cohort without Agile training. I will also detail the techniques I employed in the classroom and lead participants through an example of an in-class exercise practicing Agile techniques.
Effective Knowledge Management  
Utilizing a Digital Curation

Presenters:
Mark Deschaine  
Educational Leadership, Central Michigan University  
Sue Sharma  
Reading and Language Arts, Oakland University

Abstract:
Higher education professionals have many resources available to augment their existing instructional materials. Keeping track of all of these items is a cumbersome task, and if the instructor has not established an effective knowledge management process, retrieval of educational materials is next to impossible. This session focuses on a process designed by the presenters to make this task easier and more efficient, and we will also discuss Web 2.0 tools we have found to be effective.

Outcomes:
After this interactive session, participants will be able to:

- Gain a theoretical and practical perspective on the need for knowledge management strategies and processes;
- Identify the different parts of the curation framework;
- Recognize the ways that the framework assists in effective knowledge management;
- Strategize ways to start the process of curation when they return to their offices;
- Articulate the steps they will take to efficiently instigate a knowledge management process;
- Identify the tools that they have at their disposal to begin the process.

Keywords:
Course/Curriculum Design/Redesign; Deep Learning; Digital Curation; Instructional Technology; Knowledge Management

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

The presenters have been utilizing various aspects of the digital curation framework in their work for a number of years. It wasn’t until we had presented at a recent conference that we realized the power that the framework has on organizing knowledge management structures for educators. We have revisited the basic concepts of our digital curation model and have investigated the basis of knowledge management in the literature, and the result is the presentation we hope to share at the Lilly Conference. We have utilized all of the Web 2.0 tools that we will demonstrate in our programs and have found them to be effective in assisting with our own knowledge management needs. We
hope that our experiences will provide the support and encouragement for instructors to take the time to start organizing their resources for more effective instructional materials development and knowledge management structures.

**Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.**
Utilization of this framework to design knowledge management support structures is applicable to all courses, curriculums, and programs. In fact, that is the major strength of the framework.

**Application: How is your application different from ones that others have tried?**
We believe that we have articulated a novel framework to support the instructional design, materials development, and knowledge management efforts of higher education instructional personnel. We have taken precepts utilized in archeology, museum, and library sciences; provided a theoretical lens (Deschaine & Sharma, 2015; Gee, 2010; Vasquez, Harste, & Albers, 2010; Yakel, 2007) related to new media; and integrated Web 2.0 tools to meet the needs of educators in utilizing their resources.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**
We are currently in the process of validating the framework through a qualitative study. As of yet, there is no empirical work to back up our assertions. However, we have presented this framework at multiple conferences, and the feedback from participants has led us to the point where we believe the framework provides support for knowledge management initiatives across campuses. It is anticipated that initial results will be available for presentation at the conference.

**References (required, APA Style):**


**Organization:**
After an initial presentation of the content, participants will be active as they co-construct additional portions of the presentation. We will use small group instructional and reporting out strategies to get the participants interacting with each other. We believe that the professionals in attendance at Lilly Conferences offer everyone the opportunity to learn from solid practitioners in the field. We hope to capitalize on the experience of the group as we discuss the major topics and concepts related to effective knowledge management.
Active Learning Pedagogies and Whole Brain Teaching: Design to Increase Learning Outcomes

Presenters:
Alan Digianantonio
Graduate Education, Walsh University
David Brobeck
Graduate Education, Walsh University

Abstract:
Gestures and active learning strategies are powerful learning tools! Research on the brain provides powerful insights into how we can most effectively reach our students. Active learning pedagogies, including Whole Brain Teaching (WBT), engage students and add novelty to any class. This session is HIGHLY interactive and designed to share key elements of how to design a WBT (active learning) lesson and use specific strategies as an effective means of formative assessment.

Outcomes:
• Participants will understand how key elements of brain and learning research can support content delivery for effective use in a college classroom.
• Participants will understand basic brain science pertaining to the limbic system, mirror neurons, and positivity.
• Participants will understand the interplay of different pedagogies and how to maximize application to their content.
• Participants will learn and practice how to design a Whole Brain Teaching lesson.
• Most importantly, each learner will analyze his/her current professional teaching practices, and then articulate to a peer a means to apply key concepts from the session to his/her teaching.

Keywords:
Academic Success; Brain-Based Learning and Teaching; Cooperative Learning; Learner/Student Centered; Scholarship of Teaching and Learning (SoTL)

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Understanding the value of inspiring students to become active partners in the classroom may lie in the value of understanding pedagogies that are a shift from a traditional model of learned professor and passive-receptor students. Various forms of cooperative and collaborative learning have been enhanced by techniques, methods, and increased application of brain-based teaching and learning. Requiring students to be active workers in the learning process increases knowledge acquisition (Brobeck, Digianantonio, & Elia, 2016; Doyle, 2013; Medina, 2008). Classrooms that foster collaboration between and among students create better learning opportunities. Our research includes insights of feminist pedagogy (hooks, 1997) and application of effective methods and
techniques that can and do enhance other teaching strategies as simple as a think-pair-share, formal cooperative learning, and highly structured team-based activities (Barkley, Cross, & Major, 2004; Millis, 2010).

Humans learn with the whole body (Browning, 2006; Medina, 2008), and effective teaching can involve whole body activity. Students move, gesture, speak, listen, laugh, think, and mirror. They learn from each other, teach each other, and utilize techniques that enhance recommended processes of learning based on what is known about how the brain learns (Rekart, 2013; Sousa, 2011; Zull, 2002, 2011).

The primary purpose of this session is to facilitate a theory to practice interactions with individuals committed to the enhancement of college teaching and learning through application, interaction, and discourse.

This session will encourage participants to experience “scratchy” pushes on the status quo of their teaching. Referencing research regarding mirror neurons and the function of the limbic system (Doyle & Zakrajsek, 2013; Medina, 2008; Rekart, 2013; Sousa, 2011; Willis, 2006; Zull, 2002, 2011), participants will be asked to consider what current brain research can be tapped to create simple steps that produce a more brain-friendly learning classroom environment.

**Application: Describe the project’s related course(s) or curriculum, its students, and its place in the curriculum or program.**

At our institution, the session facilitators employ active learning pedagogies in several different graduate level courses—Legal and Ethical Issues, Philosophy of Education, Educational Psychology, Instructional Leadership—as well as being required to test strategies as part of online courses that are part of the leadership/principal track. The students in these courses are primarily K-12 teachers seeking an MA Ed., leadership endorsement, or principal licensure. Many of these students conduct action research studies relative to active learning strategies, often testing specific strategies from Whole Brain Teaching.

**Application: How is your application different from ones that others have tried?**

The content of this session is an application for design of active learning pedagogies that are commonly practiced by many college teachers. Our research has widened to include Whole Brain Teaching (WBT) (Biffle, 2013) and a perspective of feminist pedagogy as defined by bell hooks (1994). Feminist pedagogy enlists the learner and teachers as active partners in the brain gain of the classroom. WBT infused with cooperative learning, TBL, PBL, and/or group discussion has indicated to be highly effective in producing increased student engagement, enjoyment, and content acquisition. The brain is a novelty seeker (Rekart, 2013; Medina, 2008; Sousa, 2011). Appropriately applied active learning methods are novel and interesting. Some techniques can add a little bit of silliness to challenging content, which leads to laughter. Researchers are clear that humor and positivity increase learning (Doyle & Zakrajsek, 2013; Medina, 2008; Rekart, 2013; Sousa, 2011). In addition, our work includes techniques designed to create a safe learning zone in which mistakes are honored and effort is praised (Biffle, 2013; Dweck, 2006). Ultimately, strategies that produce positivity and can increase the release of the neurotransmitter dopamine (Willis, 2010).

As our research of the brain and learning evolves, study of how students prefer to express themselves has expanded to better understand this range. In a highly active classroom, awareness of student think-time, processing time, and rate of response are important factors. Our work moves beyond the labels of introvert and extrovert to consider the range, situation, and environment created in the classroom as a means to better understand the reflective learner (Cain, 2012). Rate of recall and rate of retrieval are independent of each other (Sousa, 2011). As such, collaborative learning design needs to make accommodation so that those who need more time to think can benefit from the learning activities.
Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.

Review of the literature regarding brain-based learning and active learning pedagogies, data collection in K-12 classrooms, and feedback from our graduate classrooms are the primary methods we are using to determine the success and effectiveness of various combinations of active learning pedagogies. The literature and application feedback indicates that the methods are effective in promoting learning, student engagement, fewer discipline problems, and happier students.

In addition, the researchers have presented to college teaching audiences multiple times over the past four years and have received very positive feedback. Between session reviews of related content and follow-up communication with session attendees, we have learned that the methods, techniques, and strategies are effective in a wide array of applications and settings.

References (required, APA Style):

Organization:
The session will be organized to simulate a collaborative learning environment. At minimum, participants will be paired. If space allows, the pairs could be expanded to larger groups. Participants will be active from the start to the finish practicing and learning how to apply the techniques to various content settings. The facilitators will model techniques as well as assisting participants to connect the techniques with related research as a foundation to adapt methods to their own specialty.
Teaching for Deep Learning and Skill Development

Presenters:
Lynn Gillette
Provost and VPAA, Nicholls State University
James Gillette
Economics, University of Kentucky

Abstract:
When students come to class prepared, class time can be used for deep learning and skill development. You can get your students to come to class prepared, but it requires a different course design. We explain the interactive teaching model we use to ensure that students prepare for class. We use class preparation assignments—reading assignments paired with informal writing assignments—to inform and stimulate class discussion, and we use a definitional grading system.

Outcomes:
- Design a course using an interactive teaching model where students come to class prepared and class time is used for higher-level thinking and skill development.
- Design a definitional grading system for any course with one of the categories being student preparation for class.
- Write class preparation assignments at the appropriate level of difficulty to guide students in their reading assignments and to inform and stimulate class discussion.
- Describe how class preparation assignments give space and time for student voices and show respect, and how this method will invigorate your teaching.
- Describe how using this interactive teaching model provides student experiences—inside and outside the classroom—that mirror the current research findings on grit that leads to increased performance.

Keywords:
Academic Success; Class Participation; Cooperative Learning; Deep Learning; Flipped Classrooms

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

For years we heard college teachers state that if only students would come to class prepared, class time would be so much more productive. We observed most teachers simply going to class and presenting a lecture, and we observed disengaged students and little, if any, active learning. To address this problem, we adopted a different course design based on the work of Barbara Walvoord (Walvoord, 2010). In short, we adopted a definitional grading system that included class preparation assignments. This method transformed our courses. Instead of lecturing to our students for their first exposure to the material, the students came to class prepared. We then used class time, for higher order reasoning and skill development. We have been using this “new” course design since 2000, and many instructors across the US and Canada have recently adopted it. As a result, students are coming to class prepared; they are much more engaged in the material and class; they are learning more
material with deeper learning; and they are having fun doing so. Moreover, it has invigorated instructors who have been beaten down after years of working with unprepared students. This method has allowed us to flip all of our classes. Moreover, based on current research on grit and performance (Duckworth, 2016), the interactive model that we use increases student’s passion, perseverance, deliberate practice, and performance (student learning).

**Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.**
We have used the definitional grading system with class preparation assignments in economics courses from first-year through graduate level. We have also used this method in undergraduate and graduate management courses. We have also used this method in open admission and selective universities, and in small, medium, and large size universities. And we have used the method in short, intensive courses and semester-long courses. Moreover, instructors at other universities are successfully using this course design in multiple disciplines.

**Application: How is your application different from ones that others have tried?**
Most instructors simply give up on getting students to come to class prepared. Their major method to get students to come prepared is hope and/or shame. That has not worked. Moreover, many instructors who try to flip their classrooms still complain about students coming to class unprepared. However, instructors using team-based learning seem to have success in getting students to come to class prepared and then in using class time for deep learning.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**
First, student engagement in class skyrockets. Second, students now engage in informed discussion. Third, student grades on tests increased. Fourth, student retention of the material increased. Fifth, as more instructors have used this method, they report the same findings. For example, an instructor in a difficult senior level accounting class saw test scores increase by about 12 points on a 100-point scale. He used the same test from previous years. An instructor in psychology reported that test scores increased about 15 points, and student excitement and engagement increased significantly. Sixth, faculty members have been invigorated by increased student engagement and learning.

**References (required, APA Style):**


**Organization:**
We will carefully present the basic course design and then address overcoming common pitfalls. We will address questions during the presentation and at the end. We both have engaging presentation styles that will keep the attention of the audience.
Using Exam Wrappers: An Example

Presenters:
Krys Leganza
Mathematics and Computer Science, University of Indianapolis

Abstract:
Exams are used as an assessment tool and often not thought about by students once they see their grade on the exam. However, tests can be opportunities for students to learn and grow. Exam wrappers are one approach that can be used to accomplish this after an exam has been graded and returned. During one semester, exam wrappers were used in Calculus I and Calculus II courses. The results will be shared during this presentation.

Outcomes:
1. Explain what an exam wrapper is
2. Share examples of exam wrappers
3. Discuss results from using exam wrappers in Calculus I and Calculus II classes

Keywords:
Deep Learning; Exam Wrappers; Math Pedagogy; Reflection; Testing/Examination

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Exams are used as an assessment tool and often not thought about by students once they see their grade on the exam. However, tests can be opportunities for students to learn and grow (Ambrose et al., 2010). Exam wrappers are one approach that can be used to accomplish this after an exam has been graded and returned. Exam wrappers were developed by Marsha Lovett (Paul, 2015) to help struggling students become aware of the weaknesses in their studying habits. Lovett (2013) found that students who completed exam wrappers were more likely to adopt effective study strategies and ultimately achieved higher grades. I used exam wrappers in Calculus I and Calculus II courses after three exams in each course. I hope that exam wrappers encourage my students to make reflection after exams a habit even if professors do not use them in classes. Reflection is a skill that will serve them in their academic career as well as their career after graduation.

Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.
I used exam wrappers in Calculus I and Calculus II. The students were predominantly math, computer science, or science majors. The courses are required for these majors. Most of the students were freshmen or sophomores.
Application: How is your application different from ones that others have tried?
I have seen articles about test wrappers, but not too many that talk about specific results.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.
I am still analyzing the results. At this point, students have told me that it was helpful. However, I would like to compare their responses on the exam wrappers, changes in study habits, and test performance.

References (required, APA Style):

Lovett, M. C. (2013), Make exams worth more than the grade: Using exam wrappers to promote metacognition. In M. Kaplan, N. Sliver, D. LaVaque-Manty, & D. Meizlish (Eds.), *Using reflection and metacognition to improve student learning: Across the disciplines, across the academy* (pp. 18-52). Sterling, VA: Stylus.


Organization:
At the beginning of the presentation, lead session participants through a structured reflection by asking them to recall a class session where they tried something new or a time when they had to perform a challenging task. Reflect on your performance and how you could have improved. How much time did you spend preparing? How did you prepare? What mistakes or errors did you make? How could you change your strategy to perform better the next time? (Paul, 2015).

Discuss how exam wrappers require students to reflect on their performance on exams and how they can improve in the future. Share results from my experience using exam wrappers in Calculus I and Calculus II.

At the end of the presentation, ask session participants if there are other times in students’ lives that prompt reflection and analysis would be beneficial.
Portfolio-Assisted Assessment Techniques

Presenters:
Mysore Narayanan
Engineering, Miami University

Abstract:
In this presentation, the author presents his findings pertaining to accentuating student performance by creating different learning environments. One such is the development of a detailed course portfolio that documents student learning in detail. In this case, the author has tried, implemented, assessed, and evaluated student performance using student generated portfolio and Fleming and Mills's VARK Techniques. He also compares his data with the data presented by Hunter Boylan.

Outcomes:

- Assess the integration of technology in a creative manner that will not too easily overshadow the learning outcomes intended.
- Assess the effectiveness of teaching content-driven courses.
- Integrate several sophisticated modern era technologies that can successfully contribute to the Critical Thinking Capabilities of the 21st-century technology-savvy students.
- Integrate the utilization of fast, high-powered computers and user-friendly software programs for creating a totally dynamic instructional environment for the student learner.
- Create an environment for encouraging the students to appreciate the importance of learning analysis-oriented subject matter.

Keywords:
Assessment, Faculty Learning; Assessment, Student Learning; Classroom Assessment Techniques; Cognition; Critical Thinking; Discovery Learning

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

- What should be counted as appropriate goals and accomplishments in an undergraduate engineering course that has a significant laboratory component?
- Does the discovery approach practices utilized by the instructor providing reasonably acceptable paths toward accomplishing the specified learning goals in the chosen course?
- What do students actually accomplish in the designed course and the laboratory exercises? How has discovery approach helped them in meeting their learning goals?
- How has the instructor's organizational techniques contributed towards students' intellectual development and progress?
- Has the discovery approach methodology effectively responded to address students' learning difficulties? Does the teacher revise his discovery approach methodology to
address such problems encountered by the students?

- What impact does this type of discovery approach have on students’ life-long learning attitudes? Does the discovery approach help the students to develop the ability to “learn, how to learn.”

Application: Describe the project’s related course(s) or curriculum, its students, and its place in the curriculum or program.

- Authentic project work puts students in the driver's seat of their own learning.
- Instructors should take advantage of curriculum developed by teachers in a large collection of Unit Plans that integrate technology.
- Models of meaningful classroom projects that integrate instruction in developing critical-thinking skills provide the learners with an opportunity to enhance their knowledge.
- Tools and strategies for developing one’s own exemplary technology-supported learning should always receive encouragement from the instructor.
- It is important to learn how project-based units can effectively engage students in meaningful work and promote higher-order thinking.
- It is necessary to see how questions and ongoing assessment keep project work focused on important learning goals.
- One needs to gather ideas from a collection of exemplary Unit Plans and design one’s own technology-rich teaching plan.

Application: How is your application different from ones that others have tried?

It is widely recognized that sophisticated computing technologies are becoming a key element in today’s classroom instructional techniques. Regardless, the professor must be held responsible for creating an instructional environment in which the technology actually supplements learning outcomes of the students. The author tries to focus on technology as a tool and not on the technology itself. He further argues that students must demonstrate that they have the ability to think critically before they make an attempt to use technology in a chosen application-specific environment. The author further argues that training-based instruction has a very narrow focus that puts modern technology at the forefront of the learning enterprise system.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.

The principle must be to utilize a variety of instructional tools to communicate with students who may prefer to have different learning styles. The author has utilized World Wide Web and Interactive Video Distance Learning extensively in addition to other teaching techniques. WWW and IVDL actually supplement other routinely used audio visual techniques such as PowerPoint presentations, interactive tutorials, problem-solving sessions, written research reports, peer group discussions, poster presentations, etc. (Kolb, 1985). The important aspect here is to move away from a teaching paradigm to a learning paradigm that is based on the discovery approach.

The principles assessment methodology can be summarized as follows.

- The participants should be capable of generating or selecting an assessment plan that is productive and that is best suited for their chosen discipline.
- The participants should make a choice of developing a set of rubrics that can be effectively utilized in administering their assessment procedures.
- The participants are required to generate a set of graphs that can provide them with appropriate feedback pertaining to student learning capabilities.

It is quite common for colleges and universities to offer several types of precollege-level courses. These types of courses are basically designed to teach the essential academic skills that are
necessary for success in some chosen upper-level courses (Brier, 1984). For example, a pre-calculus course may be necessary for a group of students who may be quite competent in English literature. Another example would be a technical writing course that could help scientists, mathematicians and engineers with their journal publications.

References (required, APA Style):


Organization:
This is an interactive poster session.
First: Describe what I am presenting in my poster.

Second: Interact and have a dialog with the participants … questions and answers. Obtain creative ideas from the participants to improve upon.

Assess the integration of technology in a creative manner that will not too easily overshadow the learning outcomes intended.

Assess the effectiveness of teaching content-driven courses.

Integrate several sophisticated modern era technologies that can successfully contribute to the Critical Thinking capabilities of 21st-century technology-savvy students.

Integrate the utilization of fast high-powered computers and user-friendly software programs for creating a totally dynamic instructional environment for the student learner.

Create an environment for encouraging the students to appreciate the importance of learning analysis-oriented subject matter.
Building a New Faculty Academy at Ball State University: Best Practices

Presenters:
Deanna Pucciarelli
Nutrition and Health Sciences, Ball State University
David Concepcion
Philosophy and Religious Studies, Ball State University
Kristen McCauliff
Communication Studies, Ball State University
Melinda Messineo
Sociology, Ball State University
Thalia Mulvihill
Social Foundations of Education Higher Education, Ball State University
Michael O'Hara
Theater, Ball State University
William Rodger
Biology, Ball State University

Abstract:
Seven facilitators created a new program (New Faculty Academy) for all incoming tenure-line faculty (n=53) in the fall semester of 2015. Now in its second iteration, changes were made in response to both a mid-term evaluation (conducted by the Office of Educational Excellence) and an end-of-term survey drawn from the faculty-participants. This session will delineate lessons learned and offer best practices in faculty professional development with specific attention to new, incoming faculty.

Outcomes:
Participants will be able to understand the correlation between institutional goals and how new faculty can adopt these goals into their teaching, research, and service work so that they may successfully navigate the promotion and tenure processes—all embedded in a program structure that builds faculty community leading to retention.

During this session, participants will be exposed to an array of activities in the area of learner-centered teaching, research, and service that have been highly ranked by BSU’s New Faculty Academy cohort one. As a result, participants can begin to design faculty development programs at their institution.

