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*The cover image is a word cloud generated using the abstracts submitted to the Symposium and created by Marius Ulrich, Graduate Assistant, University of Southern Indiana.*

## KEYNOTE: GOOD TEACHERS, SCHOLARLY TEACHERS, AND SCHOLARS OF TEACHING AND LEARNING

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### Keynote Description:

University instructors approach course design in unique and personal ways, often reflective of their own experiences, preferences, and perspectives. Despite the array of approaches instructors might use during a semester to teach, explore, or assess content, what IS uniform across course design efforts is the desire to advance students' thinking and learning. While some course instructors look to design meaningful learning experiences through instinct and past training, others turn towards evidence to inform their pedagogical choices. Others engage as scholars to study learning in their classroom settings. This keynote will explore good teaching, scholarly teaching, and the scholarship of teaching and learning to explain a continuum of teaching and learning in university classrooms. Resources will be provided to support evidence-based approaches to teaching and the systematic study/reflection of teaching and learning.

### Afternoon Session: Planning Your Own SoTL Project

Interested in planning a scholarship of teaching and learning (SoTL) project to explore a phenomenon in your own teaching/learning contexts? This session will extend today's keynote and provide an overview of steps faculty can take to develop a SoTL project. Those in attendance will be provided ample resources for their future use to guide project development, implementation, and dissemination.

### About the Keynote Speaker:

Dr. Jennifer Friberg is the Cross Endowed Chair in the Scholarship of Teaching and Learning and Professor of Communication Sciences and Disorders at Illinois State University in Normal, Illinois. In her capacity as the Cross Endowed Chair, she supports, mentors, and engages in research on teaching and learning on her campus and beyond. She is the Founding Associate Editor for *Teaching and Learning in Communication Sciences & Disorders*, and has authored and edited a variety of books, journal articles, and [blog posts](#) on the topic of the scholarship of teaching and learning. She is co-chair for the Advocacy & Outreach committee for the International Society for the Scholarship of Teaching and Learning and is the outgoing Chair of the Council on Academic Accreditation in Audiology and Speech-Language Pathology.

## **BUILDING FACULTY CONFIDENCE IN TEACHING WRITING IN THE DISCIPLINES: LONG-TERM STRATEGIC PLANNING AND SHORT-TERM TACTICS TO PROMOTE STUDENT SUCCESS**

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Keywords: Writing in the Disciplines, Curriculum Design, Curriculum Mapping

### **Abstract:**

Topic/Problem Statement and Context:

If you have ever looked at a pile of papers with dread for what you'll find when you start reading them, felt unsure about providing writing-related feedback to students or avoided assigning much writing altogether, you're definitely not alone. While effective written communication is a foundational skill for students' academic and professional success in most disciplines, faculty sometimes have difficulty finding time to incorporate writing instruction into content-heavy courses or lack the knowledge or confidence to teach or assess writing effectively, leading to product-focused approaches to writing instruction and less-than-stellar writing from students. However, scaffolding smaller components of writing instruction throughout the curriculum of any given discipline and adding more frequent low-stakes writing assignments can improve students' performance in discipline-specific writing contexts.

Approach:

This presentation introduces two approaches to help faculty teach writing better within their disciplines: one long-term strategic planning approach and one set of short-term tactics. First, it draws on disciplinarily-diverse examples from the University of Minnesota's Writing Enriched Curriculum program to introduce a long-term planning process for strategically incorporating effective writing instruction in any given academic program through articulation of discipline-specific writing characteristics (both academic and professional), definition of desired student writing outcomes, and curriculum mapping that distributes writing instruction throughout a student's program in ways appropriate to the specific discipline (University of Minnesota). Second, it provides a brief introduction to ways that low-stakes, unassessed or minimally assessed writing instruction can be incorporated into classes with minimal impact on instructional time or faculty workload (Elbow 1997), to promote enhanced critical thinking (Çavdar and Doe 2012) and confidence (Brownell, Price, and Steinman 2013), two key elements in student writing success.

Reflection/Discussion:

What emerges from these two approaches is a set of practices that can be incorporated in any discipline to improve student writing and decrease faculty frustration with teaching and grading writing in their fields. Students' writing improves when they more clearly understand discipline-specific expectations of writing, and faculty can use their articulations of effective writing in their disciplines to improve instruction, feedback to students, and program assessment.

References:

Brownell, S. E., Price, J. V., & Steinman, L. (2013). A writing-intensive course improves biology undergraduates' perception and confidence of their abilities to read scientific literature and communicate science. *Advances in Physiology Education*, 37 (1), 70-79.

Çavdar, G., & Doe, S. (2012). Learning through writing: Teaching critical thinking skills in writing assignments. *PS: Political Science & Politics*, 45 (2), 298-306.

Elbow, P. (1997). High stakes and low stakes in assigning and responding to writing. *New Directions for Teaching and Learning*, (69), 5-13.

Nicol, D. (2010). From monologue to dialogue: improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, 35 (5), 501-517.

University of Minnesota (2018). Writing Enriched Curriculum (WEC) Model. Retrieved from <https://wec.umn.edu/wec-model>

## CIVILITY BEGINS WITH CLEAR EXPECTATIONS

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Keywords: civility, discussion board, learning objective

### **Abstract:**

Topic/Problem statement:

Incivility is a phenomenon found in many contexts (Phillips, 2016), including the classroom. Incivility is a disregard and insolence for others, causing an atmosphere of disrespect, conflict, and stress whereas civility is an authentic respect for others requiring time, presence, engagement, and intention to seek common ground (Clark, 2018). Online learning can breed an anonymous platform for rude behavior. Setting expectations of appropriate behavior and communication sets the stage for a safe classroom.

Context:

NURS 602, Evidence Based Practice for Advanced Nursing, is one of the first courses of the core curriculum in the Masters of Science in Nursing Program and delivered online. Two course objectives relate to engaging in civil, professional, and collaborative teams.... that improve patient care outcomes and to demonstrate effective leadership and interpersonal collaboration. Module learning objectives include demonstrating effective teamwork to manage conflict and problematic behavior and apply collaborative principles in small group work.

Approach:

As an initial assignment, students read an article by Dr Molly Worthen (2017) professor at the University of North Carolina Chapel Hill. Her article informs students what is appropriate classroom communication behavior. Using discussion board in Blackboard, students write a 150-200 word response to the article citing one other scholarly reference and then read and respond to at least one other student's posting. All aspects of these points are included in a posting that gets full credit: Provides professional, insightful response that relates directly to the topic of the article; provides one scholarly reference which supports response; responds to at least one other student's posting; and uses correct language conventions (i.e. spelling, APA formatting).

Reflection/Discussion:

Students appreciated reading the article but were surprised they were asked to do so. Their reason was that incivility was not an issue in their view but with further reflection realized the helpfulness of the assignment for setting the tone of the class. Students discussed the deconstruction of civil communication beginning in elementary school and actually lamented the demise of polite conversation. Students do a large amount of course assignments in NURS602 via small groups and find that this early assignment facilitates civil communication.

This assignment is easily replicable for faculty in other disciplines and courses to raise student sensitivity of civility using discussion board technology.

References:

Clark, C. (2017). *Sustaining civility in nursing education*, 2nd ed. Indianapolis, IN: STTI Honor Society of Nursing.

Phillips, J. (2016). Workplace violence against health care workers in the United States. *The New England Journal of Medicine*, 374(17), 1661-69.

Worthen, M. (2017). U Can't Talk to Ur Professor Like This. *New York Times*, May 13, 2017.

## COMPETING FOR STUDENTS' ATTENTION IN THE AGE OF DISTRACTION: A DISCUSSION

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Keywords: internet addiction, study habits, attention, learning

### Abstract

Topic/Problem Statement:

As educators, we want our students to learn complex formulas, read challenging pieces of literature, and perhaps perform some academic research (Rousseau, 2006). Yet, can students who are quite addicted to smartphones perform deep work or are they stuck in a life of shallowness (Newport, 2016)? Evidence suggests that prolonged smartphone use robs students of the willpower necessary to perform the cognitively demanding tasks we ask of them (Baumeister and Tierney, 2012). Hence, in this session I aim (1) to present data on internet addiction, (2) to have the audience share their feelings on whether smartphones have changed students, and (3) stimulate interest in a work group dedicated to researching internet addiction and disseminating strategies for combating it.

Context:

I assume that there is a chance that while you are reviewing this submission, you have looked at your phone at least once and have multiple browser windows open. That is also how our students operate in class – and we cannot solve it by just telling students to put their phones away. Such short-term solutions do not produce long-term results. Students need to become aware of how their attention is diverted and their willpower is depleted.

Approach:

Given only 20 minutes, I aim to build an awareness of this issue through presenting some selected research on what smartphone use is doing to students. I also aim to report results of an internet fast assignment that my students performed. Ideally, I would also like to recruit a group of colleagues interested in working on this issue with me.

Discussion:

I use 2012 as a proxy for “when things changed in the classroom.” The iPhone was released in 2007, but around 2012, every student came to class with a device more powerful than the spaceship that went to the moon. Before 2012, when I entered the classroom, students were talking to each other. After 2012, most of them were face down in a screen until class started. Before 2012, I could engage a classroom in a period-long discussion. After 2012, they stopped responding and I had to alter my pedagogy to get them to respond (I posed a question, had them write “minute papers,” then asked what they wrote). I assume that I am not the only person seeing this phenomenon. Thanks for your time.

References:

Baumeister, R. F., & Tierney, J. (2012). *Willpower: Rediscovering the greatest human strength*. Penguin.

Newport, C. (2016). *Deep Work: Rules for Focus Success in a Distracted World*. Grand Central Publishing.

Rousseau, D. M. (2006). Is there such a thing as “evidence-based management”? *Academy of management review*, 31(2), 256-269.

Zomorodi, M. (2017). *Bored and Brilliant: How Spacing Out Can Unlock Your Most Productive and Creative Self*. St. Martin's Press.

