

Office of Teaching and Learning

2025

**TEACHING & LEARNING INNOVATIONS** 

**CONFERENCE** 

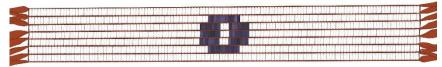
CONFERENCE PROGRAM



#### LAND ACKNOWLEDGEMENT

The University of Guelph is located within traditional territory of Mississaugas of the Credit (Michi Saagiig Nishnaabeg) and the Between the Lakes Purchase of 1784. The three campuses – University of Guelph (Guelph), Ridgetown (Ridgetown) and Guelph-Humber (Toronto) reside within the Dish with One Spoon Wampum. The Haudenosaunee have also had presence on these lands with a long-standing relationship with the Anishinaabeg Nation, exemplified by the Dish with One Spoon Wampum Treaty. Historically, this is also the traditional territory of Attawandaron people who are no longer an independent nation.

Indigenous peoples have historically been the caretakers and stewards of these Lands. Connecting the past to the present, we are able to enjoy the gifts and beauty of these Lands today because of those who came before us and cared for the Land in a Goodway. The Office of Teaching and Learning is committed to reconciliation and acknowledges the importance of building relationship with First Nations, Inuit, and Métis peoples and the Lands they have tended to since time immemorial.



The Dish with One Spoon Wampum Belt Treaty symbolizes an agreement between the Anishinaabeg and Haudenosaunee to share the land peacefully and sustainably. (Image: <u>A Treaty Guide for Torontonians</u>)

# WELCOME TO THE 2025 TLI CONFERENCE

On behalf of everyone involved in planning our **36th Teaching and Learning Innovations (TLI) Conference,** we warmly welcome you as we gather once again to share our experiences, ideas, and the new insights we have gained since we last met. We received an enthusiastic response to our call for proposals, with a rich variety of topics, and we are excited to offer a full program of engaging sessions and discussions.

The theme of this year's conference, **Cultivating Spaces of Possibility,** invites us to reflect on our teaching and learning environments— whether physical, conceptual, or communal—and the ways in which we foster innovation, change, and growth. As educators, researchers, and learners, you play an active role in shaping these spaces with intention, care, and collaboration.

We hope that the sessions and workshops over the next two days will not only be thought-provoking but will also spark meaningful conversations and new ideas that you can bring back to your own classrooms and learning communities. Thank you for being part of this conference!

Your 2025 TLI Conference Co-Chairs,

- Christopher Laursen & Megan De Roover

#### **ACKNOWLEDGEMENTS**

The Office of Teaching and Learning (OTL) and the 2025 TLI Conference Planning Committee would like to thank the Offices of the Provost and Associate Vice President (Academic) for their support of this conference.

We would also like to thank D2L for sponsoring our conference lunch and in-person closing event, Feedback Fruits for sponsoring our breakfast and break, the School of Continuing Studies for technological support, the Graduate Student Association for financial subsidy for graduate students presenting at the conference, the Physics Department for in-kind use of Poster Boards, to our conference volunteers, and to our colleagues in OTL.

#### **CONFERENCE LOCATION**

The conference is located at The University of Guelph's University Centre (UC) located at 50 Stone Rd E, Guelph, ON N1G 2W1. Sessions will take place in Peter Clark Hall (PCH), PCH Wing A, PCH Wing B, UC 332, UC 430, UC 441, and UC 442. Peter Clark Hall and its wings are located on Level 0 (Basement Level) of the UC.

## INTERNET ACCESS FOR **ATTENDEES**

External conference attendees can connect to the University of Guelph's Wi-Fi by connecting to "uog-guest" using the following login credentials:

> Username: tli@uogconf.ca Password: teachingconf25

#### SCHEDULE LEGEND

Concurrent Sessions (20 mins)	Poster Session
Workshops (50 or 75 mins)	Lunch/Break
Keynote Session	Welcome/Closing Remarks





D2L UofG Office of the Associate Vice-President Academic





College of Engineering and Physical Sciences





Wednesday M	ay 14, 2025 - Morn	ing Sch	nedule						
Time	Activity/Location								
8:15 – 8:45 AM				Breakfast in PC	CH Centre Room				
8:45 – 9:00 AM					Clark Hall (PCH) Centre In the Control of Teaching and Le				
9:00 – 9:20 AM	Byron Shel	drick, Asso			edgement - PCH Centre Roara Fulmer, Acting Director,		f Teaching and	l Learning	
			Cond	current Sessio	ons and Workshop	s			
Location	PCH Wing	A	PCF	l Wing B	UC 442		UC 441		
Session	A			В	С	С		D	
9:30 – 10:45 AM	A1: Evaluating and Unde Critical Thinking Skills in Artificial Intelligence in I (AIED)	an Age of	Practical Appr	ng for Engagement: coaches to Assessment nrollment Courses	C1: Working towards Decolonization, Indigenization and Reconciliation in Classroom Spaces: Reflections and Lessons Learned from a Community Centered Second- Year Course (SOC*2280) at the University of Guelph		D1: Learning Through Relationships: Reflecting on Reciprocity in Learning Communities		
10:45 – 11:05 AM			Mon	rning Break: Coffee &	Tea in PCH Centre Room				
Location	PCH Wing A	PCH	Wing B	UC 442	UC 430	UC 441		UC 332	
Session	A		В	С	D	E		F	
11:05 – 11:30 AM	A2: Speculative Design as a Tool for Equitable	Pedagogy Applicat	Exploring a y of Kindness: tions and Best	C2: Prompt to Pixel: Guide to AI Visual Content Generation	D2: Effects of Curricular Flexibility on Academic and Social Opportunity Structures	E2: Integrating Career Preparation into the Academic Curriculum in the BAS Program: One Step Towards a University Level Integration		F2: Spaces of Engagement in Adult Anishinaabemowin Language Learning	
11:30 AM – 12:00 PM	and Curious Learning Communities	Transform	ctices for ming Teaching Learning		D3: Building Bridges Across Generations: The Intergenerational Classroom	Biolo Educat with Indus	Aligning Day Higher ion Curricula Bioscience stry Needs: keholder spectives	F3: Pedagogies of Possibility: Critical Praxis, Qualifying Exams, and Transformative Learning	
12:00 – 1:30 PM				Lunch - PCH	Centre Room				

Wednesday May 14, 2025 - Afternoon Schedule  Time Activity/Location									
	Concurrent Sessions and Workshops								
Location	PCH Wing A	PCH Wing B	UC 442	UC 430	UC 441	UC 332			
Session	Α	В	С	D	E	F			
1:30 – 1:55 PM	A4: Reimagining Classroom Power Dynamics: Transformative	B4: Developing Writing Assignments Post-	C4: Making Space for Underprepared	D4: Expanding Possibilities of IEDI through Community Events and Improvisation in the Classroom: A Report from Critical Practice in the Fine and Performing Arts	E4: Frequent, Low- Stakes Assessments - Are We Practicing What We're Taught?	F4: Transferring Third Space Engagement			
Strategies for Leading = -	Generative AI		D5: The Power of Play: Investigating Experiential Play-based Learning in the Post-Secondary Context	E5: Frequent, Low- Stakes Assessments: Exploring the Impact of Feedback on Student Learning	Strategies to the Classroom				
2:25 – 2:45 PM	Afternoon Break: Coffee & Tea in PCH Centre Room								
2:45 – 3:10 PM		B6: Aligning Higher Education with Industry Expectations: Bridging the Gap Between Students and Industry	C6: Exploring the Relationship Between Undergraduate Students' Goal Orientations and Their use of Generative AI	Between Community and the Classroom: The Potential of a Contextual Engineering Approach to Engineering Education	E6: Engaging Spaces of				
3:10 – 3:35 PM	A6: Taking the Classroom for a Walk: Participatory Play and Place-Based-Pedagogy	B7: Transferable Skills in Higher Education: Enhancing Possibilities Beyond Employability	C7: The Impact of Emerging Technologies on Teaching and Learning in a Canadian Public College and a Canadian University through Innovative Pedagogical Practices	D7: Investigating Engineering Student Problem Solving Skill Development	Possibilities Using Collaborative Online International Learning (COIL) Experiential Activities	F6: Pedagogical Approaches for Sustainable Innovation: Cultivating Regenerative Mindsets			
3:35 – 4:00 PM		B8: I'll Take the Night Shift: Reflections on Contextual Education in the High Arctic	C8: Student Performances Using Different AI platforms	D8: Planting Seeds:  Preparing for  MATH*1080/MATH*1200  and the Journey into University-Level Calculus	E8: Collaborative Online International Learning (COIL): A Cross-Cultural Project				

Poster Session - PCH Centre Room

4:00 – 5:00 PM

Closing in a Goodway- PCH Centre Room: Cara Loft, Educational Developer, Office of Teaching and Learning

Thursday May 15, 2025 - Morning Schedule – Virtual						
Time	Activity/Location					
9:00 – 9:15 AM			Velcome and Land Acknowle rick, Associate Vice-Presiden			
9:15 – 10:45 AM	Direct		<b>Seynote Speaker: Jess</b> Ing & Professor of Professional		versity	
		Concurre	nt Sessions and W	orkshops		
Location			Zoom			
Session	G	K				
11:00 – 11:30 AM	G1: Micro-Credentials to	H1: A Hero's Journey in Learning: Gamification, AI Integration, and Growth in Literary Analysis	I1: Preparing Faculty for Defined Course Delivery  Modes	J1: Measuring Health Promoter Core Competencies Among Graduate Students Enrolled in a Health Promotion Course	K1: Cultivating Spaces for Talking About Teaching: Sparking Reflection and Professional Growth One Conversation at a Time	
11:30 – 12:00 PM	Supplement the Undergraduate Learning Experience	H2: Cultivating Personalized Digital Art Histories: AI- Driven Innovation in Art Historical Narratives	I2: The Possibilities of a Flipped Classroom: How to Prevent Your Flip from Being a Flop!	J2: Spaces of Possibility: Collaborative Design Transforming RVT Education and Veterinary Care	K2: The Guest Lecture Circuit: Lessons Learned from Communal Teaching Across Time, Space, and Identity.	
12:00 – 1:00 PM	Lunch Break					

Thursday May 15, 2025 - Afternoon Schedule - Virtual						
1:00 – 1:30 PM	G3: Creating Spaces of Possibility Through Online	H3: Cultivating Spaces of Collaboration and Reflection: How Theatre Approaches Can Innovate Experiential Learning	I3: How Understanding Language Differences Can Improve Engineering Practice: The Case for Sociolinguistics	J3: "I Actually Learned Something": Reimagining the Participation Grade to Encourage Critical Engagement Outside of the Classroom Walls	K3: From Giving Space to Creating Space: Proactive Strategies for Inclusive Teaching	
1:30 – 2:00 PM	Possibility Through Online  Learning	H4: Hands-On Skill  Development through  Infographics Assignments:  Learnings from the  Infographics in Practice  Program	I4: Building Better Teams of Physicists: Using Outreach as a Tool for Recruiting Diverse Students	J4: Cultivating Engagement Through Critical Reflection: Inspire 1PL3 as a Model for First-Year Holistic Development	K4: Bridging Academic and Student Affairs: Collaborative Strategies for Student Success	
2:00 – 2:10 PM	Break					
2:10 – 2:40 PM	G5: Co-Creating Scholar-	H5: Weaving Together: Co- Creating Spaces for Meaningful Community  Engagement for Decolonization, Indigenization and Reconciliation	IS. Data Cinal CaTL, Haine	J5: Clothing as a Catalyst: The Impact of Professors' Attire on Student Aspirations and Perceptions of Role Models		
2:40 – 3:10 PM	Activist Spaces for Transformative Inquiry and Action Across University and Community	H6: Voices of Connection: Building Inclusive Learning Communities in Higher Education	I5: Byte-Sized SoTL: Using Generative AI to Supercharge Your Research	J6: Accountability and Guidance in Large Class Case-Based Teaching		
3:10 – 3:40 PM				J7: Perceptions of the Factors that Influence Learner Engagement and Their Strategic Implications: A Qualitative Case Study		
3:40 – 3:50 PM	Break					
3:50 – 4:05 PM	Closing Remarks Christopher Laursen, Educational Developer, Office of Teaching and Learning					

