CENTER FOR ACADEMIC INNOVATION

SAGINAW VALLEY STATE UNIVERSITY

Teaching & Learning Symposium

February 16, 2018

INNOVATE COLLABORATE CONNECT

THE CENTER FOR ACADEMIC INNOVATION

Dr. Poonam Kumar	Director, Center for Academic Innovation and Online Learning
Dr. Robert Lane	Professor, Department of Political Science
Dr. Erik Trump	Professor, Department of Political Science
Dr. Josh Ode	Associate Vice President for Community Engagement & Integrated Learning.
Ann Coburn-Collins	Director, Academic and Adjunct Faculty & Academic Support Programs

Welcome to the Center for Academic Innovation's (CAI) 4th Annual Teaching and Learning Symposium. The Center's mission is to support the campus community in enhancing and creating innovative practices that advance pedagogical excellence and support the University's commitment to teaching. We hope this Symposium will provide you with a platform for discussions on teaching and learning issues and inspire you to try new pedagogies. We plan to do this in the following ways: First, we have the privilege of having Dr. Joan Middendorf present the Keynote Address, and the subsequent workshop. Dr. Middendorf is a Lead Instructional Consultant at the Center for Innovative Teaching and Learning and an Adjunct Professor in Educational Leadership at Indiana University. Second, in three consecutive Showcases, SVSU faculty, including the 2017-2018 recipients of the Herbert H. and Grace A. Dow Professor Award, will showcase the creative work they are currently implementing in their classes. Finally, following this Symposium, the CAI Team looks forward to continuing the conversations and collaborating on creating engaging learning experiences using promising pedagogical practices.

- CAI Team

INNOVATE **COLLABORATE** **CONNECT**

SAGINAW VALLEY STATE UNIVERSITY

KEYNOTE SPEAKER

Dr. Joan Middendorf

Lead Instructional Consultant at the Center for Innovative Teaching and Learning.

Adjunct Professor in Educational Leadership at Indiana University.

Joan Middendorf is Lead Instructional Consultant at the Center for Innovative Teaching and Learning and Adjunct Professor in Educational Leadership at Indiana University, where she developed the "Decoding the Disciplines" approach along with David Pace. Joan and Leah Shopkow published Overcoming Student Learning Bottlenecks: Decode the Critical Thinking of your Discipline (2017). In her work with the History Learning Project (Diaz, Middendorf, Pace, and Shopkow) Joan addressed emotional bottlenecks. The HLP won the top research awards in the fields research of teaching and learning (2009 McGraw-Hill–Magna Publications Award) and in educational development (2008 Menges Award).

Keynote Address Breakfast: 8:00 - 8:45 a.m.

Overcoming Bottlenecks to Student Learning

The nature of expertise allows experts to do many difficult things all at once. These mental moves are often implicit; that is, they are "natural" and may not be available for conscious scrutiny. The bottleneck approach provides a framework for analyzing the gaps between experts and novice thinking. In this session we will learn to identify bottlenecks, the places where over and over again, students struggle to learn.

Keynote Workshop: 8:45 - 11:45 a.m.

Helping Students Face the Real Difficulties of Unfamiliar Ideas and Mental Models

In this session participants will map out the places where students struggle most and then develop plans to help them get through such difficulties. We will use the Decoding the Disciplines approach, a theory based on the gap between expert and novice thinking that asks, "what are the assumptions and mental moves we want students to make?"

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KEYNOTE ADDRESS BREAKFAST:
Overcoming Bottlenecks to Student Learning

8:00 - 8:45 a.m.
Banquet Room A

KEYNOTE WORKSHOP:
Helping Students Face the Real Difficulties of Unfamiliar Ideas and Mental Models

8:45 - 11:45 a.m.
Banquet Room A

DELI LUNCHEON

12:00 - 12:45 p.m.
Banquet Room C

SHOWCASE SESSION I:

12:55 - 1:40 p.m.
Banquet Room A

Bill Williamson / Scott Kowalewski
Preparing 21st-Century Communicators: Audio Production in Professional and Technical Writing

Chris Giroux / Hideki Kihata
The Still Life Project

Rhett Mohler
Acquisition of an Unmanned Aerial System (UAS) for Curricular and Co-Curricular Use

