



2018 Celebration of Teaching Learning Symposium - Abstracts

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Designing Active Learning Exercises that Utilize Multiple Learning Strategies

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Focus area:

Improving student engagement and motivation

Governing bodies for higher education have encouraged curricular reform supporting more active and integrative learning. In response, Indiana University School of Medicine “renewed” its curriculum and asked that all courses commit at least 50% of student contact time to active learning strategies (non lecture). One particularly effective new learning exercise was a collaborative small group activity designed to reinforce key concepts in renal processing of ions and nutrients, and at the same time utilize multiple learning strategies. Evidence based learning strategies incorporated included: small group collaboration, peer teaching, retrieval practice using “clickers,” and elaboration through discussion (Mayer 1980, Slavin 1980, Van Boxtel and Veerman 2000, Webb 1991). A convenience sample 23 students was assembled and completed a five question anonymous survey providing feedback. Survey responses indicated perceived usefulness of the exercise with average Likert scores of 3.7 on a maximum 4.0 scale. Response to open ended questions were also very positive. Customized National Board of Medical Examiner (NBME) exam scores further substantiated student perceptions. Student completing this exercise averaged 79% correct responses on questions mapped to this exercise compared to 76% correct responses for students nationwide. This nephron mapping exercise provides a model for designing exercises that promote use of Bloom’s higher order skills and engage students in methods proven to enhance learning. Although this exercise included physiology content specific to the kidney, others could use this exercise as a model for developing interactive exercises for diverse learners (high school through post-graduate) in any discipline.

A Case Study in Deploying Experiential Learning in Fast Paced, Large Online Classroom Environment

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Focus area:
Learning in specific settings or contexts

Online education is rapidly gaining momentum in higher education. Online delivery mode is especially gaining tractions with professionals looking to further their career by obtaining Master of Business Administration degree. This student segment is actively seeking for flexible learning environment to allow them to successfully balance professional career, family commitments and school obligations. Furthermore, they expect immediate benefit and practical application of newly acquired knowledge in their professional life. On the other hand, MBA granting institutions are meeting the growing demand by introducing programs and courses allowing for large enrollments (30 -250) and intensive/shorter duration (7-8 weeks). The faculty is under pressure to deliver intensive, practical, rigorous, and scalable courses.

Information Visualization & Dashboarding course was offered as a newly created course in USI's rapidly growing online MBA; data analytics track. This seven-week course could meet its five main objectives by adopting highly structured experiential learning. Experiential learning is the process of learning through reflection on doing (Kolb 1984). While the value and need for experiential learning in business programs is noted in higher education (McCarthy & McCarthy 2006), successful implementation in 100% online and intensive environment that requires acquisition of technology skill to allow for 'doing' is rare.

The course was delivered to 44 students of various backgrounds though 7 modules, each consisting of module overview, 6 lessons, lesson quizzes, module exam & experiential hands-on assignment with brief reflection. All instructional materials (videos, readings and assessments) were highly customized, closely coupled and reinforcing each other. The emphasis was placed on practical value of the content and immediate applicability. Students were provided the avenue for continued feedback on course structure and effectiveness. Early feedback suggests this is one of most intensive (15-20+ hours of work per week), practical and effective courses in the MBA curriculum. Early indication is that this course structure can scale to hundreds of students with incremental investment in academic coaches and technology mentoring.

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Using Active Learning and Open Educational Resources to Improve Student Access and Engagement

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To increase student engagement and access to course materials, the Mathematics Program at Kentucky Wesleyan College (KWC) expanded the adoption of Open Educational Resources (OERs) and active learning techniques in mathematics courses ranging from MATH095 – Foundations of Algebra to MATH402 – Analysis I. A meta study of the use of OERs suggests that the use of these materials is at least as effective as materials from traditional publishers (Hilton, 2016) while drastically decreasing or eliminating the cost to students. Additionally, many studies indicate that the use of active learning can increase student engagement and passing rates while diminishing the achievement gap for women and low-achieving students (Laursen, 2014; Freeman, 2014; Asera, 2001).

Given the varying levels of preparation and positive perceptions of mathematics between general education and upper-level mathematics courses, the implementation of OERs and active learning varied between courses. Some courses were redesigned to consist entirely of active learning techniques while others augmented a more traditional lecture approach with active learning experiences. In this presentation, we will describe the decisions that lead to this approach as well the types of OERs and active learning techniques that were adopted. A discussion of the successes and frustrations we experienced while implementing this project will hopefully encourage and assist others in following suit.

The Role of Active Learning and Student-Faculty-Interaction in Student Lifelong Learning

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Improving student engagement and motivation
Learning in specific settings or contexts

The notion of transformative learning, learning that moves beyond content to impact motivational commitment beyond the classroom is a focus of higher education. While a laudable goal, questions exist as to the specific cognitions involved in the process of driving lifelong learning. The self-regulated learning perspective has become a dominant viewpoint from which to explore transformative (lifelong) learning. Self-regulated learning views students as active participants in the learning process. Within self-regulatory frameworks, cognitive and motivational mediators are posited to influence the relationship between the classroom experience and student performance. The significance of self-regulatory learning is that it develops capacity for continuous learning beyond the classroom. The present research examined relationships among several key self-regulatory concepts. The sample for the study consisted of students who were assigned classes in a classroom specifically designed for active/collaborative learning at USI. Eight different classes were assigned this learning space. While classes utilized different content-related in-class activities, all classes employed student group activities as a significant component of the in-class experience. Paper questionnaires were distributed toward the end of semester classes. The distribution procedure resulted in a total of 206 completed questionnaires. Conditional process analysis was used to provide a rigorous test of direct and indirect effects of independent variables on a dependent variable. Consistent with predictions, student perceptions of active learning were found to interact with perceptions of student-faculty interaction to influence a student's mastery goal orientation such that stronger active learning perceptions have a greater effect on mastery goal orientation when students perceive lower student-faculty interaction. Further, this interaction was found to work through mastery goal orientation to influence student self-efficacy for self-regulated learning. Implications of this research point to the significance of the use of active learning to help drive students' mastery goal orientation and self-regulatory capacity.