## CONCEPT MAPS AND HISTORY TEACHING

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Keywords: Concept Maps, History, Student Outcomes, Critical Thinking

### **Abstract:**

In the Fall 2017 semester, I conducted an experiment, with IRB approval, in two of my classes (HIST 263: World History from 1700 and HIST 311: Women and Gender). In both classes the students were asked to complete an older version of a Concept Map that required them to read a secondary source historical article and identify the author's argument, evidence, and conclusion and then to formulate an analytical question based on their reading. The students were then required to complete assignments using a different version of the Concept Map that included the same questions as the first map, with additional questions on what sources the author used, what did they learn from the reading, and what did the reading add to the general scholarship on the course topic. After completing the Concept Maps the students answered questions to determine whether they retained information about the article and could identify what kind of sources the author's used. Pedagogical research suggests that Concept Mapping aids in the retention of historical material and can improve student understanding of historical analysis. (Nair & Nayansami, 2017) My hypothesis is that Concept Mapping could help student's identify arguments in secondary source material and analyze the author's evidence. The results suggest there was a small improvement in student retention between the old and new concept map. This presentation will discuss the results and the limitations of the data set.

## **COPUS: A NON-EVALUATIVE CLASSROOM OBSERVATION INSTRUMENT FOR ASSESSMENT OF INSTRUCTIONAL PRACTICES**

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Keywords: observation protocol

### **Abstract:**

Research in Science, Technology, Engineering and Math (STEM) education has gathered a significant amount of evidence that active learning pedagogical methods are much more effective in helping students learn than traditional, passive, approaches. [1] Higher education institutions interested in transforming their instructional practices saw the need for information gathering on their current extent of active learning. The Classroom Observation Protocol for Undergraduate STEM (COPUS) was created as a response to that need. [2,3] COPUS allows a reliable characterization of how faculty and students spend time in the classroom, with a focus on measuring how student-centered the class is. The University of Southern Indiana's Center for Teaching and Learning adopted the COPUS instrument in Spring 2017 as one tool to support reflective teaching and inform improvements in teaching.

An non-evaluative class observation using the COPUS instrument is available for any USI class in any discipline and level. Instructors who are interested in incorporating active learning in their classes would find the information gathered from the COPUS useful. After a request is submitted by the interested instructor, a trained COPUS observer attends an instructor-selected class session and notes what students and the instructor are doing based on predetermined codes during two-minute intervals. The observer focuses on identifying how students are engaged in their learning (such as working with class members to solve problems or listening to the instructor) and what instructional practices the instructor is using (such as interacting with students or lecturing), rather providing feedback on the instruction or course.

From the observation data, two pie charts are generated, one for students and one for the instructor, that indicate the proportion of the time each spent on different behaviors (e.g. listening, writing on blackboard, asking questions etc). Instructors can use the COPUS results for improving their classes and increasing student learning, as documentation in peer-reviewed educational publications and professional portfolios, as well as funding proposals.

Implementing the COPUS instrument at USI has been a particularly rewarding experience as it allowed a group of faculty with active learning pedagogical methods common interest to work closely together. As a COPUS observer, we found that attending other faculty member's classes

not only provides a service to enhance teaching but it also exposes us to different teaching approaches and active learning ideas.

#### References

1. Active learning increases student performance in science, engineering, and mathematics, Scott Freeman, Sarah L. Eddy, Miles McDonough, Michelle K. Smith, Nnadozie Okoroafor, Hannah Jordt, and Mary Pat Wenderoth, PNAS June 10, 2014 111 (23) 8410-8415
2. The Classroom Observation Protocol for Undergraduate STEM (COPUS): A New Instrument to Characterize University STEM Classroom Practices, Michelle K. Smith, Francis H. M. Jones, Sarah L. Gilbert, Carl E. Wieman, and Erin L. Dolan, CBE—Life Sciences Education 2013 12:4, 618-627
3. Anatomy of STEM teaching in North American universities, M. Stains, J. Harshman, M. K. Barker, S. V. Chasteen, R. Cole, S. E. Dechenne-Peters, M. K. Eagan Jr., J. M. Esson, J. K. Knight, F. A. Laski, M. Levis-Fitzgerald, C. J. Lee, S. M. Lo, L. M. McDonnell, T. A. McKay, N. Michelotti, A. Musgrove, M. S. Palmer, K. M. Plank, T. M. Rodela, E. R. Sanders, N. G. SCHIMPF, P. M. Schulte, M. K. Smith, M. Stetzer, B. Van Valkenburgh, E. Vinson, L. K. Weir, P. J. Wendel, L. B. Wheeler, A. M. Young, Science 30 Mar 2018 : 1468-1470.

## CREATIVE APPROACH TO THE SYLLABUS

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Keywords: Syllabus, Graphics, Pictures

### **Abstract:**

Topic/Problem Statement:

Regardless of its purpose and format, the course syllabus is one of the most extensively used documents in higher education [1]. Students not only learn about the course (i.e., traditional syllabus) and obligations (i.e., contractual), but also form impressions about their instructor. According to the signaling theory, individuals use limited information provided (in syllabus) to infer broader qualities (about the course and instructor) [2]. Additionally, instructors can 'signal' specific information to aid student learning and motivation. As such, it is imperative to create an informative and effective syllabus.

Context and Approach:

In the Fall 2018, I created a newspaper-like syllabus in the Sport Psychology course. A majority of the 28 students were Psychology majors (61%), with the remainder Individualized Studies or from a myriad of disciplines. My outcomes for the students were to take an active role in their learning and captivate and sustain their enthusiasm for learning. To meet these objectives, I created a graphic-rich syllabus. It attempted to meet Nilsons's [3] claim that syllabus might "not only [be] the road map for the term's foray into knowledge but also a travelogue to pique student's interest in the expedition and its leader" (p. 33). This is accomplished through the uses various elements of graphic design (e.g., images, colors) to create document like a newsletter, the uses of text that is student-focused, and the description of the course that connects to broader themes (e.g., life success) or professional experiences [4]. On average, students liked the syllabus a moderate amount ( $M = 6.29$  out of 7) and agreed that it was well organized ( $M = 5.64$  out of 6). The following themes emerged from "what they found the most appealing about the syllabus": *organization, format, presentation of the information, and course component/professor information*. Themes that emerged from "what they found the least appealing": *too much/not enough information, format, and course component*.

#### Reflection:

Due to the lack of comparison groups and a formal systematic assessments, I am unable to draw definitive conclusions of the effect of graphic-rich syllabus on students' engagement and success. Nevertheless, the inclusion of engaging syllabus facilitated my understanding of student preferences. In addition to the class content, teaching methods, and requirements, instructors should consider additional factors when creating the syllabus including a) the presentation of the content and methods in a student-oriented, engaging, and meaningful way, and b) the effect of the presentation on students' perception of the instructor, interest and motivation in the course [4].

#### References:

1. Harrington, C.M. and C.A. Gabert-Quillen, Syllabus length and use of images: An empirical investigation of student perceptions. *Scholarship of Teaching and Learning in Psychology*, 2015. 1(3): p. 235-243.
2. Spence, A.M., Market signaling: Informational transfer in hiring and related screening processes. Vol. 143. 1974: Harvard Univ Pr.
3. Nilson, L.B., *The graphic syllabus and the outcomes map: Communicating your course*. 2009, San Francisco, CA: John Wiley & Sons.
4. Ludy, M.-J., et al., Student Impressions of Syllabus Design: Engaging versus Contractual Syllabus. *International Journal for the Scholarship of Teaching and Learning*, 2016. 10(2).

## DECISION-BASED LEARNING IN ENGINEERING CONTEXTS

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Keywords: Decision-Based Learning, Unpacking expert knowledge, Conditional knowledge, Software-assisted education

### **Abstract:**

Commonly higher education courses are structured to engage students to think critically about topics (conceptual knowledge) and to provide students with the ability to carry out a series of steps to produce a desired outcome (procedural knowledge). Obtaining conditional or functional knowledge<sup>1</sup>, that is the knowledge to know under what conditions to use one's conceptual and procedural knowledge is generally left to be implicitly gained throughout the course. Decision-Based Learning (DBL)<sup>2</sup> is a recent pedagogy that is designed to strengthen a student's conditional knowledge as material is presented in the context of a decision-making model. This model mimics the questions that an expert has taught him or herself to ask to conditionalize his or hers conceptual and procedural knowledge.

The DBL pedagogy was implemented for a single unit in a senior-level mechanical-engineering course to assess its effectiveness, particularly in an engineering context, and to inform whether a possible more-expansive implementation of DBL should be undertaken for the course. A decision-making model for the selection and utilization of static-failure theories, which are used to quantify and predict when failure will occur in a mechanical component, was created and presented to the students using software specially created for this type of pedagogy<sup>3</sup>. The decision-making model was presented to the students using a 'just enough, just-in-time' approach where relevant content was presented to the students to assist them in making decisions when taking examples through the decision-making model. A collection of problems was created for students to work through which provided practice in each branch of the model.

Because this was an informal study to assess the potential of using a DBL approach in an engineering course, reflections based on the teaching experiences, student comments, and their behavior rather than data are discussed. The overall engagement of the students as the DBL model was presented and used was favorable. While part of this may have been due novelty, the DBL approach has the benefit of allowing both instructor led-examples and opportunities for individual student self-study, leading towards the possibility of high student engagement as both approaches are utilized. All students completed the collection of problems given to them with a large majority obtaining correct answers. In conclusion, because of the success of the technique and positive feedback from students a further a more comprehensive implementation of DBL in an engineering course is being planned for the following year.

