



# ACURIT 2022

The Augustana Conference on Undergraduate Research and Innovative Teaching

## *Learning by Doing*

May 5 & 6, 2022

### **List of Abstracts (ordered by presentation schedule)**

- *The New Newsroom: Fostering Collaborative Learning During 'Tainted Water,' a National Student Journalism Project.* Steve Lillebuen, MacEwan University  
Journalism is undergoing a profound transformation. Media scholar Mark Deuze argues that large newsrooms are being replaced with a fragmented workforce of entrepreneurial journalists—a tech-savvy, globally-minded group who work together on projects from locations around the world. Therefore, a challenge for journalism educators is teaching students how to succeed in an increasingly collaborative, horizontally networked, and fragmented industry. Last year, a group of journalism professors came together with the aim of solving this problem. How can we teach collaborative skills in the classroom when collaboration in journalism is occurring between cities and countries? The result was "Tainted Water," a major investigative series led by student journalists from nine universities with key findings published in The Toronto Star and broadcast on Global News. In this talk, I will outline how undergraduate students at MacEwan University learned by doing—in this case, investigative journalism through the creation of a national reporting network to examine lead in drinking water. The network was facilitated by the Institute for Investigative Journalism at Concordia University to simulate the real-world trend of collaborative journalism. It was also an experiential learning strategy focused on completing a team-based assignment. The 15 students in my class knocked on hundreds of doors across Edmonton and Alberta, and conducted dozens of interviews, before collecting water samples from residents, which were then sent to accredited labs for analysis. They weren't alone. Pooling skills and resources, my students used online tools and forums to share their research and problem-solve with students from Vancouver to Halifax. During this talk, I will discuss strategies for managing a collaborative project and how to partner with another department, university, or with industry. I will also share reflections from students involved in the project, the impact it had on their learning, and comment on the links to employability.

- *Learning To Research by Doing Research: Undertaking a Summer Research Project on Higher Education Institutional Responses to Sexual Violence.* Jane Bryan, Rebecca Cole, University of Warwick, Coventry, UK

In the summer of 2021, Rebecca Cole and Dr Jane Bryan partnered together to engage in the University's annual Undergraduate Research Support Scheme (URSS), which pairs students keen to research with academics happy to supervise. Rebecca explored an issue that was very topical that summer, how should universities respond to cases of sexual violence? This paper will explore the context of her work, the findings of her research as well as outline her experiences of researching and the URSS scheme itself which aims to foster student research. Rebecca will explore best practice in the UK in the responses to harmful sexual behaviour on campus and recommendations for further action. Jane will outline the benefits to academics and the wider institution of encouraging student research and provide more detail of the URSS scheme which supports students' academic development and employability by funding a research summer internship programme, thereby enabling 'learning by doing'.

The presentation will involve limited (non-sensitive) audience participation and a Q&A section to ensure engagement.

- *Reflecting on Doing Research: Beyond Acquiring Knowledge, Honing Skills.* Parmida Beedle, Mélanie Méthot, University of Alberta, Edmonton, Canada

As an undergraduate student interested in academia, I feel fortunate to now have the opportunity working as a research assistant. Doing research for a professor demystified the process. Reflecting on my experience, I realize I have honed valuable skills. Specifically, attention to details, critical thinking, and perseverance.

By investigating the relationship between law, marriage, family, and gender via newspaper coverage of bigamy prosecution in Australia, I am not only gaining knowledge on how and why individuals have committed the offence, but further appreciation for research as a process. To illustrate my point, I have chosen to share the story of Phoebe Josland. She was a young woman whose wedding ceremonies occurred three weeks apart in early 1920, and ended in arguments and a massive gun show. The coverage of her story invites readers to question how factors such as law, desire, and family shape marriages. It also showcases how the justice system often considered women bigamists as victims.

The practical experience of conducting research with a team has been invaluable to forming a strong consideration of details and collegiality, critical thinking skills, and the ability to continue persevering when overcoming various types of obstacles. This presentation aims to share with the audience the process involved in piecing together narratives from the past, as well as showing exactly how it has contributed in developing some important life skills.