Using Online Videos to Promote Active-Learning and Student Success

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Improving student engagement and motivation

Active-learning in introductory physics classes, according to conclusive evidence in the physics education research literature, increases student grades, retention and learning. To include active-learning in class without compromising content, students need to acquire knowledge prior to class. Typically, this takes place by asking students to read the textbook and then take an online quiz based on what they read. In general, physics textbooks may be confusing, skip steps in theoretical proofs and example problems, and fail to demonstrate the coherence and organization of the discipline. This project sought to replace textbook reading assignments with short online videos prior to class in order to promote active learning in class. During the Spring 2017 implementation in General Physics II (PHYS176, algebra-based), the average normalized student learning gain of electricity and magnetism concepts was 55%. This learning gain is significantly higher than the national average of 23% of calculus-based electricity and magnetism introductory physics courses. Students completed the pre-class assignment almost all the time and found the online videos helpful for their learning. Thus, the use of online videos as part of pre-class assignments can significantly increase student learning.

Online synchronous virtual classroom:
How to decrease student anxiety and increase engagement

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Focus area:
Improving student engagement and motivation
Learning in specific settings or contexts

An online synchronous virtual classroom can create anxiety and apprehension in students. Through strategic approaches, students can increase connection and engagement and decrease their anxiety. SOCW402: Social Work Practice I and SOCW412: Social Work Practice II are seminar courses senior BSW students take concurrently while completing their required internship. Online synchronous sections of these courses have allowed students the opportunity to complete their internship in geographic areas outside of the surrounding campus communities. It has broadened their internship opportunities, yet created some anxiety in taking an online synchronous seminar course. Research into effective online instruction reveals the importance of having a strong presence of the instructor as well as creating online active learning opportunities that are collaborative in nature. Research also indicates quality online instruction can be just as effective as face to face instruction in the classroom (Dixson, 2010). Through several years of teaching this synchronous format and evaluating student feedback, key areas have emerged that help to decrease anxiety in students and increase connection and student engagement. The first thing is to recognize there are actually more similarities than differences between learning in a traditional classroom and learning in a synchronous online format. Students are required to be on time, limit distractions, come prepared with textbook (and reliable technology), prepared for class discussion/content, and be actively engaged. These expectations can be accomplished regardless of face-to-face classroom or whether face-to-face through the use of a video-conferencing application. Choosing the correct web based video-conferencing application is important. When students view the application as easy to access and use, the interactions between student and instructor and student to student becomes second nature. Other keys to a successful synchronous online course include: availability of the instructor, creating a detailed syllabus and a well-designed Blackboard course, providing clear expectations both in writing and verbally at the beginning of the semester and emphasized throughout the course, as well as the thoughtful designing of discussions and activities to encourage group-centered interactions. The outcomes of being diligent in these practices has resulted in students indicating the courses set high standards of practice and required active participation; and students indicating they felt connected to the instructor and fellow students. Students have overwhelmingly indicated the web based synchronous virtual classroom was a positive experience for them in completing their internship and BSW degree.

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Let's Play: 'Gamifying' the Introduction to Social Psychology course

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Focus area:

Improving student engagement and motivation

Effective educators use creative approaches to capture attention, promote engagement, and enhance student success. As such, in the Spring of 2017, I 'gamified' the Introduction to Social Psychology. Gamification is the application of game elements to non-game settings [1]. Research suggests that adding elements, such as 'Experience Points' (XPs), 'Achievement Points' (APs), and the 'Freedom' to choose the level of expertise (e.g., beginner), leads to greater student engagement, enjoyment, and success [2, 3]. A majority of the 28 students were Psychology majors (50%), with the remainder Undecided or from a myriad of disciplines. My objectives for the students were to 1) apply scientific method(s) in social psychological research, 2) demonstrate knowledge of the major theories and findings, and 3) recognize and appraise how basic theory and experimental results apply to their lives. To meet these objectives, teams of three completed challenges (e.g., quizzes, exams) and quests (e.g., a research journey, 'show and tell') to earn XPs. The winning team of 'social psychologists' demonstrated their newly acquired mastery on the topics covered during the semester. Students were able to earn APs by completing Optional Assignments (OAs; e.g., summarizing a research article) to 'unlock the door' and give them 'special powers' (e.g., skip exam questions). The principles of operant conditioning [4], suggest that behaviors are strengthened when they are reinforced. As such, the motivational mechanisms (i.e., rewards, e.g., 'special powers') of gamification increased the students' interest and engagement that led to improved learning and socialization [5, 6]. Of the nine groups, only one completed the OAs suggesting that most of the students did not think that the 'reward' was worth their effort. Students' feedback was mixed. One of the students "enjoyed the class a lot", while for another student "[t]he material [was] boring, but she tried to make it interesting." Based on my observations, most of the students appeared to be engaged throughout the semester and enjoyed the varied game activities (e.g., discussions). Due to the lack of comparison groups and a formal systematic assessment, I am unable to draw definitive/quantitative conclusions of the effect of gamification on students' engagement and success. Nevertheless, the inclusion of gamification to my class facilitated my understanding of student engagement. In the future, placing a greater emphasis on OAs and APs and incorporating gamification software to build quests, award points, and keep track of progress will facilitate assessment while potentially increasing students' engagement and success.

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Why Won't Our Students Speak Up in Class?

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Focus area:

Improving student engagement and motivation

My proposed session is a follow-up to my presentation from the past year, as I have collected additional data.

Focus/Problem Statement: Do we expect our students to act like extraverts, when data shows that 70% of them are introverted?

Context: I've collected DISC profile data from 345 undergraduates and over 200 graduate students, which is more than double what I had at this point last year. This data has provided valuable evidence that can help any educator better connect to their students.