Keywords:
Centers for Teaching and Learning; Communities of Practice; Faculty Development (not involving FLCs); Inspirational Mentoring

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the
learning objectives you wanted students or colleagues to better achieve as a result of your application.
The New Faculty Academy was a new program; as such, revisions are in-process for cohort two this coming fall (2016). The Ball State University New Faculty Academy had/has the following objectives:

Academy Goals: To ensure a positive beginning to a satisfying career as a member of the Ball State University community.

Participants will:

- Be supported and connected to resources as they refine and pursue their research/creative endeavor agenda
- Acquire a productive understanding of Ball State University’s particular resources, policies, and practices
- Enhance the learner-centeredness of their teaching to help improve student retention
- Reflect upon their identity as a teacher/scholar to develop a fulfilling career that properly balances (i) work and life and (ii) teaching, research, and service

Application: Describe the project’s related course(s) or curriculum, its students, and its place in the curriculum or program.
Ball State University began its inaugural NFA in the fall semester of 2015. Seven faculty, coming from different disciplines, departments and colleges, were selected to build the program beginning in May of 2015. All of the facilitators had won teaching awards and held respected research or creative endeavor track records. After a literature review and consultations with other institutions, a 15-week, three-hour per week program was created. Fifty-three incoming tenure-line participants were enrolled. All faculty were given a course release so that they could fully engage with the program.

Application: How is your application different from ones that others have tried?
There are limited New Faculty Academies housed in state universities across the country that provide a comprehensive program that integrates teaching, research, and service modules while providing a course release for faculty to attend. This program was designed for 3 hours per week for the entire 15-week semester, and faculty were required to attend all sessions. The end of the program resulted in a capstone project shared out with all participants.

The seven facilitators designed the program after a deep literature review, consulting with experts and modifying activities that the participants responded well to through program immersion.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.
At the midway point in the program, we requested professional staff with expertise in program evaluation from Ball State University’s Office of Educational Excellence to conduct a program review with the participants. Results were compiled by OEE and shared with the facilitators. Adjustments in content delivery methods were altered for the second half of the program to better suit an adult professional learner.

At the end of the 15 weeks, an on-line survey was conducted by OEE with the participants. Data were compiled by OEE, and the results were shared with the facilitators. In the summer of 2016, the seven facilitators used the data to refine or exclude learning modules. Further refinements to course content delivery were made.
References (required, APA Style):


Organization:
The first 10 minutes of the session will provide an overview of BSU’s New Faculty Academy (NFA) mission, goals, and structure. In the next 20 minutes, participants will engage in a series of activities that best suit their needs. For example, some participants may have already built a NFA, but may seek additional professional development activities to enhance current program offerings.

We will have a minimum of four stations, each led by one BSU facilitator, where participants can gravitate towards that space and engage in a different, applied activity. These sessions will be timed, and participants will be alerted when to move on to the next station, or stay and expand on the current topic if deeper discussion is warranted. All materials will be available prior to the conference and uploaded to the conference website.

Station topics will include:

1. Methods for new faculty to write a three-year teaching, research and service plan
2. Quickly building “community” for new faculty
3. Incorporating NFA program learning objectives into a “showcase” project and symposium

The last 10 minutes will be open for participants to share out with the larger audience how they plan to incorporate one professional development activity in their home institution.
Creating and Utilizing Student Teams in Qualitative Research: An Autoethnography

Presenters:
Marie Radina
Family Studies and Social Work, Miami University
Sarah Rich
Biology, Miami University
Mary Martin
Family Studies and Social Work, Miami University
Kaylie Kawamura
Family Studies and Social Work, Miami University
Lindsay Clark
Biology, Miami University
Alyssa Oddo
Family Studies and Social Work, Miami University
Lauren Ramsey
Biology, Miami University

Abstract:
A senior researcher in the field of Family Science and undergraduate research assistants will present a group autoethnography about utilizing undergraduate student research teams for qualitative research. The senior researcher will introduce how to create and utilize research teams, including an overview of the predominant attitudes of student readiness and a discussion of the variety of models for utilizing undergraduates. All presenters will conclude by sharing their experiences conducting and presenting qualitative research together.

Outcomes:
How to create and utilize undergraduate student research teams for qualitative research; how to conduct, analyze, and present qualitative research as a team; how undergraduate students prepare/present for national conferences, speak professionally, network, ask questions in research, mentor peers, assume team leadership roles, and develop professional identities as researchers.

Keywords:
Discovery Learning; Group Work/Learning; Mentoring; Peer Mentoring; Qualitative Research; Undergraduate Research

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.
The goal of this presentation is to describe the roles and experiences for students as undergraduate research assistants. No specific learning objectives were outlined in advance, as the research team described in the presentation has been ongoing for over 10 years.
Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.
Students who participated in these research experiences were part of Miami’s First Year Research Experience, Scholastic Enhancement Program, and the College of Education, Health, and Society's Leadership Scholars Program. Students also signed up for research independent study credit.

Application: How is your application different from ones that others have tried?
Given that this presentation does not involve the application of some new pedagogical intervention, this question is not applicable.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.
The students who participated in the development of this presentation engaged in an autoethnography in which they reflected on their own learning and experiences. The presentation includes students' reflections on their perceived successes as participants in this experience.

References (required, APA Style):
N/A

Organization:
The senior researcher will introduce how to create and utilize research teams, including an overview of the predominant attitudes of student readiness and a discussion of the variety of models for utilizing undergraduates. She will explain many points on creating, correctly utilizing, and the benefits of undergraduates on research teams. Undergraduates that work with the senior researcher will then contribute by sharing their experiences conducting and presenting qualitative research together and how these aspects have contributed to their academic and personal lives. The session will conclude with an opportunity for questions to be answered by the senior researcher and the undergraduates.
**Teacher as Coach:**

**Strategies for Deep Learning**

**Outside the Classroom**

**Presenters:**
Susan Robison
Principal, Professor Destressor

**Abstract:**
How do you structure out-of-class learning opportunities for your students when you advise and mentor them or direct their research? This practical, interactive workshop based on coaching skills drawn from executive, personal, and academic coaching will introduce skills that provide such a structure and produce the kind of deep learning our students long for. Skills covered will be setting an agenda, assessing student motivation, designing a learning plan, preventing obstacles, and planning accountability.

**Outcomes:**
1. Listen deeply to students’ agenda for learning.
2. Assess student motivation for learning
3. Design a learning program that matches interventions to the student’s stage of change.
4. Apply strategies drawn from research on goal-setting, brain pacing, work-rest rhythms, multi-tasking, accountability, and preventing obstacles to help students set realistic learning goals.
5. Implement accountability practices for students to pace their learning and use campus resources such as faculty, peers, and writing centers to help them achieve results.

**Keywords:**
Academic Success; Coaching; Deep Learning; Faculty Development (not involving FLCs); Mentoring

**Category: Application**

**Application:** Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

The session will begin by discussing the importance of faculty coaching skills – how the academy can increase an atmosphere of knowledge and civility through social and emotional intelligence skills.

Then each of the skill areas listed below will be defined and explained, followed by a demonstration of the skill and then by participants’ practice with a partner.

The workshop will conclude with a discussion of practical choices, such as how and when to use such skills and what follow-up strategies participants might design to increase their own skills.
1. Listen deeply to students’ agenda for learning.
   - Ask student for goals for the session: “What’s on your mind?” Summarize what the student is asking.
   - Ask follow-up questions if needed.
   - Refrain from giving advice until you are sure what the mutual goal will be.
   - Watch the student’s body language to see if the agenda resonates with the student.

   - Use powerful questions (Kimsey-House et al.) and interview skills drawn from Motivational Interviewing (Miller & Rollnik, 2002) to assess motivation valences towards various learning objectives and options.

3. Design a learning program that matches interventions to the student’s stage of change.
   - Use change strategies from Prochaska et al. (1994) stages of change transtheoretical model.

4. Apply strategies drawn from research to help the student set realistic learning goals.
   - Help the student get specific about goals with skills about brain pacing, work-rest rhythms, multi-tasking, defeating obstacles, and defining specific parameters of the learning needed such as time, place, and standards of performance.

5. Implement accountability practices to self and possibly others to accomplish the learning goals.
   - Explore campus resources such as faculty, writing centers, and accountability buddies or groups to help them achieve results.

**Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.**

Not related to a particular course or curriculum. Relevant to all faculty who see students in their offices for advising, career help, study assistance, or research direction.

**Application: How is your application different from ones that others have tried?**

Most faculty don’t have an specific structure for guiding in-person meetings with students. This structure is a starting point for more effective and deeper learning to take place following those appointments.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**

I have coached many faculty who have asked for help with student appointments and have given me qualitative data on its effectiveness. This workshop is the first time I have presented this structure for a faculty audience.

**References (required, APA Style):**


**Organization:**
The session will begin by discussing the importance of faculty coaching skills—how the academy can increase an atmosphere of knowledge and civility through social and emotional intelligence skills.

Then each of the skill areas listed below will be defined and explained, followed by a demonstration of the skill and then by participants’ practice with a partner.

The workshop will conclude with a discussion of practical choices such as how to and when to use such skills and what follow up strategies participants might design to increase their own skills.
Latinos in Rural America:  
A Community-Engaged Learning  
Public Humanities Project

Presenters:  
Clara Román-Odio  
Latino Studies, Kenyon College

Abstract:  
This presentation describes and assesses Latinos in Rural America, a community-engaged learning enabled, public humanities project within a 300-level course at a liberal arts college in rural Ohio. The project resulted in a traveling, bilingual exhibit and a College-Preparatory Program for Latino Youth. Our outcomes strongly validate research on the impact of this pedagogy to enhance mastery of academic content, career choice, and civic engagement (Butin, 2010; Chong et al., 2013; Grobman & Rosenberg, 2015).

Outcomes:  
Learning outcomes: After my session, participants will be able to understand how to:

- Use an oral history framework to build community-engaged learning in a college-level course,
- Delimit a community-engaged project,
- Use an array of methods for reflection in community-engaged,
- Address questions of logistics (transportation, Institutional Review Board, building community partnerships, etc.),
- Assess faculty, student and community partner experience, and
- Engage with some of the literature addressing theory and practice of community-engaged learning.

Keywords:  
Action Research; Assessment, Student Learning; Civic Engagement; Community-Engaged Learning; Inquiry-Based Learning; Inquiry Research; Latinos; Public Humanities; Service-Learning

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

A significant body of research on mastery of academic content, career choice, and civic engagement substantiates community-engaged learning as a high-impact pedagogy (Boss, 1994; Butin, 2010; Chong et al., 2013; Danielson & Fallon, 2007; Grobman & Rosenberg, 2015; Mathieu, 2005). As Adler-Kassner et al. (1997) assert, “service learning in the context of Composition can increase students' conception of the social far more effectively than either textbooks or experience alone” as students address the “causes of social problems and not just the symptoms.” Other scholars claim the ethical and civic promise of community-engaged learning because it can foster democratic and social
justice values and encourage students to take on the perspectives of others (Cushman, 1999; Warren, 1998). Reflecting about the role of the university as a public good, this presentation assesses these claims by exploring the intersection of the public humanities and community-engaged learning as a powerful strategy to open up new spaces for social dialogue. I used community-engaged learning in my Spanish 380 to connect Chicano/a history and culture to the present experience of Latinos in Knox County. I also wanted to build into my course strategies for immersive inquiry and undergraduate research. I found that at their best, public humanities and community-engaged learning can strengthen undergraduate research and create, as Cantor (2004) suggests, a context for the exchange of peoples and ideas that maintain the university as a public good.

Application: Describe the project’s related course(s) or curriculum, its students, and its place in the curriculum or program.

Spanish 380, Introduction to Chicano/a Cultural Productions, is a core course in the Latino Studies program at Kenyon College. The course learning objectives are: 1) to expose students to Chicano/a cultural productions from the Mexican-American civil rights movements to the present; 2) to analyze Chicana/o history and culture as oppositional expressions to sexist, racist, classist, and homophobic ideologies; and 3) to offer students meaningful opportunities to learn through community engagement. The key enabler was an oral history project, Latinos in Rural America, which had two components: a) eight weeks of research by two students Summer Scholar and three community-engaged course projects.

Application: How is your application different from ones that others have tried?

Latinos in Rural America combined public humanities with community-engaged pedagogy. The public humanities enable interpretation of the past and envisioning of the future. Particular to this approach is the emphasis on the analysis and exchange of stories, which can help us to engage with our surroundings, including diverse cultures. Community–engaged learning can be broadly defined as a pedagogy that builds on partnerships between institutions of higher education and surrounding communities to identify and work with public issues that have both academic and public life dimensions. Community-engaged learning is change-oriented and finds research questions in the needs and knowledge of the community. It aims at preparing students for an active civic life by combining classroom learning objectives and skill development with social action geared at empowering community groups. As a public humanities project emerging from community-engaged learning, Latinos in Rural America aimed at intercultural development, a way of imagining a shared future that includes the interaction of different ethnic, linguistic, and racial groups based around a shared appreciation of place—in this case, Knox County. In order for this work to be done effectively, it is important to tell the story of the place and the stories of its people, with the focus here on the small but growing Latino population. We need new models of intercultural development to ensure a rural sustainability that includes Latinos as valued community members. In our case, the public humanities played a strategic role in cultural brokerage, by telling new stories of distinctive rural communities and the people who live there. Community-engaged pedagogy enabled the project and offered students a unique opportunity to teach to, and learn from, the community by creating a primer on cross-cultural interactions and a sustainable program to help local Latino/a youths prepare to apply to and remain in college.

Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.

Students engaged in both library research and community-based learning. Their journal entries confirmed Johnson’s view that “Service learning reflection is a crucible in which academic knowledge and . . . big questions permeate each other.” For instance, one student questioned the applicability of decontextualized academic knowledge and highlighted the value of linking it to community life. Another made sense of her college experience by embracing civic responsibility locally. Going beyond the academic content of the course, another discovered the purpose and value of higher education as a
public good. Through an anonymous survey, we asked students to indicate their level of agreement with statements relating to their community-engaged learning experience, including:

- connection between community-engaged learning and course content;
- increased interest or investment in the course;
- meaningful opportunities to develop valuable knowledge, relationships, and/or skills;
- increased knowledge of campus community or wider world; and
- increased involvement off-campus.

Students made quite positive remarks in relation to all the categories listed above, indicating that community-engaged learning can create authentic opportunities to analytically engage with the social fabric of a place. The community’s response to *Latinos in Rural America* was assessed through a survey completed after seeing the exhibition. We found that the audience embraced cultural difference from the bilingual/bicultural content of the text, pictures, and video to the discovery of social tensions and educational disparities locally. It also indicated that attendees truly enjoyed learning diverse perspectives in the company of others. They made connections between local issues and national debates, and questioned the world where they live. They faced disparities, social tensions, and alternative views, and reflected on their changed perceptions. Students who engaged in the creation and implementation of the *Bilingual College-Preparatory Program for Latino Youth* stated this was a transformative, high-impact learning experience.

**References (required, APA Style):**


Organization:
Through an oral history framework, *Latinos in Rural America* documents the experiences of Latinos and Latinas in Knox County, Ohio, using community-engaged learning pedagogy and scholarship. During this presentation, participants will learn how these stories were collected, curated and shared; how the project incorporated community-based learning; and how students, the Latino community, and the public at large responded to the experience.

The first 10 minutes of this presentation will offer participants a community-engaged learning framework to understand the challenges and opportunities of community-engaged learning pedagogy and scholarship, including a body of literature assessing the impact of community-engaged learning on mastery of academic content, career choice, and civic engagement. The next 20 minutes will describe and assess *Latinos in Rural America* through an exploration of the project’s main components and digital archives. This will offer participants an opportunity to understand how to build community-engaged learning into an existing course, delimit a community-engaged learning project, use an array of methods for reflection in community-engaged learning, address questions of logistics, and assess the faculty, student and community partner experience. The final 10 minutes of the presentation will be for sharing materials and Q&A period.
Beyond Page One of Google: 
Getting Students to Research and Write 
Toward Deep Learning

Presenters: 
Sue Trout 
English, Belmont University
Jason Lovvorn 
English, Belmont University

Abstract: 
Four decades of research have established the benefits of deep versus surface learning (Marton & Saljo, 1976), but rarely do we see how those classes look in practice. This interactive session will unpack two general education classes that encourage deep learning and provide strategies for classes within other disciplines. Service learning and oral history classes provide models for eliciting intentional and reflective learning, and encourage students to engage with research and writing within their disciplines.

Outcomes: 
Participants will be able to:

-- recognize the differences between surface and deep learning strategies for faculty and students.
-- promote learning approaches that enable students to do research for meaningful understanding and mastery of concepts
-- encourage students to develop deeper interest and motivation for research and writing.
-- encourage students to understand and impose meaning on complex concepts.
-- develop course materials encouraging research strategies that promote higher-order learning, integrative learning, and reflective learning.

Keywords: 
Academic Success; Collaborative Learning; Course/Curriculum Design/Redesign; Critical Thinking; Deep Learning; Group Work/Learning; Problem-Based Learning; Service Learning; Undergraduate Research; Writing

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Our research showed that student success across the curriculum increased when deep rather than surface learning strategies were employed in the classroom. However, specific examples of course design and assignments that engage students in research and writing that will facilitate deep learning were sparse. We were interested in developing strategies that produce an “intrinsic desire” for learning that motivates both students and faculty (Smith & Colby, 2007).

Since both classes require sustained research, we developed a sequencing of assignments that developed student research and writing skills over the course of the semester. We were intentional in
our discussions with students about our learning outcomes—particularly the desire for deep, meaningful learning (Smith & Colby, 2007). To that end, we offered students the freedom to choose topics meaningful to their own interests and sequenced assignments so students could make connections that authenticated their research and increased their enthusiasm for the work. In addition, we added an experiential or fieldworking element that required students to connect research and communication skills to real-world experiences. Ultimately, they were asked to integrate primary and secondary sources, understand diverse perspectives from scholarship, interview subjects, and integrate their learning within their discipline and outside the classroom.

We were determined not to approach these classes in a surface manner—that is, offering a series of unrelated assignments to fulfill departmental and university research and writing requirements. In the past, we were driven by the number of papers and pages written while we designed our syllabi. By being intentional about deep learning, integrating all assignments toward one multi-staged project, we were able to increase the quality of the research and the writing. We also saw increased enthusiasm in students for meaningful engagement not only in the research but also in understanding their positioning in real world situations.

**Application:** Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.

We will look at two general education courses: a problem based junior seminar course that requires a sustained research and group project, and a third-year writing seminar that requires a significant research project within the students' specific field of study. Both classes are required of third-year students, are topical, and are populated by students across the disciplines.

**Application: How is your application different from ones that others have tried?**

In the past, success in both the Junior Cornerstone and the Third Year Writing Seminar has been measured by the number of papers written in the course. This is rather typical of university writing classes. Often the assignments, approaches, and modes of thinking and writing were loosely related, and methods of assessment focused on one long research assignment, rather than knowledge accumulated over the semester. There was never a requirement that the assignments be connected, nor was there an emphasis on deep rather than surface learning. Therefore, we found there was no consistency or connectivity between the assignments, and this resulted in students approaching “the learning content as something that can be obtained in specific quantities,” rather than deep learning asking them to “recognize the dynamic and interrelated structure of the content to be learned” (Platow et al., 2012, p. 272). By restructuring our courses and focusing on the entire class being geared to gaining knowledge that accumulates over the course of the semester, we found that student understanding and motivation increased; students were able to understand course goals more explicitly, and their investment in the course and collaboration with one another improved.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**

We determined the success of our course design most specifically through the quality of the work students produced, their abilities to reflect upon their deep learning, their motivation during the project, and their commitment to considering diverse perspectives and a continued desire for lifelong learning.

We will show evidence of the success of our assignments through examples of student work, their abilities to evaluate and reflect upon their own learning, and course evaluations.
References (required, APA Style):


Organization:
In this interactive session, we identify the benefits of deep learning and convey the difficulties associated with students embracing deep research practices (Bennet, 2008; Laird et al., 2014). We will (1) explain the perils of secondary research that encourages surface learning and little student investment, (2) unpack two classes we teach that offer specific examples of assignments that encourage deep learning through fieldwork and primary research, and (3) discuss student engagement and success that can be replicated in classes in other disciplines.

In our session, we will emphasize how learning that occurs in oral history gathering and service learning produces the integrative, higher order, and reflective learning measured by the NSSE deep approaches to learning constructs (Laird et al., 2014). We will share a number of effects on students, including “motivation, ability . . . and self-concept” (Platow et al., 2012, p. 272), perceptions of and attitudes toward research, increased attention to research processes, abilities to work collaboratively, and tendencies to synthesize and evaluate research findings (Campbell & Cabrera, 2014).