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SHOWCASE SESSION II:

1:50 - 2:35 p.m.
Banquet Room B

Arthur Martin
Active Learning and Project-Based Laboratories for the Biological Sciences that Build Critical Thinking and Conceptual-Based Skills

Gary Lange / Holly Little / Katherine Cottrell-Donahue
Engaging Students in a Non-Majors Biology Classroom through Increased Active Learning

Sally Decker
Use of Gaming: "Friday Night in the ER" as an Educational Learning Experience

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SHOWCASE SESSION III:

2:45 - 3:30 p.m.
Banquet Room A

Julie Keil
The Benefits of Undergraduate Moot Court for Students and the University

John Baesler
Interviewing Tri-City Veterans: A Virtuous Cycle of Research and Student Learning

Bill Williamson, Ph.D.
Professor
Rhetoric and Professional Writing

Dr. Williamson's research interests include user-experience, accessible design, and curriculum development. He also co-hosts the RPW Department's podcast, The Technical Rapport. capable of 6-ft. vertical leaps.

Scott Kowalewski, Ph.D.
Assistant Professor
Rhetoric and Professional Writing

Dr. Kowalewski's research interests include usability and multimedia production, specifically podcasts. He currently hosts and produces several podcasts, including The Technical Rapport.

Preparing 21st-Century Communicators:

Audio Production in Professional & Technical Writing

Abstract

The primary objective of this project is to better prepare technical and professional writing students to be rhetorically-effective, technologically-adept 21st-century communicators, who engage in multimodal production of documents, specifically through the use of professional-grade audio equipment. In short, we ask the following research questions:

1. In what ways might professional and technical writing students engage with audio production to support rhetorical (audience, purpose, context, and technologies) thinking and problem solving, especially in the areas of instruction design and civic engagement?

2. In what ways might experience with audio production spark technical writing students to imagine new ways to market themselves professionally? In what ways might experience with audio production impact technical writing students' sense of professional identity?

To address these research questions, we sought funding to purchase professional-level audio recording equipment, contributing to the creation of a dedicated recording studio, designed to support student projects and productions.

Introduction

In her 2009 College Composition and Communication article, computers and composition scholar Cynthia Selfe [1] asserts multimodal projects are important to student development as rhetorically competent communicators because these projects help foster and support "the rights and responsibilities that students have to identify their own communicative needs and to represent their own identities, to select the right tools for the communicative contexts within which they operate, and to think critically and carefully about the meaning that they and others compose" (618). In short, when students compose with modes that include writing, but also extend to include audio and video, they are preparing to be rhetorically-effective twenty-first century communicators.

Instructional Challenge

In some ways, however, scholars in technical and professional writing have been slower than our composition colleagues in researching the impact of audio and other multimodal projects in our pedagogy. One exception is the 2015 Technical Communication Quarterly article, Multimodality in the Technical Communication Classroom: Viewing Classical Rhetoric Through A 21st-Century Lens," Bourelle, Bourelle, and Jones [2] situate multimodal projects in the context of the rhetorical canons: invention, arrangement, style, memory, and delivery. The authors draw parallels between text-based and multimodal compositions, as they enact the rhetorical canons. One challenge many faculty and programs face when trying to support multimodal work, however, is providing access to equipment and space for producing professional-quality content.

Teaching Innovation

This project seeks to address the lack of access to professional-level equipment by creating a space and securing production equipment that provides students with the resources to record professional-level content. What makes this project unique, or innovative, is that we have designed a specific space dedicated to audio production, and we have made a pedagogical commitment to integrate audio-specific projects into our courses. Students are supported, therefore, not only with professional-level equipment but with a dedicated space with which to enact and create, facilitating their development as 21-century communicators.

Impact

Locally, the significance and impact effects SVSU's technical and professional writing students most critically. Because, as Selfe argues, "...we need to pay attention to both writing and aurality, and other composing modalities... (618), this project is intended to foster the critical, rhetorical thinking and technological aptitude appropriate for technical and professional communicators in the 21st century. This project addresses two core areas of student competencies within the RPW Department: 1. communication tools and technologies and 2. theoretical perspectives. Quite simply, this project helps expand the competencies of our students, as they prepare for the demands of 21st century communication, that is increasingly digital and increasingly multimodal.

