2016 Symposium on Scholarship of Teaching and Learning

November 10 – 12, 2016
Banff, Alberta, Canada

Learning In and Across Disciplines

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Institute for Scholarship of
Teaching and Learning

Table of Contents

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Welcome to the 2016 Symposium on Scholarship of Teaching and Learning

Message from the Acting-Director

Symposium Presenters, Attendees, Guests, and Friends:

On behalf of the Organizing Committee, welcome to the 2016 Symposium on the Scholarship of Teaching and Learning. Each year we gather as a scholarly community that seeks to bridge traditional disciplinary and institutional boundaries. The diversity in this year's programming is evidence of our collective success.

With an expanding focus on SoTL across Canada over the past few years, I am pleased to announce that we had an unprecedented number of submissions to the Symposium. With a total of over 100 oral and poster presentation submissions, the Symposium has been extended into Saturday afternoon to accommodate this number of faculty and student presenters. Concurrent sessions have been organized into themes of teaching with technology, assessment, methodology, experiential learning, collaboration, and involving undergraduate students in SoTL.

Our Symposium will kick off with five pre-conference workshops from Canadian and international scholars. Following the workshops, we will open the Symposium with a reception and banquet featuring a keynote presentation by Dr. David Pace, Professor Emeritus at Indiana University and President of the International Society for the Scholarship of Teaching and Learning in History. Dr. Pace has been a fellow in the Carnegie Academy for the Scholarship of Teaching and Learning and the Mack Center for Inquiry on Teaching and Learning and has received the American Historical Association's Eugene Asher Distinguished Teaching Award. Pace is the co-author of Decoding the Disciplines: Helping Students Learn Disciplinary Ways of Thinking and has published numerous articles on the scholarship of teaching and learning.

Friday's keynote presentation will include a live demonstration of David Pace's Decoding the Disciplines process. Experienced decoders, Margy MacMillan, Michelle Yeo, and Genevieve Curry from Mount Royal University will illustrate how you can uncover and unpack crucial thinking, revealing the "bottlenecks" to learning that your students experience. Follow-up commentary and discussion will be facilitated by Dr. Pace.

Saturday's Plenary will feature Delmar Larsen, Founder and Director of the LibreTexts Libraries, Department of Chemistry, University of California, Davis, an international expert on Open Educational Resources who participated in the pre-conference OER Day hosted by Mount Royal University with support from the Campus Alberta OER Initiative. The title of Delmar's presentation is "Resistance is Futile: The Oncoming OER Revolution and How LibreTexts Can Help You Navigate It".

The Institute for Scholarship of Teaching and Learning at Mount Royal University remains dedicated to hosting a multidisciplinary conference for post-secondary educators, scholars, and administrators devoted to developing and sharing research on teaching and learning. This would not be possible without our sponsors, D2L Incorporated, the Nexen Scholars Program, the Associate Vice-President Teaching and Learning, and the Academic Development Centre, at Mount Royal University. Our on-going gratitude is also extended to Anne Johnston, Administrative Coordinator for the Institute and the behind-the-scenes mastermind of this conference. I also want to thank Dr. Janice Miller-Young, former Academic Director of the Institute for Scholarship of Teaching and Learning, for her important contributions to SoTL in Canada and to this year's Symposium, and to Karen Manarin and Margy MacMillan for their contributions to this year's Symposium as members of the 2016 Organizing Committee.

Finally, I wish to thank each and every one of you, our scholarly community, for your on-going support of the Symposium. Your dedication to the advancement of SoTL is equally important to our success as a Symposium and as a growing community. I would like to especially thank our reviewers, who read abstracts and provided valuable feedback to shape this year's program.

Once again, and on behalf of the 2016 Organizing Committee, welcome, or welcome back! We hope you enjoy the Program and come away from this annual meeting with new ideas and inspiration for advancing teaching, learning, and scholarship in your classes, institutions, and communities.
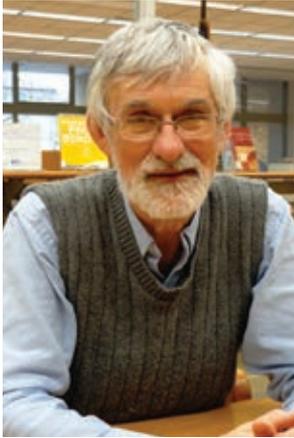
Sincerely,

Brett McCollum, Acting Academic Director
Institute for Scholarship of Teaching and Learning

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Invited Keynote Speaker

David Pace, Ph.D.
Professor Emeritus, Indiana University
President, International Society for the Scholarship of Teaching and Learning in History

David Pace is an emeritus professor of European History at Indiana University, a co-founder of the Freshman Learning Project, and the President of the International Society for the Scholarship of Teaching and Learning in History. He has been a fellow in the Carnegie Academy for the Scholarship of Teaching and Learning and the Mack Center for Inquiry on Teaching and Learning and has received the American Historical Association's Eugene Asher Distinguished Teaching Award. In addition to his publications in intellectual history, Pace is the co-author of Decoding the Disciplines: Helping Students Learn Disciplinary Ways of Thinking and has published articles on the scholarship of teaching and learning in The American Historical Review, The Journal of American History, Arts and Humanities, National Teaching and Learning Forum, History Teacher, College Teaching, American Historical Association Perspectives, and To Improve the Academy.

With Joan Middendorf, Pace created Decoding the Disciplines, a new approach to increasing student learning in college classes. Faculty using this method begin by defining a bottleneck in one of their courses, i.e. a place where the learning of significant numbers of students is interrupted. They then go through a systematic process of exploration in which they define as precisely as possible just what experts in the field or successful students do to get past this obstacle. Once these steps have been defined, they are modeled for students, opportunities for practice and feedback are created, and the learning is assessed. This approach has been used to good effect in a wide variety of disciplines in a dozen countries, and it has become one of the central methodologies.

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Why Don't They Get it? Decoding the Gap

The very future of the societies in which we live depends on college instructors learning to share increasingly demanding subjects to increasingly diverse groups of students. To respond to this challenge, we must bring the kind of sustained intellectual inquiry that we are accustomed to in our disciplinary work to bear on the places where student learning is blocked. We must systematically explore what makes our fields difficult for many students and analyze the processes that they must master to function effectively in our disciplines. This talk will describe the Decoding the Disciplines model and share multiple examples of how, by making conscious the mental operations that we do automatically and carefully sharing these with students, we can provide them with the tools they will need to shape the future.

The Decoding Interview: Live and Unplugged

Scholars of teaching and learning around the world and in many disciplines have been using the Decoding the Disciplines process to make explicit the mental operations that students must master to succeed. Teachers, as experts in their disciplines, often hold this knowledge in tacit and implicit ways that are not easily accessible to novices, resulting in "bottlenecks" to learning. A key step towards addressing bottlenecks is a Decoding interview in which teachers uncover and unpack crucial thinking with the help of two interviewers outside their field. The interview can yield important insights for teachers, generate data for SoTL work, and also play an important role in developing the community and trust necessary for collaborative teaching and research projects. To illustrate how an interview unfolds, this plenary will feature a live Decoding interview conducted by experienced Decoders from Mount Royal University, with follow-up commentary and discussion facilitated by Dr. David Pace.