Since “the meaning of the surface and deep approach distinction is equally applicable to all disciplines” (Lake et al., 2015, p. 1734), we will facilitate a group activity for participants to identify ways to integrate deep learning practices across the curriculum. Ultimately, we want participants to grapple with questions like the following: How can we encourage students to approach research with serious engagement and inquisition as opposed to simply Googling sources to write a required research paper? What kinds of assignments offer students the opportunities to engage with research that will be meaningful to them and allow them to make specific connections to the learning objectives in their courses? How can we be more intentional in designing courses that create enthusiasm for learning that includes sophisticated kinds of research and evaluative writing?
Cross-Campus Collaboration in the Instruction of Research & Writing on a Regional Campus

Presenters:
Ping-Yuan Wang
History, Ohio University-Lancaster
Paul Campbell
Alden Library, Ohio University

Abstract:
This session showcases successful collaborative teaching in a history research & writing course on a regional campus. The collaboration between faculty and a librarian in a capstone seminar is an application of Universal Design for Learning (UDL) and embedded librarianship to the effect of providing multiple and flexible ways for students to access course content, express learning outcomes, and engage with instructors and instructional goals. This collaboration turns a seminar into an inclusive, hands-on workshop.

Outcomes:
• Apply UDL principles to their teaching beyond the emphasis on “accessibility” or “learning preferences”
• Identify obstacles or barriers to students’ learning, especially in research and writing courses, and consider innovative ways of helping students succeed
• Recognize the benefits of multiple sessions of information literacy instruction with embedded librarians
• Adopt library instruction to enhance student success in the long term and, therefore, to improve retention
• Consider ways in which they may better incorporate library instruction or collaborate with the library in their teaching
• Develop innovative strategies for cross-campus collaboration to support student learning and increase retention

Keywords:
Capstone Course/Curriculum Design/Redesign; Cross-Campus Collaboration; Decoding the Disciplines; Information Literacy; Journaling; Online Library Instruction; Research Paper, Student; Universal Design for Learning (UDL); Writing

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.
HIST3111J, taught in the Fall of 2015 at Ohio University in Lancaster (OUL), is the third iteration of Wang's design and implementation of “Historical Research & Writing.” This capstone course develops very specific skills—the fundamentals of historical research and academic writing. Students learn to conduct research in online databases, locate and evaluate sources, synthesize secondary studies,
formulate a topic and a thesis, compile a bibliography, and make an argument. The final product is a research paper. SETs, formative assessments, and needs/gap analyses collected from previous years have shown that students are unevenly prepared to produce desirable learning outcomes in one semester.

Three pedagogical frameworks inform the course’s redesign and implementation: 1) Decoding the Disciplines (Pace & Middendorf, 2004): identifying a bottleneck in students’ learning and addressing that particular obstacle in course (re)design and assignments; 2) UDL (; CAST, 2015; NEA, 2008; Rose, Harbour, Johnston, Daley, & Abarbanell, 2006): eliminating barriers to learning and providing multiplicity and flexibility in presentation, expression, and engagement in the learning process; 3) Embedded vs. one-shot library instruction (Sullivan & Porter, 2016).

History faculty on OU’s regional campuses have identified common obstacles to students’ success in HIST3111J. Students start research too late and have varying degrees of information literacy skills and familiarity with the research process; both cause research anxiety. Students’ writing abilities and experiences also vary widely, which causes writing anxiety. Students’ comfort levels with essential tools also vary, and they may not have access to all of them. HIST3111J offered at OUL in Fall 2015 is the first to apply the aforementioned pedagogical frameworks to eliminate barriers and achieve specific instructional goals. In practical terms, students are required to conduct research and write in class, along with the instructor and the embedded librarian, so that they can ask questions and receive immediate feedback and individualized instruction.

Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.

History majors in their junior or senior year on all OU campuses take a junior composition seminar, HIST3111J: “Historical Research & Writing.” At OUL, the wide range of student writing abilities, research experiences, and competency in technology makes achieving the objectives of this course challenging. More than an apprenticeship in the historian’s craft, HIST3111J develops lifelong skills, including information literacy, expository writing, proficiency in web- or computer-based content management, and the ability to formulate meaningful questions and find solutions to problems based on sources of evidence. Despite their upperclassman status, not all students are equally prepared to meet these learning objectives.

Application: How is your application different from ones that others have tried?

Other HIST3111J courses, including Wang’s previous implementations, have incorporated library instruction. However, they have not been (re)designed with UDL as an overarching principle from the start. Specifically, Wang’s application emphasizes access to as well as the ability to fully utilize web- and computer-based tools to maximize productivity. Obstacles to student learning have been identified by other instructors as well. Wang’s course specifically adopts Decoding the Disciplines to address the bottleneck. The multiple and individualized workshops with an embedded librarian are also a first attempt on OU’s regional campuses.

The LMS, Blackboard, is designed to proximate a fully online course so that students can focus on developing skills. The class is held in a computer lab so students have access to all essential tools, which eliminates barriers such as outdated hardware and software, or a slow Internet connection at home. The collaboration with an instructional librarian exposes students to at least two approaches to identify, obtain, and evaluate sources.

The faculty instructor provides the historian’s expertise in writing instruction and the utilization of source materials, and the librarian assists in the acquisition as well as evaluation of materials. The librarian offers three structured tutorials addressing different aspects of research and guides students through the process in person. The librarian then joins the class three additional times to offer individualized consultation, together with the faculty instructor, as students develop their research projects. While in the lab, students access course content on Blackboard and submit their written
works in Word documents to Box, a file-sharing tool, so that they can receive thorough and timely feedback from the instructor, all online.

The application of UDL, Decoding the Disciplines, and embedded librarianship turns a seminar on the fundamentals of research and writing into a collaborative workshop and the computer lab into an inclusive classroom.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**

The primary evaluation tool is a series of formative assessments, accompanied by SET, individual consultations with students, and students’ learning outcomes demonstrated in writing assignments as well as in-class exercises. Previous implementations suggest that online journal entries on Blackboard are effective tools for both gauging students’ progress and assessing the effectiveness of the course.

Students report on their progress in seven entries on the online journals on Blackboard. Students respond to specific questions about their prior experiences with research and writing in a pre-course assessment and reflect on the progress they have made in the post-course assessment by answering several particular questions. Throughout the semester, students write entries reflecting on the learning outcomes of specific assignments: writing a summary, potential research topics, progress reports on research, and reflections on the presentation of their projects. Two journal entries specifically address the effectiveness of library instruction. All students reported that they found the structured and yet customized, multi-session, and workshop-like library instruction beneficial.

Students’ timely feedback through both individual consultations and the online journal also allows the instructor to course correct during the semester. For example, after the three library instruction sessions, the instructor realized that some students still struggled with searching for sources in online databases or library catalogs. She then invited the librarian back to her class for three more sessions, working with students individually as they continued to advance in their research projects. When specific students reported in their journal entries the challenges in research or writing, the instructor engaged with those students directly during class time and provided immediate solutions. In the computer lab, students revised their writing with the instructor’s immediate assistance. This course received a 4.8 out of 5 for the SET, which further demonstrates the effectiveness of this application.

**References (required, APA Style):**


**Organization:**
The presenters will:

1. Explain the rationale of the redesign of this course
2. Present the three pedagogical frameworks: UDL; Decoding the Disciplines; embedded librarianship
3. Demonstrate the ways in which library instruction is embedded in the seminar/workshop
4. Share feedback from students, in particular, their online journal entries (formative assessment) that address specific learning outcomes
5. Offer reflective evaluation of the application of the three frameworks

**Audience participation:**

1. Participants share with the group their experiences in teaching skill-based and/or capstone courses: success stories and less successful moments
2. Participants offer feedback to the presenters and discuss whether or not the design principles and collaboration presented in this session may be applicable to their own teaching
Development of an International Model of Faculty Learning Communities

Presenters:
Naoji Yamagishi
Center for Higher Education Studies, Waseda University

Abstract:
This session aims to present a model for internationally collaborative Faculty Learning Communities (FLCs) that is based on the experience of Waseda University in Japan. Waseda’s FLCs consist of three parts: a 2-week cohort program hosted by the University of Washington (UW), a monthly gathering named “Faculty Café” at Waseda, and joint research projects regarding student-centered-learning (SCL) between Waseda and UW. Thus, Waseda’s FLCs are an international hybrid of a cohort- and topic-based FLC.

Outcomes:
After this session, participants will learn the mechanism of an international FLC program that is an application and expansion of an American FLC. Participants will also learn how the program helps faculty members to adopt SCL and how it encourages them to engage in the Scholarship of Teaching and Learning. In addition, participants will understand how the program serves as a trigger for transforming a fragmented organization suffering from the “silo effect” into a learning organization. Lastly, participants will learn that international settings and the hybrid nature of cohort- and topic-based programs can even further expand the possibilities of FLCs.

Keywords:
Assessment, Faculty Learning; Centers for Teaching and Learning; Faculty Learning Communities (FLCs); International Faculty; Learner/Student Centered

Category: Application

Application: Describe the theory, approach, and revision that you applied in your course, curriculum, or program. Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your application.

Japanese universities, modeled after European universities, are aggregations of research-oriented units and operate very differently from American universities. Japanese universities have not fully recognized the importance of teaching quality, and they have not sufficiently developed liberal or undergraduate education. However, Japanese universities are now undergoing the educational paradigm shift from teaching to learning that Barr and Tagg (1995) once described. A faculty learning community (FLC) has been proven to be effective for helping institutions and faculty to tackle this shift. Yet there is not enough evidence that FLCs are effective outside the American context. Considering that higher education around the world is going through the same fundamental change, it is significant to apply FLCs to international contexts.

Organizations consisting of many specialized units with specialized individuals tend to suffer from the silo effect (Tett, 2015). Organizations with silo effects develop the culture of indifference and isolation. The silo effect should be an issue of concern for universities with specialized faculty belonging to specialized schools and departments. Actually, culture of indifference and isolation is not unusual in
higher education (Baker, 1999). The assessment of this study also showed the same symptoms at Waseda.

One of the ways to break down silos is to secure opportunities for individuals from different units to gather, which exposes them to different perspectives (Tett, 2015). This perfectly echoes that FLCs will produce synergy from appreciating multidisciplinarity (Shulman, Cox, & Richlin, 2004). Under the FLC model, cultural difference can be considered as another disciplinary difference. Thus, it is reasonable to assume that FLCs operating internationally are even more effective. In this respect, this study is not just about a Japanese university's importing of American FLCs. Rather, it is a quest for creation of an internationally collaborative model of FLCs by involving both Japanese and American community members.

**Application: Describe the project's related course(s) or curriculum, its students, and its place in the curriculum or program.**

For the 2-week cohort program, about 25 faculty members from different schools of Waseda visit UW. The members learn basic concepts of SCL from UW facilitators, observe classes, and complete a small project. After coming back to Waseda, the members participate monthly in Faculty Café, hosted by Waseda facilitators, where each of them brings their own concerns regarding teaching to discuss. UW facilitators visit Waseda and observe the members’ classes with Waseda facilitators and give feedback to them. The members are encouraged to do joint research projects related to SCL with UW faculty. Three projects are currently in operation.

**Application: How is your application different from ones that others have tried?**

First of all, there are few previous studies regarding the application of American FLCs to different cultures (Kwong, Cox, Chong, Nie, & Wong, 2016). Indeed, Wong and Cox (2016) investigated the impacts of application of the American FLC model to an Asian university. Waseda's FLC is also congruent with the idea and design of the American FLC, so that it is indeed an application of the American model. Yet, it goes beyond application of model as it aims to establish a model of international collaborative FLCs through inviting both American and Japanese community members, having both Japanese and American facilitators, and pursuing the Scholarship of Teaching and Learning (SoTL) by joint research projects between Japanese and American community members. It is also unique in that it is a hybrid of cohort-based and topic-based FLC types.

**Application assessment and baseline: Indicate how you determined the success and effectiveness of your application.**

Waseda, as with other Japanese universities, is highly fragmented and disconnected at the individual faculty level as well as the school/department level. Each school and department does not share information about teaching and learning (T&L), for instance, data from student course evaluations, with other schools and departments. Faculty members generally do not have a chance to communicate with those in different schools and departments. Consequently, Waseda does not have a common language to talk about T&L. Individual faculty members who wish to improve their teaching do not have a channel to gather information about T&L.

Waseda's FLCs have already produced three joint international research projects between Waseda and UW faculty. This indicates the success of Waseda's FLC. Now, data is being collected through a questionnaire-based survey that adopted a 4-point Likert scale and open-ended questions. Some of the preliminary findings from the survey suggest that Waseda's FLC members seem to appreciate the cohort program because its international environment promoted the bonds among the members and made it stronger than otherwise. In addition, analysis of syllabi pre-FLC and post-FLC will be done, and the focus group interview will be conducted as well. Data will be fully collected, and the analysis of it will be completed by the time of the Lilly session. The effectiveness of an international model of an FLC will be available to evaluate.
References (required, APA Style):


Organization:
The session will begin with brief overview of higher education in Japan. This overview will be followed by discussion of whether or not cultural difference hinders an FLC from fully functioning, given that Japanese universities operate very differently from American universities. Next, the session will describe Waseda’s FLC, and will show the results of assessing it. This will be followed by closing discussion of what made Waseda’s FLC effective. This is an important point to discuss, because in terms of teaching in higher education, Japan has much in common with other Asian countries such as China, Korea, and Taiwan. So, considering Waseda's experience and exchanging ideas about it may contribute to establishing a general model for international FLCs.
Using Mastery-Based Testing in Undergraduate Mathematics, Science, and Other Courses

Presenters:
Alyssa Armstrong
Mathematics and Computer Science, Wittenberg University
Amanda Ramsay
Mathematics and Computer Science, Lewis University

Abstract:
We present preliminary results from a two-year study on a new assessment model called “mastery-based testing.” This method strives to increase complete understanding of concepts through a growth-mindset approach to learning (Dweck, 2000). Using MBT, students are given early feedback, enabling them to reevaluate and retest concepts. We will share data and experiences collected from undergraduate mathematics classes at 10 universities. We will also discuss the benefits and challenges of implementing this alternate assessment technique.

Outcomes:
- Describe the mastery-based testing assessment technique
- Understand how mastery-based testing fosters a growth-mindset approach to learning
- Understand the benefits, shortcomings, and challenges of mastery-based testing
- Compare and contrast sample student work using mastery levels
- Identify mastery-based concepts within a particular course context (presentation only)
- Formulate how they can use mastery-based testing assessments in their own courses (presentation only)

Keywords:
Assessment; Student Learning Growth Mindset; Mastery-based/Specifications grading; Mastery-Based Testing; Math Pedagogy; Self-Reflective Grading; Test Anxiety

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

We discuss a new assessment method called “Mastery-Based Testing.” In mastery-based testing, students receive credit only when they demonstrate "mastery," but they receive many attempts to do so. Since concepts appear on subsequent tests, students have extra chances to attempt problems not previously mastered. One goal of MBT is to encourage students to revisit old ideas that they have not fully understood. This is especially helpful in math and science courses where much of the material builds upon itself. MBT provides students opportunities to fully understand previous concepts, which aids in their learning of new material. “Research has shown that mistakes are important opportunities for learning and growth, but students routinely regard mistakes as indicators of their own low ability” (Boaler, 2013, p. 7). MBT allows students to change how they approach
mistakes. First, MBT reduces the cost for mistakes in assessments in order to allow students to learn and re-evaluate concepts. Second, students are incentivized to keep working on concepts until they are able to show mastery. MBT supports Dweck’s (2000, 2007) growth-mindset towards learning, as students who work hard and learn from their mistakes are able to persevere through the material. Allowing students to re-evaluate mistakes from problems has already had some success in student learning. Cherepinsky (2011) discussed his method of having students review and correct exams to get points back, and gives evidence that students liked this chance for self-reflection and that it helped in their learning. Finally, there is some evidence that mastery-based testing may help reduce test anxiety, since students have multiple times to attempt concepts. Overall, MBT aims to promote full understanding of course material in a non-threatening way that encourages students to learn from their mistakes and demonstrate growth in their education.

Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

We feel this innovation can work for any course, especially mathematics and science courses, in which assessments are traditionally graded on a points scale, rather than on mastery. Our research group has used mastery-based testing in undergraduate mathematics courses at 10 universities, ranging from small, liberal arts to public, research-focused schools.

Innovation: How is your innovation different from ones that others have tried?

Some assessment techniques have already been made to counteract entity learning culture. While these techniques support our efforts, they are not exactly the same as our mastery-based testing. For example, Beatty (2013) discusses a standards-based grading scheme he used in his article, “Standards-Based Grading in Introductory University Physics.” In the course, students were not awarded points per test, but points per standard or objective for the course. Normal scores are used, not mastery grading, but like mastery-based testing, these scores relate to a particular skill or objective for the course. Studman (1984) used a mastery learning method in which a certain set of objectives are given in small units to the students, and they must achieve mastery on them to pass the course. The student is allowed multiple attempts to show mastery, and testing is considered part of the learning process. This is different from MBT in that the units are small, and testing can occur at any time, not just during regular tests or quizzes. Also in this approach, mastery is not necessarily doing it perfectly, but instead showing general understanding, which is akin to getting a C. Some teachers may even use a method of grading in which no points are used. In this case, a grade is assigned based on how well the student meets the clearly laid out course objectives (Brilleslyer et al., 2012). While this is similar to MBT, no concept of mastery is introduced. Mastery-based testing is unique in that it focuses on complete understanding of the material by only using standard in-class assessments such as tests and quizzes.

Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).

Our research group is collecting data from our students through anonymous evaluations and surveys about their thoughts on assessment and the testing process. These surveys ask whether or not students felt that they fully mastered concepts, to what extent the students felt levels of test anxiety throughout the semester, whether they went back and studied past concepts, and whether or not they felt that they better understood the material after studying the topics multiple times. We are also asking questions throughout the semester about students’ mindset on learning by asking them to rate the extent to which they agree with statements like “You have a certain amount of math intelligence, and you can't really do much to change it.” The main goals for this project include, but are not limited to:

1) Assessing the extent to which students felt they mastered major concepts of the course, examined and reflected on past material, and felt test anxiety.
2) Evaluating whether or not mastery-based testing influences a student’s mindset on learning, improves the learning of concepts, and reduces test anxiety.

We will be presenting our preliminary research and data at this conference.

References (required, APA Style):


Organization:
The session will begin with an exercise in which the audience will grade solutions to three different math or science problems on a 10-point scale. The audience will then grade the solution using a thumbs up, thumbs down, or thumbs sideways grading scale. We will compare the results of the audience and use this to transition into a general overview of mastery-based testing (MBT) and how it is implemented in undergraduate mathematics courses at ten universities. We will discuss data collected regarding two of the main objectives of MBT: decreasing test anxiety in students and increasing complete understanding of course concepts through a growth-mindset approach. At this point, we will take time for the audience to brainstorm how they can apply MBT in one of their own courses and/or discuss any challenges they may see with this new assessment technique. We will encourage groups to share any input as well as add information regarding our personal experiences using MBT. Next, we will discuss how grading and retesting using MBT differs from traditional “points” grading, by providing a few examples of graded student work and retests. If time allows, we would like the audience to also brainstorm mastery-based concepts based on a set of course learning goals. This gives participants a chance to get practice shifting from a traditional assessment technique to MBT. We will conclude the session by answering any questions participants may have regarding mastery-based testing.
Creating Games and Watching Imagination Come to Life

Presenters:
Leah Carruth
Teacher Education, Angelo State University
Carlos Flores
Teacher Education, Angelo State University
Edwin Cuenco
Visual and Performing Arts, Angelo State University
Raelye Self
Curriculum and Instruction, Angelo State University

Abstract:
Two university courses collaborated to create a functional game associated with state standards that could be used in a classroom to help promote learning among both the college and K-12 students. The games were created from scratch by students in the Visual and Performing Arts department and evaluated for classroom use by students in the College of Education.

Outcomes:
We would like for the participants of this session to understand the importance of collaboration with other departments within their university. Although our departments are in the same building, we do not work together on projects. Everyone stays in their area of the building and says hi to each other in the hallways. In this case, we were able to connect not only faculty from different departments who would not normally work together, but students from different colleges as well. This cross collaboration allows students to understand the importance of working together towards a common goal, one that not only benefits the students of the university, but the students in the K-12 classrooms as well. Not only are the students in our programs broadening their horizons, but the faculty are learning from each other as well. Amazing things are done in the Visual and Performing Arts department, and they are learning what it takes to work in the classroom with students. When departments across the university cross collaborate, the possibilities are endless.

Keywords:
Games; Interdisciplinary/Multidisciplinary; Teamwork

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

Occasionally, games are located through online searches and simply printed out to match the lesson plan being taught. We wanted the students in these two departments (College of Education and Visual and Performing Arts) to have full ownership in the process and implementation of the game. This would allow the students to better understand the reasons a game would be used in the classroom to promote learning by incorporating the state standards (TEKS; Texas Essential Knowledge and Skills) that are mandated to be taught in the classroom. This project allows students to choose a grade level,
content area, and incorporate the required standards, broadening their understanding of what a teacher needs to look for in an activity that would be of benefit to his or her students.

**Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.**

This project spanned two different colleges within our university. Professors from the College of Education met with students in the Visual and Performing Arts class to discuss what could and could not be included in the games. Once the games were constructed, the students presented their games to classes in the College of Education. The classes were made up of future teachers who were given the opportunity to play the games and provide feedback to the students on what improvements could be made to them. Future feedback will include how they can be adapted for use in special education classrooms.