## **SCHEDULE LEGEND**

Concurrent Sessions (20 mins)	Poster Session
Workshops (50 or 75 mins)	Lunch/Break
Keynote Session	Welcome/Closing Remarks

#### Wednesday, May 14, 2025

#### Breakfast 8:15 AM - 8:45 AM

Location: Peter Clark Hall (PCH) Centre Room

## Open in a Goodway 8:45 AM - 9:00 AM

Location: Peter Clark Hall (PCH) Centre Room

Cara Loft, Educational Developer, Office of Teaching and Learning, University of Guelph

## Welcome & Land Acknowledgement 9:00 AM - 9:15 AM

Location: Peter Clark Hall (PCH) Centre Room

Byron Sheldrick, Associate Vice-President (Academic), University of Guelph

## Conference Information 9:15 AM - 9:20 AM

Location: PCH Centre Room

Sara Fulmer, Acting Director, Office of Teaching and Learning, University of Guelph

## Morning Concurrent Sessions & Workshops 9:30 AM - 12:00 PM

## Session A1: Evaluating and Understanding Critical Thinking Skills in an Age of Artificial Intelligence in Education (AIED)

Authors: Kathleen Rodenburg, Nicole McCallum, & Poorya Selkghafari

The proliferation of generative artificial intelligence in education (AIEd) has sparked significant debate about its use in the classroom – so, how can we best use it? While concerns persist regarding GenAI, its enduring presence necessitates a shift in focus towards leveraging AI to augment student learning experiences. In this session we present preliminary results from a study designed to investigate how AI could be used to enrich deep student learning (DSL) and improve the quality of teaching to undergraduate business students. Qualitative and quantitative data was collected from over 900 undergraduate first year business students in Fall 2023 who completed a current state of AI use survey and a first assignment requiring the use of AI. The assignment was delivered across four treatment groups with a slightly varied version of the same tasks (i.e., use of GenAI vs. online search, task structure and level of guidance), and the same final reflection question on new learning gleaned. Indicators from the National Survey of Student Engagement are used to classify the level of higher order thinking skills observed in the reflection, to test whether certain assessment designs produce better student learning results than others. Results show statistically significant differences across some treatment groups, offering valuable insights on assessment design using GenAI. Effects are examined across different learner groups as well, providing an overview of what types of students (program, gender, previous learning exposure, motivational factors) are using GenAI, and how.

## Session A2: Speculative Design as a Tool for Equitable and Curious Learning Communities

Authors: Vic Duarte

How can speculative design inspire more equitable and curious learning communities? This interactive session invites participants to explore the transformative potential of speculative design as both a methodology and a lived experience. Designed through speculative design principles, this session embodies the very practices it seeks to teach, creating a collaborative space for imagining and prototyping innovative solutions to challenges in education.

Rooted in accessibility, diversity, and inclusion, the session aligns with the TLI Conference's theme of: spaces of possibility. Participants will begin with a brief introduction to speculative design and its applications in fostering equity and curiosity. Through a guided activity, small groups will identify barriers to equity in educational spaces and collaboratively prototype speculative frameworks integrating culturally responsive teaching, decolonization, and anti-oppressive pedagogies.

By participating, attendees will experience speculative design in action, learning how to apply its principles to reimagine teaching and learning environments. The session will conclude with a debrief and Q&A, allowing for reflection and discussion of practical takeaways. This session is ideal for those seeking to embrace curiosity, challenge biases, and build inclusive spaces for co-creation.

## Session B1: Designing for Engagement: Practical Approaches to Assessment in High Enrollment Courses

Authors: Megan Pickard & Jackie Hamilton

Teaching large enrollment courses presents unique challenges in student engagement, assessment design, and feedback management. This interactive session explores evidence-informed strategies for creating meaningful assignments that enhance student learning while maintaining efficiency in grading and feedback.

Through collaborative discussion, participants will analyze common assessment pitfalls and discover practical solutions that align with pedagogical best practices. We will also examine various assessment strategies that were piloted in a large third-year management DE course (MGMT\*3100) and consider their impact on student engagement, academic integrity, and instructor workload.

Attendees will leave with actionable strategies to support their assessment design process in large enrollment courses. Whether you are new to teaching large classes or refining an existing course, this session will provide concrete takeaways aimed at improving assessment design and student engagement.

## Session B2: Exploring a Pedagogy of Kindness: Applications and Best Practices for Transforming Teaching and Learning

Authors: Katie Lebel, Kate Parizeau, Janet Wolstenholme, Cara Loft, & Jeji Varghese

This interactive session explores The Pedagogy of Kindness, inspired by the transformative work of Cate Denial, a thought leader in compassionate teaching practices and author of *A Pedagogy of Kindness*. Denial's approach emphasizes the power of empathy, inclusivity, and flexibility in creating educational spaces that prioritize the well-being and growth of both educators and students.

Participants will engage with key principles from Denial's work, including kindness to self, redesigning syllabus policies to reflect empathy, creating supportive assignment structures, and fostering inclusive classroom environments. Through guided reflections and collaborative activities, attendees will reframe traditional approaches, such as rigid late work policies or high-stakes assignments, to better align with a more kind and student-centered teaching philosophy. The session will also emphasize the importance of kindness to educators, encouraging strategies for self-care and sustainable teaching practices.

By blending Denial's theoretical framework with practical tools, this session will equip educators to create classrooms that celebrate diversity, build trust, and support meaningful learning experiences. Join us to explore how kindness can transform education for all.

# Session C1: Working towards Decolonization, Indigenization and Reconciliation in Classroom Spaces: Reflections and Lessons Learned from a Community Centered Second-Year Course (Soc\*2280) at the University of Guelph

Authors: Jeji Varghese, Cara Loft, Spencer Martens, Allison Young, Sarina Perchak, Prakrithi (Prax) Monteiro, & Sophie Pheasant

The 2020-21 CSAHS Enhancing Equity, Diversity, Inclusion, Indigenization (EDII) Grant (funded by the Grace Porterfield Fund for Teaching and Learning Excellence) provided a unique opportunity to decolonize SOC\*2280: Society, Knowledge Systems, and Environment. This session will share insights from the course redesign, highlighting the integration of Indigenous pedagogies and collaboration with Indigenous educators and the Educational Developer for Indigenous Knowledges and Pedagogies at the OTL. This session will explore the process of non-Indigenous Faculty engaging in decolonial and Indigenized pedagogies, and methodologies, in collaboration and consultation with the Educational Developer for Indigenous Knowledges and Pedagogies at the OTL and other Indigenous staff at the University of Guelph and beyond. Students from this course will also share their experience engaging with Indigenous Knowledge systems and their reflections on integrating this new knowledge into their own learning. Working towards reconciliation within the classroom in higher education, the session will articulate how non-Indigenous faculty have respectfully engaged with Indigenous pedagogies (i.e. Collaborative Learning, Experiential Learning & Land Based Learning) and Indigenous methodologies (i.e. Sharing Circle, Community Engagement, Knowledge Necklace). The core of decolonial, Indigenized and reconciliatory work begins with relationship building, and this session will emphasize the importance of building respectful, responsible, relevant, and reciprocal collaborations with Indigenous peoples and communities. Participants will gain practical strategies and considerations for decolonizing and Indigenizing their own classroom spaces. The session will intentionally draw on multiple perspectives, including instructors, staff, GTAs, and students. It will also cover the iterative process of course development and revision based on student learning experiences, ensuring continuous improvement and relevance.

### **Session C2: Prompt to Pixel: A Guide to AI Visual Content Generation**

Authors: Michael Samartzis

We are in a new era where artificial intelligence (AI) serves as a powerful tool for visual content creation. But how can we use these tools effectively? What strategies ensure efficient and controlled engagement with AI platforms? How do users retain agency over the output, and how do these systems work?

This session demystifies AI systems and introduces algorithmic-based prompt design, providing attendees with practical strategies to constructively engage with AI tools. Drawing on my MA thesis research, I will present an 8-step framework for systematic prompt engineering that ensures repeatable and controlled results. By managing input variables and analyzing their influence on outputs, this framework empowers users to make precise adjustments and optimize content creation.

Through this interactive workshop, participants will explore how AI interprets language, engage with hands-on exercises using tools like Copilot, and discover the art and science of prompt design. Foundational computer science design concepts and AI methodologies will also be covered, positioning AI as a collaborative partner in creative and academic endeavors.

This session is ideal for students, educators, and professionals. No prior AI experience is needed. Attendees will leave with the skills and confidence to navigate AI-powered tools while understanding their broader implications in creative industries and personal tasks.

## Session D1: Learning Through Relationships: Reflecting on Reciprocity in Learning Communities

Authors: Kim Barton, Valerie Trew, & Alicia Briel

Tucked away between the trees near the Guelph Arboretum is a vibrant learning community on campus, comprised of nearly 700 members including children, students, family members, and educators. The Child Care and Learning Centre (CCLC) prides itself on cultivating opportunities for experiential learning, parallel practices, and authentic pedagogical partnerships throughout its operations for the past 35 years. Today, the CCLC aims to foster a culture of reciprocal learning encounters among and between children, educators, families, cooks, administrators, practicum students, work-study and part-time student employees, co-op students, URAs, external placement students, community partners, and researchers. Such encounters lead us to wonder what young children can teach post-secondary education departments about pedagogical practices that are relevant to our current realities of 2025. In this session, we will invite collaborative reflection upon current opportunities to engage in authentic co-learning in your teaching and learning contexts. We will also hear directly from the students, staff, and families of the CCLC community about how their relationships with the CCLC have shaped and inspired their teaching and learning processes. This session aims to engage with pedagogical questions that are responsive to our current lab school community but that are scalable to diverse post-secondary teaching and learning contexts.

## Session D2: Effects of Curricular Flexibility on Academic and Social Opportunity Structures

Authors: Delainey McManus & Dan Grunspan

Undergraduate students' social connections influence their academic performance (Vargas et al., 2018), persistence (Zwolak et al., 2017), and mental well-being (Poole et al., 2023). Thus, it is important to consider university features that facilitate or constrain peer relationships from forming, such as curriculum. Students in majors with rigid curricula frequently co-enroll in courses with same-major peers, increasing the likelihood of forming meaningful relationships. In contrast, students in flexible majors co-enroll less often. Beyond this social role, the range of courses students take determines the disciplinary foundations to which they are exposed. We investigate how curricular flexibility influences students' academic and social opportunity structures (the content students access through coursework, and the peer relationships students have the opportunity to form). For example, we are interested in the academic diversity of peers students co-enroll with, and the disciplinary clustering of electives. We analyzed enrollment data for a cohort of students in the College of Biological Sciences at the University of Guelph. This includes 2,556 students across 13 majors, 11,630 offerings of 1,303 courses they took, and 62,376 co-enrolled peers from across campus. We compare the opportunities students face in the college's most flexible major to that of more rigid majors.

## Session D3: Building Bridges Across Generations: The Intergenerational Classroom

Authors: Jessica Hsieh, Raza Mirza, Christopher Klinger, Alexis Hart, Florene Shuber, Heather Janes, & Claudia Osmond

The University of Toronto (UofT) partnered with Christie Gardens, a retirement home, to launch an innovative experiential learning initiative: The Intergenerational Classroom. Half the learners were UofT undergraduate students (n=24); the other half were older adults residing at Christie Gardens (n=25). Through interactive seminar-style discussions, collaborative projects and mentorship, the course, which was held at Christie Gardens, provided a semester-long exploration on aging. To evaluate the program, pre/post-surveys were administered to all learners, and following the semester, students (n=6) and older adults (n=8) participated in focus group discussions.

Outcomes of program success were identified across domains, including meaningful friendships and bonds created, increased awareness of aging issues, reduced ageist attitudes, and greater sense of community and civic engagement. Evaluations revealed that 92% had an excellent learning experience, 95% found the course intellectually stimulating, and that 100% would recommend the course to others.