Invited Plenary Speaker

Delmar Larsen, Ph.D.
University of California Davis

Delmar Larsen is an Associate Professor in the Department of Chemistry and the Biophysics Graduate Group at the University of California, Davis. Delmar received his Ph.D. from the University of Chicago (Chemistry) and did postdoctoral stints at the Free University Amsterdam (Biophysics) and the University of Southern California (Chemistry). In 2005, Delmar moved to the UC Davis as an Assistant Professor and was promoted to Associate Professor in 2012. Delmar's current research interests extend across many scientific disciplines including biophysics, physical chemistry, molecular biology, and computational modeling, with a common thread of investigating and characterizing of rapid condensed phase dynamics. Delmar is the Founder and Director of the LibreTexts project (http://Libretexts.org) consisting of eleven (soon to be twelve) independently operating and interconnected libraries that focus on augmenting post-secondary education in specific fields in both STEM fields, social sciences, and humanities. Supported by the U.S. National Science Foundation ($1 million grant), the Libretexts project is actively being built by over 1000 developers (students, instructors, and outside

experts) across multiple campuses and nations. Since 2008, Libretexts has served students with over 180 million pages resulting in half a millennium of confirmed reading. The chemistry library is the most trafficked chemistry education site in the world and the entire project is responsible for over 50 million student visitors annually. Approximately $US 3 million in textbook costs have been saved in the past two years by students at over 30 campuses and since the project is still growing exponentially in traffic and content, much more is expected to be saved in the near future. For more details, see our social media accounts (http://twitter.com/Libretexts and http://facebook.com/Libretexts)

Resistance is Futile:
The Oncoming OER Revolution and How LibreTexts Can Help You Navigate It

"It is becoming ever clearer that new and innovative educational efforts are required to: facilitate the greater creativity, flexibility, and increased learning capability needed for post-secondary education in the future. Unfortunately, rapidly rising undergraduate fees and textbook costs are serious factors impeding access to higher education for many students; many of which do not have the funds to benefits from these new advances that are often commercialized. Growing textbook costs are a serious barrier for under-served, at-risk students and open-access resources (OER) textbooks are a growing approach to address these issue. The Libretexts project (http://LibreTexts.org) is designed as a collaborative OER effort that enables dissemination and evaluation of new education developments and approaches, with an emphasis on data-driven assessment of student learning and performance. Since its inception eight years ago, the Libretexts has been exponentially growing and currently reaches over 60 million students per year and is the most visited chemistry website in the world with traffic extending over both the United State and to every nation of the world. The success of the LibreTexts project relies on the construction of a large collaborative team extending across multiple campuses to reach students at very different levels of education, including community colleges, four year colleges, and research universities."

Session Types, Times, and Logistics

Concurrent Sessions – All concurrent sessions will occur Friday and Saturday in the Aspen, Birch, Cedar, Pine, Maple, Willow, Black Bear, and Lynx Rooms on the Main Level of the Hotel. Each session is fourty minutes in length unless noted in the Program – this time period will include questions and comments.

Poster Session – Although posters will be available for viewing throughout the Symposium, the formal poster session will begin Friday at 10:00 a.m. in the Castle/Assiniboine Rooms. Poster presenters will be available to discuss their work.

Technical Details – Each concurrent session room is equipped with a screen, projector, laptop pc, and appropriate cabling (Mac users must provide their own computers and cables). There is limited technical support available. For assistance, please speak to someone at the Symposium registration desk.

2016 Symposium Sponsorships and Acknowledgements

The Institute for Scholarship of Teaching and Learning would like to gratefully acknowledge support provided by:

D2L Incorporated

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Mount Royal University
Office of the Associate Vice-President Teaching and Learning
Academic Development Centre

And the following who reviewed proposal submissions:

Katrin Becker - Mount Royal University
Derek Briton - Athabasca University
Nancy Chick - University of Calgary
Ana Colina - Mount Royal University
Ian Cowley - Southern Alberta Institute of Technology
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Stephen Hammel - Queensborough Community College
Christina Hendricks - University of British Columbia
Kelly Hewson - Mount Royal University
Lorne Jeal - Medicine Hat College
Alison Jeppesen - Red Deer College
Nina Johnson - Thompson Rivers University
Scott Johnson
Pat Kostouros - Mount Royal University
Joseph Leydon - University of Toronto
Wallace Lockhart - University of Regina
Jodi Lommer - Northern Alberta Institute of Technology
Margy MacMillan - Mount Royal University

Cynthia Maier - Southern Alberta Institute of Technology
Karen Manarin - Mount Royal University
Jen Marran - Southern Alberta Institute of Technology
Janice Miller-Young - University of Alberta
Jodi Nickel - Mount Royal University
Brent Oliver - Mount Royal University
Tom Perks - University of Lethbridge
Subhadra Rai
Kari Rasmussen - University of Alberta
Melanie Rathburn - Mount Royal University
Nicki Rehn - Ambrose University
Elizabeth Rennie - Thompson Rivers University (TRU)
Glen Ryland - Mount Royal University
Joanna Szabo-Hart - Mount Royal University
Patricia Senger - Saint Leo University
Tammy Sherrow - Mount Royal University
Maureen Toews - Red Deer College
Shelly Wismath - University of Lethbridge
Michelle Yeo - Mount Royal University
Stephanie Zettel - Mount Royal University

Program at a Glance

Thursday, November 10, 2016		
8:00 a.m. – 7:00 p.m.	Hotel Foyer Reception Area	**Registration Open**
Pre Symposium Workshops		
9:00 a.m. – 12:00 noon	Aspen	An ALURE (Authentic Large-Scale Undergraduate Research Experience) for Your Students: Designing for Success Using Learnings from a Multi-Institutional, Multi-Disciplinary Project ***Susan Rowland, Ph.D.,*** ***University of Queensland, Australia***
9:00 a.m. – 12:00 noon	Lynx	Getting Started in the Scholarship of Teaching and Learning (SoTL) ***Karen Manarin, Ph.D., and*** ***Michelle Yeo, Ph.D.*** ***Mount Royal University***
10:30 a.m. – 10:45 a.m.	First Floor Hallway	**Coffee**
12:00 noon to 1:30 p.m.	Terrace Restaurant	**Lunch** – provided for all Workshop participants
1:30 p.m. – 4:30 p.m.	Black Bear	Next Steps: Developing Your SoTL Project / Broadening Your SoTL Perspective ***Wallace Lockhart, Ph.D.,*** ***University of Regina*** ***Brad Wuetherick, Ph.D.,*** ***Dalhousie University***
1:30 p.m. – 4:30 p.m.	Birch	Workshop: Decode Yourself: Mine Your Research History to Help Plan Your Future SoTL Research ***Margy MacMillan, Mount Royal University***
1:30 p.m. – 4:30 p.m.	Cedar	The Process of Learning Model (POLM): Transforming the Metacognition in Learners Through Innovative Pedagogy. ***Steve Janz,*** ***Southern Alberta Institute of Technology***
3:00 p.m. – 3:15 p.m.	First Floor Hallway	**Coffee**

5:30 p.m. – 6:30 p.m.	Glacier Salon Mezzanine Level	**Opening Reception** Please join us for an informal gathering at the beginning of our seventh Symposium. This is a perfect time to reconnect with friends and colleagues, meet other scholars of teaching and learning, and enjoy the company of our participants. This reception is sponsored by the Academic Development Centre at Mount Royal University.
6:30 p.m. – 7:30 p.m.	Castle/Assiniboine Rooms	**Opening Banquet** Experience has taught us that beginning with an opening banquet provides for an easy entrée into the community and good work of the Symposium. This is a chance to get acquainted with new colleagues and prepare for the rigor and excitement of the days to come.
7:30 p.m.	Castle/Assiniboine Rooms	**Opening Plenary Keynote Session** Why Don't They Get It? Decoding the Gap Between Faculty and Student Thinking ***David Pace, Ph.D., Professor Emeritus, Indiana University*** ***President, International Society for the Scholarship of Teaching and Learning in History***