**Innovation: How is your innovation different from ones that others have tried?**

Previous innovations have handled creative projects on a planning level only. Games were developed solely through the planning stage, and it was discussed as to how the game would be used in a classroom setting to teach a standard. Occasionally, games are located through online searches and simply printed out to match the lesson plan being taught. With this in mind, it was necessary to have a full implementation of the game, from conception of the idea for the game to creating fully functional games with players providing feedback to the game designers. The design occurred through two departments. Education students assist in how applicable the game is to a classroom setting while witnessing the creativity in the graphic design of students' full-scale board games. Through the collaboration, students in both areas benefit and have a real-world experience they otherwise would not participate in. This project was the collaborative effort of professors from different backgrounds as well--early childhood/literacy, special education, school administration, and graphic arts. We based our collaboration on co-teacher models outlined by Murawski and Spencer (2011).

**Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).**

At this time, we have feedback from the students in the College of Education that will be presented to the students in the department of Visual and Performing Arts regarding the games and how they can be used in the classroom. Tweaks will need to be made regarding the state standards addressed in the games and more focus placed on the desired outcomes. A group of special education teacher candidates has also provided feedback that will be given to the students explaining how the games can be used with students with special needs. At this time, we are not ready to take the games out to K-12 classrooms. Our desire is to have a plan in place to do so by the fall of 2016. At that time, we will have rubrics in place for the K-12 teachers to help rate the use of the games in the K-12 classrooms. It is not only important that the students enjoy playing the games, but we need to be able to assess whether or not the games helped promote learning. Did the students learn (or reinforce) what the teacher needed them to learn in accordance with the state standards? This can possibly be achieved by administering pre- and post-tests to the K-12 students who will be playing the games. The games are not designed to be the sole source of information for the students, but should be designed to reinforce the lessons already taught in the classroom. Although the game designers may not have access to the lessons taught by the teachers in the classrooms, they do have access to the state standards that are required for each grade level and subject across the state.

**References (required, APA Style):**

Organization:
The session will be organized in an interactive lecture style format. We would like to have samples of the games that have been created up to this point that participants can see, touch, and use. We will discuss the process of how we developed and implemented the plan, and the changes currently being made. This is a project we would like to continue, and we would like to have time in the session for feedback from the participants. Other educators may be able to help point us in a direction we did not consider when developing this project.
Creating Accountability and Fostering Self-Assessment in the Private Music Lesson

Presenter: Jennifer D'Agostino
Fine and Performing Arts and Music, Walsh University

Abstract: Students need guidance practicing so they can see better progress in their private lessons. Creation of a template allows them to:

1) document procedures used in the private lesson,
2) establish goals for practice time throughout the week,
3) monitor and record practice habits, and
4) assess their success in achieving a learning outcome.

This process allows students to better understand grading in a field that is often seen as subjective.

Outcomes:
- Understand an effective way to create accountability and foster self-assessment in the private lesson. Examples of my template will be available, as well as examples that my students have used which highlight their successes or acknowledgement of their shortcomings.
- Use my example in participants' own studios.

Keywords: Assessment, Student Learning; Master Teacher; Music Lessons; Private Lessons; Reflection

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

Private lessons in music typically consist of an hour or half-hour of class time in which the instructor guides the student, one-on-one, through the many aspects that build independent musicians. Although every student begins at a different level based on their past experience, “Daily practice is necessary for the full benefit of lessons. The amount of time spent in practice varies from individual to individual” (Boytim, 2014). Many students do not have the understanding of how to practice. The template I have created gives students a canvas to capture the time in their private lesson, dictating vocal exercises that are unique to their voice's needs and making note of specifics that need to be repeated in their practice time. Students self-assess how practicing helped them achieve their learning objective, in an attempt to begin a dialogue on how their own efforts can help them succeed. This process also allows students to understand grading as an art form that is often seen as subjective.

In more established music schools, students come to the private lesson with great pride and through many painstaking hours of practice before meeting their master teacher. Students who are unaware of this practice, or who are unmotivated, have a hard time adjusting to the private lesson standard. As
result of my innovation, students understand what is being asked of them in order to progress their skills and knowledge. Students learn to assess their own results and understand grading. We explore habits, conditions, and the process of learning and being independent musicians. Self-exploration allows students to critique themselves and others. Their time outside of the classroom and completion of the lesson template helps to create meaningful dialogue during class time.

Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
My innovation is for the one-on-one voice lesson. Students take this course as a voice major, voice minor, or as an elective for 30-60 minutes once a week. The student is expected to practice outside of the classroom, as little as 30 minutes a day, in order to see improvement. Walsh University is currently establishing a music major, and it is important to improve our students’ practice habits in order to adhere to the national standards of other students majoring in voice.

Innovation: How is your innovation different from ones that others have tried?
There are practice templates available in music study, some with assessment as a priority (Kickstein, 2009). None follows the same format. My template focuses on recording time during the lesson, setting goals, and monitoring time spent practicing to establish habits and self-assessment. According to Matthew Schatt, the use of more goal or task centered practice charts can strengthen the belief that if students work harder, they can achieve greater positive results (Olson, 2011.)

In Strategic Approaches to Practice: An Action Research Project, Burwell and Shipton outline “a phase of an action research project, investigating student approaches to personal practice” (Burwell & Shipton, 2013.) My template is unique in its innovation in that it allows students to assess their efforts and it gives them a better understanding of the academic grade and overall benefit they are gaining by practicing. I hope to connect mindful practice and detailed self-assessment in order to improve.

In an article where he discusses documenting student learning in music performance, Brian Wesolowski promotes “For performance-based music tasks, "best-practice" tools for diagnostic performance assessments include checklists and rating scales” (Wesolowski, 2014.) My template serves as a document, but rather than using checklists and rating scales, students are encouraged to journal their self-assessment which will be unique to the student learning outcomes and goals we establish on a weekly basis.

Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).
I have made copies of the student assessments and I have their grades from the semesters of study. The assessments begin with each student’s first lesson and continue as long as they are in voice lessons. I have taken notes for each student’s lesson to guide my thoughts on their progress. The students have been performing end of the semester voice exams (juries) in which they prepare music to sing from memory for a panel of music instructors.

The student’s success is graded from a combination of actives throughout the semester. I include the self-assessments, progress, and attitude in their weekly lessons, and the presentation they give during their juries in their final grade.

The students have a rubric for voice lessons that describes the letter grades with each of those topics.
References (required, APA Style):


Organization:
The session will be interactive. I hope to have a poster presentation where I can show the original template and explain how voice lessons differ from other lessons.

I hope to highlight the self-assessment and its benefit for students who are not used to practicing on their own.

I would like to describe the use of rubrics and standards in the private voice studio. I have copies to demonstrate how this is implemented in the private lesson.

I am able to provide video (if allowed) of student lessons, juries, and testimonies to aid in demonstrating their progress. I can also give a live demonstration of how to use the template in a sample lesson.
Using Student and Faculty Feedback to Create Dynamic Online Learning Environments: Are We Connecting With Our Content, Communication, and ADA Compliance?

Presenters:
John Huss
Education, Northern Kentucky University
Shannon Eastep
Education, Northern Kentucky University

Abstract:
Two extensive surveys examined online learning from the perspectives of those actually taking and teaching the courses. Live modules created from the feedback of 1,600 online students and 135 instructors are presented as demonstrations. Attendees experience open source tools that can be used to achieve a successful learning environment and ensure ADA compliance to meet all students’ needs as set forth by Title 5 of Americans With Disability Act (ADA) regarding accessibility within online courses.

Outcomes:
Attendees will

1. experience open source tools that can be used to achieve a successful learning environment;
2. receive instructional design tips for organizing content for student success;
3. obtain suggestions and tools for effectively communicating with one’s online students;
4. acquire strategies for ensuring ADA compliance to meet all students’ needs as set forth by Title 5 of Americans With Disability Act (ADA) regarding accessibility within online courses.

Participants will be assisted in not only learning the tools but also in creating materials that can be immediately used in their own online or hybrid courses.

Keywords:
Americans With Disability Act (ADA) Title 5; Disabilities; Distance Learning; Instructional Technology; Scholarship of Teaching and Learning (SoTL) Example; Teacher Education Pedagogy

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students’, colleagues’, or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

Our research explored the attitudes and perceptions of both online students and faculty at a Midwestern university. The results, numerical and narrative, provided candid feedback that we used to inform our own practices as we design and deliver web-based instruction to close the gap between student expectations and online course realities. Traditional classroom instruction is founded on the authority of the instructor, whose presentation of material is often performance-based. Therefore, the need to share control of the online classroom and accept the inherent changes in time, space, and channel is a difficult transition for many instructors, regardless of their discipline or field. They are
grappling with the learner-centeredness of distance education as well as the challenge to demonstrate caring in a manner that is received and reciprocated by students. Online faculty members do not always know what forms of interaction students need, want, or expect in support of their learning. Faculty also question whether the overall quality of face-to-face can be replicated online, especially for complex or novel content (Ward, Peters, & Shelley, 2010). Without performance metrics and quality assurance to guide future course development and delivery, retention in online courses and programs becomes problematic and uncertain. In addition, Title 5 of the Americans With Disabilities Act (ADA) makes it clear that online classes must fulfill the requirements of the ADA and section 508 of the Rehabilitation Act. Online course sites must be accessible to students with disabilities, but training instructors in accessible design has often been an afterthought. Consequently, online courses can be a legal vulnerability. Therefore, through live interaction with course modules, we will share innovative resources for designing and delivering web-based instruction that better meets these expectations of students while providing substantive academic experiences that cut across all content areas at 2-year and 4-year institutions.

Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
This innovative merger of research and “action” initially involved the distance education program at our University, which has witnessed an expansion from 1,130 students taking at least one online course in 2005 to close to 5,000 in 2016. We have had the opportunity to be a part of this web-based movement, designing and teaching courses in Education, at each of the undergraduate, graduate, and doctoral levels. We have proceeded to share our findings across campus to assist instructors in moving from their knowledge base of distinct skills to a modification of those skills to address specific situations and contexts.

Innovation: How is your innovation different from ones that others have tried?
While many presentations and publications offer suggestions for designing online courses, this innovative session differs from others because the course design strategies we will present are a direct result of detailed feedback from the very students who populate the classes and the very instructors who teach them. Our findings have allowed us to better understand student and faculty expectations for course format; technological support; interaction between faculty and peers; course flexibility and pace; assessment and feedback; ADA compliance; and overall communication, and how open source tools can address these critical variables in a variety of online or hybrid courses. This presentation is grounded in the Community of Inquiry (CoI) framework (Garrison, Anderson, & Archer, 2000), which is a process model of online learning, emphasizing the idea that building community must be a deliberate objective and not something assumed to be inherent. CoI views the online educational experience as evolving from the interaction of social presence, cognitive presence, and teaching presence. Both cognitive and social presence are closely tied to and supported by teaching presence, or the instructors’ ability to project themselves in online courses. Teaching presence establishes the course structure that makes it possible for students to realize the learning outcomes. How and why these particular free tools work in unison to produce a highly engaging, collaborative learning environment where the students learn, share information, and build a community of learner support is the kernel of this presentation and our goal of assisting instructors with implementing informed change. Research that specifically sets up side-by-side comparisons between student and faculty perceptions of distance learning are not abundant. We asked faculty across our entire campus to provide feedback on their attitudes toward online teaching and learning, thus providing a means to contrast those perceptions directly with students responding to the same questionnaire items.

Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).
While several of the findings from our research and course design strategies have recently become
part of our university’s updated strategic plan for online learning and technology, we will also be prepared to share responses from our new study that serves to emphasize the current level of faculty awareness toward ADA compliance in online courses. We hope to use this data to improve upon the student learning experience and to assist faculty in bringing their online courses into ADA compliance. Because large numbers of faculty at our institution have had exposure to our feedback, we are witnessing a move from simply recognizing the need for quality online interactions to truly providing such opportunities in both course design and implementation. Those who develop and teach online courses need to be mindful of the different aspects of the online environment that can “make or break” the experience for the student. Changing practice in the light of evaluation is the true value and innovation embedded in this presentation. It is not enough to simply take one’s content and put it “online.” One must help to make the transition from the traditional classroom to the online classroom a seamless one for the student. This process involves strong organization skills, an eye on the details of the courses, and constant, meaningful communication to—and with—the student. To this end, we embrace the literature on the four types of interaction integral to the online classroom: learner-learner, learner-instructor, learner-content, and learner- interface; and the seminal work of Moore and Kearsley (1996) and their advancement of transactional distance theory, which contends that distance is a relative term, a pedagogical phenomenon, and less a function of geographic separation. Transactional distance comprises course design, the organization of the instruction, the pedagogical models used, and the role of various media used to communicate.

References (required, APA Style):


Organization:
Attendees will (1) experience open source tools that can be used to achieve a successful learning environment; (2) receive instructional design tips for organizing content for student success; (3) obtain suggestions and tools for effectively communicating with one’s online students; and (4) acquire strategies for ensuring ADA compliance to meet all students’ needs as set forth by Title 5 of Americans With Disability Act (ADA) regarding accessibility within online courses.

The presenters administered two extensive surveys to examine online learning from the perspectives of those actually taking and teaching the courses. In this interactive and hands-on session, participants will be given the opportunity to hear feedback generated by online students and faculty from the presenters’ university, and then learn the basics of several free tools to help address the student and faculty feedback. After gaining a better understanding of the survey results, we will spend time demonstrating several tools that will help participants to address the feedback found within the survey. Participants will see the tools in action in authentic course modules used in our own classes. We will assist all participants in not only learning the tools but also in creating materials that can be immediately used in their own online or hybrid courses (including how to meet ADA compliance with course tools and materials). Attendees will be shown how to create free accounts for the various tools. This active session will combine research data and practical experience with strategies proven to connect and engage online students with both the content and the instructor. These strategies will be extremely useful to those who teach web-based courses because an increasing number of faculty members are becoming more deliberate about their actions as they seek to develop teaching presence that extends beyond the managerial and technical aspects of their interactions with students.
Rethinking Rubric Design:  
A Methodology for Reducing Variations  
in Student and Teacher Assessments  
of Writing

Presenters:
Peggy Lindsey  
Writing and Linguistics, Georgia Southern University  
Jinrong Li  
Writing and Linguistics, Georgia Southern University

Abstract:  
This presentation explores a new methodology for designing rubrics that reduce the variations in how students and teachers interpret and apply criteria for evaluating writing. It describes initial findings of a mixed-method research study designed to test the efficacy of key word rubrics—rubrics that consist solely of essential descriptive terms rather than detailed criteria. The presenters will share preliminary data on the effectiveness of this methodology and its potential for application across disciplines.

Outcomes:  
Provide more fair and flexible assessments of student writing. Specifically, participants will learn to create rubrics using key evaluation terms that create a common class vocabulary for assessing writing. Unlike class-generated rubrics that can require substantial class time to create, this method can be integrated as part of other course instruction. Unlike assignment-specific rubrics, this strategy is flexible and can be adapted to all course assignments while still focusing on individual assignment outcomes. By addressing the often substantial variation in student and teacher evaluations of writing, participants can ensure that students more thoroughly understand expectations of both assignments and assessments.

Keywords:  
Assessment, Student Learning; Critical Thinking; Learner/Student Centered; Rubrics; Writing

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

This project was motivated by a 2015 study (Li & Lindsey), which revealed substantial variations in how different readers apply rubrics. The study found differences between faculty, between faculty and students, and between monolingual and multilingual students. It revealed that even when readers assigned similar numerical scores, their interpretation of rubric language—and, thus, their reasons for assigning a particular score—varied widely. Readers tended to recognize specific words and phrases as key in evaluation, but they varied on what those terms meant in relation to a specific assignment. Such discrepancies in ratings are one of the most serious flaws with rubrics: No matter how detailed one tries to be in explaining assessment criteria, the readers' backgrounds, experiences, training and understanding of the task result in different interpretations. Yet studies have shown that rubrics have benefits: They can help an instructor grade more consistently (Rezaei & Lovorn, 2010) and help students understand assignment outcomes (Andrade, 2000; Reddy &
Andrade, 2010). We seek to create a rubric methodology which will maintain these benefits, but also achieve more transferable outcomes: rubrics that improve students’ understanding of writing quality not only for specific assignments for a specific instructor, but for all writing they might encounter.

Thus, this project tests a methodology for achieving all four outcomes: (1) improve rater consistency, (2) clarify expectations, (3) appraise writing fairly for particular assignments, and (4) demonstrate understanding of strong and weak writing across genres.

Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

Because our goal was to develop strategies for creating rubrics that encourage transferability of evaluation skills beyond assessing a single assignment or genre, we tested our rubric methodology in different courses and programs, including classes in a first year writing program, an advanced writing course in an English Language Program, and upper-level courses in the humanities and social sciences. This enabled us to better understand how the rubric methodology adapted to different student populations, instructors and assignments. Our goal is to create a methodology that is applicable across disciplines.

Innovation: How is your innovation different from ones that others have tried?

Earlier approaches have attempted to address variation between student and teacher application of rubrics by calling for instructors to create rubrics with their students (Ainsworth & Christinson, 1998). While some studies show that student-created rubrics or rubrics co-created with the instructor may improve writing quality and attitudes toward writing (Johnson & Gelfand, 2013), most of these studies involve rubrics in lower grades, not college writing courses. Such techniques can also prove time-consuming. Stevens and Levi (2005) provide useful guidelines for generating student-created rubrics, but the authors admit that the activity can take one to two full class periods. Moreover, such approaches to rubrics fail to address the ongoing issues with language inherent in all rubrics, whereby transferability is limited because the criteria are rigidly assignment-specific or transferability is compromised because terms are inaccurately understood by students. Instructors typically strive for referential language in rubrics (language close to the dictionary meaning) because the more referential the language, the less possibility there is for misinterpretation. Yet studies show, in rubrics, what is intended as referential language is frequently used as representational (language with multiple meanings and interpretations) (McRae, 1996). Wilson (2007) asserted that far from helping students improve as writers, rubrics were a liability because their feedback was overly generic. Studies such as Covill's (2012) show that longer, more detailed rubrics do not necessarily result in greater student success. Our approach emphasizes both referential and representational meanings in order to build competence in the language of assessment through the use of the rubrics without requiring that instructors devote entire class sessions to rubric development. Moreover, its emphasis on key terms rather than detailed descriptions allows for more flexibility in addressing individual issues, while at the same time providing a common vocabulary for assessing strengths and weaknesses.

Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).

For this study (to be completed by mid-September), students receive a set of writing samples on a single topic but for different rhetorical situations and of varying quality. The students evaluate the samples, first in their own words and then with a key word rubric consisting of words and phrases describing different qualities (e.g., sophisticated, adequate, simple). In using the key word rubric, students will identify terms they feel match each sample, explain why, and give an example of how the sample reflects that quality. They also take a self-assessment questionnaire. Instructors then introduce a course-specific writing task and provide models, explicitly incorporating the rubric key words in relation to the specific assignment and genre(s). Students provide drafts for small group review, responding to peers in writing outside of class using the key word rubric with their explanations and
examples. They then share reviews in groups, collaborating to find consensus on key words, their meaning, and specific evidence. The instructor evaluates the drafts using the same set of key words and providing explanations. Students submit revisions accompanied by their evaluation of their revision using the key word rubric. The instructor evaluates the work using the same rubric. Finally, the students in all courses again evaluate writing samples and complete a questionnaire.

The evaluations of model assignments, peer drafts, and students’ own revisions provide the means for instructing the students in the language of writing assessment in ways that explicitly address differences among referential and representational meanings. The pre- and post-activities and the drafts and revisions evaluate whether that instruction is effective by quantifying the students’ abilities to assess writing in relation to rhetorical situations. The questionnaires track how students’ beliefs align with their abilities and if those beliefs changed.

References (required, APA Style):

Organization:
We will begin by briefly explaining our research study, including our motivations for it and its theoretical underpinnings. We will then ask participants to generate a key word rubric by requesting that they generate a list of words and phrases for describing writing that is strong, average and weak. We will select three of these words (one related to excellent writing, one related to adequate writing, and one related to poor writing) and ask for general definitions as well as definitions specific to particular rhetorical situations. The audience will then read two short texts on the same subject as a basis for discussing how those definitions do and do not work for assessing the texts. The presenters will then discuss the results of the research study, making connections between how the session audience’s responses did or did not parallel those of the students in the study. The presenters will then review the importance of considering both referential and representational language when assessing texts as a means for participants to understand the variation among raters and how to reduce it by establishing common vocabulary through key word lists. Finally, we will encourage discussion on how we might use our results to streamline our methodology and further test the concept. We will invite the audience to join the next phase of our study in hopes of expanding its reach to more programs and institutions.
We’re Not in Kansas Anymore, Toto: Pulling Back the Curtain on a New Institution

Presenters:
Nancy Sowers
Economics and Business, Berea College
Maggie Robillard
Education Studies, Berea College
Connie Lamb
Nursing, Berea College
Beth Kelly
Mathematics, Berea College
Sarah Jones
Psychology, Berea College
C. Anderson
Art and Art History, Berea College

Abstract:
Changing institutions is a challenging adventure. Through a peer observation project, we took advantage of each other’s experience and perspective to learn more about our own teaching and our new community. We were struck by interdisciplinary themes that emerged in our self-reflections. This worthwhile endeavor might be replicated by faculty learning communities that embrace openness, a focus on pedagogy rather than content, and a willingness to see teaching through a colleague’s eyes.

Outcomes:
• Discuss the divergent needs of experienced faculty new to an institution
• Consider the benefits of formative over summative observations, and
• Appreciate the strengths of interdisciplinary faculty learning community.