1. Biggs, J. B. (2011). "Teaching for quality learning at university: What the student does," McGraw-Hill Education (UK)

2. K. Plummer, R. Swan, N. Lush, "Introduction to Decision Based Learning", *International Technology, Education, and Development Conference (INTED 2017) Proceedings*, pp. 2629-2638 (2017).
3. Decision-Based Learning [computer software]. (2018) Conate Incorporated, Retrieved from [decisionbasedlearning.com](http://decisionbasedlearning.com)

## DISCOVER AN AUTHOR (AND MORE . . .)

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Keywords: Author assignment incorporates Reading/ Writing/ Thinking/ Speaking/ Research/ Documentation

### Abstract

**The issue:** Many of my freshmen college students at Vincennes University do not have a foundational knowledge of major literary works, authors, or how writing and writers affect culture or history. I wanted to expose them to important ideas and the people who created them. But, English 101 is a gateway composition class, not a literature course.

**The challenge:** Create a writing assignment that would engage students with research, reading, writing, speaking, and critical thinking. AND expose them to authors and ideas. AND work it into an already crowded course curriculum.

**The course:** English Composition 101 is a course in critical reading and writing. The course develops one's ability to think, organize, and express ideas clearly and effectively. Students must also be able to make their own discoveries via research, articulate those findings, and properly document their work. This assignment does that and more.

### The assignment:

- 1) Students are to research an assigned author and write a two-page (no more, no less) summary which invariably will include biographical information, but which focuses on the author's contribution to literature and/or culture. Adherence to strict guidelines is required.
- 2) Students must prepare a 4 to 5-minute, informal, verbal presentation, with a visual aid (typically a PowerPoint), that informs the student audience about the author and his or her important works and ideas within them. (We have fun on presentation day!)

### Research:

I have yet to find conclusive, peer-reviewed research corroborating my experiences with students on this subject. (The research is ongoing.) It may well be localized, as students from different high schools in Indiana have very different experiences.

But, in her book *Teaching Unprepared Students*, author Kathleen Gabriel cites a national *Chronicle of Higher Education* survey in which 44% of college. A contributing factor in this, I suspect, could be that students not having a general understanding of the range of significant literary figures or their works, especially with how said people or work fit into a basic timeline of history. My polling of students the last 5 years shows that many of my students have not read, or know about the titles or authors listed on the College Board Recommended Reading

List for college bound students. Most have no frame of reference for an "Orwellian concept," for instance. They don't know about Hemingway, Faulkner, or Steinbeck.

In seeking a two-year degree in many of Vincennes University technical and academic programs, over 60% of first-time freshmen required remedial, or developmental, coursework (2015 to 2017 school years). While this number is based on "basic skills," one (me) can assume that students may not have the basic literary-cultural knowledge they ought to have when entering college. This bears out with the classroom polling / testing / teaching done in the past five years. Thus my assignment for English 101.

However, much more research – perhaps on my part – must be done.

### **Lessons learned:**

#### Positives:

- Writing/research skills are challenged.
- 86% of students pass assignment with B average (six semesters)
- Students learn how to cite outside sources in their papers.
- Students learn and get practice in paraphrasing and quoting information.
- Students make connections between ideas, authors, history, and culture, and build contextual knowledge.
- Students blossom with a new-found interest in authors and ideas. Some students actually read a book by their assigned author.
- Students have a frame of reference from what they've learned and connect it with daily life or something discussed in another course.

#### Negatives:

- Some students dislike the presentation aspect.
- Some wait too late to begin (it's only 2 pages!), and miss discoveries learned in research.
- Presentations can burn up classroom time.

## DOES WHAT STUDENTS BELIEVE PREDICT HOW WELL THEY EVALUATE ARGUMENTS?

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Keywords: Epistemic beliefs, Argument evaluation, Academic Performance, Critical Thinking

Abstract is not included by request of the authors. Please contact the authors for additional information.

### References

Bendixen, L. D., & Rule, D. C. (2004). An integrative approach to personal epistemology: A guiding model. *Educational Psychologist, 39*, 69–80.

Britt, M. A., Kurby, C. A., Dandotkar, S., & Wolfe, C. R. (2008). I agreed with what? Memory for simple argument claims. *Discourse Processes, 45*(1), 52–84.

Dandotkar, S., Magliano, J. P., & Britt, M. A. (2016). Effect Logical Relatedness and Semantic Overlap on Argument Evaluation. *Discourse Processes, 53*(7), 581-602.

Ferguson, L.E., Bråten, I., Strømsø, H.I., & Anmarkrud, Ø. (2013). Epistemic beliefs and comprehension in the context of reading multiple documents: Examining the role of conflict. *International Journal of Educational Research, 62*, 100-114.

Hofer, B. K., & Pintrich, P. R. (Eds.). (2002). *Personal epistemology: The psychology of beliefs about knowledge and knowing*. Mahwah, NJ: Erlbaum.

Schommer-Aikins, M., Duell, O. K., & Hutter, R. (2005). Epistemological Beliefs, Mathematical Problem-solving Beliefs, and Academic Performance of Medical School Students. *The Elementary School Journal, 105* (3).289 - 304.

Wood, P. K., & Kardash, C. A. (2002). Critical elements in the design and analysis of studies of epistemology. In B. K. Hofer & P. R. Pintrich (Eds.) *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 231-260). Mahwah, NJ: Erlbaum.

## ENGAGEMENT AND HIGHER ORDER SKILL PROFICIENCY OF FIRST AND SECOND YEAR MEDICAL STUDENTS – A COMPARISON BETWEEN IUSM’S LEGACY AND REFORMED CURRICULA

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Keywords: student engagement, higher order skills, active learning

### Abstract:

In order to better prepare students for clinical practice in today’s environment, the Association of American Medical Colleges (AAMC), American Medical Association (AMA), and Accelerating Change in Medical Education Consortium (Cooke, 2010) have all called for reform in medical education. In response to these calls, the Indiana University School of Medicine (IUSM) transitioned from its legacy curriculum (LC) to a newly reformed curriculum (RC) in the 2016-2017 academic year. The LC focused primarily on didactic methods to deliver necessary material, while RC incorporated active learning into at least 50% of student contact hours. This study set-out to determine if students enrolled in Indiana University’s RC demonstrated higher levels of engagement and proficiency in use of Bloom’s higher order skills (HOS) than students in LC; furthermore, the authors conducted analysis of student development in engagement and HOS from first year (MS1) to second year (MS2), focusing on MS1 students initially in the lowest HOS quartile. Following IRB approval, study participants’ engagement and HOS were annually assessed during MS1 and MS2 for the Class of 2019 (LC) and the Class of 2020 (RC). Engagement was determined using a validated Survey of Student Engagement (SSE) (Ahlfeldt, 2005). HOS proficiency was assessed using the Collegiate Learning Assessment (CLA+), professionally developed and validated by the Council for Aid to Education (<https://cae.org/flagship-assessments-cla-cwra/cla/>). Preliminary statistical analysis indicated that RC students increased engagement significantly from MS1 (39.0±7.0) to MS2 (40.8±5.3) and demonstrated significantly higher engagement than LC MS2 students (36.3±5.3); however, there were no differences in HOS proficiency when comparing RC to LC, or MS1 to MS2. Additionally, RC MS1 students in the lowest HOS quartile (1688.8±53.1) demonstrated significantly increased HOS when re-tested during MS2 (1809.5±86.8). This phenomenon was not seen in LC students. Implementation of RC resulted in higher levels of student engagement than LC and, despite literature suggesting that more engaged learners will become more proficient in HOS (Bonwell & Eison, 1991), there were no differences in HOS group means between RC and LC.

## FLIPPING PRECALCULUS TO IMPROVE STUDENT LEARNING

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Keywords: Student learning, evidence-based teaching practices, flipped learning

### **Abstract:**

Precalculus is designed to prepare students for college-level calculus, and as such the course serves students majoring in a variety of STEM disciplines and pre-professional programs. Its efficacy, however, is unclear. Precalculus courses tend to have a high failure rate, while those students who actually proceed to calculus may not gain much benefit from the course (Sonnert & Sadler 2014). We describe a quasi-experimental study in which we flip an undergraduate precalculus course with the goal of improving student learning and increasing success rates through the implementation of evidence-based teaching strategies.

While there is some evidence for the effectiveness of flipped pedagogy in improving student learning (Talbert 2017), positive outcomes are likely critically dependent on the specific implementation of the flipped classroom (O'Flaherty & Phillips 2015). In particular, improvements in student learning outcomes may be largely attributable to the active learning occurring during class (DeLozier & Rhodes 2017). Our flipped course structure is guided by these findings, together with the evidence-based design principles outlined by Lo, Hew & Chen (2017). Two sections of precalculus were flipped during a recent semester, with students expected to watch a short video (approximately 15 minutes), attempt a few introductory problems, and complete a brief reflection quiz before class. During class the students actively engaged in group-based problem solving with the support of the instructor. The student learning outcomes in these flipped sections are compared with a traditional "interactive lecture"-based section of precalculus taught by the same instructor in the same semester. In addition to comparing student learning outcomes, we use the Short Attitudes Towards Mathematics Inventory (Lim & Chapman 2013) to track affective changes, including enjoyment, the perceived value of mathematics, and mathematical efficacy (self-confidence) between the flipped and control sections.

## HISTORY AND COMMUNICATION GATEWAYS: MEANINGFUL LEARNING AND FIRST YEAR IMPACT

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Keywords: History, Communication, First Year, Gateway

### **Abstract:**

#### Topic/Problem

The John Gardner Institute for Excellence in Undergraduate Education identified history as a subject with high levels of attrition among first generation college students in their first year of college. That is not the case with the subject of communication. This project explores similarities and differences in the ways students with learn about history and communication during their first year and identifies possible teaching practices common to communication that may be useful in the history classroom. In particular we will look at communication exercises requiring skills development and social integration.

#### Context

HIST 10500 Survey of Global History and COM 11400 Fundamentals of Speech Communication are prescribed first semester courses that fulfill general education and humanities and social sciences requirements for all undergraduates at Purdue University Northwest. While the differences in course design, intention, and expectations are significant, students must find value in each of them to progress toward program completion. In this first stage of research, we look at student demographic data in each of these courses and rates of completion and retention in the following year.