## Session E2: Integrating Career Preparation into the Academic Curriculum in the BAS Program: One Step Towards a University Level Integration

Authors: Donald Bruce, Sobia Iqbal, & Nicola Edwards

The Arts & Science Connections: A Deconstructed Conference about Career Possibilities integrated into the BAS curriculum and assessments. For students, attending the Career Conference was paired with a reflection assignment. Since 2021 and after 6 conferences, we have collected 988 reflection assignments from BAS students across all four years of the program. Additionally, we conducted student and faculty focus groups. Results revealed evolving perspectives on students' career exploration. Year 1 students showed strong engagement with the conference, focusing on exploring career paths, identifying transferable skills, and developing self-awareness, which helped them build a foundational understanding of their future opportunities. Year 2 and 3 students continued to benefit by learning to leverage career tools and addressing feelings of failure with resilience. In Year 4, students appeared to have already gained a significant amount of insight into their career development and self-reflection and desired more tangible strategies on how to actually obtain future employment. The Career Conference provides students an opportunity to discover who they are, what they like to do, and how to link course learning to transferable skills. Supported by a SOTL grant, our pilot study in the BAS program supports the integration of career development into academic programs.

## Session E3: Aligning Biology Higher Education Curricula with Bioscience Industry Needs: Stakeholder Perspectives

Authors: Sidney Evans & John Dawson

The Canadian bioscience industry anticipates over 65,000 job openings by 2029, yet there is a significant misalignment between workforce demands and the skills of biology graduates. Employers report that while graduates possess academic knowledge, they often lack essential technical, transferable, and industry-specific skills critical for success. This research investigates how stakeholder collaboration can bridge this gap by aligning biology curricula with the evolving needs of the bioeconomy.

Grounded in stakeholder curriculum theory integrating curriculum and stakeholder theories, this study emphasizes inclusive decision-making by involving students, educators, industry professionals, and policymakers in curriculum design. The research employs a mixed-methods approach, including national surveys, focus groups, and interviews, to capture diverse perspectives on current educational practices, skills gaps, and workforce readiness.

At the TLI conference, I will present findings that explore stakeholder perceptions of the alignment between biology education and workforce demands, provide insights into how BSc biology curricula address (or fail to address) bioeconomy requirements and outline actionable strategies for bridging gaps between higher education and industry needs. These outcomes aim to inform curriculum development, enhance employability, and strengthen academia-industry partnerships in Canada.

## Session F2: Spaces of Engagement in Adult Anishinaabemowin Language Learning

Authors: Angela Easby & Shauna Kechego-Nichols

How can we cultivate spaces for Indigenous language learning that meaningfully engage both learners and fluent speakers, encourage daily language use, and foster a sensibility of lifelong learning? We discuss our praxis as Anishinaabemowin teacher-learners who work in multiple spaces (university classrooms, our own homes, community spaces) which feature a common challenge of how to get (and keep) adult Indigenous language learners engaged. Shauna will reflect on experiences teaching Anishinaabemowin in post-secondary while simultaneously attending an immersion program as a learner, to discuss the value in a combination of learners and fluent speakers building language skills together to foster engagement. Angela will discuss findings from her PhD dissertation, examining barriers to and successes in staying engaged as an Anishinaabemowin adult learner working on intergenerational transmission. Both will discuss how these experiences have informed the ongoing pedagogical design of an extracurricular Anishinaabemowin language table at the University of Guelph, part of the SSHRC-funded research project Strength in Relations: Generating Possibilities for Indigenous Language Learning. As data collection has not begun, we reflect on our own decisions around the design of the space, based on Indigenous language learning research and our experiences.

## Session F3: Pedagogies of Possibility: Critical Praxis, Qualifying Exams, and Transformative Learning

Authors: Nealob Kakar & Allison Bishop

Graduate education prepares students to become stewards of their discipline. Graduate programs often include a comprehensive or qualifying exam, which traditionally requires students to engage with the list or canon of previous scholarship and write a series of essays summarizing the literature and its relevance to their research interests. While the scholarship on this aspect of graduate education is limited, it is intended to prepare students to conserve the most important ideas and findings that are a legacy of past and current work (Golde, 2007; Riviere, 2016).

In this presentation, we argue for embracing critical praxis as a pedagogy of possibility in graduate qualifying examinations. We draw on our own experiences of queering and decolonizing the qualifying exam to show how engaging in dynamic processes of critical reflection, action (making and doing), and visiting practices (with scholars and their work, with place, and one another) integrates both theory and practiced knowledge in accessible, decolonial, and anti-oppressive ways. We argue that moving beyond the list and embracing a wide range of creative and relational practices helps graduate students practice epistemic integrity and interdisciplinary boundary crossing. We see critical praxis in the qualifying exam as a latent opportunity for transformative learning.

## Afternoon Concurrent Sessions & Workshops 1:30 PM - 4:00 PM

#### Session A4: Reimagining Classroom Power Dynamics: Transformative Strategies for Leading Inclusive, Student-Centered Learning Environments

Authors: CJ Lopez

In this collaborative workshop, participants will engage in a knowledge exchange to develop meaningful strategies for decentring teaching practices to foster an inclusive and empowering learning environment. In the first half of the workshop, the facilitator will share her experiences as an secondary school educator, first generation Filipino-Chinese Canadian, and expertise in equity and inclusion all of which have shaped her practical approaches and frameworks for teaching strategies. This will include examples and experiences engaging underrepresented students and promoting cultural responsiveness, such as CRRP and Anti-Racist, and Anti-Oppressive frameworks.

In the second half, participants will engage in a knowledge exchange where they will draw on their own experiences to discuss collective successes and opportunities for improvement. Note: This workshop is designed for educators who are currently working in educational spaces with students.

## Session A6: Taking the Classroom for a Walk: Participatory Play and Place-Based-Pedagogy

Authors: Steve Donnelly

Do you remember when you were first told to stop playing in class? This interactive workshop will invite participants to take part in a series of games which aim at reclaiming play as a form of study, melding playfulness and critique as central materials of learning.

Taking influence from participatory walking-art practices, the session will consist of a series of playful interventions that encourage conviviality, exploration of place, and critical reflection. Starting from the conference venue folk will be invited to explore the campus following cues and instructions designed to encourage thoughtfulness and reflection.

The workshop will offer space to test and consider the use of participatory games in-and-out of classroom settings, and to reflect on how one's non-academic skills, trainings, and interests might create opportunities for the development of unique and authentic playfulcritical pedagogical interventions.

## Session B4: Developing Writing Assignments Post-Generative AI Authors: Mary McCaffery, & Adeiza Isiaka

Writing assignments are challenging to develop and onerous to grade, but they endure because writing is a powerful heuristic. By reading the literature, establishing a narrative across sources, and synthesizing information within paragraphs, students struggle to solve dozens (if not hundreds) of conceptual and rhetorical problems to finish their papers. Through this struggle, they achieve greater fluency and familiarity with disciplinary communication and content.

Now, generative AI complicates the role of writing assignments in student learning, and faculty are scrambling for new ways to facilitate disciplinary engagement through assessment. In this interactive 50-minute session, we will create a space to confront this challenge and workshop solutions. We will open with a brief presentation of common learning objectives for research papers. These learning objectives will then form the basis of a structured brainstorm to share and develop tasks and/or assignments that facilitate learning within the same domains. All who attend will receive a summary of the ideas shared, and, hopefully, gain new connections with colleagues who can keep the conversation going.

## Session B6: Aligning Higher Education with Industry Expectations: Bridging the Gap Between Students and Industry

Authors: Navjeet Kaur

The transition from higher education to the professional workplace is a critical turning point for students. The alignment between higher education and industry needs can determine how students approach the transition from university to the workplace and whether they are equipped with the knowledge, skills, and values necessary to meet the demands of today's labour market. However, many employers have noted a gap between the skills that students develop through higher education and those required by the industry. This disconnect raises the question of whether higher education is aligned with industry needs, and more importantly, how this alignment might be improved. My research aims to determine how students' views on the biology curriculum, science industry requirements, and career preparation inform the alignment of higher education with industry needs. Existing literature has identified areas where students express a desire for improvement, including opportunities to develop communication skills, more interdisciplinary courses, and a stronger emphasis on real-world applications in their programs. I surveyed biology students from several Canadian universities, and I will present these findings, along with recommendations to improve the alignment between biology education and industry needs, ensuring future graduates are better prepared for their professional careers.

## Session B7: Transferable Skills in Higher Education: Enhancing Possibilities Beyond Employability

Authors: Christine Mishra

This session aims to broaden the conversation about transferable skills in higher education beyond a narrow focus on employability. High participation systems of higher education like Canada's, aim to prepare students for life in an advanced industrial society, emphasizing adaptability to rapid social and technological changes. Developing transferable skills is crucial for this adaptability. While some academics express concerns about any increased focus on skills potentially encroaching on academic freedom and autonomy, I argue that these concerns may be exaggerated in the case of transferable skills. Transferable skills align with the empowering capabilities approach, and they can often be integrated into university curricula with minimal effort and without threatening faculty autonomy.

Including transferable skills development opens up possibilities for students. Skills such as critical thinking, problem-solving, time management, collaboration, and communication are vital for academic success, research, personal development, lifelong learning, responsible citizenship, and helping to solve complex global problems. These important transferable skills should be included within coursework, rather than assuming all students can gain them through extracurricular experiences.

## Session B8: I'll Take the Night Shift: Reflections on Contextual Education in the High Arctic

Authors: Shoshanah Jacobs, Jonathan Goldner, Jess Clausen, & Daniel Gillis

"I'll take the night shift," said the anthropologist.

Students on STEAM was a spectacular success, once again, in Iqalutuuttiaq. With more students, learning, and fun each year, the teaching team has reflected on what we've learned to ensure sustainability and added community value. Relationship building began in 2019 with a series of conversations, and now we have offered three versions of field schools, each improved based on experience and community feedback.

In addition to learning directly from Northern instructors, much of what Southern instructors learned comes directly from engaging with the youth. Shedding of 'southern ways' was easy and meaningful. Within a couple of days, the students increased their learning engagement time, identified new career goals, or practiced leadership skills. And because we took the night shift, we saw magic.

Join our session to learn about what can happen when the community, government, industry, and education all go camping.

#### **Session C4: Making Space for Underprepared Students**

Authors: Karen Lochead

Underprepared students enter university, their program, or a particular course with deficiencies, weaknesses, or gaps in essential knowledge and critical skills. This negatively impacts their academic success as well as their social and emotional wellbeing (Grimes 2006; Bailey & Smith Jaggars 2016; Bloom 2019; Hughes 2021). The goal of this session is to empower instructors to identify and address under preparedness through a lens of care and kindness (Bali 2021; Eyler 2018; Beard, Clegg & Smith 2007; Cavanagh 2016).

Attendees are asked to bring approximately 20cm of rope or cord to the session.

# Session C6: Exploring the Relationship Between Undergraduate Students' Goal Orientations and Their use of Generative AI Authors: Julia Mellary, Nathan Cozzi, Rayan Kanaan, Tim Bartley, & Dan Grunspan

The recent widespread availability of generative-AI (genAI) tools has disrupted higher-education. Instructors' attitudes on the use of genAI in their classes vary widely; some instructors treat any use of AI as academic misconduct, while others have integrated AI into their courses. However, creating informed guidelines is difficult without a more robust understanding about how students use AI. While some students may use genAI in a manner that clearly constitutes academic misconduct, others may use these tools in a healthy manner that supports their learning. Our interest lies in better understanding what underlies this variability and explores a potential link between students' achievement goal orientation (AGO) and their use of genAI. AGO is a context-dependent measure of what drives students' motivations for achievement: students with mastery-goals focus on developing competence, while students with performance-goals focus on demonstrating competence relative to others. (Elliot, 1999). AGO has been linked to student engagement in academic dishonesty, with students with mastery-goals engaging in academic dishonesty significantly less (Fritz et al., 2023). We hypothesize that students with performance-goals may be more inclined to use genAI to complete assignments without further supporting their learning, whereas students with mastery orientations, may use genAI in a manner that supports the advancement of their knowledge. To test the relationship between students' AGOs and their genAI use, students in a first-year biology course were instructed to create a concept map in preparation for an upcoming assessment and were encouraged to use ChatGPT. Students submitted their concept map and ChatGPT log. To measure students' AGO, we administered the AGO Questionnaire-Revised (Elliot & Muryama, 2008). We also had students describe their use of genAI to help them construct their concept map, had them answer questions about their prior experience using genAI, and collected student demographic and course performance data. Complete data were collected from 292 students. We will discuss results from regression analyses and discuss how our findings can inform policies on student AI-use.