Approach: The DISC profile is a widely-used personality inventory assessment in industry (probably second to Myers-Briggs-MBTI).

The DISC profile, based on the work of William Moulton Marston, is a 2X2 model of the interaction between introversion—extraversion and task focus—relationship focus. The model contains four main “types” Dominance (extravert/task), Influence (extravert/relationship), Steadiness (introvert/relationship), and Compliance (introvert/task), with combinations of these variables yielding 15 different profiles.

Compared to MBTI, the DISC is easier to interpret and to teach to students. I've successfully taught students the DISC in 1-2 class periods, whereas MBTI took much longer. Using the profiles to guide my pedagogy resulted in more engaged students and better performance on team projects.

While some scholars will dispute the finer points of these instruments, in practice the benefits outweigh the flaws.

Brief Results: Because 70% of my students are introverts, I've learned to subdue my bias towards the extravert ideal.

Reflection: The DISC is simple to learn and administer. I wish more of my colleagues could benefit from using it in their classes.

Supplemental Instruction - What is SI?

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Focus area:

Improving student engagement and motivation

Learning in specific settings or contexts

Fostering inclusion and civility

Students often become overwhelmed with the amount of information to be learned in a course, and often feel underprepared for exams. SI can provide peer-led study sessions that demonstrate effective note-taking, discussion, critical thinking, and a variety of review methods, including continuous review. The scheduled 2-3 sessions per week throughout the weeks of the semester offer students planned study time and review. All sessions are open to all enrolled in the particular course. Feeling more prepared and confident with the material, not only produces higher test scores, but students participate in class and are less hesitant to ask questions.

SI Leaders are students who have already successfully completed the course and have successfully met the required criteria, as well as, final approval of the course professor. Leaders have completed or will be completing training offered through the College Reading and Learning Association (CRLA) of which the department of Academic Skills is accredited.

Defining SI, along with a bit of history, will demonstrate the benefits of the Supplemental Instruction program for both students and professors.

Atypical use of audience response system provides students the opportunity to formatively assess faculty teaching and improve learning outcomes

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Improving student engagement and motivation

Use of audience response systems (“clickers”) offer faculty the ability to formatively assess student learning. Unfortunately, this technology is very rarely - if ever - used to provide students the opportunity to formatively assess faculty teaching. Over the past two years, Indiana University School of Medicine completely reformed its curriculum. Reform efforts led to a variety of innovative and experimental teaching and learning methods. One new method involved a series of nine classroom sessions that were based on clinical cases and engaged a panel of experts (physiologist, pathologists, pharmacologists, and physicians). Panel presentations were interactive, and delivered course content via livestream to all 360 second year medical students enrolled at nine different campus sites. In order to assess the effectiveness of this entirely new approach, a series of four questions were delivered via an audience response system to all students at the end of each three hour session. Students responded to the following questions: 1) To what degree has this session required you to utilize higher order skills?; 2) on a scale of 1-10 rate your overall level of engagement; 3) estimate the percentage of time you remained focused; and 4) please share what went well and suggestions you have for improvement. Response to questions following the first session indicated that only 10% of students viewed the session as requiring very high levels of engagement, 55% of students reported high to very high levels of engagement, and 55% felt they remained focused for 70% or more of the class period. Students provided many informative responses to open ended questions. Based on student input, faculty made revisions prior to delivery of the next class session (next day) including addition of more challenging and interactive questions, narrative to slides, and summation of cases. Each day changes were made based on student input. By the ninth (final) session, over 30% of students indicated the session required very high levels of higher order skills, 80% reported high to very high levels of engagement, and 75% felt they were able to remain focused over 70% of the session. At all levels of education, student feedback is essential as faculty seek to design applicable and intellectually challenging learning exercises that students find useful and enjoyable. In this study, innovative use of an audience response system allowed faculty to gather student feedback that resulted in improvement in student engagement, focus, and utilization of higher order skills.

Incorporating a brief mental health curriculum into a course for college freshmen can increase student awareness and early intervention for mental health problems

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Focus area:

Improving student engagement and motivation

Student retention through graduation is negatively impacted by impaired mental health (Pedrelli, et al. 2015). According to an annual report by the Center for Collegiate Mental health (CCMH), more than 150,000 college students sought treatment for mental health concerns in 2016, which was a 50% increase over 2015 (CCMH, 2016). The purpose of this presentation is to suggest a potential model to engage students in conversations related to mental health. By empowering peer educators to address and open conversations about mental health concerns in a preemptive way, students will benefit. A mental health curriculum was developed to be piloted in a course required for all college freshmen. Objectives were to direct students to (a) self-assess mental health status, (b) recognize mental illness and suicide threat behaviors, and (c) identify and acquire mental health care. Student learning to meet the objectives occurred through media presentation, providing students with relevant resources, faculty presentation and guided discussions among small student groups. Campus and community resources were provided, and a team member from the USI Counseling Center participated in a majority of class sessions. Students were assigned to small peer groups to work together for the purpose of generating short videos that demonstrated strategies to deal with relevant hypothetical cases based on real life experiences. Class discussions encouraged student reflections of the cases and alternate perspectives were encouraged among the class. The short curriculum has been incorporated into UNIV101 courses for four semesters, which has involved more than 250 students. Pre/post surveys consisting of seven questions on a four-point Likert scale showed significant differences from pre to post on every question in every cohort ($p < 0.001$). This provided evidence that student knowledge and perceptions were positively impacted by the brief mental health curriculum, indicating that it was highly successful in meeting stated objectives. Mental health impairment often interferes with a student's school performance, and many factors prevent students from seeking help, including stigma that surrounds mental illness, lack of adequate resources and student knowledge about those available resources. This project addressed all those issues.