Friday, November 11, 2016		
7:00 a.m. – 9:00 a.m.	Alpine Meadows and Castle/Assiniboine	**Breakfast** available until 9:00 a.m.
8:00 a.m. – 2:00 p.m.	Hotel Foyer Reception Area	**Registration Open**
Concurrent Sessions		
8:30 a.m. – 9:10 a.m.	Aspen	We Should Talk: A Reflective Journey to Optimizing IT/Faculty Relationships and Student Learning ***Jessie Barnett, Shanna Altrichter, Pete Sedivy, Nick Suchla*** ***University of Minnesota Rochester*** *Teaching and Learning with Technology*

8:30 a.m. – 9:10 a.m.	Birch	Marking Matters: The Influence of Learner Proficiency on Foreign Language Learner Responses to Direct and Indirect Written Corrective Feedback
		Britney Paris, University of Calgary
		Research on Teaching and Learning
8:30 a.m. – 9:10 a.m.	Cedar	From Student to Teaching Assistant to Member of the Research Team
		Karen Graham and Wallace Lockhart University of Regina
		Involving Undergraduate Students in SoTL
8:30 a.m. – 9:10 a.m.	Maple	Using an Ethic of Care Framework for Educational Research
		Kari Rasmussen University of Alberta
		Methodologies and Innovative Approaches to Data Gathering and Analysis
8:30 a.m. – 9:10 a.m.	Pine	Getting Out of the Way: Creating Space for Student to Student Interprofessional Learning
		Liza Choi and Margot Underwood Mount Royal University
		Collaborating Beyond the Single Classroom
8:30 a.m. – 9:10 a.m.	Willow	Shared Learning as Partners in Research: Experiences Through SoTL
		Jennifer Lock, Carol Johnson, Noha Altowairiki, Chris Ostrowski University of Calgary Laurie Hill, St. Mary's University
		Research on Teaching and Learning
8:30 a.m. – 9:10 a.m.	Black Bear	School-University Partnerships Within and Epistemology of Practice
		Kevin O'Connor, Gladys Sterenberg, Ashlyn Donnelly Mount Royal University
		Research on Teaching and Learning

8:30 a.m. – 9:10 a.m.	Lynx	Interdisciplinary Collaboration as a Means to Support International Student Writing and Argumentation in a First-Year Science Course ***Ashley Welsh, Amber Shaw, Joanne Fox UBC Vantage College, University of British Columbia*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Aspen	Designing a MOOC Through Research, Dialogue, and Practice ***Derek Briton, Marti Cleveland-Innis Athabasca University*** *Teaching and Learning Through Technology*
9:15 a.m. – 9:55 a.m.	Birch	It All Adds Up: Implementing Strictly Cumulative Grading ***Katrin Becker, Mount Royal University*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Cedar	The Power of Collaborations: Incorporating Student Partners in SoTL Research ***Julia Evanovitch, Melec Zeadin, Nancy Fenton McMaster University*** *Involving Undergraduate Students in SoTL*
9:15 a.m. – 9:55 a.m.	Maple	The Languages of the Wilderness Across Teaching and Learning ***Michael MacDonald, University of Calgary*** *Collaborating Beyond the Single Classroom*
9:15 a.m. – 9:55 a.m.	Pine	Who Cares? Exploring Understandings of Care in Practice ***Catherine Smey Carston, Monica Pauls Mount Royal University*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Black Bear	Going Beyond Experiential Learning in Post-Secondary Science Education to Explore the Real Life of a Scientist ***Hagar Labouta, Ru Li, Natasha Kenny, Leslie Reid, David Cramb University of Calgary*** *Research on Teaching and Learning*

CANCELLED *(overlaid on Maple row)*

9:15 a.m. – 9:55 a.m.	Lynx	Visions of the Possible: Building Bridges Between SoTL and Librarians
		Caitlin McClurg, Nancy Chick, University of Calgary ***Margy MacMillan, Mount Royal University***
		Collaborating Beyond the Single Classroom

Poster Presentations
Easels and Poster Boards (3'x4' or 4'x3') with fasteners will be set up and available in the Castle/Assiniboine Rooms on Thursday, November 10, 2016. Please display posters upon your arrival at the Symposium. Refreshments will be available in Alpine Meadows.

10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Interprofessional Communities of Practice: Fostering Resilience in Post-Secondary Students
		Candi Raudenbaugh, Kristen Gulbransen Red Deer College
		Collaborating Beyond the Single Classroom
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Effectiveness of Videos on Student Retention
		Jewell Cleo Gapasin, Chris Lovallo, Karen Ho ***Mount Royal University***
		Teaching and Learning with Technology
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Using GradeMark to Improve Feedback and Engage Students in the Marking Process
		Alison Graham, Sara Marsham ***Newcastle University, United Kingdom***
		Teaching and Learning with Technology
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	What Do I Know? A Peer Mentoring Exploration for Culturally Dynamic Partnerships
		Catherine Smith, Carolyn Jasmin Diep, Che Burnett, Tera Graves, Jenna Duszynski, Mount Royal University
		Involving Undergraduate Students in SoTL
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	A 3D Intervention Addressing Enzyme-Substrate Interactions Misconceptions
		Cassidy Terrell, University of Minnesota Rochester
		Research on Teaching and Learning

CANCELLED

10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Early Perceptions of Athletic Therapy Students with a Clinical Presentation Curriculum Delivery Method ***M.R. Lafave, M. Yeo, J. Owen, K. Westbrook, D Valdez, B. Eubank, and J. McAllister Mount Royal University*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Reflections on Reflection: Exploring the Course Experiences of Management Education Students Learning Through the Pedagogy of Community Service Learning ***Christian Cook, Mount Royal University*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Blended Learning Techniques in a Liberal Arts University: Its Application to First-Year University Introduction to Chemistry Course ***Vladimir Pitchko, Concordia University of Alberta*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	What do Undergraduate Students Learn During an Immersive Summer Research Experience? ***Lynn Taylor, Carol Johnson, University of Calgary*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	The Testing Effect in a University Classroom ***Heather Poole, McMaster University*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Student Logs, Interviews, and Classroom Observation: How Can Student Engagement in Five-Day Block Week Courses be Accurately Measured to Implement Change? ***Cornelia Burian, University of Calgary*** *Research on Teaching and Learning*
10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Testing Math Skills of First Year Students Across Disciplines and Institutions ***Daria Ahrensmeier, Simon Fraser University*** *Calls for Collaboration, Triangulation, and Development*