Session C7: The Impact of Emerging Technologies on Teaching and Learning in Canadian Public College (Conestoga College) and Canadian University (University of Niagara Falls) through Innovative Pedagogical Practices.

Authors: Anu Anu

The integration of emerging technologies into higher education is transforming teaching and learning practices across disciplines. In Canada, public colleges and universities are increasingly adopting innovative pedagogical approaches to enhance student engagement, improve learning outcomes, and prepare students for the evolving demands of the workforce.

This study explores the impact of emerging technologies on teaching and learning in Canadian public college and university, 1) focusing on how technologies shape an instructional strategy, 2) faculty development linkup with student experiences.

Through a mixed-methods approach, including surveys and case studies, the research examines the use of technologies such as artificial intelligence, virtual reality, and adaptive learning platforms in higher education settings.

Key themes identified include the role of technology in promoting active learning, fostering collaboration, and supporting personalized learning experiences.

Additionally, the study highlights challenges faced by educators, such as the need for ongoing professional development, technology integration barriers, and concerns regarding digital equity. The findings suggest that while emerging technologies offer significant potential to enhance pedagogy, their successful implementation requires thoughtful planning, institutional support, and a shift towards a student-centered learning model. This research provides valuable insights for faculty, administrators, and policymakers seeking to leverage technology for pedagogical innovation in Canadian postsecondary education.

#### Session C8: Student Performances Using Different AI platforms

Authors: Eric Chi & Vy Le

I present on a study, which explores performance differentials on an assessment among students using different generative AI platforms. The study looks at student performance in an Introductory Macroeconomics class for first-year students. Students were sorted into three cohorts: ChatGPT users, Microsoft Copilot users, and non-AI users. The results reveal a substantial performance gap between different cohorts. We wish to shed light on the following questions:

- 1. What is the performance difference between Gen AI users and non-AI users?
- 2. Is there a performance differential between ChatGPT users and Copilot users?
- 3. How do other student characteristics, such as gender, high school education, math background, etc impact the proficiency in using Gen AI?

#### Session D4: Expanding Possibilities of IEDI through Community Events and Improvisation in the Classroom: A Report from Critical Practice in the Fine and Performing Arts

Authors: Ryan Bruce

Critical Practice in the Fine and Performing Arts (Brock University) is a course that re-envisions the classroom as a dynamic network of learning spaces and practices. Using a hybrid delivery model, students complete online learning modules, attend events in galleries, theatre, and concert halls, and participate in workshops to explore creativity as related to social practice. The anti-sexist and anti-racist design engages with historical challenges to oppression, research materials from the International Institute for Critical Studies in Improvisation (IICSI) website, and selected off-campus events that promote Indigenous history and knowledge, issues of representation and response, and artistic concepts in these contexts. In-class meetings engage in interdisciplinary activities where students choose to improvise with sound, writing, visual art, and dance. We explore improvisation as negotiating difference, as risk and building trust, and to hone technique as a practical application of focus, skill-building, and understanding diverse artistic expressions. As such, the pedagogy emphasizes creation, discussion, reflection, and the priority of process over final product. This presentation is an example of the non-traditional classroom to actively engage in IEDI principles, generation of artistic and social meaning, and making space of possibility for inclusion, participation and co-creation.

#### Session D5: The Power of Play: Investigating Experiential Playbased Learning in the Post-Secondary Context

Authors: Kimberly Squires & Tricia van Rhijn

In this presentation, we will share about a recent research study that has examined if the benefits of both experiential learning and play-based learning can be harnessed to better support student learning in the post-secondary context. Previous research has found many benefits to implementing experiential learning within post-secondary settings, which can include improvement in student learning, achievement, motivation, and skill development (Radovi et al., 2021). The benefits of adults engaging in playful learning experiences has been much less studied; however, recently there has been increased acceptance of the potential importance of play for adults (Whitton, 2022). It is critical to further study these concepts together within the post-secondary setting to understand if there are opportunities to better support student learning.

This project used a pre- and post-intervention mixed method survey design to investigate the impact of implementing Play Labs in two second-year undergraduate courses within the University of Guelph Department of Family Relations and Applied Nutrition. This presentation will discuss key results from the study and encourage participants to consider how they may be able to harness the benefits of experiential and play-based learning within their future post-secondary pedagogical and teaching practices.

## Session D6: Bridging the Gap Between Community and the Classroom: The Potential of a Contextual Engineering Approach to Engineering Education

Authors: Nida Ansari, Abhiroop Chattopadhyay, Ann-Perry Witmer, & Shoshanah Jacobs

Within Canada, there is increasing concern that engineering students' techno-centrism interferes with the societal need to train thoughtful technical designers. Humanitarian engineering projects designed to help "developing" communities experience high premature failure rates. This raises concerns about the overall sustainability and longevity of engineering solutions. The theory of Contextual Engineering (CE) was developed in response, emphasizing community context as critical to all stages of an engineering project.

It is unclear if current engineering pedagogy allows for the integration and application of CE into students' future decision-making as engineers. Calls to introduce experiential and transdisciplinary methods in teaching and learning suggest that there is value in evaluating the current academic environment of engineering to determine the steps necessary to introduce CE into engineering education in Canada.

We seek to understand the current perspectives of engineering students about the value of CE approaches to curriculum and program design. In this presentation, we will describe the overall project and present findings from a survey representing the engineering student body of a Canadian institution. We will also present findings from a case study of CE in practice to illustrate its potential. We aim to contribute valuable insights about the current engineering education climate to better inform, introduce and adapt contextualized approaches into the engineering curriculum.

## Session D7: Investigating Engineering Student Problem Solving Skill Development

Authors: Grace Ly & Ryan Clemmer

Engineering students generally work with structured, closed-ended problems and become familiar with this. However, engineers are exposed to ill-structured, open-ended problems in the workplace. While traditional textbook problems are useful, they do not adequately prepare engineering students for real-world problems, thus creating a gap. The research team is exploring how problem-solving and problem definition skills are currently being taught in the undergraduate curriculum to find gaps and areas of improvement. A survey was distributed to assess student confidence levels in problem-solving and how problem-solving skills are being developed within the undergraduate engineering curriculum. The survey also identified where and what teaching activities offered the greatest development of problem analysis and problem definition skills. A focus group was conducted to further investigate the student experience and areas of difficulty when solving ill-structured, open-ended problems. Preliminary survey results show that students find open-ended problems difficult as they have no single solution. It was also hypothesized that students would become comfortable with problem definition near the end of their degree, however, results from upper year students show that they still struggle with defining problems. This presentation will showcase the research results and overall findings from the survey and focus groups.

## Session D8: Planting Seeds: Preparing for MATH\*1080/MATH\*1200 and the Journey into University-Level Calculus

Authors: Nagham Mohammad, Matthew Demers, & Geordie Richards

Following the COVID-19 pandemic, it was observed that the mathematical backgrounds among incoming first-year Calculus students at the University of Guelph were markedly less consistent than in previous years. These observations run parallel to concerns that the math achievement gap among students of different socio-economic backgrounds may have been exacerbated during the pandemic (Ruef. Et al, 2022). In order to create new spaces that promote equitable learning, we developed and delivered (in Fall 2023) a non-credit, two-day program designed for students enrolled in MATH\*1080 "Elements of Calculus I" and MATH\*1200 "Calculus I". This program was offered during orientation week in a face-to-face format and consisted of two lectures in which review materials were covered in preparation for regular-semester calculus classes, giving students a chance to meet and interact with their professors while learning and/or reviewing important prerequisite concepts. The program was a resounding success, with approximately 1800 students in attendance, and was offered again ahead of the Fall 2024 semester with the intent to continue this program as a regular part of orientation week in future years. In summary, we believe that these sessions have proven to be highly beneficial to students in preparation for their respective calculus courses.

## Session E4: Frequent, Low-Stakes Assessments - Are We Practicing What We're Taught?

Authors: Arielle Ramnath & John Dawson

Frequent, low-stakes assessments (FLSAs) are intended to increase student engagement and stimulate self-guided learning. These benefits would have been crucial during the switch to an online classroom during COVID-19, thus prompting an increased recommendation to incorporate FLSAs. However, this recommendation came with little specifics on the criteria for these assessments to classify them as FLSAs and ensure students are receiving their intended benefits. Unfortunately, the Scholarship of Teaching and Learning (SoTL) literature on FLSA criteria is sparse with few studies defining exact criteria to consider when implementing FLSAs. If literature isn't informing instructor practice of FLSA, I hypothesize that traditions of FLSA practice within individual institutions are key. That is, teaching and learning orientation and professional development programs at each institution may depend on the backgrounds of those defining the training and mechanisms of FLSAs specific to that institution. As a result, instructors' teaching strategies should be grounded in the resources of the university where they have received teaching and learning development. Let's find out! This presentation will analyze whether this alignment exists between student experience of FLSAs and University of Guelph resources and explore any misalignments or inconsistencies between FLSA theory and practice.

## Session E5: Frequent, Low-Stakes Assessments: Exploring the Impact of Feedback on Student Learning

Authors: Leena Tawfik, John Dawson, & Arielle Ramnath

Feedback is a vital component of education, enabling students to understand their progress and build confidence in their knowledge and abilities. Frequent, low-stakes assessments (FLSAs) provide an opportunity for students to engage with feedback in a lower-stakes environment, thus promoting learning rather than being grade-focused. This research explores how students perceive, engage with, and use assessment feedback from FLSAs in undergraduate College of Biological Science (CBS) courses at the University of Guelph.

This research aims to evaluate the formative aspect of feedback; that is, the ability of feedback to guide students in improving their learning processes. Feedback can be categorized into three levels of formative value: high (feedback with actionable insights for future learning), low (feedback with limited insights for future learning), or none (purely score-based feedback). Through analysis of the levels of feedback provided by FLSAs and input from undergraduate students, we will determine how the level of formative feedback influences student learning and confidence.

The results of this work will determine how FLSA feedback impacts student experiences and inform improvements within feedback practices to better support student success.

## Session E6: Engaging Spaces of Possibilities Using Collaborative Online International Learning (COIL) Experiential Activities *Authors: Ruben Burga*

Collaborative Online International Learning (COIL) creates spaces of possibility for experiential learning in a way that integrates exposure to business practitioners, sustainability practices, and cross-cultural engagement among students in a truly global environment. This session will describe how a COIL experiential activity allowed students from Lang's School of Business and Economics to engage their course curriculum and learn about flourishing businesses, sustainability and cross-cultural work with students from schools in the US, the UK, Spain, Brazil, South Africa, Saudi Arabia, and Indonesia. The session will describe the experience and provide a working document and a practice session that can be followed to adapt virtually any program to a COIL experience. In this way different spaces of possibilities for learning are created for faculty and students.

## Session E8: Collaborative Online International Learning (COIL): A Cross-Cultural Project

Authors: Nathania Ebegbare, Beatrice Abiog, Ashnaa Narumathan, Linniah Williams, & Deborah Gonzalez Bello

For the past three years, the Soka Education Research Centre on Global Citizenship (SERC-GC) at the University of Guelph-Humber (UofGH) has been conducting Collaborative Online International Learning (COIL) projects with a Japanese high school. The project provides senior undergraduate students at the UofGH (Toronto) and senior high school students at Kansai Soka High School (Japan) with a crosscultural learning experience to collaborate on developing research projects that address issues of global importance, such as the UN's Sustainable Development Goals and nuclear disarmament. The students engage in virtual lectures, discussions, and collaborative research, culminating with the high school hosting the UofGH students at their school in February for joint discussions on shared learning and presenting the collaborative projects to the student body and teachers. Our TLI session will explore the transformative potential of peace education within the context of global citizenship and cross-cultural collaboration. By drawing on the experiences and outcomes of the COIL project, we will demonstrate how integrating peace education principles fosters critical engagement, empathy, and understanding among learners from diverse backgrounds.

### Session F4: Transferring Third Space Engagement Strategies to the Classroom

Authors: Michelina Crosbie, Kimm Khagram, & Joannah O'Hatnick

How do we cultivate spaces of engagement for undergraduate students? How do we transfer effective engagement strategies from one space to another?