References and Resources:

Selfe, C. L. (2009). The movement of air, the breath of meaning: aurality and multimodal composing. College Composition and Communication.

Bourelle, A., T. Bourelle, & N. Jones. (2015). Multimodality in the technical communication classroom: viewing classical rhetoric through a 21st century lens. Technical Communication Quarterly.

Chris Giroux
Associate Professor
Department of English
Assistant Director of the
SVSU Writing Center

Chris Giroux received his doctorate from Wayne State University. He joined SVSU in 1999.

The Still Life Project

Abstract

"The 'Still Life' Project" created collaborative service-learning opportunities for SVSU students, particularly Art majors and Writing Center tutors, to gain practical experience editing creative writing and producing photographs for publication. These students' work helped create a journal called "Still LIfe," which featured the work of writers in the Great Lakes Bay Region, paying particular attention to those with little opportunity for publication: K-12 students, non-college students, and Saginaw Regional Correctional Facility (SRCF) inmates. Accompanying these writings in the journal were photographs by SVSU Art students.

Hideki Kihata
Chair & Professor of Art
Department of Art

Hideki received his MFA from the University of Cincinnati. He joined SVSU in 1987.

Introduction

Studies regularly show engagement in the arts actually improve student learning, retention, and critical thinking (Linik), but budget cuts in K-12 schools have limited such opportunities. Creative writing opportunities are even more limited for the Saginaw/Bay City adult population, reflected in part in the low literacy rates of their respective counties (cited in State Bar of Michigan). National statistics likewise point to this need for literacy education among the prison populations (Davis et al. xv). This project thus aimed to do the following:

1.) Create a cross-curricular learning project for SVSU Art students and Writing Center tutors.

2.) Create a journal, titled "Still Life," to showcase the creative writing of Bay and Saginaw County residents.

3.) Support SVSU's strategic priority of community engagement to enhance regional and institutional success.

Instructional Challenge

Instructional challenges linked to this project largely involve the need to create real-life opportunities involving publishing for both SVSU Art students and Writing Center tutors. Art 225 students were instructed to create images manifesting a sense of calmness or timelessness. They were asked to incorporate visual elements linked to this theme to create their photographs. In addition to working with this theme, Art 435 students used such 19th-century photographic processes as Cyanotype, Vandyke Brown, and Gum Bichromate. Considering their photographs to be a part of poetry journal was for them significantly different than working simply for the sake of an assignment. The Writing Center tutors, on the other hand, were asked to examine poetry, work they typically don't see in the Writing Center, and also continue to bridge the gap between providing feedback on work versus merely being editors and proofreaders, a stereotype that plagues the field (Gillsepies and Lerner; Fitzgerald and Ianetta). Tutors needed to ensure that they emphasized the most positive aspects of the work under review, recognize each individual writers' voice, and consider the age of each writer in their assessment.

Teaching Innovation

Much research notes the benefits of service-learning and publishing student work, particularly in relationship to community life. Deans argues service-learning is about making meaning in ever-widening communities both inside and outside academia; moreover, effective service-learning encourages students to cross academic, cultural, class, and community boundaries (9). Although Deans writes about service-learning as it specifically relates to the composition of essays, we argue composing any form of visual or textual art in a service-learning context is beneficial. With its end goal of an arts publication and a focus on cross-curricular collaboration—Mathieu, Parks, and Rousculp speak of the power of publishing community members' work—this project fulfills various service-learning goals, and its cross-curricular approach and focus on the arts make it unique.

Impact

Beyond the opportunities provided to SVSU Art students and Writing Center tutors in reading or producing visual and written artwork for publication, the project worked to provide a creative outlet for various groups. K-12 students, for example, stood to benefit from the project, especially given the current focus on Common Core and standardized testing, as well as the shrinking monetary support provided to arts programs. This project was also designed to benefit the incarcerated. Since Fall 2016, through funding provided by Michigan Campus Compact and SVSU's College of Arts and Behavioral Sciences, Writing Center tutors have led creative-writing seminars at the SRCF. Inmates there and the tutors with whom they work know first-hand the value of the creative writing, but have few opportunities to share the work they've generated. This project works to support these groups and all residents of the larger Saginaw Bay area. In fact, interest in the project has prompted a community member to fund the journal for another five years.