10:00 a.m. – 11:25 a.m.	Alpine Meadows and Castle/Assiniboine	Decoding the Disciplines Applied to Game-Based Learning ***Victoria Mondelli, Mercy College, New York*** *Calls for Collaboration, Triangulation, and Development*
11:30 a.m. – 12:30 p.m.	Alpine Meadows and Castle/Assiniboine	**Lunch**
12:30 p.m. – 2:00 p.m.	Castle/Assiniboine	**Plenary** The Decoding Interview: Live and Unplugged ***Margy MacMillan, Michelle Yeo, and Genevieve Curry, Mount Royal University With commentary and discussion facilitated by David Pace***
2:00 p.m. – 2:30 p.m.	Alpine Meadows	**Coffee**
2:35 p.m. – 3:15 p.m.	Birch	I Deserved a Better Grade: Qualitative Analysis of Student Responses to the Question, "Did You Earn the Score You Think You Deserve?" ***Kelsey Metzger, University of Minnesota Rochester Paula Soneral, Bethel University Brittany Smith, Minnesota State University Mankato*** *Research on Teaching and Learning*
2:35 p.m. – 3:15 p.m.	Cedar	When Undergraduate Researchers are Necessary to Answer the SoTL Question: An Undergraduate-Led Study on the Use of Study Drugs on Campus ***Suzanne Wood, University of Toronto*** *Involving Undergraduate Students in SoTL*
2:35 p.m. – 3:15 p.m.	Maple	Using the CEL-SoTL Data Archive to Reexamine Scholarship of Teaching and Learning Evidence ***Jessie Moore, Elon University*** *Methodologies and Innovative Approaches to Data Gathering and Analysis*
2:35 p.m. – 3:15 p.m.	Pine	The World's Greatest Challenges: Building Interprofessional Understanding and Collaboration Among Business and Social Work Students ***Catherine Pearl, Brent Oliver Mount Royal University*** *Collaborating Beyond the Single Classroom*

2:35 p.m. – 3:15 p.m.	Willow	Preparing Students to Learn Across the Disciplines: Pedagogical Interventions in Community-Service Learning ***Roberta Lexier, Melanie Rathburn, Andrew Vespa*** ***Mount Royal University*** *Research on Teaching and Learning*
2:35 p.m. – 3:15 p.m.	Black Bear	From Learning Objectives to Experiences: Community-Engaged Learning Across Disciplines ***Christine D'Onofrio, Kathryn Grafton*** ***University of British Columbia*** *Collaborating Beyond the Single Classroom*
2:35 p.m. – 3:15 p.m.	Lynx	Design Thinking for Layers of Collaboration ***Kimberley Grant, Jodi Latremouille*** ***University of Calgary*** *Collaborating Beyond the Single Classroom*
3:20 p.m. – 4:00 p.m.	Aspen	Comparative Analysis of Three Blended Courses: Learner Variables as Determining Factors in Engaging Students in Meaningful Learning and Attaining Learning Outcomes ***Shani Beth-Halachmy, Diane Salmon*** ***National Louis University*** *Research on Teaching and Learning*
3:20 p.m. – 4:00 p.m.	Birch	Concepts Over Computations: How Innovative Assessment Practices Highlight Student Misconceptions of Statistical Concepts ***Brad Quiring, Collette Lemieux*** ***Mount Royal University*** *Research on Teaching and Learning*
3:20 p.m. – 4:00 p.m.	Cedar	CLIPS (Communication Learning in Practice for Scientists) as a Vehicle for Student Partnership and Student Scholarship of Teaching and Learning ***Susan Rowland,*** ***University of Queensland, Australia*** *Involving Undergraduate Students in SoTL*

3:20 p.m. – 4:00 p.m.	Maple	The Stories of Technology, Tables, and Chairs: Using Ethnography to Understand Learning Spaces and the People That Use Them
		Chris Ostrowski, Nancy Chick ***University of Calgary***
		Methodologies and Innovative Approaches to Data Gathering and Analysis
3:20 p.m. – 4:00 p.m.	Pine	The Effect of Prior Knowledge on Student Performance in Upper-Level Undergraduate Courses
		Johnathan Mee, Mount Royal University
		Research on Teaching and Learning
3:20 p.m. – 4:00 p.m.	Willow	Reflections on Residential Field Courses: Overcoming Barriers to Participation and Engagement
		Graham Scott, ***University of Hull, United Kingdom***
		Research on Teaching and Learning
3:20 p.m. – 4:00 p.m.	Black Bear	What Debriefing Uncovers: Student Success and International Field Schools
		Joe Pavelka, Mount Royal University
		Research on Teaching and Learning
3:20 p.m. – 4:00 p.m.	Lynx	Conscious Connections: Phenomenology and Decoding the Disciplines
		Genevieve Currie, Mount Royal University
		Collaborating Beyond the Single Classroom
4:05 p.m. – 4:45 p.m.	Aspen	Using a Flipped Design for Learning in a Large-Enrollment Biochemistry Course to Help Students Appreciate the Role of Creativity in Scientific Inquiry
		Isabelle Barrette-Ng, Carol Bereson, Miranda MacCallum ***University of Calgary***
		Research on Teaching and Learning
4:05 p.m. – 4:45 p.m.	Birch	Assessing Interdisciplinary Thinking Using a Card Sort Activity
		Chris Addison, James Charbonneau ***University of British Columbia***
		Research on Teaching and Learning

4:05 p.m. – 4:45 p.m.	Cedar	A Cross-Disciplinary Study of Undergraduate Students' Perception of Research
		Nirma Samarawickrema, Robyn Benson, Basia Diug, Janet Macaulay, Monash University, Australia
		Research on Teaching and Learning
4:05 p.m. – 4:45 p.m.	Maple	Using the Echo Technique and Interpretive Phenomenological Analysis to Understand the Student Experience of Blended Learning
		Karl Mueller, Jason Openo Medicine Hat College
		Methodologies and Innovative Approaches to Data Gathering and Analysis
4:05 p.m. – 4:45 p.m.	Pine	The History Essay and Its Alternatives
		Mills Kelly, George Mason University Adrian Jones, LaTrobe University, Australia
		Research on Teaching and Learning
4:05 p.m. – 4:45 p.m.	Willow	Getting Into the Canoe
		Marya Helena Myllykoski, Mount Royal University
		Research on Teaching and Learning
4:05 p.m. – 4:45 p.m.	Black Bear	Making Personal Connections with Global Issues? Lessons from a Global Citizenship Class
		Priscilla Wamucii, Mount Royal University
		Research on Teaching and Learning
4:05 p.m. – 4:45 p.m.	Lynx	Partnering for Late Night Engagement: Are Students Learning at 2 a.m.?
		Elizabeth Rennie, Kathy Gaynor, Sara Wolfe, Charles Harris Thompson Rivers University
		Collaborating Beyond the Single Classroom
4:50 p.m. – 5:30 p.m.	Aspen	Death to Deadlines 2.0
		Katrin Becker, Mount Royal University
		Research on Teaching and Learning

4:50 p.m. – 5:30 p.m.	Birch	Do We Have Access to Clean Water?: Using Local Environmental and Civic Issues to Model Interdisciplinary Instruction in Science and Social Studies for Elementary Educators ***Katrina Roseler, Scott Wylie Chaminade University of Honolulu*** *Collaborating Beyond the Single Classroom*
4:50 p.m. – 5:30 p.m.	Cedar	The Intersection Between Professor Expectations and Student Interpretations of Academic Skills: A Multi-Disciplinary Approach ***Laura Schnablegger, University of Guelph*** *Research on Teaching and Learning*
4:50 p.m. – 5:30 p.m.	Maple	How'd the Exam Go? Using Post-Exam Reflections as a Data Collection Method for Investigating Student Metacognitive Profiles ***Kelsey Metzger, University of Minnesota Rochester Brittany Smith, Minnesota State University Mankato Paula Soneral, Bethel University*** *Methodologies and Innovative Approaches to Data Gathering and Analysis*
4:50 p.m. – 5:30 p.m.	Pine	The Market Value of an Unfinished Assignment: Enhancing Decoding of Disciplines with Learner-Sighted and Self-Regulated Learning Practices ***Dan German, Indiana University Bloomington*** *Research on Teaching and Learning*
4:50 p.m. – 5:30 p.m.	Willow	Generating Enthusiasm for Community Based Research in Introductory Psychology ***Bill McConnell, Jen Wrye, North Island College*** *Research on Teaching and Learning*
4:50 p.m. – 5:30 p.m.	Black Bear	Practicing Altruism: Sociology in Action ***Nancy Angel-Doetzel, Mount Royal University*** *Research on Teaching and Learning*