We will present a case study for demonstrating engagement strategies and their impact on student learning through a brief overview of the University of Guelph's Supported Learning Groups (SLG) Program. SLGs, an academic support program modelled on the internationally recognized Supplemental Instruction model, provides peer-facilitated, interactive study groups for high-risk undergraduate courses. SLGs operate in a "third space" of learning, which is neither the formal classroom nor the student's informal learning environment alone or with friends. In this third space, which bridges the gap between formal and informal learning spaces, students experience rich opportunities for deep engagement in learning with their peers.

In addition to sharing research about the program's effectiveness, presenters will lead a mock SLG session in which participants can experience some of the many effective engagement strategies incorporated in SLGs. This demonstration will be followed by a discussion of how engagement strategies used in a third space can be transferred into more formal spaces for learning, such as the classroom, seminar or lab.

## Session F6: Pedagogical Approaches for Sustainable Innovation: Cultivating Regenerative Mindsets

Authors: Negin Ficzkowski, John Donald, & Richard Zytner

This interactive workshop explores strategies for integrating principles of living systems into engineering education for improving solutions and services produced by future engineers. Rooted in the philosophy of regenerative design thinking, this approach shifts the focus from reducing harm to generating benefits, enabling more effective responses to socio-ecological challenges and equitable economic growth. The objective of the session is to foster learning environments that prioritize adaptability, sustainability, and innovation.

The session begins with a brief introduction to key principles and frameworks of regenerative design and their application in fostering systems-thinking mindsets. Participants will then engage in collaborative discussions and activities, guided by the facilitator, to analyze case studies, critique existing sustainability approaches in engineering curricula, and co-create innovative strategies for embedding regenerative principles into teaching practices.

Activities are structured to encourage reflection, challenge assumptions, and generate actionable ideas that educators can apply within their own classrooms and institutions. Contributions will be synthesized in real-time and shared with participants to promote collaborative learning and peer-driven innovation. This session aligns with the theme Cultivating Spaces of Possibility by creating an interactive and inclusive space for educators to share expertise, develop new insights, and collectively reimagine engineering education as a driver of systemic and sustainable transformation.

## Closing Event & Poster Session 4:00 PM - 5:00 PM

Join us for an engaging and celebratory closing event for the in-person day of the 2025 TLI Conference.

**Poster Session:** Explore innovative pedagogical approaches and research findings showcased by our diverse array of poster presenters. Engage directly with presenters to delve deeper into their work, ask questions, and exchange insights.

Sponsored by D2L, this event will feature hors d'oeuvres, prize give-aways, and Closing in a Goodway.

## Poster Title: The Importance of Physics Outreach in Attracting More Students to Physics

Authors: Michaela Hishon

"Physics isn't for me, only geniuses can be physicists" is a phrase we unfortunately hear far too often in prospective physics students. At the University of Guelph, the Department of Physics' outreach team addresses this mindset and more through a variety of strategies from outreach events to specialized video content. Since promoting the public's attitude towards physics benefits the physics community, it is in our best interest as physicists to approach this mindset shift through the lens of a physicist; by creating a plan and executing a possible solution. Rooted in community engagement initiatives, over 1100 students participated in outreach events with the Guelph Physics' inflatable planetarium in Summer 2024. Sharing a variety of planetarium shows from Canada's contribution to space exploration and Indigenous night sky teachings allows all students and community members to experience the spaces of possibility and spaces of being that physics can foster. By relaying relevant information in an accessible manner, Guelph Physics works towards inspiring curiosity in audiences that can overall promote their attitudes towards physics as a whole.

## **Poster Title: Exploring Global Perspectives in Undergraduate Biology Education**

Authors: Isabella Tucci

Regional variations in higher education impact the effectiveness and competitiveness of biology programs worldwide. This research examines global perspectives in undergraduate biology education by comparing Program Learning Outcomes (PLOs) and structures of Bachelor of Science (BSc) biology programs from thirty top-ranked institutions across five continents. PLOs, categorized into Knowledge, Skills, and Values using a standardized framework, were analyzed alongside program structures including course offerings, research opportunities, internships, and co-op placements. By analyzing this data, we can describe the current space of biology teaching and learning, and how pedagogical practices differ globally. Deciphering best practices in biology education allows us to recommend improvements to biology curricula and address gaps in educational design and spaces for teaching and learning in Canadian academia. I will present the findings of this work, which will demonstrate the interconnectedness of localized and globalized education, offering Canadian institutions actionable insights to align with best practices in biology higher education.

## Poster Title: Walk the Walk or Just Talk? Curriculum-Based Transferable Skills in Engineering Disciplines

Authors: Nida Ansari, Zoha Butt, & Shoshanah Jacobs

Engineering programs in Canada are accredited through the Canadian Engineering Accreditation Board, who have established a set of 12 graduate attributes to account for the "lifelong" skills necessary in engineering (EGAD, n.d.). However, identifying the exact skills learned within the curriculum of any program can be a difficult task. Despite the requirement of standardized profession-level learning outcomes identified through accreditation, course-level learning outcomes (CLOs) are often identified at the instructor level. CLOs are thus variable in nature and are dependent on instructors' priorities and capacity to implement outcomes (Mishra, 2022; Nelson & Brennan, 2018). With an increasing importance of teaching transferable skills in education (Boivin, 2023), and the noted variability in experiences at the course-level, we are provided a vulnerable point in the curriculum at which evaluation is needed.

Thus, we aim to review the CLOs associated with an engineering program at a Canadian institution to understand the expected skills development as it relates to transferable and discipline-specific skills. By identifying themes in the content and vocabulary used to describe expected skill development, we aim to better understand the current educational climate of engineering, as it informs us on how engineers will apply their knowledge in their field and in the changing world.

#### Poster Title: Navigating the New Normal: Exploring the Pandemic-Induced Differences in Post-Secondary Transferrable Skills Development and its Applicability in the Workforce

Authors: Olivia Gair, Nida Ansari, David Walters, & Shoshanah Jacobs

This poster will review the impact of one's educational background (notably the tertiary education degree obtained and academic field of study) on the use of transferable skills such as problem-solving at work, controlling for work-related and socio-demographic factors. Findings will be compared between the 2011-2012 and 2023-2024 Programme for the International Assessment of Adult Competencies (PIAAC) datasets.

As problems continue to become more complex as a result of global challenges such as the COVID-19 pandemic, it is imperative to understand how the learning context of post-secondary students has changed prior to and since the pandemic, especially in regard to the growing concern about the transferrable skills gap that new graduates experience. This poster hopes to inform future directions for educational research and curriculum reform to better serve student needs in a world where alternative modes of learning are quickly becoming more pervasive and have the potential to create unanticipated impacts on skill development required for the workforce.

## Poster Title: From Classroom to Cloud: Evaluating Hybrid Approaches for Engineering Software Instruction

Authors: Karam Abu El Haija, Stephen Mattucci, & Makary Nasser

This work explores the effectiveness of hybrid teaching methods for technical engineering software education, drawing from the author's personal teaching experiences and relevant literature. With the increasing integration of hybrid learning environments, understanding how different delivery methods' online, in-person, and hybrids' affect student engagement, comprehension, and skill development is crucial. This work provides insights into pedagogical challenges and opportunities associated with hybrid teaching through a qualitative examination of instructional approaches, student feedback, and existing educational frameworks. By analyzing teaching experiences and reviewing current research, the aim is to identify preliminary observations that can inform future studies on optimizing hybrid learning models for technical engineering education. The findings from this work will contribute to refining instructional methodologies and guiding further exploration of effective hybrid teaching strategies.

#### Poster Title: Identifying and Removing Inclusion Barriers in Graduate Studies can Facilitate Creating Spaces of Being that Optimally Support Graduate Student Success

Authors: Virginia Capmourteres, Molly Contini, Ala Alzubi, & Jennifer Monk

Experiencing barriers to inclusion can prevent graduate students from fully engaging in their programs and limits the quality of the training environment. Consequently, graduate students may not develop critical transferable skills and discipline-specific knowledge or engage with networking opportunities that support their transition into the workplace. This poster will share the findings from an anonymous online survey and focus group discussions involving biological science graduate students that identified four inclusion barrier themes: i) financial literacy and equity (e.g., insufficient stipend/financial support, minimal awareness of financial aid resources); ii) recruitment and admissions policies (e.g., inequitable recruitment and/or hiring approaches, and emphasis on academic grades in admissions criteria); iii) student wellbeing (e.g., mental health challenges, poor student-supervisor relationships, and limited social or professional engagement); and, iv) accessibility (e.g., physical access to laboratory equipment/facilities and unequal access to training or professional development opportunities). Additionally, institutional changes are proposed to enhance financial aid resources, improve access to mental health support and cultural sensitivity training, mentorship and networking opportunities for graduate students. Understanding and then working to remove inclusion barriers in graduate studies helps create spaces of being that ultimately support success in graduate programs.

Poster Title: Expansion of Hybrid Approach of Learning Possibilities for Business Study Students in the Canadian Public and Private Management Colleges.

Authors: Anu Anu & Sheenu Nayyar

The poster is based upon an investigation of the role of both physical and digital spaces in fostering inclusive learning. In this work we will explore how physical and digital spaces can be designed to be more accessible, and how these tools and platforms can facilitate remote, flexible, and collaborative learning. The target group will be international and domestics students who had attended the classes in a hybrid mode from 2020-2024. Case study analysis and questionnaires will be used for collecting the data for our proposed work. The findings would be related to positive and negative learning aspects of the mixed online and in- person system in Canadian colleges. Furthermore, we will also focus how AI can promote our research work.

Poster Title: Virtual Mystery Webtool: Collaborative Critical Thinking with Online Hybridized Problem-Based Learning Authors: Stephanie Shishis, Sherry Fukuzawa, Courtneay Hopper, & Travis Steffens

Integration of digital technologies in post-secondary curricula has increased since its widespread implementation during the COVID-19 pandemic. This digital shift has led to a call for a greater understanding of student engagement in online and blended course delivery as the digital age rapidly progresses. The Virtual Mystery (VM) webtool is an online hybridized problem-based learning platform that was developed as a cost-saving mechanism to promote small group student collaboration for large-in person courses. In the VM webtool, unique practical case studies (or "mysteries") related to course material are auto released for students to complete. The practical and unique nature of each mystery facilitates experiential learning and promotes collaborative critical thinking. The VM has recently been implemented in smallersized undergraduate courses in the disciplines of Social Sciences and Sciences, both online and in-person. It has also been implemented at various institutions including the University of Guelph in Biological Anthropology (ANTH1120) where the VM allows students to learn course material in a novel manner and provides real-world skills applicable to careers in biological anthropology. Overall, students responded positively to the VM webtool across disciplines, undergraduate years, and course delivery modalities; a promising first step in expanding the webtool beyond large introductory courses.

# Poster Title: Community Engaged Research and Service Learning: A Complementary Model of Interdisciplinary Collaboration Authors: Alex Mittun, Vivienne Close, Laura MacDiarmid, & Adam Sandford

The current project provides insights into an interdisciplinary model of critical community engaged- and applied service-learning. While often defined as separate pedagogies, we explore how these models are complementary. In doing so, we show how our team of undergraduate students, faculty, and community partners combined academic work and applied learning on the topic of late-life homelessness. The project involved the development of an academic paper, directed and guided by faculty and the community partner, as well as 50-hours of placement experience at the community organization. Our findings discuss how the project unfolded, including design and development, implementation, and outcomes concerning mutually beneficial collaboration. We conclude by offering insights for future research and practice as it relates to co-supervision between academics and community partners.

### Poster Title: The Value of Problem-Based Experiential Learning for Graduate Students

Authors: Jeanna Rex, Joy Roasa, & Evan Fraser

Problem-based learning is a holistic approach that can help graduate students develop transferable skills. UNIV\*6050 is an experiential learning course developed by the Arrell Food Institute that creates a space for graduate students from various disciplines to collaborate with external partners where they work together to tackle real-world problems in the agri-food sector. The purpose of this study was to evaluate the impacts of UNIV\*6050 on transferable skill development among seven cohorts of students from 2017 to 2024. A survey was disseminated to evaluate the impacts of the course on nine transferrable skills, including communication, creativity, critical thinking, initiative, leadership, organization, project management, problem solving and teamwork. Surveys were completed by 52 respondents. Results revealed that teamwork, communication and project management were the three most developed skills after taking UNIV\*6050. Among respondents, 69% strongly agreed that UNIV\*6050 allowed them to develop skills beyond their degree program, while 81% strongly agreed that collaboration with external partners was impactful towards their skill development. Moreover, 38% and 56% of respondents somewhat and strongly agreed that UNIV\*6050 prepared them for their current or future role in the workplace. These findings highlight the value of problem-based experiential learning at developing the skill sets of graduate students.