Keywords:
Assessment, Formative; Evaluation of Teaching; Faculty Learning Communities (FLCs); Interdisciplinary/Multidisciplinary; New Faculty; Peer Mentoring; Peer Observation

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

The professional development needs of new faculty members within a new college are well documented. While much of the focus is on acculturating to the new institution, a fair amount of the orientation has traditionally been dedicated to college-level teaching. Our professional development expert empowered us to identify how best to meet the challenges of our transition. In response, we created a formative peer observation project, where we attended each other’s classes, provided formative feedback, and established a supportive cohort over our transition year.

The transition to Berea was more difficult than first anticipated. In the process of transitioning to exciting new job challenges, we were moving from places of certainty, where we understood
institutional norms, to a place of ambiguity (Bridges, 2010). Our resilient students come from low-income, sometimes troubled backgrounds, too often without the study skills necessary for higher education. Our challenges included: learning to teach smaller classes more actively and with less lecture, working with dramatically different student preparation levels, and acclimating to students' expectations for personal connection. Meanwhile, we were also adapting to being part of a new department, a new community, and new advising responsibilities, including mentoring teaching assistants. Rather than gloss over or hide from one another the classroom "problems" we experienced, we decided to treat them as an opportunity for shared investigation (Bass, 1999; Johnsen et al., 2009).

We discovered the benefit of collegial support in:

- Creating a safe space for deep reflection and honest discussion
- Focusing feedback on course climate rather than disciplinary content
- Observing student engagement and critical thinking in the classroom

As higher education institutions consolidate and faculty move across institutions, colleges need to be aware of how to accommodate new, yet experienced, faculty in a different, yet acclimating way.

**Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.**

Our innovation involved the participants in a new faculty transition group, which met regularly throughout the year to discuss pedagogy and acculturation to the college. The participants were six female faculty members, all new to the institution but not to teaching. During conversation among the learning community members we found ourselves inspired by the broad scope of teaching methods, problem solving, and the individual determination to produce a positive learning environment. We formed an interdisciplinary learning community for the purpose of leveraging our expertise. We were supported by faculty development resources in our investigation.

**Innovation: How is your innovation different from ones that others have tried?**

The innovation of this project stems from the lack of literature on a specific population of faculty: those who have experience in teaching but who have transitioned to a new institution. The professional development needs of experienced faculty are likely to be different than those of junior faculty (Seldin, 2006). There is a plethora of research on faculty teaching experience in the first two years (Adams, 2002; Austin, 2002; Boice, 1991, 1992, 2000; Sorcinelli & Austin, 1992). Neither the research on new faculty nor the research on senior faculty addressed the situation in which we found ourselves. The six of us encountered specific challenges related more to the unique culture of the institution than to the newness of serving as a college instructor. We wanted to improve our instruction, but the traditional feedback model has been limited to summative feedback from senior faculty members responsible for tenure decisions. Research on formative peer observation as an alternative has indicated that respect and trust are essential (Cox, 1995). Our learning community members, therefore, with the support of the faculty development director, discussed and implemented alternative ways to support one another through formative evaluation methods.

**Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).**

This was a qualitative study, and, as such, we defined success as self-reported personal development and a feeling of being integrated into the college community. We assessed our project through self-
reflection and group discussion. Although we did not assess student learning outcomes as a direct result of this intervention, all participants did report a better understanding of the needs of our students.

We also found that we were more motivated and more engaged in our pedagogy, our collaboration within our cohort increased, and we discovered an innovative way to contribute to faculty development within our new institution. We found this process to be a very productive tool for expanding and improving our own teaching and developing our sense of belonging to the institution.

Perhaps the clearest indicator of success is that our diverse but cohesive group found this experience so rewarding that we are continuing to engage in collaborative pedagogical work and formative assessment with one another. We aim to share this experience with others as a means of supporting faculty through their transition to a new institution.

References (required, APA Style):


Organization:

Discussion Prompt:
Consider differing developmental needs among new faculty, experienced or senior faculty who have spent their entire career at one institution, and faculty who have moved to a new institution during their careers. Participants will discuss in small groups and then share out.
Identify ourselves as third group and discuss our experiences being an interdisciplinary FLC.

*Full group discussion:* Participants will be asked to share their most and least helpful in-class observation experiences.

Presenters introduce the three ingredients that made this formative assessment successful (willingness to address pedagogy rather than content, openness to feedback, focus on faculty needs since we were outside the tenure hierarchy).

Presenters will individually and collaboratively discuss the themes that emerged in our reflections.
Revisions to Student Evaluation of Teaching: Two Years of Experience and Some Remaining Challenges

Presenters:
Timothy Spannaus
Learning Design and Technology, Wayne State University
Rita Casey
Psychology, Wayne State University
Mathew Ouellett
Office for Teaching and Learning, Wayne State University
Poco Kernsmith
Social Work, Wayne State University
Margaret Smoller
Mike Ilitch School of Business Administration, Wayne State University
Monica Brockmeyer
Academic Affairs, Wayne State University
Laura Woodward
Testing and Evaluation, Wayne State University

Abstract:
Two years ago, Wayne State University launched a revised Student Evaluation of Teaching (SET) process, including an updated process for collecting and reporting data, marketing to improve response rates, and a revised instrument. We previously reported on the revisions at the 2014 and 2015 Lilly Conferences. This paper will report additional results of the new process after two years' experience and the remaining challenge, the use of SET reports in P&T and Personnel processes.

Outcomes:

- Discuss issues surrounding Student Evaluation of Teaching, including roles of SETs in promotion and tenure and annual reviews, and evaluating teaching in different settings
- Explore best practices in measuring teaching effectiveness
- Reflect on how the experiences of one institution may apply to their own setting
- Apply their knowledge and experience to the presenters' institutional questions and goals

Keywords:
Ethics; Evaluation of Teaching; Graduate Education; Promotion and Tenure

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

Changing any part of the P&T process is politically fraught. Those on the tenure track fear any change. Those administering the process want stability. At the same time, the committee of faculty and administrators charged with revising the SET are concerned that the current use of global items
is indefensible in high-stakes personnel decisions, including granting or withholding tenure and awarding merit raises (Basow & Martine, 2012; Berk, 2013).

In the past year, we have experienced these changes:

- A new video to support improved response rates and use of SET data. The video features well-respected faculty and students, promoting the value of SET to students and faculty.
- Use of SET reports by students during registration
- Confronting the global items as insufficiently reliable and problematic in the ways they are used (Berk, 2013)

Responses that we hope will improve as a result of the changes we made:

- Revisions to the global items
- Support for P&T and Personnel committees to make more defensible use of SET data
- Student response rates
- Student use of SET reports, e.g., students report that having access to the SET helps them make choices in their courses

Still to do:

- Improve instrument (get rid of or revise global items)
- Reduce time from collection of data to reports being available
- Improve use of instrument as a way to raise the quality of instruction.

As a baseline, we have extensive data for decades of prior experience with SET. Our goals are to:

- improve SET response rates; raise the validity of the instrument, especially for a broader range of teaching and learning contexts; increase the utility of SET for students, faculty and administrators; and improve confidence in the data reported by the SET process.

Innovation: If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
University-wide, undergraduate and graduate, online and face-to-face. The wholesale changes were brought about by recognition of weaknesses in the previous SET process (Berk, 2006; Stark & Freishat, 2014).

Innovation: How is your innovation different from ones that others have tried?
The scope of the innovation sets it apart from others. To some extent, the prior SET process could be seen as dysfunctional, with widespread faculty mistrust, low levels of student engagement and response, and the use of the SET as the major, if not only, measure of teaching quality for merit raises, promotion and tenure (Basow & Martin, 2012). It is an indication of the extent of the problems that negotiators were unable to resolve contentious issues during regular contract talks.

Innovation assessment and baseline: Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).
This paper reports the first year of the revised process. As a baseline, we have extensive data for decades of prior experience with the SET. Our goals are to improve SET response rates, raise the validity of the instrument for high stakes teaching evaluations, increase the utility of SET for faculty and administrators, and improve confidence in the data reported by the SET process.
References (required, APA Style):


Organization:
In a participatory format, presenters will outline the revisions and results of the revised SET process and the changes over the past two years, the history and charge to the 2N (administrators and faculty) committee, with an updated report on actions and results. Participants in the session will share their experiences with SETs, comparing and contrasting their history and challenges, so that all will come away with a broader understanding of the issues and some ways of proceeding to resolve them.
Demonstrating Equity, Fairness, and Justice Through the Use of a Syllabus Contract

Presenters:
Carol Steinhaus
Management, Northern Michigan University

Abstract:
Traditionally, university syllabi consist of faculty members’ statements of expectations and requirements of students for the course. The presentation will discuss the effects of a faculty member explicitly also stating what students can expect of the faculty member. In addition, a grading and record-keeping method will be shared which insures that subjective grading is being done as equitably and consistently as possible. Both the contract and the grading efforts reflect a focus on equity and justice.

Outcomes:
- List the benefits of explicitly stating in the syllabus both the faculty member’s and the students’ requirements for the course.
- Develop an explicit two-way contract for use in his/her own syllabi.
- Describe various types of justice involved in teaching and grading at the university level.
- Describe a record-keeping and grading method that insures grading is done with as little bias as possible. Adapt record-keeping and grading methods to his/her own classroom situation.

Keywords:
Academic Success; Course/Curriculum Design/Redesign; Equity Theory; Learner/Student Centered; Motivation; Syllabus

Category: Innovation

Innovation: Describe the planned innovation addressed in your paper and what motivates it. Describe what you see in your students', colleagues', or institution's behavior that you want to change. Describe the learning objectives you want students or colleagues to better achieve as a result of your innovation.

Equity theory states that people often compare what we put into jobs with what we get out of them, and we compare our inputs and outputs with those of others (Adam, 1965). If we believe our ratio to be equal to that of others, we see equity or fairness as existing. If we see that ratio as unequal, we experience tension, which can result in anger if we feel under-rewarded, or guilt if we see over-reward.

Originally, equity theory focused on distributive justice, a person’s perception of the amount and allocation of rewards among individuals. Recent developments have included: 1) distributive justice—perception of the amount and allocation of rewards among individuals; 2) procedural justice—perceived fairness of the process used to determine the distribution of rewards; and 3) concern and respect (Colquitt, Conlon, Wesson, Porter, & Ng, 2001).

Students do not believe they are always treated fairly, such as an instructor having rigid due dates for submission of papers which then are not graded in a timely manner. Other anecdotes mention perceived favoritism in grading, biases, and inconsistency in grading and policies.
As a role model as a good manager of students in the course, I demonstrate consistent, fair management. Students see that the classroom is a type of organization and that we all need to set expectations, objectives, and behavioral rules as a group in order for maximum learning and enjoyment to occur for all of us.

The learning objectives are that students will be able to:

- Define equity theory and all forms of justice.
- Describe how the course contract and grading/recordkeeping methods relate as examples of equity theory and all forms of justice.
- Describe how this experience can be used in students’ future jobs and careers as supervisors and managers.

**Innovation:** If your innovation involves a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

The course in which these innovations have been introduced is a sophomore-level management course, Organizational Behavior, offered by our College of Business. The course is required of all business majors and also of majors in areas such as construction management, health and fitness, clinical lab science, and hospitality management. The course focuses on appropriate management theories and techniques such as communication, leadership, teamwork, motivation, performance appraisals, and individual differences among people, including personality types and learning styles.

**Innovation:** How is your innovation different from ones that others have tried?

I have not found literature that anyone else has published articles regarding the emphasis of management concepts such as these in actual management courses. I have years of management experience and am, therefore, interested in the course itself demonstrating good management techniques, modeling what I teach. Equity and justice are universal themes, and therefore, these issues would relate to any course.

**Innovation assessment and baseline:** Indicate how you plan to determine the success and effectiveness of your innovation. If outcomes are not yet available, indicate when they will be (by the time of the session?).

To date, in a pilot of these innovations, I have anecdotal evidence that students appreciate my efforts to be fair, non-biased, and transparent. They express surprise and gratitude that a faculty member has taken the time to be explicit about what students can expect from a faculty member. By the time of the session, I will have gathered survey data (survey questions not yet developed) from multiple classes to gather both quantitative and qualitative information regarding their reactions to these methods and the effect that these efforts have had on their course perceptions and behavior.

**References (required, APA Style):**


Organization:
The session will be conducted following these steps:

Introduce myself, my background in management, the course and type of student. Discuss theories: equity, justice (distributive, procedural, organizational, interactional)

Discuss idea that a syllabus is a contract between students and faculty. Normally we focus on our expectations of students. Don’t they have the right to request specific behavior from us?

Involve group in discussion of behaviors they expect of students and state in syllabus

Involve group in discussion of behaviors they think students should be able to expect from faculty

Individual work listing own behaviors for use in own contract; pair and share

Share my contract via computer display

Share grading/record-keeping method and discuss how use of this method relates to students’ perceptions of fairness and types of justice; display steps via computer display
Navigating Student Mental Health Issues in the Classroom

Presenters:
Pam Cartor
Psychology, Bellarmine University
Pattie Dillon
Liberal Studies, Spalding University

Abstract:
The number of students coming to college with psychiatric diagnoses has significantly increased; however, faculty typically receive no training on how to recognize common disorders or how to handle behavioral symptoms in the classroom. In this presentation, we will discuss the disorders common in college students, how symptoms of those disorders may present in the classroom, signs of at-risk behaviors, and ideas for managing mental health issues in the classroom.

Outcomes:
After the session, participants will be able to …

• identify common mental disorders and how they present in college students.
• recognize how behaviors related to these disorders may present in the classroom.
• identify ways to modulate student behaviors to create an inclusive classroom.
• recognize at risk behaviors that warrant a referral or consult.

Keywords:
Disabilities; Faculty Development (not involving FLCs); Inclusion; Mental Health

Category: Integration

Integration: Indicate the broad area of teaching and learning in higher education that you are integrating. Describe how your paper integrates the research of others in this area.

Faculty share similar routines the first day of class—syllabus review, icebreaker exercises, and reviewing accessibility documentations. While these forms identify students' needs for instructional accommodations, they provide no information pertaining to students' psychological diagnosis. Faculty also receive no training on how to recognize common behavioral disorders, or on how to mitigate disorders in the classroom. Furthermore, the scholarship of teaching and learning offers limited guidance on how to navigate behavioral disorders in the classroom. While research has examined issues of civility in the classroom (e.g., Boyson, 2012; Myers et al., 2016), few studies have explored how faculty respond when students present symptoms associated with common disorders within their classes. Moreover, most research exploring student mental health issues draws from data emerging from counseling centers and/or accessibility services departments rather than the classroom (e.g., Gallagher, 2014; Salzer, 2012; Mowbray et al., 2006). This presentation will alter this research paradigm by focusing on the interaction between faculty and students with mental health issues within the classroom setting.

Integration: Critique results in selected items in this area.

We know that more students with psychological disorders are attending college and that this has an impact on counseling centers and accommodation offices. There has not been as much discussion or research on how behaviors related to these disorders may manifest in the classroom. A professor
may see disruptive behavior from a student and attribute it to a disrespectful or uncivil attitude; however, we know that many behaviors related to certain psychological disorders may present as disruptive, but are motivated by very different factors (APA, 2013). For example, a student on the autism spectrum may come across as combative because of voice tone and not conforming to the social rules that guide classroom conduct; however, this student is very different from a disruptive student who intentionally challenges and disrespects the instructor. Making the distinction is important so that faculty are better able to understand and respond to these types of behaviors.

**Integration: Provide a context and description for future exploration.**

Faculty receive a list of accommodations to be provided to students, but that list does not help explain or help a faculty member manage classroom behaviors. By recognizing common disorders and the associated symptoms that may be exhibited in a class, faculty can more effectively create a positive, inclusive learning environment.

Our goal is for faculty to recognize psychological disorders common in college students, particularly those that may impact classroom behavior. Additionally, through discussion of specific examples, we want faculty to feel better equipped to recognize and respond to these behaviors in an inclusive and effective manner. With more students coming to college with psychological disorders, the relevance and importance of providing support to faculty in this area is significant.

**References (required, APA Style):**


**Organization:**

In this session, we will present information on mental disorders that are common in college students. We will use case scenarios to illustrate how behaviors related to these disorders may be exhibited in the classroom and give examples on how to best respond to these behaviors to promote a positive and inclusive classroom experience for all students. Participants will be encouraged to share examples from their own experiences.
Assessing Student Perceptions of the Emergenetics Profile and Workshop as a Study and Development Tool

Presenters:
David Brobeck
Education, Walsh University
Carl Taylor
Government and Foreign Affairs, Walsh University

Abstract:
What would you do if your course had one of the highest student failure rates on campus? This session reveals how the Emergenetics Profile was used to support student learning and instructor facilitation. The key outcome was that no student failed the course. This is an interactive session where participants will experience the synergy of the research project and have an opportunity to dig into the concepts, data, findings, and assumptions.

Outcomes:
- Participants will understand the key elements of the study and the basic research design.
- Participants will understand the key premises of the Emergenetics Profile.
- Participants will experience a quick assessment of their personal thinking and behavior preferences.
- Participants will investigate the application of thinking and behavior preferences as a pathway to understanding various research implications.
- Participants will review the data and conclusions of the researchers.
- Most importantly, participants will analyze their current professional teaching practices, and then articulate to a peer a means to consider possible application of the study design to their own teaching.

Keywords:
Academic Success; At-Risk Students; Brain-Based Learning and Teaching Group Work/Learning; Scholarship of Teaching and Learning (SoTL) Example; Team-Based Learning

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

Our university instituted a new retention program, “Quality Improvement Project” (QIP), in July 2016. The initiative is a formative feedback instrument focused on student retention in required classes in which students historically struggle academically and, as a result, may fail to return to the university during a subsequent semester. One of the courses selected for the QIP was GFA 103: American Government. As part of the GFA 103 QIP initiative, the selected strategy was to train students and the instructor with the Emergenetics Profile, and then to use student profile information throughout the semester for group activities, quiz study groups, and examination study groups.
The research opportunity focused on two areas based on use of the Emergenetics Profile: training the instructor and each student to understand his/her thinking and behavior preferences, and how that knowledge can improve performance. Would this treatment/strategy impact the teaching and learning process in GFA 103 and produce a shift in the student learning outcomes?

One objective, after the training process, was to use the insights gained from the Emergenetics Profile to assist the instructor’s grouping strategies and student learning strategies for problem study, TBL activity, and quiz/test preparation. Another objective was to have each group balanced based on individual thinking and behavior preferences.

At the end of the semester in November 2015, the students were asked to participate in an IRB-approved study of their perceptions related to the Emergenetics Profile. Although participation was entirely voluntary, each student participated in the initial survey. They were asked 22 questions that focused on their experiences with Emergenetics during the semester. Relevant results from the survey, as well as data collected from follow up live interviews with 10 of the 17 students, helped the researchers better assess the impact of the strategy and the outcomes related to the QIP.

**Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.**

GFA 103 is part of the general education (GenEd) requirements. Enrolled students are most often freshmen (14/17 in the study). Of the three remaining students, two were sophomores and one was a junior. Historically, GFA 103 has had one of the highest student failure rates among GenEd required courses. The professor demonstrated an interest in developing a process that would enable students to be more successful. He had been a participant in university-sponsored Emergenetics Profile faculty development session. Insights gained from the Emergenetics training motivated him to consider that the tool could benefit student-learning outcomes and improve retention rates.

**Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?**

Neither our university, nor any other higher education institution, to our knowledge (based on investigation of the literature and inquiry to Emergenetics, Inc.), had ever utilized the Emergenetics Profile and training to address university student learning outcomes and student retention. Adhering to IRB protocols, students were invited to participate in the study. All 17 students consented to participate. One week after the students answered the Emergenetics Profile questions, an Emergenetics facilitator met in groups with the students to explain their personal Emergenetics Profile. Several students were unable to meet during the scheduled times, so the facilitator met with those students either individually or in smaller groups. These “Meetings of the Minds” were abbreviated in time to meet student needs and schedules. Regardless, the most essential information necessary to understand the Emergenetics profile was disseminated to the students.

After students participated in Emergenetics training, the GFA 103 instructor was given the student profile information, and it was used in a number of ways for the balance of the semester. For example, the instructor used the Emergenetics profile information to institute and require study groups for quizzes and examinations that balanced student-learning preferences by their profile data. Students also engaged in problem-solving group activities based upon the same attempt to balance student learning preferences. Ample time in class was given for both activity types. In addition, the Emergenetics facilitator came in to the class four times during the balance of the semester to reinforce old and introduce new aspects of students’ Emergenetics training. Students were exposed to Emergenetics in multiple ways throughout the semester.
Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

The researchers were presented with an unexpected outcome when 100% of the students passed the first “quiz” with a grade of C or better. In the 10 previous semesters the professor had taught the course, there had always been several students who failed the first quiz. Initial student feedback was that the study pairs, based on Emergenetics data, were effective. Throughout the duration of the course, and each time the facilitator conducted an activity to support Emergenetics application and understanding, students were engaged, positive, and interested.

At the conclusion of the course, students participated in a Likert-scale online survey that asked 22 perception questions. Student responses indicated their belief that the use of the Emergenetics Profile had beneficial value to their learning and performance. The instructor reported that every student had passed the class, which had never happened in his previous times teaching the course.

The researchers extended their investigation by creating seven interview questions from online survey responses. Those online responses that in which students had the strongest agreement were used to write the interview questions. The researchers wanted to better understand why students had strong beliefs about the impact of the Emergenetics Profile.