References and Resources:

Davis, Lois, et al. "Evaluating the Effectiveness of Correctional Education: A Meta-Analysis of Programs That Provide Education to Incarcerated Adults." RAND Corporation, Bureau of Justice Assistance, 2013, rand.org/content/dam/research_reports/RR266/RAND_RR266.sum.pdf.

Deans, Thomas. Writing Partnerships: Service-Learning in Composition. NCTE, 2000.

Fitzgerald, Lauren, and Melissa Iannetta. The Oxford Guide to Tutoring Writing. Oxford, 2015.

Gillespie, Paula, and Neal Lerner. The Allyn & Bacon Guide to Tutoring Writing. Longman, 2003.

Linik, Joyce Riha. "Picasso in the Wilderness." Northwest Education, vol. 4, no. 4, 1999, pp. 12-17.

Mathieu, Paula, Steve Parks, and Tiffany Rousculp, eds. Circulating Communities, The Tactics and Strategies of Community Publishing. Lexington Books, 2011.

State Bar of Michigan Criminal Issues Initiative. "Michigan Profile 2009: A Compilation of Fast Facts and Data." Michigan Bar. 2009. www.michbar.org/file/programs/cii/pds/cii_data.pdf

Rhett Mohler
Associate Professor
Department of Geography

Rhett Mohler is an Associate Professor in the Department of Geography at SVSU. He joined the faculty in 2012. His interests include studying land use and land cover change using imagery from satellites, aircraft, and unmanned aerial systems.

Acquisition of an Unmanned Aerial System (UAS) for Curricular and Co-Curricular Use

Abstract

This project successfully sought to acquire an Unmanned Aerial System (UAS) for curricular and co-curricular use. In addition to Geography Majors and Minors, this project will serve Geographic Information System (GIS) Certificate students from a variety of other majors. UAS technology has revolutionized remote sensing and GIS data collection, and its use will only become more prevalent in the future. Consequently, the goal of this project is to give interested students an opportunity to gain hands-on experience with UAS technology. This will be accomplished by incorporating UAS flight programming, data collection, and data processing into the curriculum of GEOG 441 (Advanced Remote Sensing). Outcomes include students who are more competitive in the job market, increased opportunities for student research projects with community partners, and the recognition of SVSU as a leader in this high-technology field, particularly as it pertains to undergraduate education.

Introduction

The purpose of this grant was to obtain a UAS for the Geospatial Techniques program at SVSU. The UAS will allow the program to accomplish four specific goals:

1. Strengthen the Geospatial Techniques Curriculum: The Geospatial Techniques program at SVSU strives to prepare students for a successful career in spatial data collection, analysis, and mapping. UASs are an increasingly important part of how these operations are carried out.

2. Produce Competitive Graduates: The Geospatial Techniques program seeks to produce graduates that are highly sought after by potential employers. The UAS will help to produce graduates who have the experience and skills employers seek.

3. Increase Collaborative Opportunities: The Geospatial Techniques program constantly seeks collaborative opportunities with other academic departments at SVSU and with community partners. This UAS will allow the program to work on UAS-related projects with these partners.

4. Become a Leader in UAS Education: Due to strict federal regulations, the use of UAS technology in universities is relatively rare despite its ever-increasing importance. This UAS will give SVSU a chance to become a leader in UAS education, particularly as it pertains to undergraduate students.

Instructional Challenge

Due to the rapidly increasing importance of UAS technology in the Geospatial Techniques field, SVSU students need to have this experience in order to be competitive in Geospatial careers. Therefore, acquisition of this UAS fills a very important instructional and learning need in that it will allow students to gain hands-on experience programming and operating a UAS for the collection and analysis of imagery data.

Teaching Innovation

This UAS represents a major teaching innovation at SVSU because it will allow Geospatial Techniques students to gain experience with this important piece of technology. This will make them more competitive upon graduation, as potential employers are already using this technology. Furthermore, this UAS will allow SVSU to become a regional leader in instruction with UAS technology.