## Poster Title: Exploring Perceptions and Experiences in Interdisciplinary Engineering Education

Authors: Julia Billings, John Donald, & Richard Zytner

Interdisciplinary education is increasingly seen as fundamental for training engineers to solve complex problems and integrate knowledge across several domains. Nearly 40 percent of faculty report using an interdisciplinary approach to teach; however, there is limited evidence regarding the actual impact of interdisciplinary education on student learning. Many universities have adopted teaching first year engineering design courses with an interdisciplinary approach, as this forms the foundation for developing a problem-solving mindset. Although interdisciplinary engineering education (IEE) is increasingly acknowledged as essential, there is a gap in understanding the impact of IEE from both student, faculty, and alumni perspectives, particularly regarding how these experiences shape student learning, curriculum design, and professional development. The purpose of this poster is to inform your understanding of the impact of IEE by characterizing how IEE is perceived and experienced within the context of engineering curriculum. Student, faculty, and alumni of engineering programs will be interviewed to explore the impact of IEE, and this poster will present preliminary findings.

#### **Poster Title: Burnt Out Aspirations**

Authors: Amanda Ball, Kathleen Clarke, Andria Jones, Daniel Gillis, & Shoshanah Jacobs

This research aims to expand on what is known and documented in literature about burnout in the context of the workplace to how it applies to students in higher education. Using an integrated survey approach, this study looks at the lived experiences of students at the University of Guelph and quantifies these experiences against measures of the symptoms of and outcomes of burnout as established in literature. This research aims to also look at the relationship between quantified levels of burnout and participants' self-reported career aspirations after they graduate from university.

### Poster Title: Enhancing Student Learning through the Flipped Classroom Model

Authors: Karen Lochead

The flipped classroom model is a student-centred approach to teaching that shifts the focus from traditional lecture-based instruction to active learning. In this poster, I'll explore the foundational principles, benefits, and practical implementation of the flipped classroom model in higher education. I'll begin by comparing the flipped classroom to the traditional learning model. Next, I'll discuss key elements of the flipped classroom: pre-class preparation, active in-class engagement, and feedback. I'll conclude by highlighting some of the benefits and challenges of this teaching model. Key points and identifying resources support adoption of the flipped classroom.

**Poster Title: Failure as a Means of Creating Spaces for Learning** *Authors: Makary Nasser, Stephen Mattucci, & Karam Abu El Haija* 

Failure is often seen as a deterrent of success, rather than part of a learning process. This work examines the practical effects of failure in different learning environments, such as engineering design courses at the University of Guelph, where failure is often established during design, prototyping, and problem-solving tasks. Observations have indicated that students consider failure as a setback rather than an opportunity for improving. When introducing reflective practices, this may help view failure as a tool for constructive learning. This work looks into the effects of failure that can be integrated into learning spaces through the use of reflective practices. The significance of this work lies in how the concept around positive failure can be applied with learning inside and outside the classroom. This work compares methodological approaches that assess the role of failure in learning outcomes. The aim is to unlock strategies that can redefine how failure is perceived within education and pushing failure to become an initiation for growth. This work looks to address questions including: How can reflective practices reshape students' perceptions of failure? What strategies are effective in transforming failure into a learning tool within engineering? How can these approaches be implemented beyond the classroom?

Poster Title: Development of a Silicone-Based Model and Methodology to Teach Twin Pregnancy Reduction to Undergraduate Veterinary Students.

Authors: Tracey Chenier

The incorporation of models in the teaching of complex technical skills to veterinary students has significant advantages. A realistic silicone-based model uterus and embryo was developed alongside cognitive task analysis using experts in the field in order to produce a reliable method to teach this skill. Future work will evaluate student perceptions of the model's value as a teaching tool.

## Poster Title: Advancing Program Development through the Program (Re)Design Institute

Authors: Jennifer Elizarov, Megan De Roover, Aron Fazekas, Sara Fulmer, Clarke Mathany, Andrea Mills, Jennifer Reniers, Nadia Timperio, & Alyssa Voigt

Developing or modifying a university degree or diploma program is a complex process that requires significant time, effort and collaboration. This process involves expertise in areas such as learning outcomes, curriculum design, admission requirements and governance approvals, among other factors. To streamline the new program and major modification processes, we created the Program (Re)Design Institute (PRDI), a focused, two-day workshop aimed at accelerating curriculum development. The PRDI included interactive sessions, expert consultations, and structured writing blocks. By bringing together development teams and representatives from various campus offices, the institute provided a supportive environment where teams could consult with specialists, exchange ideas with peers, and have dedicated time to work on their proposals. The inaugural PRDI, attended by 21 faculty and staff from 13 programs across six UofG Colleges and two campuses. received feedback from 14 participants via survey. Participants reported an average 21% increase in the proportion of their program proposal completed by the end of the workshop. Most participants expressed moderate to high confidence in their ability to complete the remainder of their proposals post-PRDI.

Faculty and staff interested in developing a new program or redesigning an existing one should consider attending a future PRDI. The PRDI model can also be adapted by other institutions to support the creation and redesign of university programs.

## Poster Title: Applying the Students-as-Partners framework to Engineering Design: A Critical Reflection from a Graduate Teaching Assistant

Authors: Eliza Cazzola & Stephen Mattucci

This work will reflect on my experience in a student-faculty partnership in the development of a course activity as a graduate teaching assistant (GTA). I followed the design-thinking phases for this process, which started by empathizing with undergraduate students based on my own experience and as a returning GTA for this course. My proximity to the undergraduate experience allowed me to identify a concept that students struggle to learn (Problem Definition). The course needed an activity to allow students to practice this concept before applying it to their projects. In the ideate phase, I found real world engineering challenges through design grant opportunities. To prototype, I co-developed the lesson plan with another instructor, which involved adapting the challenges to our course context, ensuring variety in depth and nuance, and relating the language to deliverables. I was able to test the activity by facilitating a 60-minute class session. Reflecting on this experience, I felt more connected to the material and more confident in my ability to help students apply this concept to their projects. I felt valued as a GTA with the opportunity to contribute more to the course. For the future, I will reflect with the instructors and undergraduate students about the activity to understand how effective it was. This will allow us to iterate and improve the activity for future course offerings.

### Poster Title: When the Classroom became a Theatre, Art Gallery, and Concert

Authors: Linda Hunter

I offer examples of the use of an arts-based pedagogical approach in a second-year sociological theory course and demonstrate how this enhances students' overall learning experiences. This arts-based pedagogy stimulates the sociological imagination, takes abstract theoretical ideas and gives them new life, and helps improve critical analysis. Students are provided with guided applications of film, art, and music in order to help develop an appreciation and a contextual understanding of the historical period being studied and the various theories that emerged during these time periods. By asking students to examine the elements in the art, film, or music that resonate with the theoretical concepts being discussed, students were better able to understand the theorist's concern with the social and political issues of their day. This approach helps students to sustain an interest in the course material, understand the theoretical content, engage in a higher level of thinking and analysis, feel more confident in their abilities to write about theories covered in the course, apply theory in the real world, contextualize historical content, and enhance their memory of theories and concepts. Students' favorable feedback on the use of artsbased resources have remained consistent over time and this pedagogy remains an enduring approach that contributes to positive student learning experiences. I co-authored an article on this topic (Hunter and Frawley) in *Teaching Sociology*, American Sociological Association, Volume 51, Issue 1, January 2023.

#### Poster Title: Podcasting for Course Engagement

Authors: Dan Grunspan, Elysia DaSilva, Nathan Cozzi, & Tim Bartley

Limited time in the classroom makes it impossible for instructors to communicate to students everything they may like. Thus, instructors may avoid spending time in class answering student questions that are not directly related to the course or course content and may also avoid engaging in various forms of non-content related talk that increase instructor immediacy, establish classroom culture, and promote greater engagement (Seidel et al 2015).

In our large introductory biology course, we have used a podcast to create additional space to engage with students. Episodes of the podcast provide expanded answers to questions that arise in class and also promote more non-content related talk about the course itself. The larger goal of the podcast is to provide greater academic engagement with the course and promoting greater buy-in to the instructional decisions and overall design of the course. Our poster will describe the podcast, its goals, steps taken to produce it, and lessons learned to date.

## Poster Title: Lessons Learned from Industry-Led Training: Moving Towards Competency-Based Education

Authors: Sarah Lepage & Domhnall McGowan

The future of work requires a reshaping of traditional academic approaches to better align with the dynamic, fast-changing environment that graduates will face upon entering industry. Successful corporate and industry training programs are designed to prioritize practical, job-specific skills, frequently shifting to accommodate immediate workplace demands and employee work experience. These programs emphasize active learning, competency-based assessments, and real-world problem-solving. Corporate educators bring valuable hands-on expertise and a results-driven mindset to the learning environment.

This presentation explores lessons learned from corporate training programs and their potential application to undergraduate and graduate academic programs. We present a case study where Biomedical Sciences graduate students enrolled in a Regenerative Medicine course receive inclass and hands-on training by industry professionals, including a 2-week lab module in an industry-funded training lab. These students report feeling more prepared to enter industry upon graduation.

By examining differences in focus, pedagogy, and assessment, we reveal strategies to build more competency-based, learner-centric educational experiences in academic programs. We highlight the benefits of integrating these insights from industry-led training so that academic educators can better equip students with the skills necessary to thrive in rapidly evolving biotechnology and healthcare industries.

#### **Thursday, May 15, 2025**

# Welcome Back & Land Acknowledgement 9:00 AM - 9:15 AM

Bill Rosehart, Provost and Vice-President (Academic), University of Guelph

# Keynote Speaker: Jessie Moore 9:15 AM - 10:45 AM

Jessie Moore, Director of the Center for Engaged Learning & Professor of Professional Writing and Rhetoric, Elon University

Dr. Moore is the author of <u>Key Practices for Fostering Engaged</u> <u>Learning</u> (2023), in which she shares six key strategies to create meaningful learning experiences. Her keynote will explore the importance of building and sustaining a constellation of support for student learning, one that enhances wellbeing and professional growth. She will focus on three key practices:

- Facilitating professional relationships
- Creating strong feedback cultures
- Promoting integration and transfer of knowledge and skills

This session is a chance to rethink how we support students and strengthen the learning experience.

*Note: Please note that this session will be recorded on Zoom.* 

## Morning Virtual Concurrent Sessions & Workshops 11:00 AM - 12:00 PM

## Session G1: Micro-Credentials to Supplement the Undergraduate Learning Experience

Authors: Dianne Tyers, Carolyn Creighton, & Leanne Henderson

This presentation introduces participants to different ways in which micro-credentials can be embedded into undergraduate learning experiences. The presentation starts with core definitions and the university's micro-credential framework. It then draws upon micro-credentials for undergraduate learners currently offered across the university to illustrate ways in which micro-credentials can supplement academic learning to add value to the undergraduate learning experience. The presenters will elaborate on the connection that micro-credentials establish between undergraduate learners and prospective employers, by equipping undergraduate learners with validated proof of the competencies that employers in their fields and industries need and value.

### Session H1: A Hero's Journey in Learning: Gamification, AI Integration, and Growth in Literary Analysis

Authors: Jenny Sampirisi

This presentation explores how a Popular Literature course within an academic bridging program reimagines the first-year humanities experience as a gamified "learning journey" that integrates Universal Design for Learning (UDL), collaborative learning communities, and scaffolded skill-building assignments. A key feature of the course is the thoughtful integration of a custom AI agent, "Sage Aria," who acts as a guide and mentor for students, enhancing rather than replacing the learning process.

Through theme-based collaboration (Power and Identity, Technology and Humanity, Storytelling, and Monsters and The Other), students engage deeply with texts while tackling gamified challenges like "the AI Oracle" and "Thesis Forge." Sage Aria plays a crucial role in this process, offering tailored feedback, facilitating brainstorming, and scaffolding assignments while ensuring students remain the active agents in their learning.