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Nursing Student Led CPR Training for High School Students

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Improving student engagement and motivation
Learning in specific settings or contexts

In 2014, House Bill 1202, authored by Representative Ron Bacon, became law. This bill mandated that high school students receive instruction in performing cardiopulmonary resuscitation (CPR) and the use of an Automated External Defibrillator (AED) prior to graduation. The University of Southern Indiana nursing program partnered with the Evansville Vanderburgh School Corporation (EVSC) to meet this requirement. The EVSC purchased the 'CPR in Schools' program which includes a video, handouts, and simple, lightweight manikins. Hands-Only CPR was the method chosen to teach to the high school students. This course eliminates mouth-to-mouth ventilation making it simple and increasing the likelihood that rescuers will come to the aid of a cardiopulmonary arrest victim. Nursing students enrolled in the Population Focused Nursing Practice course received training in teaching "Hands-Only CPR."

This activity integrates service learning with the practice of teaching. Evidence has proven that service learning is an educational practice which strengthens integration of key course objectives, improves student understanding of community and social issues, and influences the initiation of civic action. In 2008 the University of Southern Indiana received recognition and was classified as a Community Engagement University by the Carnegie Foundation. This recognition is used in self-assessment and quality improvement by the university and is reassessed by the Carnegie Foundation on a five year cycle. Community engagement is defined by the foundation as collaboration between institutions of higher education and their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

Since 2015, USI nursing students have taught nearly 3500 high school students how to perform "Hands-Only CPR." In a study conducted during the EVSC school year 2016-2017, 25 USI nursing students taught Hands-Only CPR to local high school students. Assessment of a before and after perceptions of the nursing students' teaching event yielded positive results. The results showed significant improvement in the students' perception of their teaching ability to include demonstration of CPR, use of appropriate teaching strategies, and achievement of learning outcomes.

This experience not only provides the student with increased confidence in the important nursing role of teaching but is routinely mentioned on evaluations as a gratifying and a highly valued/favored experience for achieving learning outcomes. The EVSC frequently expresses their gratitude for the assistance provided by the university in providing this life-saving, required education to high school students in our community.

Expect the Unexpected: Unraveling Learner Perceptions through Simulation and Debriefing Using Critical Conversations

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Improving student engagement and motivation

Simulation is an innovative teaching strategy that bridges classroom learning and clinical experience. Beginner students can work at building confidence in performing fundamental skills while experts can expand their knowledge base. While simulation has primarily been used to improve clinical competencies, little work has been accomplished in promoting critical conversations with the learner. The simulation environment allows learners to make mistakes while gaining powerful insight into the consequences of their actions. A simulated clinical experience followed with debriefing provides the opportunity for learners to actively engage and participate in reflective discussions of the experience through critical conversations. These critical conversations enhance learning and advance critical thinking (Jeffries, Dreifuerst, Kardong-Edgren, & Hayden, 2015).

Simulation can have a powerful impact on learning. The International Nursing Association for Clinical Simulation and Learningsm (INACSL) is the global organization that maintains standards to promote excellence in healthcare simulation. INACSL (2017) recommends that all simulation experiences begin with the creation of a prebrief environment where learners feel safe to participate in potentially uncomfortable situations. During the prebrief, all simulation-based experiences need to develop measurable objectives which assist learners in achieving expected outcomes. Objectives should be developed prior to the simulation using the SMART framework: specific, measurable, assignable, realistic, and time related. Simulation-based education should adhere to the criterion put forth in the standards to facilitate expected outcomes (Lioce et al. 2015). Following the simulation, a planned theory-based debriefing component will assist learners through several stages of discussion used in critical conversations: an initial reaction phase, an analysis phase, and ending with the final phase of summarizing learning (Forneris & Fey, 2016). Critical conversations structured within the debriefing help guide thinking and understanding for both facilitator and learner. It is in the debriefing where essential learning occurs (O'Brien, Hagler & Thompson, 2015).

Critical conversations can be used across multiple disciplines and beyond the classroom. Creating an environment which promotes learner engagement and transference of knowledge will assist in development of the learners' professional roles. While facilitation extends well beyond the simulation experience, critical conversations aim to support learners to think critically in any environment (O'Brien, Hagler & Thompson, 2015).

Concept Mapping in the History Classroom

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Focus area:
Improving student engagement and motivation

This project focuses on the uses of concept maps in the history classroom. They have been a useful tool in my classes (including 100-level to 400-level) to introduce students to the historical craft. However, in recent years the maps have not been as useful in engaging students on a deeper level of thinking; therefore, I have begun to experiment with changing the format of the maps. The older maps simply had students identify an author's argument/thesis, evidence, conclusions, and the student had to ask an analytical question based on their reading. Because the historical profession has become embattled in the current political context, it has become more important in the history classroom to teach students historical literacy. A new literature has emerged on how to teach those skills in the classroom (see: Downey and Long, Teaching for Historical Literacy). Additionally, the research on concept maps in the classroom have been mixed. In some literature, it is recommended that the students create their own maps, while in others it recommends having a set map. I have created a new concept map framework that asks students to identify the author's sources and test their legitimacy, additionally, the students must fix the author in the larger historical scholarship. I have also given the students the option to create their own map rather than use one that has been created for them. Another addition to the new map is a reflection question asking the students if the reading challenged their thinking. This new format is an effort to bring historical literacy into all levels of my classes, including freshman, and to encourage students to think critically about any information that they come across. I used this map during the fall 2017 semester and will present on the successes and failures of this first trial.

Enhancing Critical Thinking for Students in the Undergraduate Bachelor Program

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Improving student engagement and motivation
Learning in specific settings or contexts

Focus/Problem State: Critical thinking for nurses involves the ability to logically connect ideas and evaluate evidence to systematically identify irregularities and problem solve to support optimal patient outcomes. These skills are often difficult for the novice nursing student to obtain. Critical thinking requires students to use the information they have previously learned and connect to relevant patient scenarios. The inability to do this, may hinder the student's progression in the nursing curriculum. Promoting critical thinking skills involves faculty to employ teaching strategies requiring students to be actively engaged and involved in decision making.