Impact

Accomplishing the four goals outlined in this project will have a significant, positive impact on students in a number of ways. First, given the rapid growth in UAS use, students who are well-versed in this technology will be more employable than students who are not. Second, having a UAS on hand will allow the Geospatial techniques program to leverage existing projects, internships, and funding in order to increase student research and internship opportunities. Third, this project represents an opportunity for SVSU to become a leader in the use of UAS technology in the classroom, particularly as it pertains to undergraduate education. Having a program like this at SVSU should give students something to take ownership in and be proud of, thereby increase retention rates and attracting potential students. Finally, it should be noted that although the UAS will be housed in the Geography Department, it will impact students across campus, since many students pursuing Geospatial Techniques minors or GIS Certificates are from majors outside of Geography.

Arthur Martin
Professor of Biology
Department of Biology

Arthur completed his PhD at the Bowling Green State University in 2007. He has been teaching at SVSU since the Fall of 2008. Arthur primarily teaches Physiology and Anatomy and his research focuses on physiological, behavioral, and ecological questions.

Co-Applicants:
Dr. Cal Borden
Ms. Katie Cottrell Donahue
Dr. Sylvia Fromherz
Dr. James McEvoy
Ms. Kathleen Pelkki
Ms. Amanda Ross
Dr. David Stanton
Dr. Rosalyn Sweeting

Active Learning & Project-Based Laboratories for the Biological Sciences that Build Critical Thinking and Conceptual-Based Skills

Abstract

Members of the Biology Department developed project-based laboratories (PBLs) for the 1st-year experience of undergraduate students majoring in Biology. These labs are part of a larger curriculum revision of the Biology Major following Vision & Change (2010): a grassroots examination of best practices in Biology. PBLs are currently being evaluated by 4 students hired through the grant. After completing each lab, they are required to submit a written report evaluating their experiences, including recommendations for change. We anticipate that the 1st-year series [2 laboratory courses] will improve student retention, academic success, and thus suitability for employment after graduation through the introduction of active learning experiences and critical thinking exercises of how science, and biology in particular, is practiced and conducted.

Introduction

Presently, the 1st-year lab series [3 courses] is classified under General Education and is thus populated by students with diverse scientific abilities. It is not uncommon that only 10% of a class are Biology Majors. Faculty are faced with a decision: either teach to Majors or teach to non-majors. Consequently, Biology Majors are both ill-prepared and frustrated, leading at times to their withdrawal from SVSU. Hence, the impetus to revise the curriculum for Biology majors, including the development of a 1st-year experience that corrects some of these long-standing issues by incorporating PBLs for Majors only. Each PBL builds critical thinking as well as analytical and technical skills of the former lab all within the framework of the scientific process. To assess their feasibility and rigor, CAI funds employed 4 Biology undergraduates to execute labs under the supervision of 7 Biology faculty who volunteered their time and expertise.

Instructional Challenge

The traditional lab structure, common to most undergraduate settings, provides students with step-by-step instructions by which to carry out an investigation. As a result, students are minimally engaged intellectually and remain unaware of the coneptual significance of their experimental results. Rather than model how scientists develop and warrant knowledge claims, traditional labs focus on students' abilities to follow directions with little regard for the conceptual and procedural understanding of the investigation. In light of this reality, the AAAS and National Academies have recommended a reassessment of best-practices to teach undergraduate biology, including laboratories. In accordance with these recommendations, PBLs developed by SVSU Biology faculty emphasize an active-learning environment that encourages independent and critical thinking to solve problems with scientific inquiry. This structure creates a teaching challenges for instructor and student. Most students have been groomed with traditional teaching approaches making them reticent to participate in open-ended discussion and enquiry. Additionally, most instructors are accustomed to predictable outcomes and preventing students from leaving the known the path to explore an unknown question.

Teaching Innovation

PBLs are laboratories designed to incorporate hallmarks of authentic biological research such as:

· Student-conducted but guided inquiry on open-ended questions that reflect biological research across multiple disciplines.

· Student-implemented experimental designs the results of which are not predetermined.

· Student-collected and analyzed data sets by which they propose justifiable conclusions to assess hypotheses.