#### Approach

Purdue University Northwest is one of eleven institutions nationwide (2-year and 4-year institutions) participating in the American Historical Association's History Gateways project, funded by a \$1.65 million grant from the Andrew W. Mellon Institute in conjunction with the Gardner Institute. It is designed to evaluate ways in which students are introduced to the subject of history during their first year, with the possibility of "substantial revision of introductory college-level history courses to better serve students from all backgrounds and align more effectively with the future needs of a complex society (AHA)." In these initial steps, we are working with our Office of Institutional Research to gather data with the goal of determining current completion and retention rates.

We begin by comparing retention rates with the Department of Communication and Creative Arts. Starting with the Bruskin Associates survey of 1973, public speaking routinely is cited along with death, dentists, and snakes as one of Americans' greatest fears, making it somewhat commensurate with the intimidating nature of history. We will also consider how course

design, stated learning objectives, and teaching techniques may help students find value in what they learn. Moreover we will consider the impact of speech assignments focused on skills development and group project assignments that stimulate interaction among students outside the classroom. We will also survey students before and after their first assignments and at the end of the semester to see if their perspectives on value have changed. This is the first stage of a 3-year project.

#### Reflection/Discussion

Because we are in the very early stages of the project, we are eager to share the process with other faculty engaged in first year teaching. Hearing of other experiences may help highlight some of the issues faced in the areas of engagement and retention.

#### References:

American Historical Association (AHA) History Gateways:

<https://www.historians.org/historygateways>

Gardner Institute Gateways to Completion:

<https://www.jngi.org/gateways-to-completion/>

## HOW REPUTATION WENT DOWN WITH THE SHIP: HOW STUDENTS CAN APPLY THE SITUATIONAL CRISIS COMMUNICATION THEORY

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Keywords: theory application, public relations, classroom activity

### **Abstract:**

#### Topic/Problem Statement:

It can be difficult for students to not only understand the different theories in the public relations field, but to understand the importance of using theory in real-life situations. It is also important that students are able to apply theory to real-world examples. Theory can be somewhat abstract and unrelatable for students. However, they will need to apply theory to practice in their jobs, so it is an important skill they learn in the classroom first.

#### Context:

For PRL 101, Introduction to Public Relations, it is important students are exposed to different public relations theories. These theories will be used in subsequent PR courses. A foundation in theory is important for success in PR. However, theory does not always seem like it can fit in real-life and that it is more a classroom skill. Creating activities that allow theory to seem approachable and applicable are necessary to connect students with the content.

#### Approach:

This case study assignment teaches students the Situational Crisis Communication Theory (SCCT) (Coombs, 2007) by applying the theory's concepts to an actual public relations crisis, different situations Carnival Cruise Lines faced. The goal of this assignment is to have small groups present an opening statement for a mock news conference to demonstrate how they applied SCCT to create a post-crisis message. Because these are situations that already occurred, students are able to compare their responses with how Carnival actually responded. This activity provides an opportunity to learn theory, apply that theory to practice and develop important PR skills that can be used in a range of crisis situations.

#### Reflection/Discussion:

Through this assignment students are able to learn about an influential PR theory and apply that theory. However, most importantly, students are able to learn that careful planning is needed to create and implement post-crisis communication. It is easy for students to judge Carnival for making these PR blunders. Yet, when the students are tasked to create their own responses, they begin to realize how many factors play a role into a crisis situation. This activity creates a fun, interactive classroom for students. This activity could be applied to many different situations and theories and would be easy to replicate in other PR classrooms and even other disciplines.

Reference:

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10, 163-176.

## I DON'T WANT TO HEAR IT: STUDENT PREFERENCES IN ONLINE LEARNING LECTURE FORMATS

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Keywords: Online teaching, Student preferences, Video, Podcasts

### **Abstract:**

Should student preferences in lecture delivery be considered? In the age of mobile learning, media creation and delivery are important. Student preferences seem to drive student consumption of learning resources. In this presentation, we will dive into the research on use of media in online courses along with sharing our own experiences in exploring student preferences in online learning.

The use of video has reached a point where is no longer just a popular tool, but is a pervasive component of teaching (Sonicfoundry, 2013). However, the rise in podcasts (Edison Research, 2018) suggests that students may prefer audio-only content that is easily accessible from mobile devices over video content that requires a strong connection for streaming. We sought to explore this hypothesis by offering students access to both podcasts and videos of the same lectures in multiple online graduate counseling courses.

Using technology in teaching, whether in fully online classes or to supplement other teaching formats, enhances teaching and learning. Multimedia tools can address multiple sensory modalities creating more meaningful learning opportunities for students (Mayer, 2002). While researchers and instructors may hesitate to consider student preferences in learning (Woolfitt, 2015), student preferences seem to drive student consumption of learning resources. For example, research suggests that students consume videos from mobile devices and prefer shorter videos (Buzetto-More, 2014). These factors indicate students are opting for convenience in their consumption of course-related media. Because of this, we feel it is important to consider student preferences in the creation of course materials to supplement learning in both online and face-to-face environments.

Based on our findings, students seemed to prefer video lectures far more than the podcast lectures based on view and download statistics from our study. However, students who did utilize the podcasts appreciated the option. In addition to these findings, we were surprised by some of the feedback we received regarding the lectures. For example, students seemed to like the more unscripted moments in the videos – jokes, interruptions, examples – that we might be inclined to edit out. Our conclusion is that offering students multiple options for consuming lectures is a way to reach more students. However, if you have limited time, video seems to be preferred by students.

## References

- Buzzetto-More, N. A. (2014). An examination of undergraduate student's perceptions and predilections of the use of YouTube in the teaching and learning process. *Interdisciplinary Journal of E-Learning and Learning Objects*, 10(1), 17-32.
- Edison Research. (2018). On the rise: Steady growth for podcasts, rapid growth for smart speakers. *The Infinite Dial 2018*. Retrieved from <https://www.edisonresearch.com/>
- Mayer, R. E. (2002). Multimedia learning. In *Psychology of learning and motivation* (Vol. 41, pp. 85-139). Academic Press.
- Sonicfoundry. (2013). Academic video at a tipping point. Madison. Retrieved from <http://www.sonicfoundry.com/white-paper/academic-video-tipping-point-preparing-your-campus-future>
- Woolfitt, Z. (2015). The effective use of video in higher education. Lectoraat Teaching, Learning and Technology. Inholland University of Applied Sciences. Rotterdam.

## IMPROVING ONLINE ACADEMIC READING SUCCESS

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Keywords: online text; e-text; online comprehension

### **Abstract:**

#### Topic/Problem

Reading academic material online is here and is not going away. While research shows that college students prefer to read information in print rather than on a screen, they will be required to read and learn academic information online. How can we as instructors assist college students to successfully navigate online material and develop online academic reading strategies?

#### Context

The navigation of online texts is a challenge for the students who use e-texts as well as for the instructors who teach courses utilizing them. Students seem to prefer the lower cost of e-textbooks as well as the environmental benefit, but do not generally appreciate the many challenges and difficulties of e-textbook reading. Previous discussions with faculty members about this conundrum led us to investigate why reading online is a problem and what strategies are suggested to improve comprehension of online material.

#### Approach

Our research found students overwhelmingly preferred reading academic material in print rather than on a screen because of eyestrain, and they exhibited a less serious attitude when reading online (Dwyer & Davidson, 2013; Jabr, 2013; Salter, n.d.; Sandberg, 2011). In addition, reading online impacted student learning as students tended to read slower and less accurately, had trouble concentrating, and experienced decreased comprehension (Alexander & Singer, 2017; Jabr, 2013; Myrberg & Wiberg, 2015; Sandberg, 2011). Despite the problems experienced when reading online, we focused our search on what would aid instructors and students in developing online reading and comprehension strategies. We also discussed our findings with college reading colleagues at a national conference to ascertain what strategies their students found helpful.

#### Reflection

In addition to the research we found in this emerging field, discussions with other colleagues and positive interactions we have had with our students show there is evidence of strategies that can improve student learning with online academic material (Dwyer & Davidson, 2013; Hodgson, 2010; Jabr, 2013; Sandberg, 2011). These strategies include effective notetaking

methods and the use of graphic organizers as well as asking students to summarize, synthesize, paraphrase and make predictions as they read. Instructor provided prompts, modeling and scaffolding can also improve online academic reading success. A list of these strategies will be shared at the symposium and participants will be encouraged to join in the discussion and share their experiences.