Context: Analysis of the early undergraduate medical/surgical nursing courses, revealed a need to improve teaching strategies than would enhance the development of appropriate critical thinking skills. The extensive amount of content delivered in an eight week course limited students' ability to develop strong critical thinking skills. Students reported some content was difficult to apply in clinical scenarios, which hindered their ability to critically think through those particular exam questions. The revelation of a knowledge deficit regarding appropriate study habits and test taking skills reinforced the need for more active learning strategies to be demonstrated within the classroom.

Approach: Three nursing course coordinators strategized on how to incorporate multimodal learning styles into the classroom setting to enhance critical thinking skills. Using the Constructivism Theory faculty developed active learning experiences allowing students to connect course content to clinical scenarios. Examples included concept mapping to deliver class content and enhance critical thinking. Another strategy was a kinesthetic activity engaging students in hypothetical urgent situation requiring them to respond and problem solve to ensure "patient" safety. This modality allowed the learners to analyze their knowledge and apply it to the experience/scenario. Building upon these activities, a Venn diagram was utilized to reflect the similarities between the two types of diabetes, and differentiate the pathophysiological processes.

Reflection/Discussion: Utilizing different teaching methods within the classroom setting has fostered the development of students' critical thinking skills. In addition, it was fascinating to see the students "become a nurse" during the kinesthetic activity. During the kinesthetic debriefing students realized how much they knew and were able to unknowingly apply in the scenario. Reflecting on these strategies, faculty recognized a need to continue and further develop methods actively engaging students in the classroom promoting critical thinking.

Eight Professions, 18 teams, One Goal

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Focus area:

Learning in specific settings or contexts

With the passage of the Affordable Care Act in 2010, interprofessional education (IPE) was endorsed by the federal government. Colleges and universities were charged to train health care professional students to work collaboratively to improve client outcomes, contain or decrease healthcare costs, and increase client satisfaction. The College of Nursing and Health Professions received a federal grant from Health Resources and Services Administration (HRSA) to train student to work in interprofessional teams. Students from eight professions formed 18 teams with one goal to learn to work collaboratively in effective interprofessional teams. They were placed in local nurse led health clinics located in local title one elementary schools, and the Veterans Administration health clinics. Each team was under the direction of a faculty member who served as a clinical coach. The students were from The College of Nursing and Health Professions and the Social Work Program in The College of Liberal Arts.

While most will agree that IPE is important, significant barriers exist which impact student learning. Student challenges included inadequate IPE team training, workload/schedule challenges, student program size, lack of appreciation of IPE value, and knowledge deficit of other healthcare disciplines. Faculty addressed each challenge by developing an IPE curriculum using as a framework the IPE core competencies and a federal program entitled "TeamSTEPPS". Over the course of three years, students from the eight professions were surveyed using two questionnaires: The Teamwork Attitude Questionnaire (T-TAQ) and the Collaborative Practice Assessment Tool (CPAT). T-TAQ results demonstrated that student communication among teams significantly increased. The CPAT, divided into subscales of team structure, general role responsibilities, autonomy, communication & information exchange, community linkages & coordination of care, decision making & conflict management, and patient involvement were all statistically significant. Prior to this project, students had little if any exposure to working interprofessionally. This project allowed students the opportunity to participate as interprofessional team members and witness the impact of teamwork on patient outcomes. Quarterly focus group discussions revealed students gained an appreciation for other disciplines' roles in holistic, comprehensive care. The goal of working collaboratively and effectively as interprofessional team members was realized by the students. Successfully integrating IPE into healthcare curricula empowered healthcare students to develop and engage as effective interprofessional teams members as they transition into the workforce.

The Effects and Outcomes of Low Fidelity Clinical Simulation for Respiratory Therapy Students

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Focus area:

Learning in specific settings or contexts

Focus: The field of respiratory therapy is a growing and demanding profession that requires a solid educational foundation that includes good critical thinking skills and the ability to quickly make correct decisions that can have a direct effect on patient care. Problem: The task of teaching critical thinking skills to respiratory therapy (RT) students is further challenged by the available pedagogical options for presenting these new ideas and concepts. Students are often challenged by the difficulty of learning complex material associated standard classroom lecture format. This research focused on low fidelity clinical simulation and how it compared to standard classroom instruction as a teaching method. This research focused on two questions that intended to investigate the use of computer based simulation as compared to a standard lecture format and how critical thinking and content retention was impacted. Question one: How does the use of online clinical simulation affect student learning and critical thinking skills? Question two: How does the use of online clinical simulation affect student perceptions and attitudes toward patient care? Context: The setting used for this research included both a standard on-campus classroom and the computer laboratory. The course of study was identified as REST 222, Respiratory Pathophysiology II with the targeted learning outcomes focused on concluding and identifying the differences in the retention of content from a standard classroom lecture to the use of computer based simulation of the same content. The aim of this study was to determine whether the use of low fidelity clinical simulation significantly improved critical thinking, clinical judgment, self-confidence, and perceptions in regard to patient care and interaction. Approach: The population for this study included second year respiratory therapy students placed into two groups. Both groups were provided with duplicate information using a standard lecture format for group one and a computer based low fidelity clinical simulation program for group two. This study incorporated a triangulation of three different data sources, which included a post-study quiz, post-study survey, and a group debriefing session to determine student perceptions and attitudes of using low fidelity simulation as a teaching method. It also determined if critical thinking skills improved with the use of low fidelity simulation. Reflection: The results of this study show positive increases in student critical thinking, clinical judgment, perceptions, and self-confidence using low fidelity clinical simulation as compared to using standard lecture as a method of teaching.