This presentation will address concerns about AI disrupting traditional humanities teaching by showcasing how it can enhance inclusivity, ideation, guided close reading, and individualized learning without crossing into doing the intellectual work for students. Attendees will learn how gamification, UDL, and AI can work in harmony to foster growth, creativity, and critical thinking in the humanities classroom.

#### Session H2: Cultivating Personalized Digital Art Histories: Al-Driven Innovation in Art Historical Narratives

Authors: Susan Douglas

The concept of Personalized Digital Art Histories represents a transformative direction in Digital Art History (DAH), offering tailored educational and cultural experiences through AI. By focusing on individual narratives, this approach deepens user engagement and democratizes access to art history, making it more inclusive and personally resonant.

This presentation explores how dynamic spaces in DAH, driven by AI, foster environments where knowledge, identity, and discourse coalesce. These personalized spaces transcend traditional methods of information transfer, transforming interactions with art history into rich, explorative experiences that embrace possibility and innovation. Attendees will discover how AI enables instructors and learners to lean into the unknown, creating new methods of interaction, assessment, and self-expression in art historical research and education. Through this lens, we will examine the potential of AI to cultivate environments that nurture growth and change, broadening the horizons of both teaching and learning in the digital age.

### **Session I1: Preparing Faculty for Defined Course Delivery Modes** *Authors: Rammy Saini*

This presentation will discuss the steps taken by Laurier's Teaching Excellence and Innovation (TEI) team to prepare faculty for the implementation of six distinct course delivery modes, including HyFlex, hybrid, and virtual synchronous formats, set to be implemented for the 2025/26 academic year. Alternative modes of delivery offer enhanced student learning possibilities, but they do require purposeful design and come with challenges. To prepare faculty for the upcoming changes and to explore how different learning spaces can support student learning, the TEI team initiated a monthly Faculty Learning Community (FLC). This community fosters a collaborative environment where faculty members share their experiences, discuss challenges, and exchange best practices on alternative modes of delivery. This FLC has formed the foundation for developing resources to support faculty with teaching their course content in alternative modes of delivery. Challenges with alternative modes of delivery include flexible student presence in the physical classroom, academic integrity and assessments, and effectively integrating technology.

By sharing insights on how to engage with teaching in different modalities, this presentation aims to provide an overview of the possibilities offered by alternative spaces for teaching and learning when designed with intention.

### Session I2: The Possibilities of a Flipped Classroom: How to Prevent Your Flip from Being a Flop!

Authors: Laelie Snook & Jennifer Monk

A flipped classroom reverses traditional learning spaces such that foundational knowledge is acquired by students independently through recorded lectures and/or readings in advance of the lecture period and knowledge is consolidated through active learning activities in the classroom. A flipped classroom learning environment can promote critical skill development and knowledge application, and therefore, could enhance scientific literacy (SL) skill development, which is critical in the life sciences. We recently published a study examining the impact of a flipped classroom on SL skill acquisition and retention in a second-year research methods course for kinesiology students. We found that SL skills increased significantly during the flipped classroom semester and were positively correlated with students' final grade. Interestingly, SL skill retention decreased after the summer break, however, the retention of SL skills was positively correlated to learning approach, with those using a deep approach retaining SL capabilities. In this session, we will discuss how to implement a flipped classroom and the experiences of the instructor and students to provide participants with some best practices for implementing a flipped classroom approach, regardless of subject matter.

#### Session J1: Measuring Health Promoter Core Competencies Among Graduate Students Enrolled in a Health Promotion Course

Authors: Andrew Papadopoulos, Lauren Sherk, Melissa MacKay, & Jennifer McWhirter

Core Competencies for Public Health are tools that guide graduate-level public health programs to ensure students are receiving the appropriate knowledge, tools, and skills required to become effective public health practitioners that comprise a strong public health workforce. Case-based learning is a learner centered approach that allows students to apply their knowledge to real-world scenarios, promoting higher-order thinking. The University of Guelph Master of Public Health graduate program incorporates both the Core Competencies for Public Health in Canada as created by the Public Health Agency of Canada and the Pan-Canadian Health Promoter Competencies developed by Health Promotion Canada (HPC), as well as experiential learning to ensure students are receiving a high-quality learning experience throughout the course of their studies. In the present study, surveys were administered to students enrolled in the University of Guelph Winter 2021 semester Health Promotion class before and after completion of an experiential group health promotion assignment. The assignment used case-based learning within a group setting, allowing students to engage and apply knowledge gained through the semester to solve a real-world public health issue. Students reported increased self-perceived proficiency in all Core Competencies after completion of the practice-based group health promotion program assessment.

#### Session J2: Spaces of Possibility: Collaborative Design Transforming RVT Education and Veterinary Care

Authors: Mariel Mading & David Macdonald

The Registered Veterinary Technician (RVT) micro-credentials project demonstrates how collaboration, co-creation, and inclusivity create transformative "spaces of possibility" in teaching and learning. Developed with the Ontario Veterinary College (OVC), Veterinary Technician Associations, and teaching and learning experts, this series of online asynchronous 5-week courses focuses on enhancing soft skills and their practical application to prepare RVTs for expanding roles in Ontario's veterinary sector.

The project emphasizes co-creation by including RVTs in the design process alongside educators, industry professionals, and faculty. Using learner personas, employer personas, and sector analysis, the curriculum addresses biases in veterinary care, ownership, and environmental connections. Equity, diversity, inclusion, and accessibility (EDIA) are embedded throughout, ensuring inclusive and meaningful learning experiences. AI tools support the development process by streamlining curriculum creation, analyzing learner feedback, and personalizing learning pathways.

This presentation highlights how collaborative curriculum design empowers RVTs with actionable skills while fostering innovation in the veterinary sector. Participants gain insights into embedding EDIA principles in curriculum development, explore the importance of diverse voices, and see how these spaces allow learners to apply practical skills in their workplaces while driving sector-wide transformation. The RVT micro-credentials project exemplifies how co-created learning, supported by AI, addresses workforce needs while advancing systemic change.

#### Session K1: Cultivating Spaces for Talking About Teaching: Sparking Reflection and Professional Growth One Conversation at a Time

Authors: Andrea Buchholz & Kimberly Squires

Coming together to reflect on our teaching, particularly in a system that trains researchers vs. teachers, can be a powerful experience. Evidence demonstrates that informal discussions about teaching amongst university educators support connections and collegiality, encourage new teaching practices, and foster interest in improving teaching and student learning (Gormley, 2022; Thomson & Trigwell, 2018).

To be clear, we are talking about those discussions that happen in informal, agenda-less meetings and spontaneously in the hallway. Talking about teaching is part of the autobiographical lens of developing a critically reflective teaching practice, where we look to peers for mentoring, advice and feedback (Brookfield, 1995). Graduate students and early-, mid- and late-career faculty benefit from developing reciprocal and collegial relationships formed via informal discussions.

In this presentation, we will describe "Let's Talk About Teaching", an informal gathering of graduate students, sessional instructors, and faculty, and which has existed in our department for over 15 years; and provide evidence to support the value of informal discussions about teaching and learning. We will encourage participants to consider how they can harness informal conversations to support their growth and reflective practice as educators.

### Session K2: The Guest Lecture Circuit: Lessons Learned from Communal Teaching Across Time, Space, and Identity.

Authors: Julia Linares-Roake, Steph Zawadzki, Luis Linares-Roake, & Jessie Ann Zawadzki

Many seasoned instructors will attest to how every time they teach a class, the class is different. These differences can be influenced by instructor adaptations, but most often it is because the students change. The effects of COVID-19 made this abundantly clear, with instructors scrambling to adapt their classrooms to match university policy. Now, instructors are navigating teaching with a group of learners who never previously experienced the normative in-person college class or campus life. For many instructors, these challenges have left them feeling alienated and frustrated.

To maintain our own personal and professional connections, the presenters began to experiment with a regular guest lecture circuit. We upcycled lectures from our own classes/work to fit into a colleague's classroom. Individually, this meant revising our lectures technologically and with sensitivity to the specific sociodemographic needs of the learners. But collectively, we 1) uncovered the unique benefits of communal teaching as a practice of care, 2) found new ways to identify and celebrate the diverse contributions students brought to the classroom experience, and (3) discovered how a communal approach to teaching may naturally foster learner-driven dialogic interactions (c.f., Freire, 2000) and communal understanding (Gonzalez-Howard & McNeill, 2019). In this session, we will compare and contrast the atomized, individualized standard of teaching with our communal approach, and reflect on how collectivizing teaching post-pandemic made clearer the unique contributions students bring to their own learning experiences.

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# Afternoon Virtual Concurrent Sessions & Workshops 1:00 PM – 3:40 PM

Session G3: Creating Spaces of Possibility Through Online Learning Authors: Vanessa Breton, Bronwyn Korb, Marie Lippens, & Melissa Montanari

Online learning provides enhanced flexibility and accessibility to students, but presents unique challenges compared to in-person offerings.

This session, led by the Digital Learning Design and Innovation team from the School of Continuing Studies, will provide participants with an overview of the School's approach to designing inclusive digital learning experiences. The session will explore topics including:

- Considering the audience
- Learning activities and interactivity
- Assessment design for large, medium and small courses
- Considerations for synchronous and asynchronous courses

The presenters will provide examples from designing courses for undergraduate, professional and workforce learners alike.

## Session G5: Co-Creating Scholar-Activist Spaces for Transformative Inquiry and Action Across University and Community

Authors: Lindsey Thomson & Elizabeth Jackson

The Community Engaged Scholarship Institute (CESI) invites you to join us for an engaging session focused on co-creating spaces for scholar-activism across research, knowledge mobilization, and teaching and learning. We will begin by sharing key insights from the literature on critical community engaged scholarship, provide an overview of some existing networks and communities of practice which bring together campus and community collaborators, followed by crucial community partner insights and visions for scholar-activist engagements. Interactive components will open space for attendees to consider what scholar-activism means to them, the role of critical scholarship and praxis in research impact and institutional change, and how intentional networks among scholar-activists and community partners focused on critical inquiry, collaborative action, and solidarity may contribute to effective responses to complex issues and shared key priorities. This interactive session represents one conversation among many that will inform the development of critical networks intended to foster connections across campus and community to co-learn, share, document, and build upon critical and collaborative practice in community engaged research, knowledge mobilization, and teaching and learning. Facilitators will share outputs created during the session and will invite attendees to stay connected to this exciting and developing network of scholar-activists and community collaborators.

# Session H3: Cultivating Spaces of Collaboration and Reflection: How Theatre Approaches Can Innovate Experiential Learning Authors: Kimberlev McLeod & Megan De Roover

As university faculty respond to a growing demand for experiential learning (EL), the question of how to thoughtfully integrate quality EL into curricula presents unique challenges. We argue that in this emerging pedagogical landscape, theatre and performance studies offers a valuable perspective as it already champions what is now identified as high-quality EL, particularly in spaces outside traditional classroom settings. Yet, within the scholarship of EL, theatre is often overlooked despite this natural affinity. We aim to highlight the crucial role theatre plays in EL pedagogy and make visible how this already robust practice can have a larger impact on the academic community and beyond.

Using examples of two EL projects that utilized both university and community spaces, we will outline possibilities for how theatre models might influence institutional approaches to EL and offer some concrete recommendations that non-theatre faculty may take up in their own EL. We also point to conversations within theatre and performance studies around care, consent and ethical engagement with communities that might challenge some existing approaches to EL within universities.

#### Session H4: Hands-On Skill Development through Infographics Assignments: Learnings from the Infographics in Practice Program Authors: Valerie Hruska, Alex Sawatzky, Rosemary Brockett, Hope Jesmer, & Rebecca Dunn

Infographics are an increasingly popular communication tool, making their way into academic publishing in the form of visual abstracts and replacing conventional longform written assignments in many university-level courses. However, there are limited programs that foster the strategic communication and technical skills required to develop an infographic. This leaves a gap in awareness of best practices and supportive resources, which in turn, hinders the learning potential of these assignments and may leave students feeling stranded in their assignments. Our innovative program, Infographics in Practice, provided graduate students with curated resources and ongoing mentorship from knowledge mobilization and artistic professionals to create their own infographics. The final projects are available at uoguel.ph/InfographicsInPractice, along with testimonials from participants about the program experience. Feedback was overwhelmingly positive and all respondents indicated an intention to create another infographic in the near future. The success of this program highlights the utility of these skills and the potential for these resources to be extended to support courses with infographic assignments. As infographics continue to be integrated into assignments at the University of Guelph, instructors must be aware of and have access to high-quality resources to optimize the learning potential of this exercise.