- *Reflections of a Professor and Senior Students Mentorship: Our Experiences Teaching a First-Year Seminar Course and Chemistry Labs.* James Kariuki, Rhythm Singh, Thaovy Nguyen, University of Alberta (Augustana), Camrose, Canada

Teaching Assistants (TAs) have assisted in teaching a diverse number of undergraduate courses within lab and lecture classes. Since TAs are required to excel in their respective classroom settings, the difference in the course's objectives and their distinct learning environments thus require

varying teaching styles to be utilized. Our presentation will be based on the unique experience of a professor along with two senior students who were mentors in the same 3-week First-Year Seminar (FYS) course within a traditional classroom and an 11-week first-year chemistry lab. We will detail the interactions that occurred between the TAs/professor and their students, TAs and the professor, and amongst the TAs. As such, the differences in teaching and the student-instructor relationships that exist within the two class settings can be explored. In summary, both courses, even though distinct, encompass how teaching is dynamic and dependent on the courses' objectives, the physical teaching environment, and the needs of each student in the course.

- *Context is Critical: Strategies for Teaching Students to Evaluate Information.* Kara Blizzard, University of Alberta (Augustana), Camrose, Canada

Asking students to find credible sources for their assignments is a more complex request than it may seem. Students engage with a wide variety of information systems, many of which include misinformation and disinformation. In this environment, evaluating information sources is a nuanced process that benefits from hands-on learning. In the past, academic librarians and other educators have relied on checklists, such as the CRAAP test (which stands for currency, relevancy, authority, accuracy, and purpose), to teach students to evaluate information. This type of approach is limited because it focuses primarily on a source's content rather than its broader context. This presentation will share ways to guide students through investigating the context of a source and thereby help them develop habits they can use during and beyond their undergraduate education. The presentation will include both theoretical approaches and practical ideas for teaching these concepts in the classroom.

- *Greater Realism in Authentic Assessments Promotes Student Motivation and Engagement.*

Constanza Pacher, Lynne P. Honey, MacEwan University, Edmonton, Canada

Student motivation is an important predictor of performance, and of attitudes toward schoolwork. Higher levels of intrinsic, or autonomous, motivation are facilitated by high-impact teaching practices, including experiential learning and the use of authentic experiences and evaluations. The present study was inspired by instructor perception that students were more engaged with, and more motivated by, one course project over another. Although both projects were authentic assessments, the preferred project had more realism including real external stakeholders. We assessed students' subjective experience while working with two projects taught in the same course over two years, where the projects varied in level of realism. Phase 1 of the study measured students' intrinsic motivation for the two projects, using a questionnaire based on the Intrinsic Motivation Inventory. Phase 2 of the study again measured students' intrinsic motivation for the two projects, after the less-preferred project was adjusted to be more realistic. The results of this study showed evidence that students experienced higher levels of engagement and intrinsic motivation when working with more realistic projects that had real external stakeholders, compared to a project with less realism. Projects that have real problems, goals, and outcomes seem to give students a higher sense of autonomy, competence, and relatedness than their fictitious counterparts.

- *Who's Paying Attention? Instructor Feedback and Community Partner Involvement Can Motivate Greater Student Investment in Learning.* Dorothy Hill, Mount Royal University, Calgary, Canada

The feedback instructors provide to students on their assignments is a powerful formative assessment tool that promotes learning, self-regulation, and improvement in future work. In an

ideal situation, feedback informs students how to reduce the gap between their current understanding or performance and their desired goals or expectations, offering a pathway forward to improve their next draft or assignment. However, many students fail to act on feedback and often do not see its relevance to other assignments or classes, thus missing out on a critical component of their learning. I examined student perceptions to instructor feedback in a third-year biology course in which students completed a project for a community partner. The project allowed students to select from a range of topics and was scaffolded with several interconnected components. Feedback was provided well in advance of the due date for the next component so that students had the opportunity to act on the constructive criticism provided. Survey and interview questions probed students' opinions on instructor feedback in general, the feedback they received in this course, and whether community partner involvement influenced their work. I then analysed students' work to look for evidence that students had applied the feedback received on one component to the next. Students indicated that specific feedback is more helpful than general feedback and helped guide their revisions. Some students commented that detailed feedback conveys that the instructor is paying attention and cares about their work. Students responded that they invested more time on this project compared to other projects and the most common reason provided was because they knew the community partner would be reading their work. This study suggests that students are motivated to increase investment in their learning when they perceive others are paying attention to their work.