4:50 p.m. – 5:30 p.m.	Lynx	Measuring University Students' Teaching and Professional Skills Development in a Community-Based Learning Program
		Beth Levinson, Erin Allard, Sandeep Raha, McMaster University
		Collaborating Beyond the Single Classroom

Saturday November 12, 2016

| 7:00 a.m. – 9:00 a.m. | Alpine Meadows and Castle/Assiniboine | **Breakfast** available until 9:00 a.m. |
| 8:30 a.m. – noon | Hotel Foyer Reception Area | **Registration Open** |

Concurrent Sessions

8:30 a.m. – 9:10 a.m.	Aspen	Impacts of the Fall Break on Student Stress and Academics: A Mixed Methods Approach
		Heather Poole, Michael Agnew, Ayesha Khan, McMaster University
		Methodologies and Innovative Approaches to Data Gathering and Analysis
8:30 a.m. – 9:10 a.m.	Birch	Using GradeMark to Improve Feedback and Engage Students in the Marking Process
		Sara Marsham, Alison Graham Newcastle University, United Kingdom
		Teaching and Learning with Technology
8:30 a.m. – 9:10 a.m.	Cedar	Empowering Undergraduate Students Through a Community-Based Participatory Research Project
		Gemma Punti, Nitya Chandiramani, Chelsea Steffens University of Minnesota Rochester
		Involving Undergraduate Students in SoTL
8:30 a.m. – 9:10 a.m.	Maple	A Methodological Road Trip: How 3 SoTL Researchers Used Autoethnography and Narrative Analysis to Inform Their Study on Students' Experiences with Journalism Ethics
		Maria Victoria Guglietti, Amanda Williams, Sally Haney Mount Royal University
		Methodologies and Innovative Approaches to Data Gathering and Analysis

8:30 a.m. – 9:10 a.m.	Pine	Learning Together: Facilitating Reciprocal and Collaborative Global Learning In and Out of the Classroom at Home and Abroad ***Lisa Semple, Margo Underwood, Dianne MacDonald, Mount Royal University Elizabeth Underwood, Calgary Board of Education Meg Karmann, Mount Royal University*** *Collaboration Beyond the Single Classroom*
8:30 a.m. – 9:10 a.m.	Willow	The Art of Nursing Leadership: Exploring Fourth Year Nursing Students' Transition to Professional Practice Through Arts-Based Learning Strategies **Joanna Szabo Hart, Sonya Jakubec, Katherine Janzen Mount Royal University** *Research on Teaching and Learning*
8:30 a.m. – 9:10 a.m.	Black Bear	Processes and Indicators: Clinical Instructors and Student Learning Contracts **Mohamed El Hussein, Olive Fast Mount Royal University** *Research on Teaching and Learning*
8:30 a.m. – 9:10 a.m.	Lynx	Adaptive Cycles of Teaching: An Integrative Framework for Teacher Preparation ***Diane Salmon, Ruth Freedman, Ayn Keneman, Xiuwen Wu, Madi Phillips, National Louis University*** *Collaborating Beyond the Single Classroom*
9:15 a.m. – 9:55 a.m.	Aspen	The Importance of Relationships in the Flipped Classroom ***Brett McCollum, Cassidy Fleming, Kara Plotnikoff, Darlene Skagen Mount Royal University*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Birch	Learning That Lasts? What do Students in First Year Biology Courses Retain and Remember From One Year Later? ***Alison Thomas, Douglas College*** *Research on Teaching and Learning*

CANCELLED

9:15 a.m. – 9:55 a.m.	Cedar	Students as Teachers: Engagement of Student Researchers in Assessing the Effectives of the Case Study Teaching Method ***Kevin Bonney, New York University*** *Involving Undergraduate Students in SoTL*
9:15 a.m. – 9:55 a.m.	Maple	Understanding Mixed Methods as a Methodological Umbrella ***Erika Smith, Mount Royal University*** *Methodologies and Innovative Approaches to Data Gathering and Analysis*
9:15 a.m. – 9:55 a.m.	Willow	Professor, Peers, and Place – What Matters for Student Engagement? ***Victoria Holec, Richelle Marynowski University of Lethbridge*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Black Bear	Capstone Experience in a First-Year Integrated Science Course: A Case Study ***Michelle Spila, Glen Loppnow, Kari Rasmussen, Christie McDermott University of Alberta*** *Research on Teaching and Learning*
9:15 a.m. – 9:55 a.m.	Lynx	Using Decoding the Disciplines to Support Curricular Change ***Michelle Yeo, Mark Lafave, Dennis Valdez, Khatija Westbrook, Jenelle MacAllister, Breda Eubank Mount Royal University*** *Research on Teaching and Learning*
10:00 a.m. – 10:30 a.m.	Alpine Meadows	**Coffee**
10:35 a.m. – 11:30 a.m.	Castle/Assiniboine	**Plenary** Resistance is Futile: The Oncoming OER Revolution and How LibreTexts Can Help You Navigate It ***Delmar Larsen, Ph.D. University of California Davis***
11:30 a.m. – 12:30 p.m.	Alpine Meadows and Castle/Assiniboine	**Lunch**

12:35 p.m. – 1:15 p.m.	Aspen	"I Wish I'd Known What I Know Now": Graduate Students' Experiences with Academic Reading
		Rosemary Green, Shenandoah University
		Research on Teaching and Learning
12:35 p.m. – 1:15 p.m.	Birch	Researching 'What Works' – Analyzing First Year Concept Maps for Evidence of Student Learning
		Michelle Yeo, Sarah Hewitt, Mount Royal University
		Methodologies and Innovative Approaches to Data Gathering and Analysis
12:35 p.m. – 1:15 p.m.	Cedar	Exploring Undergraduate Perceptions of Learning Resources: Insights from Mount Royal's Assessment Seminar
		Erika Smith, Cari Merkley, David Cloutier Mount Royal University
		Research on Teaching and Learning
12:35 p.m. – 1:15 p.m.	Maple	Will Data Really Change Everything? How the Promise (and Potential Perils) of Learning Analytics Could Affect SoTL?
		Jason Openo, Medicine Hat College
		Methodologies and Innovative Approaches to Data Gathering and Analysis
12:35 p.m. – 1:15 p.m.	Pine	Making Connections: Designing an Integrated Approach to First-Year Science Education
		Lauren Grant, York University
		Collaborating Beyond the Single Classroom
12:35 p.m. – 1:15 p.m.	Willow	Learning from Decoding Across Disciplines and Within Communities of Practice
		Janice Miller-Young, Jennifer Boman Mount Royal University
		Research on Teaching and Learning
12:35 p.m. – 1:15 p.m.	Black Bear	An Integrative Approach Using Case Based Learning
		Lisa Semple, Genevieve Currie Mount Royal University
		Research on Teaching and Learning