## References

- Alexander, P. & Singer, L. (2017, October 15). A new study shows that students learn way more effectively from print textbooks than screens. *The Conversation*. Retrieved from <http://www.businessinsider.com/students-learning-education-print-textbooks-screens-study-2017-10>
- Dwyer, K. & Davidson, M. (2013). General education oral communication assessment and student preferences for learning: E-textbook versus paper textbook. *Communication Teacher*, 27(2), 111-125. doi: 10.1080/17404622.2012.752514
- Hodgson, K. (2010, November 29). Strategies for online reading comprehension. *Instructify*. Retrieved from <https://instructitest.wordpress.com/2010/11/29/instructifeature-online-reading-comprehension-strategies/>
- Jabr, F. (2013, April 11). The reading brain in the digital age: The science of paper versus screens. *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/reading-paper-screens/>
- Kauffman, D, Zhao, R, & Kauffman, Y. (2011). Effects of online note taking formats and self-monitoring prompts on learning from online text: Using technology to enhance self-regulated learning. *Contemporary Educational Psychology*, 36, 313-322. doi: 10.1016/j.cedpsych.2011.04.001.
- Myrberg, C., & Wiberg, N. (2015). Screen vs. paper: what is the difference for reading and learning? *Insights*, 28(2), 49–54. doi: <http://doi.org/10.1629/uksg.236>
- Niccoli, A. (2015, September 28). Paper or tablet? Reading recall and comprehension. *EducauseReview*. Retrieved from <https://er.educause.edu/articles/2015/9/paper-or-tablet-reading-recall-and-comprehension>
- Salter, P. (n.d.). Impact of reading from a screen versus from printed material. Retrieved from <http://www.radford.act.edu.au/storage/reading-on-screens-v-paper.pdf>
- Sandberg, K. (2011). College student academic online reading: A review of the current literature. *Journal of College Reading and Learning*, 42(1), 89-98. Doi: 10.1080/10790195.2011.10850350

## IT TAKES A TEAM TO TEACH TEAMWORK

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Keywords: Pedagogical strategies to teach teamwork; Student teams across disciplines; Interprofessional education; Interprofessional collaboration

### **Abstract:**

Evidence supports reduced medical error when teamwork is the base for collaborative decision making. Interprofessional education (IPE), which is when students from two or more professions learn from one another and effectively collaborate to improve outcomes, has become a standard in health profession education. There are multiple ways of integrating this approach into curricula, but there must be cooperation, collaboration and coordination among educators in different disciplines to make it possible. This presentation will provide an overview of a coordinated team effort on the part of faculty to bring together students from different healthcare approaches and different disciplines within the university to work as teams in primary care clinics. This collaboration will help students (a) develop an appreciation of what each discipline contributes to improve patient care, and (b) work together as a team to plan recommendations for patients and families for the purpose of improving health and lifestyle. Graduate students in social work and different specialties within the graduate nursing program have been involved. The focus of the presentation will be the strategies used to motivate students to come together across disciplines and collaborate. This includes an overview of TeamSTEPPS® training during an eight-hour orientation to the project, design and promotion of learning modules to be used by the IPE teams while in clinics, use of case studies to form

collaborative interaction among students, scheduled pharmacology consultations for the IPE teams with a pharmacist, and recruitment of students through development of a class that promoted the importance of IPE along with student reflection. Since January 2017, 18 student teams have worked together at different community sites established through academic partnerships. These student teams as well as site personnel have provided valuable feedback to the project team regarding their experiences. Student feedback has helped in understanding how better to motivate and enhance student learning for the future of the IPE project.

## MODIFIED IBL METHOD WITH AN ORAL DEFENSE

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Keywords: Inquiry-Based Learning, Upper Level Mathematics, Oral Defenses

### Abstract:

Topic/Problem Statement:

This talk focuses on the learning outcome of “do the students have a deeper understanding of the given material or are they going through the motions without really understanding?” Using writing alone does not truly reflect student understanding. This talk will lay out a structure that tries to answer this question at the advanced course level.

Context:

The primary courses of focus are Analysis and Abstract Algebra. The average class size is currently about 6 students. Class makeup is about 50-50 pure mathematics majors and education majors. The outcomes are: better understanding and application of course material, and the student’s ability to communicate mathematical ideas, especially oral communication. Inquiry-Based Learning (IBL) has a lot of evidence supporting its effectiveness in mathematical classrooms [3, 4, 1, 5]. Furthermore, in 2017 the Conference Board of the Mathematical Sciences has endorsed IBL [8]. The Fall of 2017 Analysis course was taught as a 50-50 Inquiry-Based Learning (IBL) and traditional lecture. Though there were some successes with the class structure, it did have its draw backs. There were still glaring gaps of understanding the course material because of the lack of time students had to defend their work.

Approach:

In the Fall of 2018, the Abstract Algebra took on a more tradition IBL proof based course drawing elements from [2, 6, 9, 5, 10]. A book from the Journal of Inquiry-Based Learning in Mathematics was adopted [7]. The overall structure had a brief discussion of new definitions which quickly lead into computation like questions and examples. As proficiency in definitions were acquired the students move on to proofing/disproving theorems which required defending their work in front of their peers. After each exam, students must complete a one-on-one oral defense of their exam. The grading structure of class, rubric for the defense, and anecdotal evidence will be discussed.

Reflection:

This change to almost full IBL resulted in several positive things. First, the level of difficulty in exam questions increased dramatically while not negatively affecting grades. Second, students have become more critical of not only their classmate’s proofs but their own as well. Finally, conversational mathematics at this level is becoming easier than it has been in past classes.

Unfortunately, this process is slow in nature. Specifically the overall structure on how homework is handled, though worked well, needs to be adjusted to manage expectations. This is to ensure students stay on an appropriate pace.

## References

- [1] D. Bressoud, Evidence for inquiry based learning, Retrieved from <http://launchings.blogspot.com/2011/07/the-worst-way-to-teach.html>.
- [2] D. Ernst, A. Hodge, and S. Yoshinobu, What is inquiry-based learning?, Notices of the AMS 64 (2017), no. 6, 570{574.
- [3] S. Freeman, S. L. Eddy, M. McDonough, M. K. Smith, N. Okoroafor, Hannah Jordt, and M. P. Wenderoth, Active learning increases student performance in science, engineering, and mathematics, Proceedings of the National Academy of Sciences 111 (2014), no. 23, 8410{8415, DOI: 10.1073/pnas.1319030111.
- [4] M. Kogan and S. Laursen, Assessing long-term effects of inquiry-based learning: A case study from college mathematics, Innovative Higher Education 39 (2014), 183{199, <https://doi.org/10.1007/s10755-013-9269-9>.
- [5] G. Kuster, E. Johnson, K. Keene, and C. Andrews-Larson, Inquiry-oriented instruction: A conceptualization of the instructional principles, PRIMUS (2017), no. 26.
- [6] S. Laursen, M. L. Hassi, M. Kogan, and A. B. Hunter, Evaluation of the ibl mathematics project: Student and instructor outcomes of inquiry-based learning in college mathematics, Retrieved from <https://www.colorado.edu/eeer/sites/default/files/attached-files/iblmathexecsumm050511.pdf>.
- [7] M. L. Morrow, Introductory abstract algebra, Journal of Inquiry-Based Learning in Mathematics (May 2012), no. 26.
- [8] Conference Board of the Mathematical Sciences, Active learning in post-secondary mathematics education, Retrieved from <http://www.cbmsweb.org/Statements/Active Learning Statement.pdf>.
- [9] C. Rasmussen and O. N. Kwon, An inquiry-oriented approach to undergraduate mathematics, Journal of Mathematical Behavior (2007), no. 26, 189{194, DOI: 10.1080/10511970.2017.1338807.
- [10] C. Rasmussen, K. Marrongelle, O. N. Kwon, and A. Hodge, Four goals for instructors using inquiry-based learning, Manuscript submitted for publication.

## **MORE THAN A CONFERENCE: BUILDING ONLINE AND IN-CLASS STUDENT ENGAGEMENT BY ATTENDING USI'S HEALTH INFORMATICS TRI-STATE SUMMIT**

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Keywords: health informatics, social media, online learning, student engagement

### **Abstract:**

#### **Problem Statement:**

Students today can no longer rely only on the ability to accumulate discipline-based information for career success. They need to be able to analyze and evaluate information, solve problems, work interprofessionally and communicate effectively. As educators, our role is to provide our students with the opportunities to participate in meaningful projects in which they play an active role in shaping and enhancing their learning experiences (Delialioglu, 2012).

#### **Context:**

This presentation will highlight assignments built in four different Health Informatics classes offered both online and in face-to-face settings through participation in a conference provided on campus (i.e., Health Informatics Tri-State Summit). This event was used as a vehicle to actively engage students in the material, as well as provide networking and participation in online communities that might not exist in real life. The presentation will emphasize the bridge that was built between online and face-to-face students by creating assignments that involved both groups of students. It will also address the value of engaging students as partners in learning and teaching as the faculty member transitioned from an instructor to facilitator because of this approach.

#### **Approach:**

Transformative learning occurs when students are challenged to think not only critically but also creatively, as well as communicate and collaborate with one another (Freudenberg, Brimble, Vyvyan, & Corby, 2008). This can be accomplished by using information and technology, which need to align with the knowledge of learning (Keane, Keane, & Blicblau, 2016). As a result, students enrolled in three courses (i.e., Health Informatics (HI301.001); Electronic Health Records and Enterprise Systems (HI302.N01); Social Media Monitoring in Healthcare (HI304.001 and HI304.N01)) were required to attend the 2018 Health Informatics Tri-State Summit organized by the College of Nursing and Health Professions at the University of Southern Indiana. Instead of taking attendance, students received participation points based on social media activity during the conference. The students enrolled in HI301.001 were graded based on the meaningful tweets posted during the event. The students enrolled in HI304.001 and HI304.N01 were assigned to groups and became part of a fictitious consulting team charged with examining the Twitter activity. Their task was to identify an analytic tool that could track the social media activity of all participants during the event and write a report to be presented to the Conference Planning

Committee. Students enrolled in HI302.N01 worked in teams and developed a presentation that was relevant to the topics presented during the conference. The group presentations were exhibited using robots that were controlled by students via an app on their mobile devices.

#### Reflection/Discussion:

Attending the 1-day long conference presented students with an opportunity to learn how technology and social media can be used to increase the timely dissemination of health information, facilitate interactive communication, and most importantly, network and engage via social communities outside the classroom. Furthermore, students had the opportunity to listen to reputable speakers on current topics and research in health informatics and healthcare in general. Through the class activities that were designed in each course, students improved not only their discipline-related knowledge, but also teamwork and communication skills. Reflection submitted by students in the form of a blog indicated that they perceived greater confidence in their abilities. From an educator's perspective, actively engaging students via participation in a conference proved to be an effective tool that can improve teaching and learning by placing concepts in the context, keeping course content up-to-date, and fostering a sense of community.