- *Reflective Learning Journals: Engagement Outside the Classroom.* Ingrid Urberg, University of Alberta (Augustana), Camrose, Canada  
In 2014 the Modern Languages faculty on the Augustana Campus of the University of Alberta piloted a "Reflective Language Learning Journal" project in beginning, intermediate and advanced language courses. Adapted from work done by John L. Plews while he was teaching at the Canadian Summer School in Germany (Kassel), this journal is now a valuable component of all of Augustana's language courses. In this presentation I will provide an overview of this assignment, as well as the benefits of reflective learning journals to both language learners and teachers. These include increased engagement on the part of students and a fostering of learner autonomy. I will discuss challenges instructors and students have faced as well as our responses to these challenges. In addition, I will point out ways this activity can be adapted for use in other disciplines. While I will incorporate the perspectives of my Modern Languages colleagues regarding their students into my presentation, I will focus on the experiences and sample work from beginning and intermediate Norwegian language students.
- *Helping Students Take Responsibility for Lab Safety.* Kimberley Harcombe, MacEwan University  
One of the goals of lab instruction in the sciences, and of Course-Based Undergraduate Research Experiences (CUREs) in particular, is the development of practical skills through experiential learning. Learning outcomes for these courses typically focus on proficiency in technical laboratory skills, communication skills, and even skills in working collaboratively. One area of skills development that is often neglected in these courses is safety. The responsibility for lab safety typically lies with the instructor, who is aware of the hazards and communicates them to the students. The student's only responsibility is to follow these instructions. As an alternative to this traditional approach, my CURE is designed so that students take responsibility for their safety in the lab through participation in a safety program modeled after our own institutional standards.

Students complete an array of safety training modules, conduct hazard assessments on their lab activities, and integrate their learning into their lab practices, which will be modeled through practical examples in this presentation. These skills in safety practices, hazard assessment, and working in a regulated environment are desired in the workplace, and are a requirement of Occupational Health and Safety legislation. Developing these skills through practical experiences prepares students for future work in the sciences.

- *Taking Action on Sustainability Through Project-Based Learning.* Greg King, University of Alberta (Augustana), Camrose, Canada

Too often we teach in a vacuum in which theory is separated from opportunities to apply it in “messy” ways. Project-based learning (PBL) offers one possibility of a high-impact teaching practice in which students learn by actively engaging in real-world and personally meaningful projects. PBL requires critical thinking, problem solving, collaboration, and various forms of communication – requiring students to apply higher-order thinking. The key element of this approach is that the project is the core of the course and not a secondary component.

Many students have pressing concerns around global sustainability challenges and so-called “wicked problems”, but at the same time experience significant anxiety around how to take action after learning about the problems facing society in the classroom. I propose that a well-designed, authentic PBL experience provides a successful springboard for student engagement. Essential elements include involving local community partners, asking challenging and open-ended questions, and generating publicly-shared products. It can overcome the paralysis many students feel when confronting sustainability issues and fosters their ability to actively participate in crafting a sustainable future.

In this session I will provide insight from several iterations of teaching a mid-sized second year course entitled Applications in Sustainability that is delivered as a 3-week block course. Reaction to the course from both students and community partners has been overwhelmingly positive – both from formal and informal feedback. The end result has been a course that moves beyond content and into developing critical thinking, collaboration, creativity, and communication skills. I will delve into how I gradually developed it into a successful example of PBL, providing details of successes and failures while also sharing key strategies and take-aways and why PBL is a perfect strategy for teaching on the topic of sustainability.