· Students experience the successes and failures of lab research in the framework of the scientific method.

· Students experience the successes and challenges of collaborative research.

· Students communicate results in a discipline-appropriate manner through various media.

· Students develop critical-thinking skills in biological research that are transferable to other research experiences.

Impact

Active learning is an integral teaching tool that has gained wide acceptance and been applied from kindergarten to higher education. Within the Biology Dept at SVSU, this looks like project-based laboratories that introduce and reinforce concepts through multiple attempts. Unlike traditional teaching methods, project based learning gradually builds comprehension by initially focusing on conceptual and contextual awareness and then interpretation of details. PBLs we developed provide hands-on-experiences in an active learning environment for Biology Majors. Our intent is to provide Biology students with an authentic scientific experience in addition to honing critical thinking and analytical skills, a skill set coveted in any discipline.

References and Resources:

American Association for the Advancement of Science (2011) Vision and Change in Undergraduate Biology Education: A Call to Action. Washington, DC.

Brownell, S.E. et al (2014) Biocore guide: A Tool for Interpreting the Core Concepts of Vision and Change for Biology Majors. CBE-Life Sciences Education 13, 200-211.

National Research Council. (2003). BIO 2010: Transforming undergraduate education for future research biologists Washington, DC: National Academies Press.

Gary Lange
Professor & Department Chairperson
Department of Biology

Engaging Students in a NON-MAJORS BIOLOGY CLASSROOM Through Increased Active Learning

Holly Little
Lecturer of Biology
Department of Biology
Science Engineering & Technology

Katherine Cottrell-Donahue
Lecturer of Biology
Department of Biology
Science Engineering & Technology

Abstract

The goal of this project is to expand the active learning opportunities for students in our non-majors Human Biology course, which has, traditionally been taught with a lecture format. Increased active learning experiences in the classroom will promote a deeper understanding of content knowledge and enhance student appreciation for the value of science in society. The greater emphasis on student engagement will improve critical thinking skill and prompt students to make more informed decisions regarding science and health in the future. In this presentation, we will discuss the hands-on modules that are being piloted and offer our audience the opportunity to learn about their own human biology through an interactive lesson.

Introduction

The merit of active learning in STEM (science, technology, engineering, and mathematics) courses is well established. Meta-analysis of 225 studies published in PNAS (Proceedings of the National Academy of Sciences) (Freeman, et al, 2014) reports on the consistent findings of increased grades and fewer failures resulting from the implementation of alternatives to traditional lecturing. Another key finding noted by Freeman, et al (2014) and Haak, et al (2011) is the increased retention of underprepared and underrepresented students. These findings are exciting and inspiring as they indicate that a shift from the traditional lecture can increase performance of all students as well as reduce the achievement gap of student from diverse backgrounds.

As an increasing body of education research supports the learning gains of active learning methods, there is a need to shift from the traditional lecture-based style of teaching. This is especially true in our General Education Biology courses, such as Human Biology, which do not include a laboratory to further students' understanding of course content. For many of the students taking Human Biology, it is the only biology course they will take in their college career. As educators, our goal is to provide effective instruction to help students become informed citizens that possess a basic understanding the human body as well as the skills and knowledge necessary to assess health information and make informed choices in a complex and rapidly changing world.

Instructional Challenge

Over the last few years, instructors of lecture-based Biology courses have increased active learning opportunities in the classroom. Examples of active learning that have been integrated include class discussion, written activities, content-based games, and investigation of the senses. Student feedback through course evaluations repeatedly confirms the preference for and educational merit of these methods. Further progress to create a more student-centered learning environment is a key goal for instructors of this course; however, costly materials and models are needed to make many of these opportunities possible. As we have implemented more interactive activities throughout the last several years, we have created many course resources and have relied on the generosity of others in order to borrow materials for the course. The funding provided by this grant has addressed the need for materials that are specific for Human Biology.