#### Bibliography

- Delialioglu, O. (2012). Student Engagement in Blended Learning Environments with Lecture-Based and Problem-Based Instructional Approaches. *Educational Technology & Society*, 15(3), 310-322. Retrieved 12 18, 2018, from [http://ifets.info/journals/15\\_3/24.pdf](http://ifets.info/journals/15_3/24.pdf)
- Freudenberg, B. D., Brimble, M. A., Vyvyan, V., & Corby, D. E. (2008). A Penny for Your Thoughts: Can Participation in a Student-Industry Conference Improve Students' Presentation Self-Efficacy and More? *The International Journal of Learning: Annual Review*, 15(5), 187-200. Retrieved 12 18, 2018, from [https://papers.ssrn.com/sol3/delivery.cfm/ssrn\\_id1683150\\_code498263.pdf?abstractid=1493416&mirid=1](https://papers.ssrn.com/sol3/delivery.cfm/ssrn_id1683150_code498263.pdf?abstractid=1493416&mirid=1)
- Keane, T., Keane, W. F., & Blicblau, A. S. (2016). Beyond traditional literacy: Learning and transformative practices using ICT. *Education and Information Technologies*, 21(4), 769-781. Retrieved 12 18, 2018, from <https://link.springer.com/content/pdf/10.1007/s10639-014-9353-5.pdf>

## **OCCUPATIONAL THERAPY/RESPIRATORY THERAPY COLLABORATION: UNDERSTANDING ROLES AND EARLY MOBILITY SIMULATION**

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Keywords: Interprofessional Education, Early Mobility, Collaboration, Teamwork

### **Abstract:**

#### Topic/Problem Statement:

Students enrolled in healthcare programs must learn to work collaboratively to best serve patients. Outside of one's own profession, roles of additional team members may not be clearly understood. Occupational and respiratory therapists work collaboratively as part of early mobility teams in intensive care units. Students of identified programs need to learn each other's roles and purpose to best work collaboratively within these teams. They must also learn to communicate effectively to ensure patient safety.

#### Context:

Occupational therapy students and respiratory students both presented on their roles and scope of practice to the other discipline. Additionally, handouts were created to aid each discipline in the practice of early mobility. Following the presentations, the students completed two early mobility simulation activities. From this experience, student outcomes involved role and scope of practice recognition, the benefits of interprofessional peer teaching, and identifying the components of interprofessional collaboration and teamwork.

#### Approach:

The occupational therapy profession will need to focus on interprofessional education in the classroom to be better prepared for evolving healthcare reform impacted by emerging areas of practice within the profession (Mroz, Pitonyak, Fogelberg, & Leland, 2015). The Institute of Medicine (2003) endorsed peer-to-peer teaching to better improve healthcare quality (Buring

et al., 2009). The occupational therapy students presented to the respiratory therapy students the role of occupational therapy, importance of functional and early mobility, and how to perform a stand-pivot transfer. Next, respiratory therapy students presented the role of respiratory therapy, an overview of different types of oxygen equipment, and knowledge of oxygen parameters. All students then participated in two interprofessional simulation activities requiring teamwork to transfer a patient safely while maintaining all necessary equipment, monitoring vital signs, and assessing the patient appropriately.

#### Reflection/Discussion:

At the end of the simulation, students debriefed with occupational and respiratory therapy faculty and the standardized patient. Students voiced a better understanding of one another's roles and scope of practice. They emphasized the need for teamwork and communication when working with any patient. Many students voiced learning from the other discipline during both the presentation and simulation. The students were asked to participate in a survey at the end of the debriefing focused on the peer teaching experience. Results indicate most students agreed the interprofessional activity will help with their therapy role in the future, was time and effort well spent, and that each discipline has a responsibility to teach others. Faculty plan to continue the interprofessional activity in the future.

#### References:

Buring, S. M., Bhushan, A., Broeseker, A., Conway, S., Duncan-Hewitt, W., Hansen, L., & Westberg, S. (2009). Interprofessional education: Definitions, student competencies, and guidelines for implementation. *American Journal of Pharmaceutical Education*, 73(4), article 59.

Mroz, T.M., Pitonyak, J.S., Fogelberg, D., & Leland, N.E. (2015). Health policy perspectives – Client centeredness and health reform: Key issues for occupational therapy. *American Journal of Occupational Therapy*, 69, 6905090010. Retrieved from <http://ajot.aota.org/article.aspx?articleid=2436567>

## OPENING THE ACADEMIC GATES: USING THRESHOLD CONCEPTS OF WRITING STUDIES AS A FRAMEWORK FOR ENTERING A DISCIPLINE

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Keywords: writing, threshold concepts, disciplinary knowledge, inclusion

### **Abstract:**

#### Topic/Problem Statement:

Current theories on student learning express the inherent struggle with learning that students encounter when engaging with a new discipline in the university. One way to help students work through the troublesomeness that comes with learning about a new discipline is via threshold concepts, a framework first introduced by Jan H. F. Meyer and Ray Land (2003). In this poster presentation, I provide strategies for integrating threshold concepts of writing studies into course writing assignments (informal and formal) to increase participation in academic discourse and academic literacy and to minimize disciplinary gatekeeping.

#### Context:

I focus this presentation on a first-year composition (FYC) course (in this case, ENG 201), a Core 39 writing course at USI. I also study the English department's program objectives for ENG 201 and Core 39 assessment rubric(s) to demonstrate how threshold concepts can further articulate the goals of the department and the university, thus enabling students to more effectively engage within USI's academic community.

#### Approach:

In 2015, Linda Adler-Kassner and Elizabeth Wardle, along with other writing studies scholars, established threshold concepts for writing in *Naming What We Know: Threshold Concepts of Writing Studies* (NWWK). Building on the work of Jan H. F. Meyer and Ray Land (2003), Adler-Kassner and Wardle define threshold concepts as "concepts critical for continued learning and participation in an area or within a community of practice" (2). In this project, I take threshold concepts from NWWK, and I integrate them into formal and informal writing assignments to provide students with a more accessible way to work with key ideas in the field and departmental and university objectives. I provide strategies for creating reading responses that emphasize reflection on course content via a threshold concepts lens. I also demonstrate ways to include threshold concepts into major writing assignments to meet departmental and university goals for the course.

#### Reflection/Discussion:

Threshold concepts, with their accessible interpretations of major disciplinary knowledge, create a bridge for students to cross over the murky waters of entering into a new discipline. Through this approach, students gain confidence in writing and academic discourse

and literacy, which allows them to ease into the work of the university. Moreover, students gain a new way to talk about writing, which can be used in other courses. To that end, then, instructors can take threshold concepts of writing studies and incorporate them into their own courses.

Works Cited:

Adler-Kassner, Linda, and Elizabeth Wardle, editors. Naming What We Know: Threshold Concepts of Writing Studies. Utah State UP, 2015.

Meyer, Jan H. F., and Ray Land. Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines. Occasional Report 4. Edinburgh: University of Edinburgh, 2003. ETL Project, [www.etl.tla.ed.ac.uk/docs/ETLreport4.pdf](http://www.etl.tla.ed.ac.uk/docs/ETLreport4.pdf). Accessed 25 July 2017.

## SHAPING A COLLABORATIVE MODEL OF FOOD SERVICES AND PUBLIC HEALTH: A MULTIPRONGED APPROACH USING INTERPROFESSIONAL EDUCATION

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Keywords: Interprofessional Education, Food Safety, Food and Nutrition, Public Health

### **Abstract:**

#### Topic:

The purpose of this interprofessional education (IPE) project was to introduce and encourage collaborative learning across the two professions of public health and food service management using community expertise. The intended learning outcomes for students were improved communication, collaboration, and conflict resolution skills. Additionally, students were also expected to identify and negotiate specific roles and responsibilities while working with members of another profession.

#### Context:

The project was conceptualized by two faculty from Food and Nutrition, and Health Services programs at the University of Southern Indiana (USI). Undergraduate students and faculty from Quantity Food Production and Purchasing and Public Health courses collaborated with the Vanderburgh County Health Department (VCHD) to ensure best food safety and sanitation practice in a real world environment.

#### Approach:

The faculty partnered with VCHD to provide students with the training and resources related to food safety and public health issues in the area of commercial and quantity food production. Quantity food students were ServSafe certified and public health students study food safety topics for this project while engaging in five IPE activities spread out during one academic semester at the College of Nursing and Health Professions (CNHP). Following the initial meetings and education sessions, students engaged in a final project, where public health students served as food safety inspectors as quantity foods students prepared elaborate cultural meals offered to members from the campus community. Finally, students conducted a debate on food safety issues as a culminating experience for the IPE project.

#### Reflection and Discussion:

Through this inter-professional collaboration, public health students learned the various aspects of reducing risk for foodborne illnesses and quantity foods production students experienced using Hazard Analysis and Critical Control Points (HACCP) plans to maintain food safety while preparing cultural meals. Both groups utilized an audit system that was discussed in advance by them to identify, analyze, and minimize hazards associated with foodborne illnesses. This project was conducted with direct supervision from faculty teaching the two classes. Thus, faculty and students are using IPE as an innovative approach to develop critical work skills among the future generations of food service and public health workers.

#### References:

Brown, A. (2019). *Understanding Food: Principles and Preparation* (6th ed.). Boston, MA: Cengage.

National Restaurant Association Educational Foundation. (2017). *ServSafe Coursebook* (7th ed.). Chicago, IL: National Restaurant Association.

Riegelman, R., & Kirkwood, B. (2014). *Public Health 101: Healthy People-Healthy Populations* (2nd ed.). Burlington, MA: Jones & Bartlett Learning.

## STRUCTURING COURSE DELIVERY UPON STUDENT EVALUATION CRITERIA

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Keywords: feedback; planning

### **Abstract:**

Topic:

Student perceptions of teaching and evaluation may differ from those of the faculty member teaching the course. Without dialogue between the students and faculty members, perceptions of effective and ineffective teaching may be unaddressed. This may impair successful outcomes in the course.

Context:

Dental hygiene students enter the program as a cohort and take the same courses together for 4 semesters. Since the cohort remains the same for the 23 courses taken while in the Dental Hygiene Program, faculty members can implement similar approaches to teaching and evaluation throughout the 2 years to address student perceptions of effective teaching and evaluation methods.