- *Exploring Ways to Incorporate Universal Design Learning in Our Classrooms.* Anne McIntosh, University of Alberta (Augustana), Camrose, Canada

Universal design learning (UDL) is a framework to improve the learning experience for people, which is based on the science of how people learn. Using UDL, instructors create flexibility and choice in learning (and this is beyond just about the content: the ‘why’, ‘what’, and ‘how’). It can include ways to make for a more positive learning experience for students. Its goal is to reduce the unintended barriers for learning. The ways in which UDL are implemented are diverse and can include multiple means of engagement, representation, and action & expression. In this cracker barrel session, I will share a flexible extension policy that I implemented in my courses during the 2021-2022, which Kathy Davies at Macewan University had shared with me during an Undergraduate Biology Educators of Alberta Lunch and Learn in September 2021. While I have not conducted any formal discipline-based education research on the implementation of this Flex days policy, informal student

feedback has been very positive. In our group discussion we will explore other examples of ways in which UDL has been and can be implemented in our classrooms.

- *Uncovering the Hidden Curriculum of Field Experiences*. Nicole Patrie, University of Alberta, Edmonton, Canada

Field experiences (unpaid work experience) are one of the most impactful ways for students to gain entrance into their chosen career, especially those under the umbrella of human services. One of the most common models for field experience are sustained, intensive immersion, such as student-teachers or student-nurses working full time for a set number of weeks. Another common model is integrated immersion, where students work part time while simultaneously attending to other coursework. Both models have benefits and challenges. The official purpose of field experience is to allow students to practice skills in an authentic environment. Perhaps more importantly, field experiences provide a first initiation into their profession, including the complexities of ethical and professional conflicts. In this cracker barrel session, we will explore the strengths and weaknesses of various approaches to field experience. With particular attention to the hidden curriculum of field experiences, we will share strategies about how to encourage students to engage with their profession and its complexities, and how to support students as they grapple with issues that might arise. Given that there are many non-professional programs in colleges and universities, we will also discuss how field experiences might be incorporated into other fields of study.

- *Beyond Statistics: Reflecting on Tutoring in An Applied Statistics Course*. Paula Marentette, Josiah Afriyie, Kitty Cen, Hannah Gau, Kelsey Moch, Robel Ng'ong'a, Samuel Pennings, University of Alberta (Augustana), Camrose, Canada

In this roundtable discussion, several of the 14 student tutors who will have spent the 11-week term at the Augustana campus of University of Alberta working (both remotely, and in person) with Dr. Marentette's introductory Applied Statistics class of 260+ students will share their experiences related to this first offering of this unique Augustana course.

- *Making the Invisible Visible: Learning by Doing through Student-Centered Curriculum*. Tina Trigg, The King's University, Edmonton, Canada

With neither labs nor data-driven research practises dominating the discipline, Literary Studies nonetheless contributes in highly-transferable ways to student learning by doing " particularly through reciprocal inquiry, affective practises, interpretive communities, and confrontations with unconscious biases. Based on Kathleen Blake Yancey's student-centered models of Lived Curriculum, Delivered Curriculum, and Experienced Curriculum, this presentation will detail practical ways of implementing learning strategies and cohort-focused modifications into pedagogical practise ranging from first-year generalist classes to upper level specialized internships. Although the examples originate from reflection and experimentation over twenty-plus years of teaching English, the practises will be generalizable to many disciplines. We will explore what to do as instructors to create intentional opportunities for students to learn by doing.

- *Doing and Learning Public History through Curation and Exhibit*. Christina Han, Wilfrid Laurier University (Brantford campus), Brantford, Canada

In this paper, I will explore lessons gained from designing and teaching a third-year Public History course “Memories, Museums, and Monuments” at Wilfrid Laurier University (WLU), Brantford. The course involved community service learning as well as high-impact project-based learning. Hoping to train the students in hands-on research, curatorial, and event organization skills, I designed a class project that required them to produce a public history exhibit on underrepresented communities in early Brantford’s history. The project, entitled “Brantford: Our Immigrant Stories” involved the creation of a long-term, a pop-up, and an online exhibit, podcasts, and a performance and was supported by WLU’s Teaching and Learning and community groups. Student were engaged in every step of the project from brainstorming, research, content generation, marketing, design, installation, community outreach, to opening gala. The permanent exhibit at the Brant Museum and Archives and the opening gala on campus were featured on local newspapers and media and attracted substantial public attention.