Survey Says! A Comparative Snapshot of College Textbook Reading Expectations among USI Faculty, Freshmen, and Seniors

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Focus area:
Improving student engagement and motivation

Problem/Context: As an instructor who teaches academic reading strategies and oversees the USI reading program, freshmen often surprise me when they declare they do not have textbook reading assignments for their other courses. Since complex reading skills need to develop through age 18 and beyond, this declaration can seem perplexing and detrimental to student learning especially when many students already come underprepared for reading at the college level (ACT, 2015). My interest in knowing what faculty actually perceive and expect regarding college textbook reading led me to do a survey. I was also interested in what freshmen and seniors had to say and if their reading expertise had changed over time.

Approach: USI faculty, freshmen, and seniors were surveyed as to their perceptions and expectations regarding college textbook reading. In the 2017 Fall Faculty Staff Survey conducted by OPRA, 91% of the faculty who completed the survey indicated they assigned a textbook for one or more of the courses they teach. Did they expect students to come to class having read assigned material? Is guidance provided as to how best to read to learn in their discipline? Are students held accountable for textbook reading? Similar questions were posed to the fall 2017 cohorts of freshmen and seniors in their respective fall Assessment Day surveys. In addition, freshmen and seniors were surveyed as to how prepared they felt for the level and type of reading needed to be successful in college and how their college reading expertise may have changed since entering college. The students' reflections were compared to the stages of reading development as described by Jeanne Chall (1983) to determine if their comments aligned with changes in reading behaviors.

Reflection: Of the 185 faculty members participating in the survey, 72% expected students to read before class, 80% provided guidance in how to read in their discipline, and 72% felt that less than half of incoming freshmen were prepared for reading at the college level. USI faculty held students accountable for textbook readings through a variety of activities that mirror what researchers conclude are the most effective reading compliant approaches (Hoeft, 2012; Weimer, 2015). Comments from seniors about how their reading expertise changed over time was also instructive and supports a continued goal of preparing students for the complex reading skills necessary to do well in college and beyond.

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Student perceptions of low-tech options for engagement and assessment

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Focus area:

Improving student engagement and motivation

Learning in specific settings or contexts

Fostering inclusion and civility

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?’. The focus for the study was to explore whether utilizing a simple ‘low-tech’ option in the classroom provided adequate engagement and assessment from both the student and faculty perspective. By increasing student engagement, the researchers expect higher student learning as evidenced by literature.

This study took place in the Radiologic & Imaging sciences traditional courses in an in-class setting. The targeted learning outcomes were increased student engagement and student assessment of individual learning styles as well as faculty assessment of student learning.

Multiple authors suggest that utilizing dry erase boards can be an effective method of student engagement (Conderman, Bresnahan, and Hedin, 2011; West, Sullivan, Kirchner, 2016). Research for interactive whiteboards and their use exist for higher education, but little research was found using individual dry erase whiteboards as a ‘low-tech’ method of assessment from a student perspective in a small collegiate classroom. There is a large volume of evidence for utilizing audience response systems both in quizzes and throughout lecture and authors suggest that such forms of engagement promote engagement and learning but come with a material cost (Clauson, Alkhateeb, & Singh-Franco, 2012; Cotes, S., & Cotua, J. 2014; Costello, 2010). This IRB approved study used a single post-survey of students’ perceptions of using low cost dry erase whiteboards in the classroom. Two cohorts of students that have been utilizing individual small dry erase whiteboards in the classroom were surveyed. Student perceptions, correlation analysis of identified survey questions, and recurring themes from the short answer responses will be discussed.

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. A strong correlation was noted 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. Faculty noted active engagement from all students within the class rather than just a few students actively answering oral questions. No unexpected outcomes were noted.

Others could adapt this teaching strategy with low-tech technology in small classes by purchasing simple dry-erase boards for their classroom and implementing throughout lecture or discussion to conduct assessment of student learning. At the same time, students could utilize responses from the class and discussion that follows in order to identify strengths and weaknesses in their learning and knowledge retention.

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How I Flip my Accounting Class

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Focus area:

Improving student engagement and motivation

Learning in specific settings or contexts

Why do Accounting students have issues connecting accounting theory to assessments? The flipped classroom models allow the instructor to be present during seat time to connect the lecture to homework.

How does it work?

As with most classes involving numerical problems, example problem sets are often utilized to reinforce accounting theory. All lectures are pre-recorded using Panopto and/or VoiceThread (lectures are approximately 15-25 minutes in length). Students are required to take a pre-test in My Accounting Lab (homework management software) for participation points only. This assessment is used to gauge the initial level of knowledge and introduce students to the topics and vocabulary. Students are encouraged to read the textbook and review all recorded lectures for the chapter before coming to class at the beginning of the week. The first 50 minutes of class are used to review the theory for the week. The second 50 minutes are used to work examples previously selected by the instructor. The last 50 minutes of the week are used for assigned homework in My Accounting Lab. The instructor walks around and individually helps students with specific issues in homework. If the instructor recognizes a deficiency in the majority of the students, then time is used to reinforce the topic(s). By using this model, the instructor hopes the students gain confidence inside and outside the classroom, become more successful in accounting, and use time more efficiently. Student comments on the flipped classroom model are positive. Most student like the individual one on one time with the instructor and feel connected to the class.

Team Building Skills

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Focus area:

Improving student engagement and motivation

Focus/Problem Statement: Educators generally view the classroom with a Euro-centered lens where linear teaching is employed, and students are expected to conform to predetermined standards of academic proficiency. I adhere to the new energy and vision where higher learning includes teaching excellence and learning-centered classrooms, so I offer a practical approach to student learning that includes the contributions of every race, ethnicity, religion, creed, and ability. My teaching methods include research findings on team building skills in order to transform the classroom into a productive team who can apply the principles of collaboration, quality circles, and qualitative decision-making. Teamwork in the classroom includes active learning engagements that require group projects that not only show students the value of free speech, but also promotes classroom civility, motivation, collaboration, and negotiation on division of labor, in order to meet learning outcomes.