Teaching Innovation

In the past, science courses that did not include a lab have been taught in a lecture format. Although lecturing has its advantages, it often limits student engagement and therefore comprehension of the material. This grant has allowed us to fundamentally change the classroom dynamics in this course. There are no other non-laboratory classes that offer students the opportunity to work hands on with the material. For example, this grant has allowed for the purchase of models appropriate to the course content. This gives students the ability to not only see, but to touch and better understand the interconnectedness of the organ systems studied. In addition, materials necessary to develop interactive activities have been purchased. In class experiences allow students to process and apply content in a variety of ways that promote deeper learning of concepts such as antibiotic resistance, cancer causing mutations, and the effects of drugs and alcohol on brain function.

Impact

Altering a course to go from a lecture to an active learning experience has had immediate results on student engagement. When lecturing, it can sometimes be difficult to determine the interest level and understanding of students. However, when working with materials in class the instructor becomes aware of their interest, their level of understanding and what misconceptions students have. The atmosphere of the course has been altered to create a community of learners engaged and interested in their own learning and the learning of their peers.

References and Resources:

Freeman S, Eddy SL, McDonough M, Smith MK, Okoroafor N, & Jordt H. (2014). Active learning increases student performance in science, engineering, and mathematics. PNAS, 111 (23), 8410-8415.

Haak DC, HilleRisLambers J, Pitre E, & Freeman, S. (2011). Increased Structure and Active Learning Reduce the Achievement Gap in Introductory Biology. Science, 332, 1213-1216.

Sally Decker
Professor of Nursing
Department of Nursing

Dr. Decker received a PhD in Nursing from the University of Michigan, Ann Arbor. She holds certifications in nursing education and health care simulation as well as a Michigan License. She joined SVSU in 1980.

Use of Gaming: Friday Night in the ER as an Educational Learning Experience

Abstract

As part of an inter-professional gaming experience with the goal of improving communication and systems thinking, 348 students in nursing and occupational therapy played the game Friday Night in the ER. Gaming was selected as a learning strategy for its generational appeal and active learning involvement. The game has previously been used with a variety of settings. Three groups of students, divided into teams, played the game. Two groups included both occupational therapy and nursing students and one included only nursing students. An additional difference in the three groups was that in two groups students were individually assigned to units in the hospital. There were no statistically significant differences in the overall Team Development scores across the groups ($F=1.61$, $p=0.20$), but there were differences on individual items. The group where the teams were comprised of OT and nursing students not assigned to units had higher scores versus the other groups.

Introduction

According to the 2008 Horizon Reports, gaming is one of seven megatrends in higher education. Educational games can promote learning and enhance collaboration among students (Boctor, 2013 & Strickland & Kaylor, 2016). Gaming has also been identified as having the potential to enhance inter-professional education (IPE) (Joseph & Diack, 2015). Friday Night in the ER is a proprietary, team-based game designed to simulate the collaboration required of individuals to manage a hospital during a 24-hour day. The game has been used in many health care, business and community settings to teach concepts related to organizational culture and patient care. The game was designed as an organizational learning game to bring people together to examine mental models/ beliefs related to systems and the impact on organizational cost and quality. Use of educational gaming in nursing courses with students from other professions could offer another alternative to the strategies of simulation and role playing already used in those courses.

Instructional Challenge

Generationally appealing approaches to learning that engage students and serve as an adjunct to other teaching-learning strategies are important for today's students. Educational gaming is a strategy that has the potential to provide active learning and stimulate student motivation. If the game is relevant to student experience and provides for intentional knowledge reinforcement through reflection, there is the potential for affective as well as cognitive gains.

Teaching Innovation

Occupational therapy and nursing students, N=348, played and debriefed the game in three sessions. The first session included both student groups with individuals assigned to specific units of the hospital. In the second session, there were again both nursing and occupational therapy students, but seated at a round table without assignment to units. In the third group, there were only nursing students. Nursing and occupational therapy students had the task of working together to be creative problem-solvers to ensure that there was a consistent flow of patients arriving, transferring and exiting the hospital through various department units. Hourly hospital decision making and negotiations were required to ensure quality care, financial responsibility, and timeliness of the student teams. There was about one hour for set up and objectives, one hour for the game and one hour for debriefing. Following debriefing, students completed a Team Decisions on Core Strategies Worksheet and the Team Development Measure (TDM), a 31-item questionnaire found to have an overall Cronbach's alpha of 0.97 when used with 1,194 individuals in health care settings (Stock, Mahoney & Carney).