12:35 p.m. – 1:15 p.m.	Lynx	Reflecting on 6 Iterations of a Gamified Course Design ***Katrin Becker, Mount Royal University*** *Research on Teaching and Learning*
1:20 p.m. – 2:00 p.m.	Aspen	Encoding the Disciplines: Students Developing Disciplinary Identities ***Margy MacMillan, Karen Manarin*** ***Mount Royal University*** *Research on Teaching and Learning*
1:20 p.m. – 2:00 p.m.	Birch	On the Incremental Realization of Learning Outcomes ***Charles Morrison,*** ***Wilfred Laurier University*** *Research on Teaching and Learning*
1:20 p.m. – 2:00 p.m.	Cedar	Empowering ELLs through Discipline-based Accelerated Vocabulary Expansion: Sharing the University of Toronto Scarborough Experience ***Elaine Khoo,*** ***University of Toronto Scarborough*** *Research on Teaching and Learning* CANCELLED
1:20 p.m. – 2:00 p.m.	Maple	Methodolatry and Knowledge Generation in SOTL Research ***Mohamed El-Hussein, Andrea Kennedy,*** ***Brent Oliver, Olive Fast*** ***Mount Royal University*** *Methodologies and Innovative Approaches to Data Gathering and Analysis*
1:20 p.m. – 2:00 p.m.	Pine	Interdisciplinary Approach to Writing Life Story ***Krystyna Laycraft,*** ***KL Emotional Consulting*** *Collaborating Beyond the Single Classroom*
1:20 p.m. – 2:00 p.m.	Willow	Foundations for Student Success ***Wallace Lockhart, Nola Joorisity*** ***University of Regina*** *Research on Teaching and Learning*
1:20 p.m. – 2:00 p.m.	Black Bear	Moving Towards Healthy Classrooms; Impact on Student Health and Learning ***Sally Willis-Stewart*** ***University of British Columbia Okanagan*** *Research on Teaching and Learning*
2:05 p.m. – 2:30 p.m.	Castle/Assiniboine	**Closing Remarks - Brett McCollum**

Detailed Program
Thursday, November 10, 2016

8:00 a.m. – 7:00 p.m.	**Registration Opens – Hotel Foyer Reception Area**
Thursday **November 10, 2016** **9:00 a.m. – 12:00 noon** Aspen	**An ALURE (Authentic Large-Scale Undergraduate Research Experience) for Your Students: Designing for Success Using Learnings from a Multi-Institutional, Multi-Disciplinary Project** **Susan Rowland, Ph.D., University of Queensland, Australia** The Undergraduate research experience (URE) is a high-impact educational practice (Kuh, 2008). Multiple studies have shown that URE involvement improves student retention at university, increases student interest in further study, and improves students' time-management skills (Auchincloss et al., 2014 and studies therein). The traditional URE in science consists of an apprentice-ship style project where individual students enter the professional research laboratories and work with one or more mentors to complete a research project. While this kind of URE is considered the "gold standard" (Brew, 2006), in Australia large-scale undergraduate teaching means we are confronted with the challenge of providing the URE for hundreds of students in a class. This demand can exceed the capacity of research laboratories to house the students. In order to provide our large numbers of students with a URE we undertook a multi-disciplinary, cross-institutional project in which we developed, implemented, and evaluated large-scale UREs for groups of undergraduate science students. Our scale ranges from medium sized cohorts (60 students working on a biochemistry project that addresses spider venoms) to large groups (over 500 students working together to complete analysis of the human oral cavity microbiome). In each case the large-scale URE project was designed by the course coordinator to fit the learning objectives of the course and the needs and skills of the students. Our team mentored the design and delivery process for multiple Australian academic teams; our findings have allowed us to develop a series of Implementer Guides for the development and delivery of large-scale URES. Our SoTL around the project includes: 1) an analysis of the designed vs enacted large-scale URE curriculum using academic reflections and the Beckman and Hensel (2009) continua for undergraduate research; 2) examination, through semi-structured interviews, of the factors that support and challenge implementers of large-scale UREs; and

Thursday **November 10, 2016** **9:00 a.m. – 12:00 noon** Aspen	3) exploration of the student learning gains using structured reflective practice and the URSSA (Undergraduate Research Student Self-Assessment) tool (Weston and Laursen, 2015 and http://www.colorado.edu/eer/research/undergradtools.html). In this workshop we will present the results of this study and give participants the opportunity to design their own Large-Scale Undergraduate Research Experience using the Implementer Guides we developed as an output of the project. Plan for audience engagement: This practical workshop is designed for academics who wish to implement a large-scale URE in their own context. Participants will have access to data and design resources from our project. We will work with participants to help them design their own large-scale URE. As they design they will: 1) consider the enabling and challenging factors in their institutional environment; 2) consider and design for the needs of their students; 3) devise a strategy to engage stakeholders in their environment so that they are more able to deliver a successful large-scale URE; 4) produce an evaluation plan for their educational activity.
Thursday **November 10, 2016** **9:00 a.m. – 12:00 noon** Lynx	**Getting Started in the Scholarship of Teaching and Learning (SoTL)** **Karen Manarin, Ph.D., and Michelle Yeo, Ph.D.** **Mount Royal University** Participants will: • Learn what SoTL is and how to get started, • Discuss conceptual and theoretical frameworks that can inform their study, • Discuss a variety of research questions related to student learning, • Explore different approaches and methods for generating and analyzing data, • Think through ethical considerations involved in SoTL. This 3 hour session will be a combination of plenary presentations and small group activities. After a brief introduction to the scholarship of teaching and learning, participants will work in small groups led by facilitators as they identify something in their teaching practice that they are curious about. Different possibilities for data, methods, and approaches will be presented as individuals have a chance to see what features seem to fit their orientation and research question, along with discussion of the "fallacies of SoTL" (Grauerholz and Main).

10:30 a.m. – 10:45 a.m. First Floor Hallway	**Coffee**
12:00 noon – 1:30 p.m. Terrace Restaurant	**Lunch – provided for all Workshop participants**
Thursday **November 10, 2016** **1:30 p.m. – 4:30 p.m.** Black Bear	**Next Steps: Developing Your SoTL Project /** **Broadening Your SoTL Perspective** **Wallace Lockhart, Ph.D., University of Regina** **Brad Wuetherick, Ph.D., Dalhousie University** In this session we will build upon the foundations of the "Getting Started" workshop and guide participants further along the design of their SOTL projects. In their SoTL Reconsidered (2011), Pat Hutchings, Mary Huber and Tony Ciccone called on the SoTL community, the global 'Teaching Commons', to bring SoTL into the core of individual and institutional work in teaching and learning – classroom teaching, professional development, institutional assessment, and the recognition and reward of pedagogical work. In doing so, they believe SoTL work will become even more fully embedded into our institutional priorities of student learning and success, rather than as stand-alone projects or special initiative (Hutchings et al, 2011). With this in mind, the workshop will be structured around four key grounding questions: First, to answer your particular research question(s), what is the appropriate scope of your SoTL project? In keeping with the principle of ensuring SoTL work is more fully embedded into the institutional goals for student learning, should your project be conducted longitudinally? Across different disciplines? Across years of study? Across different institutions? Second, to answer your particular research question(s), what are other alternative sources of data that might enhance your project? Institutional data, whether from the student information system (like incoming High School grades), from the analytics tools embedded in learning technologies (including the learning management system), or institutional student surveys (including NSSE or CUSC), can all provide powerful lenses to help answer SoTL research questions. What data might inform your work, and what are some of the challenges to access such data? Third, to answer your particular research question(s), what other literatures and existing research tools might inform your work? Often SoTL projects start without a comprehensive grounding in the teaching and learning literature, but there are often existing tools exploring concepts like grit, belongingness, engagement, personality, and