# Session H5: Weaving Together: Co- Creating Spaces for Meaningful Community Engagement for Decolonization, Indigenization and Reconciliation

Authors: Cara Loft

For this presentation, Ms. Cara Loft, the Educational Developer for Indigenous Knowledges and Pedagogies in the Office of Teaching and Learning, will share her work to engage with both the University of Guelph (UoG) community, and the broader Guelph Community. Ms. Loft will speak to her collaborative work with the Guelph Arboretum and with Six Nations Polytechnic (SNP) to create spaces, Decolonization, Indigenization and Reconciliation (DIR) at the UoG and in the Guelph community.

Ms. Loft has created land-based events, in partnership with the Guelph Arboretum, to highlight the value, and importance, of Indigenous Knowledge systems. In Fall 2024, Ms. Loft led a walk on the Seven Canopy Teachings by Elder Duke Redbird. As well, Ms. Loft has created a Wintertime Story Telling event in the Arboretum to share traditional Haudenosaunee Storytelling. This work is meant to create space for non-Indigenous community members to engage with Indigenous knowledge systems; and decolonized, and Indigenized, learning methodologies.

Finally, Ms. Loft will share on her collaborative event Roads to Reconciliation and Reparations April 23rd community visit to SNP which aimed to bring the Guelph Community together with a local Indigenous community. This visit provided a collaborative space for cross-cultural sharing, capacity building within the UoG Community.

### Session H6: Voices of Connection: Building Inclusive Learning Communities in Higher Education

Authors: Amina Yousaf, Nikki Martyn, & Elena Merenda

In higher education, fostering spaces where students feel seen, heard, and valued is essential for meaningful learning experiences. Voices of Connection is a bi-weekly gathering within the Early Childhood Studies program designed to cultivate connection, community, and a deeper understanding of Equity, Diversity, Inclusion, and Belonging (EDIB). This initiative provides a structured yet flexible environment where students explore intersectionality, challenge biases, and engage in reflective conversations through storytelling and discussion.

This presentation will share key insights gained from running Voices of Connection, highlighting its impact on student engagement, identity exploration, and collaborative learning. Attendees will learn evidence-based strategies to foster similar spaces in their own teaching practices, helping students develop critical awareness and a sense of belonging. The discussion will also address the role of physical, digital, and community spaces in expanding possibilities for inclusive education.

By examining how Voices of Connection has successfully created an inclusive and supportive learning environment, this presentation will offer practical takeaways for educators across disciplines, providing tools to integrate culturally responsive teaching, accessibility, and diversity into curriculum design and co-curricular initiatives.

# Session I3: How Understanding Language Differences can Improve Engineering Practice: The Case for Sociolinguistics in Engineering Education

Authors: Abhiroop Chattopadhyay & Ann-Perry Witmer

The field of sociolinguistics recognizes that speech communities across the globe living at the multilingual and multicultural interface inhabit a metaphorical Third Space. Within this space, they use their agency to adapt the rules of the constituent languages to fit their social contexts, creating meaning and conveying it in speech in different and unique ways. English-speaking multilingual communities, for example, have distinct rules compared to "standardized" norms of the language, in terms of vocabulary as well as discourse.

With increasing globalization, engineering practitioners are increasingly operating in communities that are not familiar to them, so culturally sensitive communication is a key skill for them to learn. However, while engineering pedagogy recognizes the value of developing communication skills, communication has been traditionally viewed narrowly in the sense of technical writing or technical presentation.

This presentation will make the case for engineering students to approach intercultural communication in a systematic way with a focus on verbal communication and information decipherment. Theoretical insights on how language norms differ in multilingual communities will be presented. To highlight the real-world value of this approach, some evidence from a community-centered engineering project in indigenous contexts will be presented.

### Session I4: Building Better Teams of Physicists: Using Outreach as a Tool for Recruiting Diverse Students

Authors: Michaela Hishon

Improving the diversity of a team promotes the overall productivity of classrooms by bringing new ideas and creating more positive and inclusive teaching and learning environments. In Ontario high schools however, we see that 81% of female grade 10 science students do not continue to grade 12 physics, and as a mandatory course for physics and engineering programs across Canada (Corrigan et al., 2023). Why do we lose so many women during this time? By developing customized video content series, the University of Guelph's outreach team aims to attract students from various minority groups at the crucial stage when deciding their field of study, high school. A large contributor to enrolment choices at this stage is a student's "physics identity", whether they perceive themselves as a "physics person" (Hazari et al., 2017). Through the development of a new video series, "student perspectives", students can see the spaces for possibility and engagement via one-on-one interviews with physicists at all stages of their university careers about their journeys with physics. Key topics include imposter syndrome, finding a sense of community, and other issues that minority groups tend to face at a higher rate than other students. By sharing a more vulnerable side to our physics students, we hope to show high school students that there is a place for people like them in physics and that they can see themselves in our community.

### Session I5: Byte-Sized SoTL: Using Generative AI to Supercharge Your Research

Authors: Anita Acai & Pat Maher

Generative artificial intelligence (AI) is transforming higher education, including its applications in the Scholarship of Teaching and Learning (SoTL). This interactive 75-minute virtual workshop will explore how AI-based tools, such as ChatGPT, Consensus, and scite\_, can enhance SoTL activities, including literature reviews, research design, data analysis, and dissemination of findings. Participants will also engage with the challenges and ethical considerations of adopting these tools.

The session will begin with a 20-minute introduction to generative AI's capabilities and limitations, followed by two 15-minute rounds of hands-on exploration in breakout rooms. One breakout room will focus on using AI to generate research questions and analyze data, while the other will address dissemination tasks, such as creating abstracts and presentations. A 25-minute group debrief will highlight key insights, opportunities, and ethical challenges, emphasizing transparency, academic integrity, and responsible AI use.

Participants will leave with a deeper understanding of how generative AI can support SoTL, practical strategies for implementation, and an awareness of ethical considerations. Designed for faculty, educational developers, and students, this workshop offers a dynamic opportunity to explore how AI tools can inspire and enhance SoTL work.

# Session J3: "I Actually Learned Something": Reimagining the Participation Grade to Encourage Critical Engagement Outside of the Classroom Walls.

Authors: Julia Linares-Roake

Participation is often heralded as a cornerstone of effective learning within a classroom setting (Rocca, 2010). However, encouraging critically engaged participation is difficult to do, and grading participation is just as difficult. Instructors may grade participation from memory recall or through quantitatively recording learner attendance and/or learner participation (Gillis, 2018). These practices are often inequitable, and privilege learners who have previous experience with a topic (Mack, 2012). With social anxiety on the rise in undergraduate populations post-COVID-19 (Kindred & Bates, 2023), levels of participation, if measured via "counts" of participation in class, are likely to drop, acting as a demoralizing agent for learners which may, in turn, impact what they learn from the class. In this presentation, I introduce a "participation touch points" that I trialed in an introductory sociology class in the Fall of 2024. In this log, learners were encouraged to be creative in their construction of participation, to make connections across classes/experiences, and to showcase their integration of knowledge into their everyday lived experiences. I discuss the potentials of expanding critical engagement with course concepts outside of the classroom.

# Session J4: Cultivating Engagement Through Critical Reflection: Inspire 1PL3 as a Model for First-Year Holistic Development

Authors: Monica Palkowski & Sean Beaudette

How can we foster deep engagement and transformative learning in first-year students navigating their transition to university life? In this session, we explore Inspire 1PL3: Personal Leadership for University Students, an innovative for-credit course developed collaboratively by Housing & Conference Services and the Student Success Centre at McMaster University. This course creates a space for possibility by engaging students and instructors in reflective practices, experiential learning, and individualized learning paths.

Attendees will gain insights into how the course scaffolds student development through choose your own adventure opportunities, critical self-reflection frameworks, and active pedagogies that bridge personal and academic growth. Using evidence-based practices and data from student feedback, we demonstrate how intentional course design cultivates engagement by challenging students to reflect on their experiences and use these reflections to take actionable steps toward personal and academic goals.

This session invites participants to consider how integrating reflection and critical conversations into curriculum design can help learners move forward with new understandings and align their actions with their growth. Whether designing a course, supporting first-year students, or seeking ways to foster deeper learning in higher education, this presentation offers practical strategies for cultivating spaces of engagement.

### Session J5: Clothing as a Catalyst: The Impact of Professors' Attire on Student Aspirations and Perceptions of Role Models

Authors: Nathan Cozzi, Dan Grunspan, Julia Mellary, Megan Barker, & Elizabeth Steves

Instructors' non-verbal cues can influence how they are perceived by students. One non-verbal cue where instructors typically can enact agency is what they wear when teaching. However, how an instructors' attire influences students in an actual undergraduate classroom has never been examined.

We used a quasi-experimental design where two female instructors, each teaching multiple sections of an introductory biology lab, taught half of their sections in casual attire (i.e., jeans and graphic tee) and the other half in formal attire (i.e., dress pants and blouse). A pre- post- survey design was used to examine how the difference in attire influenced how students perceived their instructor as 1) warm and approachable, 2) competent, and 3) whether they saw their instructor as a role model.

We will present the findings from our analyses, which includes 287 students who completed the pre- and post- surveys. By exploring the impact of instructor attire, this research aims to better understand how potentially overlooked instructor choices made before class can influence their classrooms.

### Session J6: Accountability and Guidance in Large Class Case-Based Teaching

Authors: Nita Chhinzer

Whether you are a novice to case-based teaching, or someone with experience, attending this experiential and interactive seminar will help you learn new tips and tricks to build accountability and guidance in case-based classrooms on multiple fronts; accountability of instructors (who need to teach students how to read and understand cases); accountability of students (who need to come prepared to class with cases accurately read and understood); and accountability of in class peers (who need to contribute to a healthy learning environment). We will also discuss rubrics, online quizzes (autograded), and self-assessments of contributions to learning in the classroom, to help build a culture of active participation and the creation of a collaborative learning environment.

#### Session J7: Perceptions of the Factors that Influence Learner Engagement and Their Strategic Implications: A Qualitative Case Study

Authors: Jeffrey O'Leary

This session will feature the findings of a research study conducted in professional marketing education. The content is designed to demonstrate the nature of professional education and how it is changing to make working professionals job ready. A detailed case study was undertaken showing results that center on how to engage learners in professional marketing education. Key findings focus on the need to minimize transactional distance, strong emotional support, the need for socialization, the importance of experiential learning and collaboration.

### Session K3: From Giving Space to Creating Space: Proactive Strategies for Inclusive Teaching

Authors: Waed Hasan

My experiences as a Writing Teaching Assistant (TA) profoundly shaped how I approach creating inclusive learning environments in all my teaching roles. I've distinguished between giving space, reactively accommodating students' needs, and creating space, proactively designing environments prioritizing inclusivity, engagement, and equity.

Informed by critical pedagogy (Freire, 1990) and Universal Design for Learning (CAST, 2018), this presentation explores how proactive pedagogical research into EDI, structured goal-setting opportunities, and intentional training enable TAs to design inclusive spaces anticipating student needs. As bell hooks (1994) states, "The classroom remains the most radical space of possibility."

This presentation offers evidence-based strategies and personal reflections on how proactive inclusivity enhances student outcomes and TA professional development. Thus, this approach aligns student-centred pedagogy with actionable proactive practices, creating learning environments where all students can thrive.

### Session K4: Bridging Academic and Student Affairs: Collaborative Strategies for Student Success

Authors: Akalya Kandiah, Monica Palkowski, Kristin Taylor, & John Maclachlan

This session highlights innovative collaborations between academic faculties and Student Affairs to support student success. The presentation will explore three distinct initiatives that integrate these realms: faculty-specific learning communities in residence, first-year transition courses, and research partnerships on student residence living. These case studies demonstrate how bridging academic and student support domains enhances the student experience, promotes retention, and creates holistic learning environments. Attendees will gain insights into developing and sustaining cross-departmental partnerships to foster innovation and growth in higher education institutions.

#### Closing Remarks 3:50 PM - 4:05 PM

Christopher Laursen, Educational Developer and TLI Co-Chair, Office of Teaching and Learning, University of Guelph

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