The researchers are currently finalizing and assessing interview and survey data while considering limitations that will need to be addressed in future studies. Was there a placebo effect for the students? Did the random assignment of students to the class produce a “super group?” The university’s intention is to repeat the study during the upcoming fall semester.

References (required, APA Style):


Organization:
This session will be highly interactive with an emphasis on cooperative and collaborative learning. Initially, participants will be provided key elements of the study and the baseline data and research finding as well as the validation and reliability statistics for the Emergenetics Profile. The second phase of the session will enable participants to gain deeper insights regarding the process by experiencing a quick assessment of their personal thinking and behavior preferences. The presenters will enable the participants to examine possible avenues of study and possible research implications that have emerged from this research by working collaboratively with other session participants.
The Courage to Learn: Teaching Students How to Fail

Presenters:
Alex Crist
Academic Enrichment, Taylor University

Abstract:
Failure is a natural part of life and a very important part of the learning process. However, students often strive for absolute correctness and avoid learning from failure (Burger & Starbird, 2012). How can educators use failure to encourage students to be active and courageous in their own learning? Join a conversation about practical ways to help students learn how to fail effectively.

Outcomes:
- Understand specific dispositions that benefit student learning and success.
- Understand the importance of failure in the learning process and the current literature surrounding the topic, including growth mindset (Dweck, 2006) and grit (Duckworth, 2016).
- Teach students how to embrace failure in order to become a better learner by bringing an awareness to students of the importance of failure in learning, providing opportunities for students to learn by embracing failure, and modeling failure in the classroom.

Keywords:
Academic Success; Deep Learning; Dispositions; Failure and Learning; First-Year Students; Learner/Student Centered; Scholarship of Teaching and Learning (SoTL) Example

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project. Guided by the literature from the field of teaching and learning excellence and the field of student engagement and success, we have been researching how teachers can create learning experiences that bring together elements of learner-centered teaching, student dispositions for learning, and deep learning factors. Our research has identified six dispositions and additional factors for deep learning. The overarching research initiative is entitled The Courage to Learn. We have piloted these in courses and learning experiences. Feedback from students indicate benefits to their own development across multiple areas of their lives—both in and out of the classroom—as well as a desire to understand their progress towards mastery learning. Additionally, having a “willingness to fail” emerged as a disposition that students indicated as critical to their learning. Students also revealed the willingness to fail was the most difficult learning disposition for them to develop. After teaching about effective failure in the pilot courses, students became more willing to be courageous in their learning without fear of being wrong.

Because of these initial results, the current research project will involve a course with an explicit focus on embracing failure in the classroom. Learning experiences that encourage students to embrace failure, as well as having the instructor model the disposition, will allow students to take risks in order to improve their learning. As a result of the current project, students will become more
comfortable taking risks in order to improve their learning. Additionally, students will place a stronger emphasis on learning the content than simply achieving a good grade.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program. The research project will utilize one section of a required course for first-year students. The course is a component of the core curriculum and is designed to provide students with an introduction to faith-based thought and leadership. Students will attend a large-group lecture two times per week and meet with a discussion group once per week. Roughly 20 students will participate in the experimental group and will have an intentional focus for taking risks and embracing failure during the small-group discussion.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried? In previous pilot courses, students identified their former instructors did not encourage them to take risks without consequences to their overall grade. Therefore, the current project will address how students can embrace failure through three means: Bringing an awareness to students about the importance of failure in the learning process, providing opportunities for students to fail without harsh consequences to their grade, and modeling the willingness to fail throughout the course. Based on feedback from the pilot courses, teaching students about the role of failure in learning is novel to their education.

Furthermore, the research on failure and student learning provides meaningful and practical ways to learn from taking risks and embracing failure, but these concepts are not yet synthesized. Schwartz (2008) described the need for “productive stupidity,” defining it as “being ignorant by choice…. The more comfortable we become with being stupid, the deeper we will wade into the unknown and the more likely we are to make big discoveries” (p. 1771). Burger and Starbird (2012) echoed this sentiment by suggesting that learners should seek opportunities that “intentionally fail” (p. 66) in order to learn in deeper and more effective ways. Dweck’s (2006) growth mindset and Duckworth’s (2016) research on grit suggest students who persevere through setbacks and who see their abilities as aspects for growth may be more likely to embrace the discomfort of momentary failures. The current project integrates these ideas into the curriculum of the course and holistically approaches the role of failure in learning.

Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both. In order to measure the effectiveness of the focus on embracing failure, an assessment measure is currently being developed. The assessment will be given to students in multiple discussion groups at the beginning and at the end of the course. The results from the experimental section will be compared to other sections that did not have the focus on developing a willingness to fail. Following the quantitative analysis, interviews will be conducted to further explore the impact of having a willingness to fail on student learning. The interviews will be transcribed and coded for themes in order to gain a broader understand of the impact of the course on their learning. Triangulation will be used to ensure validity.

References (required, APA Style):


**Organization:**
The presentation outline will be organized as follows: 1. An introduction to the topic problem. 2. An overview of six learning dispositions and additional deep learning factors developed under the research initiative, *The Courage to Learn.* 3. A review of the literature from both teaching and learning excellence, as well as student success, with an explicit focus on one disposition: The willingness to fail. 4. Practical application for educators to equip students to embrace failure, which includes providing students with an awareness of the importance of failure, teaching about the role of failure in learning, modeling failure in the classroom, and allowing students to embrace failure in the classroom without negative implications on their grade. 5. A summary of the results from a research study in a first-year course focused on the willingness to fail disposition. An explanation of the assessment measure and student interviews will be presented, as well as implications for embedding the dispositions into future courses. 6. A conclusion for the presentation and a designated time for questions.

Doyle (2011) suggested, “the one who does the work does the learning” (p. 7). Thus, participants will be actively incorporated in many of the session components in order to maximize their learning about the role of failure. Participants will be asked to identify students with whom they interact that may avoid failure and will be prompted to assess the effectiveness of their response. Additionally, case studies will provide insight into how educators should handle discomfort and failure in the classroom in order to promote deep learning. Throughout the session, participants will participate in active learning techniques, such as think-pair-share.
Faculty Development for Fostering Students’ Critical Thinking

Presenters:
Laura Edwards
Psychology, Taylor University
Steve Snyder
Psychology, Taylor University
Allison Sodo
Psychology, Taylor University
Laura Roggenbaum
Psychology, Taylor University

Abstract:
Critical thinking (CT) training was assessed in a robust model. The model consists of an extensive workshop, mentoring, daily classroom observations, informative feedback consultations, and an end-of-semester feedback report on students’ higher-order thinking growth. Results indicate the importance of multiple detailed consultations of daily observations ($p<.05$). Professors’ training experience in this model significantly affected student growth ($p<.01$) within three levels of CT knowledge.

Outcomes:
1. Understand the process of training needed to effectively teach critical thinking explicitly to create maximum change in students’ critical thinking skills and dispositions.
2. Understand the importance of daily observations and regular detailed consultations for growth in teaching pedagogy.

Keywords:
Assessment, Faculty Learning; Centers for Teaching and Learning; Critical Thinking; Evaluation of Teaching; Faculty Development (not involving FLCs); Scholarship of Teaching and Learning (SoTL) Example

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

We sought to answer the following questions in training teachers to incorporate new strategies into their teaching on their journey to become master teachers:

Question 1: How do you take a workshop on improving teaching and make it an integrated part of a professor's classroom?

Program Solution
My colleagues and I had a lot of opportunities to be involved in quality workshop sessions within the university and in conferences on teaching, but we were not seeing substantial change in our classrooms. This was consistent with the research data on workshops for improving teaching
(Amundsen & Wilson, 2012). The program for fostering growth in the teaching of critical thinking sought to answer this question by including mentoring to infuse critical-thinking strategies for teaching and consultations throughout the year with observational data to guide the professor specifically in their teaching.

**Question 2: How do you support faculty to focus on the process of improving their teaching?**

**Program Solution**

Objective student observers were placed in each classroom. The trained students observed professors on a broad spectrum of educational variables that are present in best practices of teaching. These observations were consolidated in graphs and tables to show the professors’ areas of strength, improvements they had made in targeted areas, and specific corrections with teaching strategies. Professors were given student data on how well they were doing at developing connecting with their students, dispositions in CT, and CT skills. This training process was sustained for at least two semesters. The professor’s mentor would provide guidance in learning strategies that are research based and would help with specific weaknesses.

**Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.**

Through the Bedi Center for Teaching and Learning Excellence at Taylor University, a curriculum for training professors to explicitly teach CT skills and dispositions has been developed by Dr. Steve Snyder as a fellow of this center. A summary of this curriculum will be furnished to conferees, a website link of the full curriculum with PowerPoints of this presentation will be provided for those interested.

**Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?**

**Problem**

How do you effectively train professors to teach critical thinking for maximum student growth in skills and dispositions? It was solved by reviewing the literature on how to effectively train faculty (Amundsen & Wilson, 2012), applying and assessing the model, revising the model based on effectiveness, and then assessing the current robust model.

**Uniqueness**

The approach to supporting professors in critical-thinking pedagogy includes a comprehensive dialogue of CT topics, daily observations of objective students of faculty teaching, mentoring by an expert in CT, regular informative feedback consultations, and two semesters of infusing critical thinking into the classroom.

**Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.**

Participants in this inquiry included 15 professors employed at a small liberal arts university in the Midwest who volunteered to participate in a training program to infuse CT into course content. Data were collected from 45 semester-long classes taught by these professors from the spring of 2012 to the spring of 2015.

The assessment involved both the observations each day of professors teaching infusing CT within it throughout a semester with four consultations on progress and the pre- and posttest scores of student’s CT skills and dispositions.
Professor Observations
In order to investigate the impact of consultations on professors' use of CT pedagogy during each quarter of the semester, consultation data was compiled from participating classes.

To analyze whether professor use of CT pedagogy significantly increased after the professor received observer feedback during the first consultation, we conducted a one-way repeated measures ANOVA on first and second consultation means.

Student Pretest Posttest scores
Students in each class were given the CT skills pretests as a take-home assignment during the first week of the semester. The skills posttests were administered in-class during the last week of the semester, and students were given an hour to complete them. To demonstrate students’ comprehensive mastery of a CT skill, five levels of knowledge were evaluated for each skill: definition, identification, application, metacognitive processes, and metacognitive knowledge. We conducted a one-way repeated measures ANOVA on students’ pre- to posttest gains on each level of knowledge.

References (required, APA Style):


Organization:
The presentation will be structured around questions that help the participants to connect with and apply what they are learning. A seven-part faculty development model will be introduced through a PowerPoint presentation: 1. Workshop 2. Mentored instruction 3. Portfolio development 4. Daily class observations 5. Informative feedback consultations. 6. Final report of progress on students 7. Continued infusion of CT for two semesters. Write-Share and Write-Pair-Share teaching techniques will be used for the participants to think about what each of the steps of the faculty development model would provide and why each of these is important for implementing critical thinking. Finally, the results of this evidence based approach will be communicated along with what we have learned through faculty growing in their teaching of critical thinking.
A Process of Institutional Change in Online Learning

Presenters:
Nancy Evans
Computer Information and Graphics Technology, IUPUI
Rob Elliott
Computer Information and Graphics Technology, IUPUI
Ella Ingram
Biology and Biomedical Engineering, Rose-Hulman Institute of Technology

Abstract:
A Faculty Community of Practice concerned about a fee assessed to students taking online classes is embarking on institutional change regarding online course policy. Part of the process has entailed gathering data, and part of the process included attendance at a MACH (Making Academic Change Happen) workshop to learn how to be change agents. In this session, we will share key insights that can help others embark on the seemingly daunting task of institutional change.

Outcomes:
• Define a nagging problem in their program, department, school, or institution
• Identify the strategic players in the process of their specific change project
• Demonstrate a method for addressing objections to reasonable change projects
• Understand the importance of “pitching” the issue/concern/problem

Keywords:
Change; Communities of Practice; Institutional Change; Online Teaching and Learning

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

Problem Statement: Existing online courses do not have enough support in the areas of content production, training of adjunct faculty, and ongoing revisions. Faculty are expected to be content expert, coordinator, media developer, and curriculum resource creator. The fee assessed to students taking online courses is not distributed equitably, because it serves “new” online courses but not existing ones.

This problem came to our attention because starting in the Fall 2015 semester, online students were charged a fee of $30 per credit hour, and we could not see how all online students were served from this fee. Only new courses under an umbrella of Online Initiative courses were served, but all
courses/students were assessed. We set out to change our institution’s distribution of resources to online courses.

We needed to learn more about the perceived problem, and then determine how to reach the appropriate personnel in our institution regarding our concern. Toward the end of the Spring 2016 semester, we reached a point of needing help to clarify our problem and determine the target audience(s) we needed to reach to make progress with problem resolution (Eckel, Green, & Hill, 2001). We also needed to clarify the outcomes we desire from this project. The MACH workshop helped us at that turning point.

We determined that the best way to address the needs of all online courses is for the Office of Online Education and online teaching faculty to work together to identify and build well-structured, reusable online resources that serve all online courses. This change would address the disparity in distribution of resources to online courses and would help improve online courses, which should ultimately help improve student learning in online courses. Our next steps are to approach the “right” people in our institution to make this change happen.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
This problem is at an institutional/system level (8 campuses) with regard to all online courses/sections. There are 3096 online sections for Fall 2016 system-wide; 598 are at the campus where our Community of Practice is based. The main issue is that there are many online courses/sections, and as a Technology Community of Practice, we are concerned that only some online courses are served by the online course fee. The results of our study will impact all online courses system-wide (all 8 campuses). A critical aspect of our project entails identifying the right people to approach (Daly & Finnegan, 2010).

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?
We are still in the process of solving the problem and will continue to gather data and communicate our concerns/outcomes. Part of solving our problem required attendance at the MACH (Making Academic Change Happen) workshop. Recognition that we needed outside help is the approach that is different from what others have tried.

Institutional change is not a fast process, and we recognized that. We reached a standstill in how to proceed beyond our initial thoughts, so we decided to send a team to the MACH workshop. The results of the workshop are our springboard for action. We now have a plan of how to communicate our concerns to relevant administrators.

The approach that may be different from what others have tried is that sometimes it is necessary to get out of the home institution to be able to see the problem more clearly. Problem resolution may require outside help. Businesses use consultants to help them solve problems, but many times in academia, we do not seek outside consultation; rather, we tend to stay in our silos, and that is not a place where great change likely will take place. Further, sometimes grass roots efforts fizzle because the change seems impossible from the bottom up, but “one person can change the larger system . . . in which he or she exists” (Quinn, 2010, p. xii). We learned from the outside consultants that we can take our concerns up the ladder to the top rung, and we believe this approach may be different from other grass-roots efforts that stay in their silos and have little guidance in how to be a leader in change.

Honestly, we were a little “stuck” in our complaints surrounding the problem, to the point of not being able to solve anything. Getting outside help was the key to getting unstuck.
Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

Thus far, our project is successful because we have a strategic plan for moving forward. This is a grass roots effort of academic change that ultimately needs to reach the highest administrative levels (the Executive Vice President for University Academic Affairs, which is one step below the President of the University). We are in the process of gathering quantitative data to test our hypotheses, and we have initial quantitative and qualitative data from a survey of online instructors. We conducted this survey to determine that this problem is perceived as a problem by more than just our Technology Community of Practice. The initial data does in fact support our position that a problem exists. Twenty-six online instructors to date have responded that online teaching requires more “work” than teaching traditional courses and that they would appreciate help with re-designing and updating their courses.

This initial data indicates that we should proceed with our project, which is a measure of success at this point. The timing of receiving these initial results coincided with our attendance at the MACH (Making Academic Change Happen) workshop. We were able to use those results to clarify our problem statement and develop a strategic plan of which administrators to approach and how to approach them with our concerns.

In mid-July we will begin meeting with administrators that we see as critical to getting initial buy-in and that is when we will have a better measure of success and effectiveness. We will certainly share our experience with our next steps in our Lilly session.

Ultimately, we will know that we have succeeded when Office of Online Education resources are available to instructors and coordinators of all online courses and all courses feel like a part of the Online initiative.

References (required, APA Style):


Organization:
Introduction to how our problem was discovered, evolved, and resulted in us attending the MACH (Making Academic Change Happen) workshop at Rose-Hulman and how attendance at this workshop was the critical step in us moving forward with our project; it was a “tipping point” that moved us forward in our change project.

- Brief introduction to steps involved in developing a strategic plan that can move initial ideas forward.
- Identify the strategic players in the process of their specific change project
- Demonstrate a method for addressing objections to reasonable change projects
- Understand the importance of “pitching” the issue/concern/problem

A MACH workshop facilitator is part of our Lilly team for this presentation and she will introduce an activity pointed at identifying strategic players to target to gain buy-in. The rest of our Lilly team will facilitate the activity.

We will end with a question and answer period.
Can Online Manual Communication Labs Be Successfully Taught From a Distance?

Presenters:
Carlos Flores
Teacher Education, Angelo State University

Abstract:
All states have reported shortages in most areas of special education, but especially in low incidence disabilities (Ludlow, 1998). New technology has emerged that allows instructors to deliver classroom content from greater distances, cutting travel time and expenses. This improved technology has also given rise to manual communication classes being taught online. This study examined if videoconferencing in a manual communication lab was effective in teaching signing skills to students at a large Texas university.

Outcomes:
Participants will be able to determine whether or not they would like to investigate this topic on a larger scale. Participants will be given the information based on a small sample of students from a large university in Texas. After the completion of the session, decisions can be made to attempt a class similar to this at their university, or conduct further research on the efficacy of such a program.

Keywords:
Disabilities; Online Teaching and Learning; Scholarship of Teaching and Learning (SoTL) Example; Special Education

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

The purpose of this study was to examine the effectiveness of videoconferencing in the delivery of an online manual communication lab taught at Texas Tech University (TTU). It was a descriptive study of the effectiveness of videoconferencing in the delivery of the manual communication lab portion of TTU’s Deaf and Hard of Hearing (DHH) Teacher Preparation Program. This program was created in an effort to increase the number of Certified Teachers of the Deaf in Texas. In effect, this study was a sort of program review of the DHH Teacher Preparation Program. While the instructors of the courses knew the lab was successful, there was no data to back up that claim. I took this on as part of my doctoral dissertation to help put data behind the claims of this class’s success.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

This lab was part of Texas Tech University’s Deaf and Hard of Hearing (DHH) Teacher Preparation Program. The graduates of this program were considered the accessible population from which the researcher could realistically select subjects (Gay, Mills, & Airasian, 2009). Participants had to hold a valid Texas teaching certificate and have at least three years of teaching experience. Graduates of
the program were recommended to the Texas Education Agency to be given the opportunity to take the TEExES exam for DHH. Graduates of the program were given the opportunity to complete the remaining hours towards a Master of Education degree.

**Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?**

Based on the program already in place at TTU, the following research questions were used to guide this study:

- What role does videoconferencing play in effective teaching of sign-communication from a distance?
- Can sign-communication be taught effectively from a distance?
- What kind of interaction exists between the instructor and the students?
- What are the students’ perceptions of their success and progress throughout the lab?

I identified approximately 33 potential participants. The potential participants were emailed a survey that contained a total of 31 questions, 21 multiple-choice and 10 open-ended. The results of the survey were reported using descriptive statistics. The open-ended responses were treated as a structured interview, and the responses were coded in a way that I was able to determine general themes. From the responses to the survey, I was able to determine the effectiveness of the lab taught at TTU.

At this time, I am not aware of any other manual communication labs taught in this manner. I am hoping that at this conference, I might be able to learn of others and possibly work with someone else to replicate this study.

**Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.**

Based on the responses to the survey, I was able to code the open-ended responses into themes to determine the students’ self-perceived success in the course. Responses were received from 16 of the 33 participants, even with an extension given to complete the survey. Although I had hoped for at least 20 participants, we accepted 16 (a 48% response rate) and continued the study.

Based on information provided to me, I was able to look at pre- and post-test data for three years (three cohorts) of the course. The information provided to me in this data was also used to determine the success of the program as the data showed improvement in student signing abilities over the three cohorts.

With the student information from the survey, and the data from the pre and post-tests, I was able to determine that the lab taught at TTU was successful in increasing the signing skills of the students who were enrolled in the course.

**References (required, APA Style):**


Organization:
I would like for the session to be interactive. While I will need to spend time presenting the information in a lecture format, I would like feedback from the attendees as to whether or not they felt the information presented was useable by them. I would also like the opportunity to discover if anyone uses a similar program at their college or university, how it works, and perhaps discuss the possibility of replicating the study there as well. Online learning is here to stay, and if we are able to prove its effectiveness in teaching manual communication labs online, we would be able to help combat the shortage of certified teachers in these areas.
The Community Classroom: 
Combining Scholarship, Teaching, and Service With the Centralized Service-Learning Model

Presenters:
Lauren Milton
Occupational Therapy, Washington University School of Medicine
Robyn Otty
Occupational Therapy, Touro University Nevada

Abstract:
This session will highlight the Centralized Service Learning Model (CSLM), a framework that allows the academician to balance scholarship, teaching, and service while facilitating creative and active learning opportunities for students in the community. Results of student participation in the CSLM will be revealed, supporting the effectiveness of the CSLM as a viable teaching model to enhance learning. Attendees will reflect and discuss how the CSLM applies to their curriculum and individual course design.