Thursday **November 10, 2016** **1:30 p.m. – 4:30 p.m.** Black Bear	study habits (just to name a few) available within the global teaching commons that could be used to connect to the ongoing 'research imaginary' (Mills, 1959). How can such tools be effectively integrated into your SoTL project? We will take you through a closer look at two survey based instruments: Mantz Yorke's (2016) engagement, belongingness & self-confidence, and Macaskill and Taylor's (2010) autonomous learning scale. We will also provide guidance and precaution regarding limitations and possible errors with the use of student surveys (Porter, 2011). And fourth, how can the results of your SoTL project influence broader goals around improving student success? In addition to informing their own teaching practices, many SoTL scholars focus on traditional scholarly dissemination paths – conference presentations, peer-reviewed publications – but how else might your SoTL project influence institutional priorities, and change initiatives, around teaching and learning? The structure of this workshop will be a combination of focused and practical presentations and discussion, group work and individual focus on developing your own SoTL project. The workshop will be of value to both new SoTL researchers and those with experience who are looking to expand their SoTL horizons. By the end of the workshop, our hope is to have you well down the path toward having your SoTL project ready to go. In the same context, our hope is to share our perspectives on how the project might be designed toward using your results for your own teaching and greater institutional change perspectives.
Thursday **November 10, 2016** **1:30 p.m. – 4:30 p.m.** Birch	**Workshop: Decode Yourself: Mine Your Research History to Help Plan Your Future SoTL Research** **Margy MacMillan, Mount Royal University** Building on the Symposium's 'Decoding' theme and the reflective practitioner model that underpins SoTL, this Workshop will lead you through decoding your research past to describing your ideal future project. As 'Decoding the Disciplines' leads instructors to make their tacit moves and knowledge more explicit and perhaps more useable in teaching, turning a similar lens to research practices may lead to more conscious decisions around approaches, environmental factors, topics, and methods. A series of exercises will draw out the common factors of your research experiences, and determine which of them might lead to more engaging and rewarding future work. The decoding begins with your very earliest research encounters, and spans all of your experiences, so will be useful for participants at any stage in SoTL work from new explorers to seasoned investigators. (No researchers will be harmed in the making of the Workshop)

Thursday **November 10, 2016** **1:30 p.m. – 4:30 p.m.** Cedar	**The Process of Learning Model (POLM): Transforming the Metacognition in Learners Through Innovative Pedagogy** **Steve Janz, Southern Alberta Institute of Technology** The Process of Learning Model (POLM) provides a step-by-step guide to develop and integrate peer instruction, flipped classroom, flipped assessment, collaborative learning and experiential learning within your classroom environment. The POLM was developed based on Steve's observations of instructors at Harvard (Eric Mazur), MIT, University of British Columbia (Carl Wieman Science Education Initiative), Southern Alberta Institute of Technology (SAIT) and research from the Dublin Institute of Technology (Barry Ryan). Plenary Objectives: Participants will (1) discuss the influence of Constructivist Learning Theory in student learning; (2) identify metacognitive enhancing strategies for student pre-class (flipped classroom), in-class (peer instruction) and post-class work (flipped classroom) and (3) identify metacognitive enhancing strategies for student assessment (collaborative and experiential learning) and post-assessment efforts (flipped assessment). Plenary Activities: Participants will (1) analyze 5 varieties of video series (incorporating Lightboard and Zaption technology); (2) experience collaborative learning (team quiz) and flipped assessment process (Steve's SoTL research results and experiences on the flipped assessment process will be shared); (3) discover the benefits of solving intricate problems through peer instruction and (4) recognize how experiential learning can provide students with real-world experiences. According to Mazur (2009), evidence is mounting that readjusting the focus of education from information transfer to helping students assimilate material is paying off. By the end of the session, participants will understand through active learning the strategies for successful implementation and alignment of the aforementioned pedagogy within their courses, how to measure the efficacy of these changes through a SoTL framework (qualitative and quantitative analysis - student questionnaire responses and exam results), research questions that need to be answered and key issues to overcome. Supportive literature research: **Flipped classroom:** According to McGovern and Baruca (2013), the collected data provided evidence that students learning experiences are enhanced if class-specific digital video lectures are adopted as a delivery platform of class material. The learning experiences recorded

Thursday **November 10, 2016** **1:30 p.m. – 4:30 p.m.** Cedar	by students are deepened even further if the professor-of-record actually appears in the videos. **Flipped assessment:** According to Ryan (2013), students can take ownership of their learning and view the assessment as a positive experience where they are assessed for learning rather than the process being an assessment of learning. This approach is an additive and step-wise approach; the learner constructs their knowledge through completing the assessment and, through feedback and reflection, can deepen their understanding and hence move to the next level of comprehension.
3:00 p.m. – 3:15 p.m. First Floor Hallway	**Coffee**
Thursday **November 10, 2016** **5:30 p.m. – 6:30 p.m.** Glacier Salon Mezzanine Level	**Opening Reception** Please join us for an informal gathering at the beginning of our seventh Symposium. This is a perfect time to reconnect with friends and colleagues, meet other scholars of teaching and learning, and enjoy the company of our participants. This reception is sponsored by the Academic Development Centre at Mount Royal University.
Thursday **November 10, 2016** **6:30 p.m. – 7:30 p.m.** Castle/Assiniboine Rooms	**Opening Banquet** Experience has taught us that beginning with an opening banquet provides for an easy entrée into the community and good work of the Symposium. This is a chance to get acquainted with new colleagues and prepare for the rigor and excitement of the days to come.
Thursday **November 10, 2016** **7:30 p.m.** Castle/Assiniboine Rooms	**Opening Plenary Keynote Session** **Why Don't They Get It? Decoding the Gap Between Faculty and Student Thinking** **David Pace, Ph.D., Professor Emeritus, Indiana University President, International Society for the Scholarship of Teaching and Learning in History** The very future of the societies in which we live depends on college instructors, learning to share increasingly demanding subjects to increasingly diverse groups of students. To respond to this challenge, we must bring the kind of sustained intellectual inquiry that we are accustomed to in our disciplinary work to bear on the places where student learning is blocked. We must systematically explore what makes our fields difficult for many students and analyze the processes that they must master to function effectively in our disciplines. This talk will describe the Decoding the Disciplines model and share multiple examples of how, by making conscious the mental operations that we do automatically and carefully sharing these with students, we can provide them with the tools they will need to shape the future.