Approach:

Before the class session, a framework is created in Microsoft Word which the faculty member uses during the class session to type student feedback while the document is pulled up on the projector. Fifty minutes is dedicated to open conversation with students to understand what they consider effective and ineffective methods to address five of the ten statements found on the University sponsored course evaluation. The statements include:

- A. The course materials used, such as visuals, texts, handouts, and online items, helped me to learn.
- B. The assignments helped me increase my understanding of the course content.
- C. The instructor clearly communicated the subject matter.
- D. The instructor's teaching style was effective for me.
- E. The instructor evaluated me fairly.

Following the class session, the faculty member reviews the feedback to determine if she already implements the suggestion, already prevents the problem described, will sometimes implement the suggestion, will work on implementing the suggestion more often, or is unable to implement the suggestion. A symbol key representing each of the five actions is placed next to each item on the framework sheet. The document is emailed to students so they know how the faculty member will incorporate their suggestions. Ten to 15 minutes is spent at the beginning of the next class session to answer questions students have about the results.

Reflection:

Students tell me they feel like I listen to them and meet their needs. I better understand what it means to a student to teach and evaluate effectively. Ultimately, student evaluations of teaching have improved as a result of addressing their preferences in teaching and evaluation.

## STUDENT PERCEPTIONS OF A LOW-TECH OPTION FOR ENGAGEMENT AND ASSESSMENT

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Keywords: student engagement, interactive classroom

### **Abstract:**

The focus for the IRB approved study was to explore whether utilizing a simple 'low-tech', inexpensive option in the classroom provided higher perception levels of engagement and assessment (average rating of agree or strongly agree) from both the student and faculty perspective. The research question for this study was 'What are students' perceptions regarding the use of dry erase whiteboards in the classroom as it relates to engagement, formative assessment and learning?'. There is ample literature supporting the use of high-tech 'clickers' or student owned technology to increase student engagement. Oftentimes, these high-tech options require increased cost burden on the student. Low-tech options can be relatively inexpensive and potentially create a similar engaged environment demonstrated in literature without additional financial burden. Small dry erase whiteboards were used by students in multiple imaging science classrooms to answer course review material during lecture delivery. Two cohorts of students utilizing this method were surveyed over assessment, engagement, and learning with Likert scaled items and open-ended questions. The researchers learned that this low-cost, low-tech method of student assessment was well received by students who were in overall agreement with every surveyed item. Faculty perceptions for the study included positive results including active engagement from all rather than a few students. Statistical analysis demonstrated a strong correlation between two survey items related to student assessment indicating that students perceived a positive benefit from the use of this teaching pedagogy related to self-reflection. A suggestion for future research would include measurement of actual student learning outcomes when employing this pedagogical practice rather than just perceived learning and a comparative analysis between this option and other 'high-tech', more expensive options.

## STUDENTS ENHANCING HEALTHY EATING AND ACTIVE LIVING (HEAL) THROUGH SERVICE LEARNING

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Keywords: Service learning, food and nutrition applications, healthy eating and active living

### **Abstract:**

Topic/Problem Statement: Service learning is meaningful community service with instruction and structured reflection to enrich the learning experience and teach civic responsibility. Through service learning, the NUTR 383 students enhanced the HEAL curriculum and met course learning outcomes by applying and sharing food and nutrition principles that promote and encourage simple food and nutrient choices among the HEAL participants. The students reflected on their learning to connect theory to practice while the HEAL participants expressed reciprocal benefits to help enhance their healthy food choices.

Context: Nutrition 383 *Practical Applications and Evaluation of Food Preparation and Nutrition* is a required spring practical food science offering for Nutrition and Wellness and Foodservice Management majors. The HEAL (Healthy Eating and Active Living) program is a grant funded endeavor that promotes healthy lifestyle changes in a church group, specifically All Saints Catholic Parish in Evansville. Students in NUTR 383 and participants in the HEAL program connected in this innovative learning process by constructing, discussing, sharing, and using these materials to make simple healthy food choices.

Approach: Students worked individually on each assigned application after laboratory instruction. Through the applications, students creatively developed printed materials in four application / assignment sets. These sets included weekly dinner and snack menus, Dietary Guidelines and recommendations, suggestions for low cost foods, Nutrition Facts panel interpretation with focus on health claims, and nutrient connections to color choices of fruits and vegetables. The students also submitted recipes, which were assembled into a cookbook for individuals / families and quantity food service management. Each student created two recipes: One with enhanced vegetables (hiding a vegetable within another vegetable) and another with replacement of salt with flavor, herbs, and spices for a bean (legume) soup. This recipe allowed students to show how to promote health and reduce the risk for cardiovascular disease, hypertension, diabetes, osteoporosis, obesity, cancer, and dental caries.

Reflection/Discussion: Both the nutrition students and the HEAL participants benefited from the service learning application and the project cookbook. Students were able to plan menus,

create recipes, and provide nutritional values for educational materials for the HEAL participants. Through reflection the students stated, “I enjoy and value the engaging hands on experience application that broaden my learning capabilities; and “I feel like it was a review of previous things that have been taught in other classes which is nice.” The HEAL participants were very appreciative to receive the supplemental information.

References:

Brinkman, P. & Syracuse, C. (n.d.). Modifying a recipe to be healthier. *The Ohio State Extension Family and Consumer Science Bulletin* HYG-5543-06.

Evers, W., & Mason, A. (2001). Altering recipes for better health. *Purdue Extension Consumer and Family Sciences Bulletin* CFS-157-W.

McGee, H. (2004). *On food and cooking*. New York, NY: Scribner.

U.S. Department of Health and Human Services and U.S. Department of Agriculture. (2018). 2015–2020 Dietary Guidelines for Americans (8<sup>th</sup> ed.). Retrieved from [https://health.gov/dietaryguidelines/2015/resources/2015-2020\\_Dietary\\_Guidelines.pdf](https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf)

## **SURVEY OF DENTAL HYGIENE AND OCCUPATIONAL THERAPY STUDENTS' PERCEPTIONS OF TEAM BEHAVIORS AND CLIENT SATISFACTION DURING AN INTERPROFESSIONAL EDUCATION EVENT**

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Keywords: Dental Hygiene, Occupational Therapy, Interprofessional Team behaviors, Client satisfaction

### **Abstract:**

Oral hygiene is an aspect of daily self-care that has a significant connection to overall health. There is a direct connection between the condition of the mouth, the condition of other systems in the body, and the transmission of infection throughout the body (Azarpazhooch & Leake, 2006; Li, Kolltveit, Tronstad, & Olsen, 2000; Sloane et al., 2013; Stein & Henry, 2009). Daily oral hygiene to maintain oral health has direct benefits for older adults (Bissett & Preshaw, 2011; U.S. Department of Health, 2011). In contrast, a poor oral hygiene regimen is associated with serious risks to overall health, especially in older adults who have been already diagnosed with certain medical conditions and are at risk for health complications (Azarpazhooch & Leake 2006; Li et al., 2000; Salamone, 2013; Stein & Henry, 2009). As patients age and experience a declining health status that leads them into long term care (LTC), oral hygiene tends to receive less attention than other activities of daily living (ADL) (McNally et al., 2012). Occupational therapy (OT) practitioners and dental hygienists (DH) share similar goals in the effort to improve oral healthcare in all populations. Shared assessments include both cognitive and physiological performance skills. Through a collaborative service learning activity, OT and DH students demonstrated interprofessional skills while performing oral and upper body screening of adult clients from the. Survey results indicate positive student perceptions of team planning, as well as high patient (adult volunteer) satisfaction in the care provided.

## THE IMPACT OF CLASS DELIVERY MODE ON STUDENT-FACULTY INTERACTION AND MASTERY GOAL ORIENTATION

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Keywords: Class delivery mode, student-faculty interaction, and mastery goal orientation

### Abstract:

**Topic/Problem statement:** A host of literature points to the significance of active/collaborative learning as a means of enhancing student engagement and subsequent learning. Recently, questions have been raised as to the efficacy of the approach for different learning contexts (face-to-face versus online). The present research explores the following question: how does class delivery mode influence the efficacy of active/collaborative learning? Specifically, we examine perceived differences across delivery modes as well as if the effect of class delivery mode works through (is mediated by) perceived student-faculty interaction to influence student mastery goal orientation.

**Context:** Students completed a questionnaire related to their perceptions of the classes and their learning at the end of four classes: two sections of a marketing principles introductory class (one face-to-face and one online) taught by the same instructor using the same class assignments; and two sections of a marketing management capstone class (one face-to-face and one online) taught by the same instructor using the same class assignments.

**Approach:** Note that we controlled for instructor, assignments, and level of classes. The literature often critiques comparisons of face-to-face versus online class formats for a failure to control such factors. This research also measures important student process perceptions identified in the teaching and learning literature which have been tied to the effectiveness of active/collaborative approaches. These included: *perceived student-faculty interaction* which assesses instructor provision of feedback and facilitation of discussion (adopted from Carini, Kuh, and Klein 2006); *mastery goal orientation* which assesses the extent of emphasis on understanding rather than memorizing content, enjoyment of learning, and performance improvement (adapted from Anderman and Midgley 2002; Church, Elliot, and Gable 2001); and *perceived student engagement* which assesses student perceptions of the class learning environment (adopted from Church, Elliot, and Gable 20001).

**Reflection/Discussion:** Significant differences between the face-to-face and online delivery mode were observed with face-to-face classes having stronger perceived student-faculty interaction and mastery goal orientation than online formats. Interestingly, both delivery modes were equally engaging. Further, class delivery mode (face-to-face versus online) was a significant predictor of perceived student-faculty interaction. Lastly, delivery mode was found to work through student-faculty interaction to influence student mastery goal orientation. These findings hold implications for adapting and strengthening active/collaborative learning to online delivery. Specifically, there is a need to explore at a more nuanced level how the perception of student-faculty interaction can be enhanced for online delivery to positively influence student mastery goal orientation which has been tied to deeper, longer lasting learning.