Outcomes:

- Understand how the Centralized Service Learning Model (CSLM) can meet the demands of an academician through engaging service learning projects.
- Analyze service-learning examples through the student lens.
- Discuss qualitative outcomes that support the CSLM as a viable teaching model.
- Apply ways the CSLM can connect to existing course design and teach real world lessons.

Keywords:
Centralized Service Learning Model; Collaborative Learning Community; Learner/Student Centered; Service Learning

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

The ability to create and cultivate an environment of optimal learning is a constant challenge for higher educators. With research supporting the use of teaching pedagogy to support student engagement, educators have a responsibility to systematically examine the complexity of learning. A 2012 Scholarship of Teaching and Learning Conference at Maryville University in St. Louis, MO, featured a session by Dr. Brooke Flinders, who explained her model for combining service, teaching, and scholarship: The Partnership Model for Service-Learning known as FOCUS (Flinders, 2013; Flinders, Carlascio, Gilb, & Nicholson, 2013). Given a history of poor course evaluations filled with negative student feedback, two educators, having learned of Flinders's Model, sought the challenge not to accept such feedback as the norm but rather to utilize students' skills to meet learning needs while
simultaneously satisfying requirements of tenure-track academic roles. As a result, the Centralized Service Learning Model (CSLM) was conceived.

From a pedagogical framework, like Flinders's Model, the CSLM presents the benefits of experiential learning that allow students to learn in a real-world context. By providing an environment of authentic problem solving, students can gain the necessary skills expected in professional practice (Yardley et al., 2012). The innovation of the CSLM lies in the creativity and collaboration between two instructors, the integration of two different courses, and the assessment of the student cohort's lived perspective as an active participant in the process. With research supporting the concept of student voice as well as the use of teaching pedagogy to support student engagement, educators must systematically examine the complexity of learning. The potential to enhance teaching practices and understand the complexities of the student experience are central goals to this project and, finally, represent the need to contribute to existing scholarly work.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

The CSLM was conceived and developed within two graduate-level courses (Graduate Seminar and Management) and implemented during the final semester of a 5-year entry-level Master in Occupational Therapy Program (see https://drive.google.com/open?id=1-fbpFair8bznYV3UbA6mZC5TsVMhHFLiL2ydSIOR-kM). Following eight semesters of full-time coursework, students participate in two, 12-week full-time fieldwork affiliations. At the successful completion of both fieldworks, students return to the classroom for one semester of coursework prior to graduation. This unique model integrates learning objectives and learning activities from two different courses with one service-learning project at multiple locations in the St. Louis County area.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?

Literature supports millennial students' appreciation for experiential learning, as well as faculty allowances to “learn by doing” (Bowen et al., 2011; Pope-Ruark, Ransbury, Brady, & Fishman, 2014). To meet students' expectations for real, work-like learning experiences while facilitating faculty role fulfillment, the CSLM was implemented as an original course design model. During the final semester of coursework, occupational therapy students developed, implemented, and engaged in service-learning programs in after-school and private school settings. While planning and implementing this program, students were required to complete additional learning activities unique to each course, relevant to the experience of providing service to school-aged children at locations within St. Louis County (see https://drive.google.com/open?id=1-fbpFair8bznYV3UbA6mZC5TsVMhHFLiL2ydSIOR-kM). Courses traditionally taught in isolation involve the careful design of a single instructor. The active collaboration between educators facilitated a mentor approach to program development and administration and modeled professional skills required for job success. Students are given freedom to take risks and creatively develop and administer programs using combined fieldwork and didactic experiences. The educators “set the stage,” but students design and implement the service program in the community, allowing students to guide, monitor, and craft their own learning experiences. Students informed educators of the learning impact, effectiveness of meeting selected course outcomes, and overall opinions to improve the CSLM. Literature supporting an innovative teaching model similar to the CSLM could not be located within occupational therapy literature or beyond. Representation of this innovative model of teaching in higher education is present in K-12 literature related to co-teaching; however, literature supporting the collaboration of two different courses as CSLM presents is absent. Faculty collaboration beyond individual silos and the ability to develop contextually meaningful learning experiences while providing service in the community is the niche that separates CSLM from other proposed learning models.
Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

To determine the effectiveness of the CSLM as a viable teaching model to influence student learning, researchers collected data to answer the research question: What are students' perceptions related to an experiential based service-learning experience using the CSLM? In order to explore student perspectives, a narrative, qualitative approach was used (Merriam, 2009). Twenty-seven students enrolled in final didactic coursework participated in this study. Upon approval from the IRB, data was collected through a reflection assignment containing 11 open-ended questions. Using a summative content analysis method, transcripted data was initially coded and quantified independently by three different researchers to explore students’ perceptions (Hsieh & Shannon, 2005). Researchers then determined categories and themes through constant comparative analysis for agreeable categories and resulting themes.

Appreciation for the opportunity to create a new program and directly influence others was prevalent among the students’ responses. Three key themes relating to their understanding and perceptions of experiential-based learning: Learn by doing, Advocacy, and Falling through the cracks (see https://drive.google.com/open? id=1Wakcr0gj52nhT3GDSa3OyMs8HVbvoTn65p0V_6oa1E). Many students indicated the CSLM allowed them to "learn by doing." Students indicated a need to create a voice for others who had difficulty doing so for themselves; through such efforts, many students valued advocacy as an avenue to create an opportunity to receive services. Finally, in creating a voice, many reported filling the gap of occupational therapy services through the created programs and preventing them from "falling through the cracks."

Results confirm positive student perceptions about the CSLM that align with past research studies examining experiential learning contexts (McGeary, VanOss & Sanders, 2015). Students who experienced this original model of teaching largely support CSLM implementation and, as a result, engaged in a unique approach to learning that traditional "sage on the stage" learning lacks the ability to provide.

References (required, APA Style):


**Organization:**
The presenters will begin with a detailed background of how the Centralized Service Learning Model (CSLM) was developed as a solution to increase student engagement in and satisfaction with the learning process while meeting the challenging role of an academic. A detailed overview will share how the CSLM was administered and fully developed across four academic years, including sharing the presenters’ “lessons learned.” Throughout the presentation, attendees will have an opportunity to reflect and comment on how two separate courses combined student outcomes to meet the needs of a community program, create within-discipline scholarship, and conduct real-life lessons for students. Additionally, the presenters will facilitate small-group discussion through the pairing of attendees to discuss how might they apply and modify the CSLM to existing coursework. Through the use of technology, Polleverywhere.com, attendees will be able to share their ideas with the entire class and create additional ideas to tailor their coursework.
Teaching Introductory Concepts Using the Flipped Classroom Model

Presenters:
Shamima Mithun
Computer Information and Graphics Technology, IUPUI
Nancy Evans
Computer Information and Graphics Technology, IUPUI

Abstract:
Students in higher-level programming courses do not retain fundamental concepts from their introductory courses, and often students procrastinate in taking their higher-level courses because of bad experiences in the introductory course. With the goal of improving students' programming experience and knowledge retention, a faculty member taught an introductory programming course in Spring 2016 using the flipped classroom model. In this session, we will demonstrate how the course was flipped and present evaluation results.

Outcomes:
Participants will be able to consider teaching foundational/core courses that are building blocks for higher-level courses using the flipped classroom model. We will share how important a flipped classroom is for introductory courses in which students need significant assistance and practice to learn new concepts. Flipping a classroom is especially important for courses that require problem-solving skills. Participants in this session should be able to find rationale about teaching conceptual fundamental courses at their institutions using the flipped classroom model.

Keywords:
Class Participation; Collaborative Learning; Flipped Classrooms; Group Work/Learning; Motivation; Retention; Skills

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

Faculty members in the Computer Information Technology (CIT) department at IUPUI observed that many students in 200-level programming courses are not retaining the programming skills from their introductory (100-level) course. As a result, in 200-level programming classes, faculty members spend lots of time reviewing fundamental programming concepts that were already taught in the introductory course. Another observation is that students often procrastinate in their higher-level programming courses because of bad experiences in the introductory course. One of the faculty members of this project taught the introductory programming course in the Fall of 2015 and was not happy with the average performance of the class.

Based on the above observations, in this project we tried to address the following problems in teaching the introductory programming course:

- How to help students to retain their programming knowledge/skills
• How to give students a better programming experience in the introductory course so that they will not defer enrolling in 200-level programming classes
• How to improve the overall class average grade performance

The learning objectives of the project are the following:

• Students' knowledge/skills retention
• Better programming experience
• Improve students' performance
• Motivate students in learning and improve classroom engagement
• Provide an active learning environment that will allow students learning by practicing with other classmates while having the instructor available in that process

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
In the reported work, Programming Constructs Lab is the introductory programming course that all students in the computer information technology program are required to take. This course is an introduction to problem-solving techniques, program design and development, programming logic, and object-oriented terminology and concepts. This course is the prerequisite for all 200-level programming courses. This course is often the first programming course students have ever taken, and the majority of the students enroll in the course without any programming knowledge or skills.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?
In previous sections of the course, former faculty members focused broadly on content coverage rather than fundamental programming skills. The 100-level course requires more focus on practicing basic skills—more depth and less breadth. We solved the problem by changing the teaching approach from a traditional lecture-based classroom to a flipped classroom. The flipped approach is not an entirely new approach, but it is new to our introductory programming course, and traditional programming courses tend to be taught in a lecture-based style rather than an active learning style.

First-year students find programming to be a challenging task. Beginners need to write many programs for which they must use newly learned programming constructs. They also need significant assistance to successfully write programs. Lecture-based teaching cannot allocate sufficient time for students to practice newly learned concepts in class. To enhance the effectiveness of face time with the students, the flipped classroom instructional strategy, which has been successful on many occasions (Berrett, 2012; Estes, Ingram, & Liu, 2014; Sarawagi, 2013), was introduced in the Spring 2016. Classroom time was utilized for programming activities instead of traditional theoretical lectures. The flipped classroom model allows students to use class time for active learning where there is repetition of problem solving, conceptual understanding, and application of what they are learning by practicing with other classmates through group activities and collaboration (Simon, 2013). Students also receive guidance from instructors and fellow students. This increases student engagement and facilitates an exchange of ideas with fellow students.

We believe our strategies should help students retain their knowledge because they are learning by doing. Since our approach allows students to get sufficient guidance and assistance in their learning, students should have a better learning experience, which should motivate them to advance in their programming course path.
Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

A faculty member of this project taught two sections of the introductory programming course in Fall 2015 using a traditional lecture-based teaching approach and two sections of the same course in Spring 2016 using the flipped classroom model. Quantitative and qualitative data from Fall sections were compared with Spring sections.

Grade Performance: Experimental results show that average class performance in the Spring 2016 sections raised by a letter grade compared to the Fall 2015 sections.

Course Evaluation: The course evaluations for the Spring 2016 sections improved by 12% compared to the Fall 2015 sections. This result indicates students feel they are getting a better learning experience, which should eventually lead them to advance in their programming career course path.

Student comment from Fall 2015: "Instructor just read the PowerPoint slides and didn't try any explaining methods. That class was supposed to be my intro to programming, but it moved too fast."

Student comment from Spring 2016: "Watching the lectures prior to class was very helpful, as it made the in-class lecture more of a review. In-class assignments were invaluable in gaining hands on experience."

Attendance: Overall student attendance in Spring 2016 increased by 9% compared to that of Fall 2015 sections. This result indicates that the flipped classroom model is providing students a positive learning environment and is more motivating.

These results indicate the success of the project, because there were improvements in grades and course evaluation. Also, the student comments indicate a positive learning environment in the flipped classroom. Note that while the differences were not statistically significant, we believe that the differences are significant enough to keep the flipped model in place. We should continue to see improvements. In the future, we plan to assess how the 200-level courses are impacted by these changes and have a research project plan.

References (required, APA Style):


Organization:
We will divide the session into three segments:
The first segment: We will discuss the motivation behind exploring flipped classroom model to teach introductory programming class, provide background on flipped classroom, how the flipped classroom model was applied, and a brief description of results.

The second segment: This session will be an interactive session. In this session, the participants will experience a flipped classroom model through a hands-on-exercise lead by the presenters. This demonstration will help the participants get some ideas how they could flip their classrooms and how it is particularly applicable to foundational courses.

The third segment: It will be an open session where participants can share their thoughts and ask questions.
Self-Efficacy and Self-Esteem Student Characteristics and Transformational Leadership Teaching Style Rating

Presenters:
Lucinda Parmer
Commerce, Miami University

Abstract:
This study uses an initial classroom polling activity Internet platform to determine instructor transformational leadership qualities by way of (1) inspirational motivation, (2) idealized influence, (3) intellectual stimulation, and (4) individual consideration attributes. Further quantitative analysis examines the relationship between students' overall self-esteem and self-efficacy self-rating scores, with instructor transformational leadership rating in a higher education classroom environment.

Outcomes:

- analyze instructional transformational leadership attributes
- critique student self-efficacy and self-esteem qualities in relation to instructor-student relations
- produce digital polling activities to be used in a classroom setting for immediate student feedback

Keywords:
Academic Success; Leadership; Meaning Making; Self-Esteem; Scholarship of Teaching and Learning (SoTL) Example

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

The overall research question is: "How do student self-efficacy and self-esteem characteristics correlate with a transformational leadership instructor teaching style rating?" What I saw in my colleagues' behavior was a need to exemplify strategies to become a more transformational leader in the classroom.

The learning objectives I would like colleagues to better achieve as a result of my project are the ability to:

- analyze instructional transformational leadership attributes
- critique student self-efficacy and self-esteem qualities in relation to instructor-student relations
- produce digital polling activities to be used in a classroom setting for immediate student feedback
Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

My project involved essentially two courses: BTE 106: Introduction to Business and the Economy, and BTE 301: Personal Organizational Skills. These are both face-to-face courses within the Commerce Department at the Miami University Hamilton Campus. Students who registered for this course ranged in ages and backgrounds.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?

My research indicates that students do have varied perspectives on their instructor in the classroom in regard to his or her exhibiting obvious transformational leadership qualities or attributes in the classroom. There is not a lot of quantitative research done on transformational leadership within a classroom setting. The quantitative portion of this study is still active, and all data has not been collected as of yet.

Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

Baseline information was conducted by way of:

- current end-of-course evaluations
- personal instructional surveys for feedback
- departmental and university end-of-course means
- prior course information
- personal reflection

Assessment information was obtained by way of:

- pre- and post-results
- classroom assessment techniques (CATs)
- Col survey – Community of Inquiry Survey Instrument (Arbaugh et al., 2008)
- Miami University student evaluations
- student retention
- comparisons with previous/concurrent courses

References (required, APA Style):


Organization:

I will give a visual presentation of my research through the use of PowerPoint. I will also go over how to use the polling Internet platform to gain immediate feedback from students in the classroom. There will be a Q&A session at the end. I will also have a transformational leadership activity for the participants to partake in.
Graduate Students Preparing to Teach in Higher Education Settings: Lessons Learned From Research

Presenters:
Kirk Robinson
Educational Leadership, Miami University

Abstract:
In this presentation, attendees will hear about lessons learned by the presenter regarding graduate students' formal teaching preparation for higher education. The presenter derives these lessons from a 15-month ethnographic study on formal graduate student teaching preparation at a medium-sized, Midwestern university. Specifically, the presenter discusses what they learned from studying graduate students' preparation within a graduate student university orientation, and within preparation courses offered by both the university and individual academic departments.

Outcomes:
- Identify different settings in which graduate students formally prepare to teach for higher education.
- Compare how different settings approach formal teaching preparation for graduate students.
- Evaluate the strengths and areas for improvement in settings in which graduate students formally prepare to teach for higher education.

Keywords:
Graduate Education; Graduate Students; GTA Training Programs; Scholarship of Teaching and Learning (SoTL) Example; Teaching Preparation

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

Across graduate education, research suggests there are deficits in graduate students' formal preparation for collegiate teaching (Fagen & Suedkamp Wells, 2004). Graduate students' formal teaching preparation, which refers to their engagement in coursework or seminars about teaching in collegiate settings from academic departments or centralized university-wide programming (BrckaLorenz, 2008), is vital. Such preparation is necessary since graduate students serve as instructors to significant numbers of undergraduate students (Marincovich, Prostko, & Stout, 1998) and constitute the future faculty of colleges and universities (Wulff & Austin, 2004). As such, deficits in graduate students' formal teaching preparation are an unsettling prospect, making the need for greater understanding of their formal teaching preparation essential.

The importance of this problem, as illustrated in the literature, generated the research question: How do graduate students experience their formal preparation for teaching in higher education...
settings? This question was the impetus for a 15-month ethnographic study on graduate student teaching preparation at a medium-sized, Midwestern university. A key goal, or learning objective, in undertaking this study was to gain deeper knowledge of the process of graduate students’ formal preparation so as to better understand ways in which to improve such preparation.

In this presentation, I will describe some general lessons I learned about graduate students’ formal teaching preparation through conducting this study. As a graduate student who received no formal collegiate teaching preparation, my descriptions will be from the perspective of a relative outsider. Framing the presentation in this manner will provide attendees who are unfamiliar with this topic with an entry-level knowledge of it. It will also provide attendees who have greater knowledge of formal graduate student teaching preparation with an outsider’s perspective, thereby likely providing them a different take on something familiar to them.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

This presentation will emphasize lessons I learned about graduate students’ formal preparation within their university orientation, and within preparation courses offered by both the university and individual academic departments. Graduate student orientation was a 90-minute general session required for all university graduate students prior to their first semester. University courses were one-credit hour and interdisciplinary, meaning graduate students from any academic discipline could enroll. These courses fulfilled requirements for collegiate teaching credentials conferred by the university. Preparation courses from individual departments were specific only to students within those respective departments. Generally, these courses were part of graduate students’ degree curriculums.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?

This study addressed the following research question: How do graduate students experience their formal preparation for teaching in higher education settings? Investigation of this question came through a 15-month ethnographic study at a medium-sized, Midwestern university. Although there was exploration of numerous settings where graduate students prepared to teach, the primary settings were three, one-credit hour interdisciplinary courses that fulfilled requirements for two different collegiate teaching credentials conferred by the university.

Ethnography is a qualitative methodological approach to inquiry. It is a written description and interpretation of a culture or subculture. Taking an ethnographic approach to studying graduate students’ formal teaching preparation differs from other inquiries focusing more on the outcomes of preparation (for example, Boman, 2013). Little research exists on the process of how graduate students experience their formal teaching preparation. An ethnographic approach can, through participant-observation, interviewing, and document analysis, uncover the nuances of the graduate student experience during formal preparation (i.e., What happens during a typical preparation course, from the moment a graduate student walks into the classroom until the moment they walk out? What are the social dynamics of an interdisciplinary preparation course?). For example, a key result from this study showed graduate students in the one-credit hour interdisciplinary courses felt a sense of community with their peers, though they simultaneously felt self-conscious around them. Specifically, students expressed fear of saying the wrong thing in front of their peers during group discussions. This nuanced finding, extracted from participant observation and interviewing, illustrates the strength of ethnography in unearthing complexity about experiences that outcomes-oriented studies often do not.
Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

Data collection for this project took place over 15 months, primarily through participant-observation and generation of field notes. Recording of field notes occurred in the graduate student orientation and the preparation courses offered by both the university (i.e., the one-credit interdisciplinary courses) and individual academic departments. Additionally, seven participants taking between one and all of the one-credit interdisciplinary courses conducted in-depth interviews. Lastly, the gathering of relevant documents at the orientation and in all preparation courses was a third method of data collection.

Initial data analysis is beginning at the time of this writing. Analysis will take place through the reading of all field notes, interview transcripts, and documents. During reading, recording of memos highlighting parts of the data that stand out as notable and require closer, line-by-line analysis, will transpire. There will be coding of notable data through theory-driven coding, which creates codes “generated from the theories that guide the research” (DeCuir-Gunby, Marshall, & McCulloch, 2011, p. 141). In this case, I am developing codes using tenets of symbolic interactionism, which hold that: (a) people act toward things based on the meaning things have for them, (b) creation of these meanings comes through interactions with others, (c) meanings can change through continued social interactions, and (d) roles and systems of thought that organize societies shape interactions with others.

This presentation will highlight lessons I, as a relative outsider, learned about graduate students’ formal preparation within their university orientation, and within preparation courses offered by both the university and individual academic departments. As such, presentation of these lessons will be buttressed by analyzed data from these settings. Said differently, by the time of the conference in November, data supporting the lessons I plan to convey will be ready for presentation.

References (required, APA Style):


Organization:
This 40-minute individual session will convey some general lessons I learned about graduate students’ formal teaching preparation through conducting a 15-month ethnographic study at a medium-sized, Midwestern university. I will describe lessons I learned about graduate students' formal preparation within their university orientation, and within preparation courses offered by both the university and individual academic departments. Descriptions will be derived from aforementioned qualitative data. Thus, I will provide attendees with a written description of a graduate student's experience within a particular formal teaching preparation setting (i.e., the graduate student orientation) and then reveal, via PowerPoint, a lesson I learned about that setting. Next, I will invite attendees to, in pairs, comment and dialogue about the experience and my lesson. Lastly, I will ask the pairs to share their comments with the wider audience. This process will repeat with a different formal teaching preparation setting (i.e., preparation courses offered by both the university and individual academic departments).