Context: I am an Associate Professor of Communication Studies at Vincennes University, and I teach public relations, small group decision-making, public speaking, and interpersonal communication, all of which require the teacher to empower students, foster inclusion, and support diversity. The onerous of fostering a positive team environment in the classroom increases the likelihood that students are able to meet targeted learning outcomes of the course and program. For example, in small group communication, learning outcomes include the understanding of roles, identify the problem, and collaborate to provide viable solutions to the problem. Some student outcomes in Public Relations include being able to identify corporate crises, evaluate the management of a corporate crisis, and provide effective solutions to ethically manage the corporate crisis based on public relations theories. Collaboration and team building skills are key factors in how successful students are in identifying problems and providing conflict management strategies to effectively handle corporate problem(s).

Approach: It is important to build students' self-identity, accommodate special needs, and teach empowerment skills. In order to empower students, meet students' needs, and help them to construct a positive self-identity my curriculum includes: a) student-centered teaching; b) collaborative learning with faculty feedback; and c) experiential learning activities. My teaching method serves students of various learning styles and enhances the student learning experience. I use grounded evidence in my teaching methods from the areas of measuring group efficacy, goal setting, and team performance in innovative projects (Hardin, Fuller, and Valacich, 2006 and Hoegl and Parboteeah, 2003). The first step in teaching students to be effective team collaborators is to encourage them to share their ideas, unique perspectives, culture capital, and

generally social reciprocity follows. After trust is established, team members learn to rely on others' contributions, begin to collaborate, follow through on commitments, and engage as productive participants in the division of labor, group decision-making process, peer review process, and the final culmination of the group presentation.

Reflection/Discussion: For two decades I have developed my skills in student-centered teaching, collaborative learning with feedback, and experiential learning engagements. What I have learned is that students want to share their ideas, dialogue, and banter about salient topics; after all that is kind of the point in Communication classrooms. I have found that group projects allow students to try out various roles, collaborate, negotiate perspectives, learn empowerment skills, and gain effective group presentation skills. The peer reviews of other students increase academic rigor and teach students how to provide constructive criticism, reminding them also to follow rubric criteria. I realize that students do not care how much I know, until they realize how much I care about their academic success. One way I show them how much I care is to guide them through the steps of collaboration and effective team building skills, encourage their voice in what matters, and praise them for their contributions. I can offer instructors who may have a little trouble inspiring unmotivated students some evidence-based research on classroom team building skills that may help them to develop a warm and welcoming learning environment, increase student motivation and engagement, in order to meet learning outcomes.

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Numbers Are Scary

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Focus area:

Learning in specific settings or contexts

Many students find quantitative courses challenging and give up almost before they start. Sometimes that fear can prevent students from being successful even when the actual material is not that difficult. How do we help students over this hurdle of being afraid of numbers? There is not one solution that will help every student, but there are many solutions that may help some students. This talk will illustrate several technology tools that can be used to give students bite-sized chunks of important material for review and maybe give them a little more confidence in their quantitative abilities. The Lightboard Studio in the Romain College of Business allows instructors to create short teaching or review videos that students can watch any number of times, if necessary. This state of the art technology is an easily implemented tool that has broad application for quantitative and non-quantitative content. A second technology tool is JMP® statistical software available to all students and faculty on campus. The use of this easy to use software in courses with even a small statistical component can allow students to focus on using the statistics, rather than calculating statistical values. A third tool is the use of simulations to teach challenging concepts like the Central Limit Theorem, sampling distributions, or the real meaning of confidence intervals. Any of these tools can be incorporated in courses that are totally quantitative or courses that require small modules that are quantitative. In today's data driven world our students more than ever need quantitative skills and literacy. Students who fully engage the technology tools, both in the classroom and outside the classroom, perform better in the course than those who do not.

Broadening career opportunities and breaking down stereotypes: Correctional facility tours and the criminal justice student

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Focus area:
Learning in specific settings or contexts

Students' negative perceptions of inmates are a challenging aspect of teaching criminal justice. It is not uncommon to hear an "us versus them" dichotomy when criminal offenders are discussed. Despite an abundance of television and "infotainment" shows introducing correctional facilities to the public, these facilities and those living and working within remain largely unknown and subject to negative stereotypes. Some scholars suggest exposing students to the criminal justice system may provide a realistic approach to understanding offenders and those who work within the system. Correctional facility tours are one way to create this real-life exposure.

In two courses, CRIM 234 Introduction to Corrections and CRIM 370 Prisons, attending a jail or prison tour and writing a 500-word essay reflecting on the tour are course requirements. The original goal was to expose students to the criminal justice system in action and to allow students an opportunity to correct inaccurate perceptions. Beginning in 2014, I began conducting research to assess the effects of the correctional tours on students. This included a pre-test/post-test design wherein students were asked to complete a survey with Likert items and open-ended items before and after attending a prison or jail tour. Students were also asked if I could use their essay for research. This study was approved by the IRB, and data were collected in the Spring 2014, Fall 2014, and Spring 2015 semesters.

Correctional tours are quite popular across criminal justice curricula, but competing perspectives exist on the impact of these tours on students. Some scholars illustrated the positive impacts, such as being able to apply concepts (Brown, 2001, Helfgott, 2003), being able to link class material to the real world (Smith et al., 2010), and changing prejudicial attitudes (Boag & Wilson, 2013). Other scholars (Payne, Sumter, & Sun, 2013) argue these tours are often seen by students as entertainment and thus are not educative, and illustrate issues with tours being "staged" and that inmates are objectified (Piche & Walby, 2010).

The results of the study were both expected and unexpected. As expected, most students wrote about the influence of the media on their perceptions of corrections and revealed holding stereotypes about those who work and are confined in correctional facilities. Unexpected were results indicating that students reported more positive attitudes towards correctional staff after attending the correctional tour, and in their essays many students discussed how correctional careers were something they would now would consider.