Impact

N= 334 usable questionnaires were returned. The scores on the Team Development Measure ranged from 55 to 124 with a mean of 107.49 and SD of 13.27. The individual items with the highest scores were "I enjoyed being in the company of other members of the team" and the lowest item related to "we came up with creative solutions." ANOVA for the differences in total scores for the three groupings of students did not show a statistically significant difference (F-1.614, df 2,131, p= 0.203). Post hoc analysis of individual items with differences across the three groups showed the first group differed from the two other groups. The highest total team score, as well as the highest scores on the individual items that met the .05 threshold for difference in groups, indicated that the second group had the highest scores. The assignment to a hospital unit for sessions one and three had more of an influence on the team development versus the professional designation of nursing or OT. The observers noted that the second group was more willing to share resources early in the game. The students reported enjoying the gaming experience.

References and Resources:

Boctor, L. (2013). Active-learning strategies: The use of a game to reinforce learning in nursing education. Nursing Education in Practice,13, 96-100.

Joseph, S. & Diack, L. (2015). Playing interprofessional games: Reflection on using the interprofessional education game. Journal of Interprofessional Care, 29(3), 260-262.

Strickland, H. & Kaylor, S. (2016). Bring your A-game: Educational gaming for student success. Nursing Education Today, 40, 101-103.

Stock, R., Mahoney, E., & Carney, P. (2013). Measuring team development in clinical care settings. Family Medicine, 45(10), 691-700.

2008 Horizon Report. https://www.nmc.org/pdf/2008-Horizon-Report.pdf. ISBN 0-9765087-6-1

Julie Keil
Assistant Professor
Department of Political Science

Adviser, Law Club, Moot Court Team

The Benefits of Undergraduate Moot Court for Students and the University

Abstract

The project is undergraduate moot court. There are several objectives for the project: familiarize undergraduates with the legal system, improve undergraduate speaking, argumentative skills and writing skills, provide students with an intense experiential program to encourage higher levels of learning and lastly to provide a forum for students to be involved in academic competition. Students at all class levels can participate although it is a very difficult and intense learning experience making it more related to upper level students. Students take a 20 page case problem and 10 US constitutional cases and work intensely in large groups, small groups and in pairs to create a compelling argument that could be given to a court. The class encourages independent work, constant self, peer and professor evaluations, synthesis of ideas, improved speaking skills and creative thinking. Students self-report finding enhanced critical and analytical thinking, improved speaking skills, the chance to travel and meet students from around the US, extensive mentoring with professors, coaches, judges and fellow students and a feeling of confidence in their abilities. They also describe the class as the hardest class they have ever taken and several times more work than a standard class.

John Baesler
Associate Professor of History
Department of History

John Baesler was originally a citizen of Germany, and received his undergraduate degree in History and Philosophy at Heidelberg University in 2001 and his Ph.D. in U.S. History and Cultural History at Indiana University-Bloomington in 2009. He joined the faculty at SVSU as an assistant professor of history in 2009 and was promoted to Associate Professor in 2014.

Interviewing Tri-City Veterans

A Virtuous Cycle of Research & Student Learning

Abstract

Since I began researching the experiences of American GI's during the occupation of West Germany during the Cold War, I have been striving to incorporate different aspects of SVSU's mission--high quality instruction, opportunities for student research, and community engagement--into my project. To that end, since fall 2016 I have been locating residents of the tri-city area who served in the U.S. military in Germany and conducted interviews with them. At all stages of planning and conducting the interviews, I was supported by three SVSU undergraduate students, who in the process acquired valuable research and organizational skills. Since the interviews were recorded, students in the History Department's Public History Minor program have been transcribing the interviews in preparation for archiving them. Lastly, I plan to use these primary sources in my Spring 2018 class on U.S. foreign relations since 1945 in assignments for the students enrolled in that class, therefore continuing a virtuous cycle between teaching and research.

Reflective Notes

• Based on the Keynote Presentation, Workshop, and Showcase Sessions, what strategies might you use with your students to enhance their motivation and learning?

• What ideas sparked your interest?

Additional Notes

Additional Notes

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