In the presentation, I will describe the detailed design of the course, challenges both students and I had to overcome, and lessons for future improvement. It will contribute to the conference theme “Learning by Doing” by providing an example of innovative ways of doing and teaching public history through experiential and project-based learning. It will also discuss the importance of creating room for creativity and flexibility (for both students and instructor) to channel different interests and strengths to accomplish a multifaceted high-impact class project.

- *Learning by Making: Critical Crafting in the Classroom*. Andrea Korda<sup>1</sup>, Mary Elizabeth Leighton<sup>2</sup>, Vanessa Warne<sup>3</sup>, Kiarra Brynn<sup>2</sup>, Jocelyn Diemer<sup>2</sup>, Jacqueline Kublik<sup>1</sup>, Jane Nederlof<sup>1</sup>, Kalea Raposo<sup>2</sup>, Rebekah Stretch<sup>1</sup>. <sup>1</sup>University of Alberta (Augustana), Camrose, Canada, <sup>2</sup>University of Victoria, Victoria, Canada, <sup>3</sup>University of Manitoba

In this presentation, undergraduate research assistants from two universities reflect on their work on the “Critical Crafting In and Beyond Humanities Classrooms” project. Led by two literary scholars and one art historian at three institutions, this project aims to connect scholars, makers, and educators engaged in 19th-century material culture in order to develop and explore ways that hands-on crafting can enhance students’ engagement and learning. Student RAs on the team are responsible for developing one crafting tutorial; for following other RAs’ tutorial instructions for making a craft in order to get these tutorials ready for use in the classroom; and/or for developing supporting educational resources for the classroom. Crafts include moving panoramas, letter writing and folding, rag rugs, “crazy” quilts, embroidery samplers, paper optical toys, and cobweb cards, and our educational resources include a podcast that features interviews with artists, scholars, librarians, and curators.

Our undergraduate RAs will start off this session by engaging the audience in a hands-on crafting activity, which will require participants to bring only a piece of paper to the presentation. Next, the RAs will reflect on what they have learned from developing resources for crafting in the classroom and discuss how crafting activities can deepen students’ learning while also creating more inclusive learning environments. They will also consider what they have learned by making crafting tutorials and podcast episodes, and what they might bring forward from their crafting experiences into other courses and work experiences.

- *Interventional Strategies to Improve Anatomical Knowledge Retention in Nursing Students*. Yuwaraj Narnaware, MacEwan University, Edmonton, Canada

Human anatomy and physiology are considered a cornerstone of any health-related profession and serve as a pre-requisite for future nursing courses and clinical. A strong knowledge base of these subjects is crucial for medical, allied health, and nursing students to become successful practitioners after graduation. However, there is growing concern that students are not retaining the essential bioscience knowledge from these courses over time. Numerous studies have demonstrated the difficulty students have to acquire, transfer, retain and apply anatomical knowledge in their subsequent years of programs of study. Nursing programs worldwide are impacted by reduced face-to-face instructional hours, increased student enrollment, student demographics, fewer dedicated faculty members, minimal or no use of cadaveric dissection, and requirements to move anatomy classes and labs on-line due to pandemics such as COVID-19. These factors have impacted the teaching and learning of biosciences. In this interactive presentation, an author will describe a study that evaluated how much anatomy knowledge nursing students retained throughout the duration of their four-year program. Comparisons and trends by body system and over time will be presented to give a clear understanding of the gaps of knowledge retention between classroom to future nursing courses and clinical. Based on that assessment, he will discuss how interventional strategies were implemented to address those gaps. Attendees will then be encouraged to identify what concepts are essential to their own courses and to outline a project to evaluate whether those concepts are retained over time and what type of learning strategies could impact that retention.