### **References**

Anderman, E.M. and Midgley, C. (2002), "Methods for studying goals, goal structures, and patterns of adaptive learning", in *Goals, Goal Structures, and Patterns of Adaptive Learning*, ed. C. Midgley, pp. 1-53. Erlbaum, Mahwah, NJ.

Carini, R.M., Kuh, G.D. and Klein, S.P. (2006), "Student engagement and student learning: Testing the linkages", *Research in Higher Education*, Vol. 47 No. 1, 1-32.

Church, M.A., Elliot, A.J. and Gable, S.L. (2001), "Perceptions of classroom environment, achievement goals, and achievement outcomes", *Journal of Educational Psychology*, Vol.93 No. 1, 43-54.

## TRAINING IMPROVES STUDENT PERFORMANCE AND PERCEPTIONS IN SMALL GROUP LEARNING

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### **Abstract:**

Fifty percent of course contact time in the “renewed” curriculum at Indiana University School of Medicine (IUSM) was dedicated to non-didactic, small-group learning. End of course evaluations indicated that students did not understand or value the approach, perhaps due to lack of training in this methodology. Our aim was to determine if engaging students in training designed to enhance small group dynamics and explain outcomes of this approach would result in improved small group performance and enhanced perceptions. Following IRB approval, small-group case-based sessions were audiotaped on two occasions prior to training (Pre), and two additional sessions following training (Post). Recordings were evaluated and scored by trained evaluators using a rubric including the following categories: Participation, Shared Roles, Focus on Learning Objectives, Approach, Independent Thinking and Interpersonal Interaction. Scores for each category were averaged across the three evaluators both Pre and Post. Additionally, to assess student perceptions, a 15-question survey was administered at three time periods: 1) before any small group sessions or training; 2) after recording two small group sessions and directly prior to training; and 3) following training and after recording two additional sessions. Survey questions included topics such as personal preparation, interpersonal interactions, prior undergraduate experience, and perceptions of small group as an effective learning strategy. Question responses were based on a Likert scale of one through seven. Although work is ongoing, preliminary data analysis using paired T-tests indicate that participation scores increased following training, with members participating more equally and encouraging input from each other more frequently. There was little change in rubric scores for other criteria including ability to share roles and addressing learning objectives. Survey responses reveal that students enjoy small group sessions more, contribute more equally, and have fewer tangential discussions in comparison to the pre-training survey responses. These data suggest that students participating in small group learning sessions benefit from training in this approach, and such training will enhance student perceptions regarding effectiveness of this learning strategy.

## UNDERSTANDING RETENTION PATHWAYS AND BOTTLENECKS OF STEM MAJORS: IMPLICATIONS FOR STUDENT SUCCESS

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Keywords: Retention; Science, Technology, Engineering, and Mathematics (STEM); Systems Thinking; Active Learning

### **Abstract:**

The goals of this project are to increase faculty member's knowledge about evidence-based student retention, instructional best practices, and understanding bottlenecks and other factors impeding student progress in STEM at University of Southern Indiana (USI). In particular, hands-on experiences through group work and engaging students with early undergraduate research contribute significantly to student learning. To accomplish these goals, a working group consisting of faculty members from across the Pott College of Science, Engineering, and Education initiated discussions in Fall 2017 to examine retention factors and bottlenecks. In order to support these activities, the working group secured an Innovation Grant through the Pott College with the goal of developing individualized projects focusing on increasing retention of STEM majors and improving student learning. To assist with our shared efforts, reference materials are made available through SharePoint, Trello is used to document developing hypotheses and activities of the working group, and in-person meetings are held at least once a month to discuss the readings and to share updates on individualized projects.

Initially, a systems map was created by the working group to analyze retention pathways of STEM majors at USI. Systems thinking is an effective way to understand the complexity of a topic, identify links among themes, and discover potential individualized research directions.

Each working group member then created their own systems map to better constrain their specific area of interest. Research projects that originated from this process include: (1) comparing student attitudes towards group work implementations in introductory Physics courses; (2) evaluating the effectiveness of Pre-Calculus as a preparation for college-level Calculus; (3) exploring the impact of course repeats on student success in the Pott College; (4) increasing retention rates of STEM majors through an early undergraduate research program; and (5) using a faculty learning community and systems mapping to engage faculty members with pedagogical research. Selected student learning outcomes of these projects include: (1) improved comprehension and problem solving skills through group work and active learning, and (2) enriched student engagement through early undergraduate research. Furthermore, faculty members supported one another through the process of Institutional Research Board (IRB) training, the IRB approval process, and securing student data from the Office of Planning, Research, and Assessment.

The results from this project will support longer-term retention initiatives and inform strategies to improve student success and retention of STEM majors in the Pott College at USI. In addition, these projects will better position the Pott College to seek external funding (such as National Science Foundation S-STEM program or Howard Hughes Medical Institute Inclusive Excellence program) to support student retention efforts. Finally, classroom strategies that result in improved student learning will be expanded to other sections of introductory courses in mathematics and physics.

## USI OT/OTA TOY ACCESSIBILITY PROJECT

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Keywords: Toy, Occupational Therapy, Adaptation

### **Abstract:**

Topic/Problem Statement:

The role of an occupational therapy professional is to ensure that individuals can participate in daily life activities. Play is the work of children. All children grow and develop from play experiences. For some children with disabilities, participation in play can be limited due to physical and/or cognitive deficits. Children with disabilities can utilize switch-operated toys to more easily engage in play. The occupational therapy (OT) and occupational therapy assistant (OTA) programs decided to work together to modify toys for children with disabilities in our community as a service learning activity.

Context:

Occupational therapy students and occupational therapy assistant students make up the USI Student Occupational Therapy Association (SOTA). The SOTA program applied and received the USI Endeavor Grant in the fall of 2018. The grant was written by two OT students, one OTA student, and two OT faculty members. The funds from the grant will allow students to learn how to adapt battery operated items using switches. Students will be able to use this skill in future professional occupational therapy practice.

Approach:

According to Hamm (2005), play experiences provide children with practice for skills that they require in adult life. Children learn from interactions with peers through play. The OT and OTA students received education and training on modifying a battery-operated plush toy into a switch operated toy. The process for adapting the toys was provided by the robotics program at Ivy Tech. This process included learning how a simple electrical circuit works, evaluating the toy, splicing together wires, and connecting the switch to the toy. Toys were presented to the Evansville Vanderburgh School Corporation and Easter Seals Rehabilitation Center during December and January. A total of 50 toys were switch adapted by the OT and OTA students.

Reflection/Discussion:

After the toy adaptation sessions were completed, OT and OTA students were asked to participate in an IRB approved research study regarding the service learning experience. Results indicated most students believed this activity helped them make a difference and become more aware of the needs in the community. A majority of the OT and OTA students also reported this activity reinforced problem-solving skills and critical thinking. The OT and OTA students will present the outcomes of the project at the USI Endeavor Symposium in April 2019.

References:

Hamm, E. M., Mistrett, S. G., & Ruffino, A.G. (2005). Play outcomes and satisfaction with toys And technology of young children with special needs. *Journal of Special Education Technology, 21(1)*, 29-35. Doi:10.1177/016264340602100103

## USING A MIX OF STRATEGIES TO PREPARE NURSING STUDENTS FOR DISASTER RESPONSE

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Keywords: Disaster preparedness for nursing students; Teaching strategies for disaster preparedness

### **Abstract:**

Undergraduate nursing faculty are expected to prepare students to participate as members and leaders of interprofessional teams that provide emergency services in their communities. The BSN Essentials indicate that the baccalaureate nursing program must prepare graduates to “use clinical judgment and decision-making skills in appropriate, timely nursing care during disaster, mass casualty, and other emergency situations” (The American Association of Colleges of Nursing, 2008, p. 25).

### **Context:**

Nursing 455: Population-Focused Nursing Practice is taken Fall semester of the senior year. The course promotes development of disaster preparedness competencies through seminar, online clinical modules and simulation. Students are expected to apply principles of SALT triage, plan and set up a shelter, conduct a shelter guest intake and health needs assessment, and use the medical evacuation sled in a seminar setting on campus.

### **Approach:**

The disaster preparedness clinical education includes seminar, independent online learning and simulation. The clinical activities include the following:

- Completion of the SALT Triage and the FEMA IS-100 course independently online prior to the seminar day.
- Completion of “Stop the Bleed” which includes skills demonstration of wound packing and tourniquet application.
- Demonstration of evacuation of a victim down a staircase using a Med Sled.
- Tour of the Physical Activities Center (a Red Cross designated shelter) and development of a shelter set up plans.
- Use of case studies with Red Cross shelter forms.
- Demonstration of triage competency using patient triage training cards.

#### Reflection/Discussion:

A mix of educational strategies was used to prepare senior level nursing students for response during a disaster. Students demonstrated the ability to apply the principles of SALT triage, plan and set up a shelter, conduct a shelter guest intake and health needs assessments, and use the medical evacuation sled. Students were actively engaged, and learning occurred through the simulation.

#### References:

- American Association of Colleges of Nursing (2008). The essentials of baccalaureate education for professional nursing practice. Retrieved from <http://www.aacnnursing.org/Portals/42/Publications/BaccEssentials08.pdf>
- American College of Surgeons (2015-2016). Stop the bleed. Retrieved from <http://www.bleedingcontrol.org/>
- Federal Emergency Management Agency. (2018). IS-100.C: Introduction to the incident command system, ICS 100. Retrieved from <https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>
- MESH Coalition (n.d.). Adult patient triage cards. Retrieved from <http://www.meshcoalition.org/products/patient-triagecards>
- National Disaster Life Support Foundation (2015). SALT mass casualty triage on-line training. Retrieved from <http://register2.ndlsf.org/mod/page/view.php?id=2056>

## **USING WORLD LITERATURE TO BUILD CULTURAL AWARENESS AND INCREASE COGNITIVE FLEXIBILITY**

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