An outline of this session, broken down by minutes, is as follows:

Introduction (3 minutes)

Description of a formal teaching preparation setting – Graduate student orientation (3 minutes)

The lesson I learned about preparation in that setting (2 minutes)

Attendee pairs discuss (3 minutes)

A pair shares with wider audience (3 minutes)

Description of a formal teaching preparation setting – Preparation courses offered by the university (3 minutes)

The lesson I learned about preparation in that setting (2 minutes)

Attendee pairs discuss (3 minutes)

A pair shares with wider audience (3 minutes)

Description of a formal teaching preparation setting – Preparation courses offered by an individual academic department (3 minutes)

The lesson I learned about preparation in that setting (2 minutes)

Attendee pairs discuss (3 minutes)

A pair shares with wider audience (3 minutes)

Closing remarks (3 minutes)
Feedback About Feedback:
A Problem-Based Assignment
Exploring Why Students Are Dissatisfied With Feedback

Presenters:
Carol Sisson
Education, Taylor University
Kimberly Case
Assessment and Quality Improvement, Taylor University

Abstract:
Quality and timely feedback has consistently been associated with multiple areas of student success. However, national survey results indicate gaps between the importance students place on feedback and their level of satisfaction. A problem-based assignment for graduate students explored this gap using undergraduate focus groups. In this interactive session, participants will discuss the importance and difficulties of giving effective feedback from faculty and student perspectives, as well as explore suggestions for improvement.

Outcomes:
- Articulate student perspectives on what makes quality feedback.
- Identify the value of effective feedback on student learning, motivation, and learner efficacy.
- Describe what feedback is most helpful to students.
- Explore ways to overcome the barriers to providing quality feedback.
- Prepare to implement at least one idea for improving student feedback.

Keywords:
Academic Success; Assessment, Student Learning; Classroom Assessment Techniques; Feedback; General/Liberal Education; Problem-Based Learning

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution's behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

The Problem: Taylor University's 2014 results from the National Survey of Student Engagement (NSSE) and the Student Satisfaction Inventory (SSI) revealed that both first-year students and seniors reported receiving significantly lower levels of feedback than did their peers at comparison institutions.
The Question: To determine the “why” behind these results, the Office of Assessment developed a problem-based assignment for an assessment course in the Masters of Arts in Higher Education program. This project utilized undergraduate focus groups to explore the area of feedback.

Course: HED 640: Assessment of Learning in Higher Education

Course Objectives related to the project:

- Familiar with and able to describe current “best-practices” in assessment
- Proficient in the use of basic tools utilized in the assessment process
- Prepared to evaluate, administer, and report on standardized assessment instruments
- Able to use assessment results to inform program decision-making
- Able to prepare and present assessment findings for use in decision-making
- Able to demonstrate oral and written communication skills, critical thinking skills, problem solving skills, and interpersonal and collaboration skills at the next higher level

Learning Opportunities for Faculty: Understand the reasons behind some students’ disappointment in the lack of quality and/or timely feedback. As a result of this project, there will be opportunities for guided discussion among the faculty and between faculty members and students concerning student expectations of feedback, the importance of feedback, and how to make it more effective.

Institutional Benefits: With more discussion, training, and emphasis on effective feedback, it is possible that student satisfaction in this area will increase and, in turn, that learning will increase.

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

The project was a collaboration between the Office of Assessment and the seniors in the Masters of Arts in Higher Education (MAHE) program, who were enrolled in the Assessment of Learning in Higher Education course. The collaborative model has been used throughout the MAHE program, especially in the area of assessment and quality improvement. Seventeen graduate students enrolled in the class conducted five focus groups with approximately 60 undergraduate student participants. Though graduate students could report on different questions in the focus group protocol, most reported on feedback and its importance to both students and faculty.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?

The Office of Assessment routinely compiles and reports on institutional data from multiple sources, including the NSSE and the SSI. In the reporting process, administrators, faculty and staff discuss potential reasons for the strengths and areas of growth, as well as ways to improve. However, with questions involving student learning and behavior, the best source of input is the students. Though students are often asked informally about their opinions on the data, they have not often been asked in a systematic way. The problem-based assignment using focus groups to explore reasons for the gap in scores between expectations of feedback and satisfaction of feedback was beneficial to at least three parties.

Master of Arts in Higher Education Students: The ability to analyze institutional data, formulate hypotheses about reasons for scores, and generate improvement ideas are vital skills in higher education. The problem-based learning assignment was meaningful and real, both personally and institutionally. Graduate students learned a beneficial approach to seeking answers from data, as well as the logistics of how to effectively choose, set up, lead, and report on focus groups. Peer group interaction and individual reflection added deeper learning opportunities.
**Undergraduate Students:** Students who participated in the focus groups gained an opportunity to represent and voice concerns related to the survey questions and to think critically about reasons for particular scores. Their responses can inform faculty on this issue, which will benefit future students.

**Faculty:** Though faculty may know the benefits of quality and timely feedback, they may not feel compelled or know how to make improvements in this area. This information, along with further discussion and workshops, might lead to improvements and a sense of responsibility for some of the faculty who do not make feedback a priority.

**Research assessment and baseline:** Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

The project was successful in multiple ways; however, like any assignment, it will be adjusted in the future. The MAHE students found the problem-based assignment to be beneficial in multiple ways. They found the entire process of looking at institutional data, hypothesizing on reasons for the results, developing focus groups, writing questions, facilitating the groups, taking notes, finding themes, reporting on results, and reflecting on what they learned all to be highly relevant aspects of the assignment. These benefits were revealed through their class discussions and their papers.

The students in the focus groups shared how they appreciated being involved in a process such as this one, in which they could share their experiences or those of their peers as well as hear about other’s experiences.

Emerging themes will be helpful institutionally, especially to the Bedi Center for Teaching and Learning, as the topic of feedback is a relevant and recurring issue with faculty, past and present. It is hoped that this will lead to improvements for both teachers and students.

**Preliminary results from a first level of analysis:**

- Feedback not being offered in time to implement changes for subsequent assignments
- Receiving little or no feedback beyond grades
- Professors being willing to provide feedback, but students must initiate the process
- Professors being too busy to give quality feedback
- Contingent on class size, major, and style of professor

**Focus group participants’ advice for professors on feedback:**

- A desire for detailed feedback
- Any feedback is better than no feedback
- Feedback should be offered within two weeks before the next assignment is due.
- It is helpful when feedback states how the student can improve, allowing students to focus on a particular area.
- Professors should clearly communicate at the beginning of the semester what students should expect for feedback.

**References (required, APA Style):**


**Organization:**
Using interactive activities, participants will be invited to reflect on the importance of feedback by responding to actual prompts from the National Survey of Student Engagement (NSSE) and the Student Satisfaction Inventory (SSI) from the perspective of self, students, and their institution.

Relevant literature will position the topic of feedback within the context of higher education and student learning:

Providing quality and prompt feedback has been a long-standing good practice in higher education (Chickering & Gamson, 1987), but competing obligations can sometimes limit an instructor’s use of this important practice (Richlin, 2006). Distinct from evaluation, Tagg (2003) emphasized feedback as a means of helping students to modify their performance and included “frequent and ongoing feedback” (p. 124) as one of the five characteristics of learning paradigm institutions. Quality and timely feedback has been associated with student motivation (Ames, 1992), student feelings of competence (Ryan & Deci, 2000), and effective teaching (Bain, 2004). Beyond these benefits, ongoing research provides direction for improving the effectiveness of feedback through consideration of timing, type (Chappuis, 2009; Hattie & Timperley, 2007), and tone (e.g., constructive, non-controlling) (McKeachie & Hofer, 2001).

Results of NSSE and SSI will be briefly shared.

A description of the graduate level problem based assignment will be presented. This assignment helped students discover some of the reasons for the gaps between student levels of importance and levels of satisfaction of feedback, especially in general education courses.

Results from the focus groups will be discussed.
Participants will explore possible options for improving levels of feedback.
Participants will set a goal on how they can personally improve feedback quality and/or timing.

*Note:* The discussions and interaction will be guided and structured as to allow for individual and corporate engagement with the material, as well as to cover the topic efficiently.
Developing Critical Thinking Dispositions in the Way We Teach

Presenters:
Steve Snyder
Psychology, Taylor University
Sierra-Kailin Mathews
Psychology, Taylor University

Abstract:
Presently, undergraduate students are graduating with an ineffective understanding of critical thinking (CT) dispositions. This absence of student understanding stems from a lack of effective training models; therefore, the presenters will provide an evidence-based framework to prepare university faculty in integrating CT dispositions. With this training, professors will showcase stronger changes in student growth, shown by increased practical significance ($\eta^2 > .2$) and higher overall dispositional growth, as compared with a control group ($p < .01$).

Outcomes:
After this session, participants will be able to:

- Understand the definition and purpose of CT dispositions.
- Understand the importance of disposition integration in teaching.
- Know how to structure the learning environment to best facilitate dispositional growth.
- Understand the process needed to integrate CT dispositions into traditional teaching practices.

Keywords:
Assessment, Faculty Learning; Assessment, Student Learning; Critical Thinking; Critical Thinking Dispositions; Dispositions; Scholarship of Teaching and Learning (SoTL) Example

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution’s behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

Fundamental to life-long learning is the ability to think effectively and reflectively. Being actively engaged in modern society requires well-honed CT capability, but university students, including those within our own institution, are graduating without effective gains in this area (Arum & Roksa, 2011). This highlights the problem within higher education regarding the quality and quantity of intentional, explicit CT instruction. Research has found benefits from explicit CT implementation, with most studies focusing on CT skills (such as identifying parts of an argument, evaluating evidence, recognizing fallacies, and comparing and contrasting issues) (Arum & Roksa, 2011). But underlying the ability to implement CT skills are CT dispositions, or “consistent attitudes, tendencies, and intentions that reflect habits of mind to engage in CT” (Snyder, Edwards, & Sanders, in press). Without such attitudes, students are left without the proper motivation or consistent willingness to engage problems using CT. Examples of CT dispositions include truth seeking, open-mindedness, analyticity, systematicity, inquisitiveness, cognitive self-confidence, and cognitive maturity (Facione, 1990).
Yang and Chou (2008) conducted a pretest-posttest quasi-experimental design ($n = 220$) to assess the relationship between CT skills and dispositions; results concluded that both skills and dispositions can be taught and learned. But current university practices lack an effective faculty training model aimed at providing a framework for effective CT disposition instruction. Professors, then, must be provided with the context about how dispositional attitudes can be changed in order to lay the groundwork for increasing student gains in CT. Based upon previous research, our program has implemented a pedagogical model aimed at best instructing professors about the benefits and processes of proper dispositional integration, with the ultimate goal of fundamentally changing the attitudes of students in their approach to understanding CT and increasing its effective usage.

**Research:** If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.

“The Critical Thinking Program” (CTP) has assessed 26 faculty members, 62 distinct courses, and 1353 students. Based upon the research of philosopher Ennis (1987), the CTP director chose to focus the faculty training and development for this program on the infusion method of CT integration. This particular model of integration explicitly implements the instruction of CT within the learning environment. CTP utilizes a robust seven-part pedagogical training model consisting of an "extensive workshop, mentoring, daily classroom observations, informative feedback consultations, and an end-of-semester feedback report on students’ higher order thinking growth," (Edwards, Snyder, & Edwards, submitted for publication, 2016).

**Research:** How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?

Considering that the traditional university curriculum lacks effective CT integration, this program desires to both train faculty members in proper CT education and encourage student skill and dispositional growth. The problem is assuring that students focus more on fostering effective thinking, and less on viewing classroom CT practices as content for a grade. It is important to be able to define and identify a disposition, but being explicitly taught the steps they are employing as critical thinkers allows students to correctly demonstrate and transfer their dispositional knowledge. Our program’s approach provides more than the curriculum for proper CT integration; it provides context for faculty to understand how to fundamentally change students’ overall approach to CT through increased dispositional growth. Our pedagogical training model works alongside professors through portfolio development, individualized consultations, and one-on-one mentoring with the CTP director. Through this individualized training, professors were encouraged and instructed to utilize five key elements necessary for student dispositional growth, as proposed in literature reviewed by Fazio (1995). These five elements are: a direct experience, a sensory experience, an emotional reaction, freedom to choose behavior, and attitude rehearsal with the ideas being learned. Professors implement these five elements through authentic learning strategies, including simulations, case studies, and problem-based learning. Through individualized professor training and implementation of these pedagogical practices, student dispositional growth has been noted, as shown in our study.

**Research assessment and baseline:** Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.

Effectiveness of integration was assessed through a CT dispositions tests measuring student’s growth in attitudes reflecting their willingness to engage in CT. Researchers developed a 42-item instrument quantitatively assessing the seven dispositions: truth seeking, open-mindedness, analyticity, systematicity, inquisitiveness, cognitive maturity, and cognitive self-confidence. Questions are answered on a 6-point Likert-scale ranging from strong disagreement to strong agreement. Cronbach’s alpha for the CT dispositions test indicated strong internal consistency ($\alpha = .95$). Faculty members are
subdivided into three categories based upon the number of semesters teaching CT within a given course: Novice faculty had one semester of CT training, experienced faculty had two, and expert faculty had a minimum of three semesters. A control group, utilizing professors with no CT training, was also compiled for a baseline in student dispositional understanding. Professors for the control group were chosen by a panel of students based upon perceived teaching effectiveness and selected due to their consistent high ratings. Results provided important findings key to the assessment of our program’s effectiveness. All levels, including the control group, showcased statistically significant changes within each of the seven disposition subscales ($p < .01$). This indicates that, to some extent, students’ dispositional attitudes will grow throughout a given semester. But, the extent of the change varied based upon professor experience level. Consistently, experienced and expert professors showcased stronger changes in student growth, as indicated by increased practical significance for individual dispositions ($\eta^2 > .2$) and higher overall dispositional growth, as compared between the four groups ($p < .01$). This indicates that dispositional growth is implicit within the teaching of excellent professors, but to achieve maximum student growth, faculty training for explicit CT implementation is required.

**References (required, APA Style):**


**Organization:**

Throughout our session, each objective will be addressed with a time for interaction between the CTP director, fellow researchers, and attendees. The session will be divided as follows:

This session will begin by operationally defining each CT disposition and associated terms to provide foundational information for understanding the purpose of CT disposition implementation. After providing background information, attendees will be asked the purpose of CT dispositions for learning and learning transfer as it applies both broadly and to their particular classroom content. To begin conversation, participants will be asked the perceived importance of disposition integration within classroom content. Presenters will then explain the need for CT disposition integration, as found within the literature. Attendees will then be given techniques on how to structure the learning environment to best facilitate student dispositional growth. Presenters will explain the definition and
purpose of Fazio’s (1995) five key elements for dispositional growth, including a direct experience, a sensory experience, an emotional reaction, freedom to choose behavior, and attitude rehearsal with the ideas being learned. To increase understanding, attendees will be asked to generate examples of these specific techniques within their own classroom. Each participant will interact with a partner and several will be asked to explain their example and reasoning to the group to improve overall understanding and foster dialogue. Finally, presenters will explain the process needed to integrate CT dispositions into traditional classroom settings. Data from our study will be presented, as well as the implications for our findings. As a wrapper, participants will be asked to discuss with a partner areas where CT dispositions would be appropriately applied in their classroom.

All objectives will be addressed and interaction between presenters and attendees will be encouraged to increase overall understanding and transfer of learned information and experiences.
Milieu Matters: 
The Social Context of New Learning Spaces

Presenters:
J. D. Walker
Center for Educational Innovation, University of Minnesota
Paul Baepler
Center for Educational Innovation, University of Minnesota

Abstract:
What is it about classrooms designed specifically to enhance active learning that enables students to outperform expectations and report an improved learning experience? We believe these spaces alter classroom “social context,” and we have attempted to accurately measure this network of relations. Analyzing data from 4000 students over three years, we discuss the development of an instrument designed to measure social context and research that investigates the educational importance and usefulness of this construct.

Outcomes:
Participants attending our session will gain an understanding of the four-factor model underlying social context. They will become familiar with the 27-item “Social Context and Learning Environments” (SCALE) measure and the iterative instrument development process that was used to validate it. Attendees will also learn about how the SCALE measure varies in different learning environments and what instructors might do to optimize the classroom’s social arrangements to benefit learning. Finally, participants will explore the latest research on social context, which begins to explore the role of personality traits in the social milieu.

Keywords:
Assessment, Student Learning; Flipped Classrooms; Learning Communities, Student; Social Context; Scholarship of Teaching and Learning (SoTL) Example; Spaces; Team-Based Learning

Category: Research

Research: Indicate your teaching and learning project: the problem, question, or opportunity addressed in your paper and why it was a problem or opportunity; Describe what you saw in your students', colleagues', or institution’s behavior that you wanted to change. Describe the learning objectives you wanted students or colleagues to better achieve as a result of your project.

At least since the 1990s, colleges and universities have reexamined the physical learning spaces on their campuses. Driven by a desire to create spaces that facilitate student-centered pedagogy, many have created variations on the “Active Learning Classroom,” or ALC, in which students are seated at round tables with access to projection screens and marker boards, in a room without a central focal point. Early studies of such spaces (Dori et al., 2003) suggested that they have potential to support student learning, and ongoing research at the University of Minnesota indicates that students do benefit from taking classes in ALCs, in terms of the quality of their learning experience and the learning outcomes they achieve (Brooks, 2011; Walker, Brooks, & Baepler, 2011).

This finding raises the question of mechanisms: What is it about ALCs that helps students to outperform expectations and report a better learning experience? Answering this question is
paramount because it will help to guide instructors seeking to maximize those benefits in the classes they teach.

From their earliest uses, instructors and students in ALCs have noticed that these new learning spaces appeared to change the relationships in the classroom, both between students and instructors and among students themselves. These observations dovetailed with a body of educational research and theory indicating that classroom relationships are an important moderator of the outcomes that students achieve (Billson & Tiberius, 1991; Meyers, 2008; Pascarella & Terenzini, 2005).

In 2012, we began an effort to systematically investigate this changed network of relationships, which we term the classroom “social context,” by conceiving of the important aspects of student-instructor and student-student relations, measuring them in a reliable and valid way, and examining their association with the quality of the student learning experience and with student learning outcomes (Baepler, Walker, Brooks, Saichaie, & Petersen, 2016).

Research: If your project involved a particular course or curriculum, briefly describe it, its students, and its place in the curriculum or program.
To explore classroom social context, we gathered data from nearly 4000 students in a variety of classes taught in different sorts of classrooms at three different universities in the upper Midwest. The bulk of our data come from introductory-level science classes taken by students who are reasonably representative of the broader population of students at the universities in question.

Research: How did you solve the problem, answer the question, or address the opportunity? How is your approach different from ones that others have tried?
Our investigation of classroom social context has two main components. The first has to do with measurement: Can we accurately measure something as seemingly elusive as social context? For over three years, we have engaged in an intensive instrument development process, beginning with conversations with students and faculty members as well as think-aloud protocol interviews with students, and proceeding through multiple iterations of data reduction and model construction, a process that has resulted in the Social Context and Learning Environments (SCALE) survey (Baepler, Brooks, & Walker, 2014).

Factor analysis has indicated that the SCALE survey reliably and validly measures four underlying factors that comprise social context. Two of these factors (student-student general relations; students acting as instructors to other students) describe relations between students, and two other factors (student-instructor informal relations; student-instructor formal relations) measure the relations between student and instructor.

Research assessment and baseline: Indicate how you determined the success and effectiveness of your project. You may use quantitative or qualitative data or both.
Our work on the SCALE survey shows that we can measure something accurately, but it does not show that what we can measure is educationally important. The second component of our investigation of social context addresses this issue, by examining the association between what the SCALE survey measures and the learning outcomes that students achieve in different sorts of learning spaces.

We use correlational and experimental research designs, along with multivariate predictive analyses of large data sets, to show that, first, different types of classrooms (ALCs, traditional lecture halls, etc.) are associated with different levels of social context. This finding confirms our initial hypothesis that the type of learning space in which a class is held has an impact on relations among students and between students and instructors. Second, we show that the different aspects of social context are
related to student learning outcomes in different ways, while controlling for multiple student-level variables: certain components of social context support student learning, while others seem to work against it.

This result indicates that social context plays a role in explaining how classroom spaces of different sorts shape student learning, and it also points toward the practical, educational relevance of social context. How can instructors create learning environments in which the constructive components of social context are promoted, while the less constructive aspects are minimized? The next phase of our research, which is ongoing as of this writing, addresses this question by drawing out the pedagogical implications of our findings (Baepler, Walker, Brooks, Saichaie, & Petersen, 2016), and by examining the ways in which social context interacts with different ways of forming student working groups in the classroom, and with students’ personality traits (the “Big Five”; Komarraju et al., 2011), to influence learning in introductory biology classes.

References (required, APA Style):

Organization:
This session will integrate audience response and participation with media-driven data presentation in order to ensure that the research project is discussed in a way that meets the needs and answers the questions of participants. Audience engagement will have several components:

A prompt to share at their tables their own experiences with and questions regarding new learning spaces; a video presentation and subsequent discussion designed to showcase the ways in which classes in new learning spaces are different; a quiz and subsequent discussion regarding the different components of social context, and their connection to learning outcomes; collaborative discussion at audience tables about how to interpret the results of social context research, and how instructors should respond to these findings.

Finally, the audience will be asked for help in determining the next directions for research into social context and new learning spaces, and offered the chance to participate in future collaborative investigations.