Developing Career Ready Skills Through a Service Learning Project in a Exercise Course

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Focus area:

Improving student engagement and motivation
Learning in specific settings or contexts

Focus/problem: Exercise Science students are not prepared for career related skills as they approach their internship and graduation.

Context: Two sections of the course Program Design for Healthy and Special Populations in the USI's exercise science program. There were a total of about 20 students per section.

The course objectives were:

1. Recognize the characteristics of individuals with various disabilities and chronic diseases.
2. Describe the specific effects of various disabilities and chronic diseases will have on exercise testing and training.
3. Perform exercise testing on various populations with knowledge of specific recommendations and special considerations.
4. Create and present exercise programs directed at specific special populations

Approach: I assigned a common service learning project within my classroom. Service learning is a common teaching approach in the health professions majors where the faculty and students partner up with a community member that is in need of services (1). The students then reflect about the services they provided to the community partner (1). In my classroom, I partnered with Jacobs Village who were in need of volunteers to provide exercise to their community. Jacobs Village is community with residential apartments and group homes for individuals with intellectual disabilities and lower socioeconomic older adults. The students enrolled in the course worked in groups of 2-4 people to provide 10 exercise sessions to those residents at their community center. I was also present during each session to observe the students providing exercise for the Jacobs Village residents. After each exercise session, the students turned in the exercise prescription and answered four questions to reflect about the exercise session. The students also completed 3 exams.

Results: Based on the reflections, exams and my observations over the 10 sessions, the students grew by becoming more confident and did well in their skills for prescribing and executing an exercise program. I also observed them communicating better with their client over the 10 sessions.

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Virtual Reality Simulation for Health Care Leaders of the Future, Utilizing Leadership Rounds in the Hospital System, An Online Educational Activity

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Focus area:

Learning in specific settings or contexts

Focus Statement

The purpose of this study is to bring forth educational activities that prepare leaders in the healthcare system which positively impacts the health system to include quality, cost, and access. The nascent formulation of this project is to develop and study a pilot-education deliverable using virtual simulation leadership rounds in an MHA graduate program.

Context

The course, The Health Service System MHA 621

The active design and delivery of the educational strategy encompass three areas of which includes; target leadership gaps such as critical thinking, presentation, and communication skills. The second focus area covers the macro and micro healthcare related topics of the course, and third to assist in aligning course content with the mission and vision of the health administration graduate program.

The University of Southern Indiana Hospital has been created and acts as a fictitious teaching hospital in the city of Blackboard located in Indiana. The hospital is now led by new chief executive officers that have implemented new strategies that align with their mission and vision, and a new emphasis is placed on quality and education. Graduate students will progress through a series of healthcare virtual scenarios, during healthcare executive rounds. These scenarios will introduce the graduate students to the unique hospital units, customer satisfaction surveys, quality performance measures, quality scorecards, financials while solving actual issues faced today in healthcare.

The use of virtual hospital rounds will be used, and the student will (1) solve a set of financial equations (an economic model), (2) participate in a scaled model, (3) practice or rehears factual scenarios, (4) demonstrate competency through playing games (asteroid game), listening to interviews, and being introduced to an animated flowchart.

Approach

A pilot-education survey (satisfaction instrument) will analyze quality measures of satisfaction and individual perceptions of the virtual simulation. A Likert scale survey and open-ended questions will determine the satisfaction themes. The results of the survey will be analyzed using triangulation to determine common themes for the sample population.

A study published in 2011, by the Centers for Creative Leadership (CCL) describes changes related to effective leadership. The findings and recommendations from the study indicate that the need for broad cross-functional learning opportunities for healthcare leaders. These changes are imperative for healthcare organizations and future leaders entering the industry. The university must recognize these changes and adapt the delivery of pedagogy activities that assist in the development of the next healthcare leader.

Conclusions

Graduate students will build upon basic knowledge and theories, as it relates to leadership. Virtual simulation is a useful tool that allow experimentation without exposure to risk, as many nursing and medical students benefit from this tool today. A similar concept may help improve the skills of the future healthcare leader. The leadership simulation will build upon competencies for the future healthcare leader and may be utilized in future MHA graduate classes.

Writing to Learn for NOS Scientific Literacy: Evaluation and Research Implications of A Curriculum for Historical Geology

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Focus area:
Improving student engagement and motivation
Learning in specific settings or contexts

Scientific literacy is a primary goal of undergraduate introductory science education, and yet measures of this crucial pedagogical outcome among U.S. citizens indicate it is mediocre at best. Scientifically literate citizens have sufficient understanding of the concepts and the nature of science (NOS)—and how to communicate that knowledge in writing—to actively participate and make decisions in a global society grappling with issues such as climate change. However, understandings of the NOS and how to communicate science are lacking in many university students, both science majors and non-majors, leading to misconceptions that create barriers to scientific literacy. As an educational strategy to improve scientific literacy, Writing to Learn (WTL) is effective because it aligns with attributes of successful learning such as reinforcement, encourages students to emulate the languaging processes of building scientific knowledge, and also provides students with opportunities for the critical thinking, synthesis, and analysis needed for effectively engaging with and communicating science. A WTL curriculum was developed for and implemented in a historical geology course for majors and non-majors (N=22) to improve students' scientific communication skills and scientific literacy in the NOS. Curriculum assignments include pre-writing, critical reading, in-class writing, instruction in argumentation, a research essay, structured peer review, revision plans, group work and field presentations designed to emulate science epistemology. Evaluation of pedagogical effectiveness was performed by comparing NOS literacy exhibited in student pre-writing with that exhibited in subsequent work, through analysis of the form and content of students' written arguments, and an end-of-course survey. This paper will present the results of these evaluative measures in addition to describing each part of the curriculum and its theoretical underpinnings in science education research and composition studies, and discuss implications for future implementation and research. Results indicate that engaging students in the study of science through language arts—critical reading of and writing about scientific texts and the NOS—enhances the majority of students' scientific literacy.