Detailed Program –
Friday, November 11, 2016

7:00 a.m. – 9:00 a.m.	**Breakfast available until 9:00 a.m.** **Alpine Meadows and Castle/Assiniboine**
8:00 a.m. – 2:00 p.m.	**Registration Open** **Hotel Foyer Reception Area**
Concurrent Sessions	
Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Aspen	**We Should Talk: A Reflective Journey to Optimizing IT/Faculty Relationships and Student Learning** **Jessie Barnett, Shanna Altrichter, Pete Sedivy, Nick Suchla** **University of Minnesota Rochester** ***Teaching and Learning with Technology*** "Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). Our institution's' mission statement emphasizes personalized education in a technology-enhanced environment and holds it to be of paramount importance (University of Minnesota Rochester Campus Mission Statement 2009). This year we, a group of faculty and staff from three different disciplines, got a taste of our own experiential learning medicine after facing a series of teaching-with-technology challenges. Using critical reflection as a meaning making tool during our process, we navigated the eye-opening joys and absolute frustrations that come with incorporating technology and learning, the IT/faculty working relationship, and the larger university structure. We argue that taking time to critically reflect on the relationship between IT, faculty, and organizational structure is a vital component of responsive teaching, learning, and realizing optimal student outcomes. In a higher-education world championing the benefits of technology use in the classroom (Dahlstrom, 2015), a productive and critical interdisciplinary relationship should actually be the norm. In our presentation, we will: Explain our different roles within our institution and describe UMR's unique teaching and learning environment, Share the student-driven situation that brought us together as technological detectives during the past year, and why we feel it necessary to share our experience more widely,

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Aspen	Specifically address our critical reflection findings including barriers to and facilitators of technological innovation, interdisciplinary communication, and optimising IT's place within the institutional structure, Make recommendations for best practice in developing these co-disciplinary relationships.
Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Birch	**Marking Matters: The Influence of Learner Proficiency on Foreign Language Learner Responses to Direct and Indirect Written Corrective Feedback** **Britney Paris, University of Calgary** ***Research on Teaching and Learning*** Research on Assessment is often driven by the need to show student results to external stakeholders; however, SoTL asks us to instead focus on student learning (Felten, 2013). By engaging students as learning partners, assessment becomes better informed, resulting in improved student learning. Formative assessment focuses on student learning by providing learners with feedback on how to improve. In foreign language classes, Written Corrective Feedback (WCF) is a common formative assessment strategy, which has been shown to improve both the grammatical accuracy of student writing and learning outcomes (Shute, 2008). This presentation will showcase a current study, including research design and preliminary results, investigating the relationship between two types of Written Corrective Feedback (Indirect Feedback and Direct Feedback) and learner proficiency of German Foreign Language Learners. In a meta-analysis on the efficacy of WCF in improving Second Language written accuracy it was shown that feedback-type is a mediating factor (Kang & Han, 2015). Specifically the study investigated whether Direct Feedback (DF) – providing the student with the correct form – or Indirect Feedback (IF) – only indicating that an error exists – had the most positive long term effects, for which there are differing results (Kang & Han, 2015). They also suggest that learner proficiency is a moderating variable of the effectiveness whether DF or IF is more useful may depend upon learner proficiency. Yet the efficacy of WCF depends upon how learners make use of this feedback (Hattie & Timperley, 2007). Most research on WCF focuses on the effectiveness of various feedback types but ignores the interaction between the learner and the feedback. The current study makes use of semi-structured, topical interviews to investigate learner perceptions of DF versus IF, as well as what the learners do with the feedback they have received in order to make improvements in their writing.

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Birch	Through a better understanding of how learners perceive and use WCF, teachers can better make informed decisions about the types of feedback they provide when conducting formative assessment. Importantly, this study focuses on the learner's perspective and gives a voice to students who are normally not asked to provide commentary on how they best learn. Preliminary findings of this study illustrate that learner needs vary with proficiency and as we listen to our students, we gain a better understanding of how learners perceive and use WCF. Teachers can then make better informed decisions about the types of feedback they provide, and to whom, when conducting formative assessment.
Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Cedar	**From Student to Teaching Assistant to Member of the Research Team** **Karen Graham and Wallace Lockhart** **University of Regina** ***Involving Undergraduate Students in SoTL*** The primary focus of this workshop is to discuss the challenges and benefits of using technology to augment high impact practices associated with a flipped classroom for an introductory business course. Technology such as Turnitin allows students to evaluate themselves before assignments are submitted, and provides more powerful tools for instructors and graders to identify potential plagiarism issues. We will also discuss the challenges of student diversity in the context of standardized classroom experiences to all of our students. How the session will differ from most SOTL workshops: I am telling my story from my perspectives in my evolving roles as a mature student, seminar lecturer, community service learning coordinator, teaching assistant and lead teaching assistant, ultimately leading to a new co-op position as course coordinator and member of the research team. I am here to share my story and some of my most memorable and interesting experiences over the past three years in the context of my varied roles, and our ongoing SoTL research. As a new member of the research team, my perspectives are grounded in my experiences, both as a student and a teaching assistant monitoring the results of our collaborative efforts. I will also be joined by my professor who is principle investigator of the project. Key topics to be covered in the workshop include: • Flipped classroom: pre-class assignments, and feedback with Turnitin, university app • University app doesn't make my life easier, but my prof loves it!

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Cedar	• High impact practices: experiential seminars and structured team teaching, training in advanced practices (UPEI)
	• Instructors opening their classroom to other instructors and accomplished professional business leaders, egos have to be left at the door!
	• My role as lead teaching assistant: challenges with managing diverse faculty and students mentoring students teaching assistants and collaboration with several instructors
	• Everybody has their own teaching style, this requires a lot of diplomacy!
	• Inquiry and aliteracy; how to find it, judge it, use it and cite it
	• Why look it up? Wikipedia already did it for me!
	To consolidate the session, we will examine the ways in which my experiences compare to the results of our research into student diversity, high impact teaching practices, student engagement and learning outcomes. Areas of focus include engagement & belongingness (Yorke, 2014), autonomous learning (MacAskill and Taylor, 2011) as well as our more recent research into inquiry and aliteracy (Wells, 2012). We will utilize a workshop format with opportunity for open discussion so we can all share our experiences, challenges and successes.
	Please join us! THERE WILL BE CHOCOLATE!!!!!
Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Maple	**Using an Ethic of Care Framework for Educational Research** **Kari Rasmussen** **University of Alberta** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** There are many frameworks that can be used when one engages in educational research, but a more strategic framework that can be used to investigate the experience of education from multiple perspectives is rare. To engage in educational research that looks at the larger implications of education and its place in our lives this presentation presents an adapted ethic of care framework (Joan Tronto, 1993). This model provides a solid structure in which to investigate many aspects of education – from strategic visioning to the underlying structure of an instructor's role in the classroom. Additionally, this framework provides a more humanistic focus on educational research as it recognizes the importance of care as part of our lived experience. This presentation will focus on the foundation upon which this framework was created, the framework itself and will show an example of the utilization of this framework as part of a doctoral thesis. Finally, in dialogue with the participants, other possibilities for the use of this framework will be explored.

| Friday
November 11, 2016
8:30 a.m. – 9:10 a.m.
Pine | **Getting Out of the Way: Creating Space for Student to Student Interprofessional Learning**

Liza Choi and Margot Underwood
Mount Royal University

Collaborating Beyond the Single Classroom

Background
Interprofessional education (IPE) is increasingly acknowledged as an essential element for patient safety in healthcare and as a standard for healthcare education by accrediting bodies and professional organizations. Research regarding IPE has significantly evolved over the past decade; however, there remains a lack of clarity as to when IPE should occur within an education program, what education strategies would best promote interprofessional collaboration in graduates' practice, and whether IPE ultimately impacts professionals' practice.

Purpose and Objectives
The purpose of the research was to explore the influence of a collaborative nursing lab on participating Bachelor of Nursing (BN) from Mount Royal University and Respiratory Therapy (RT) from Southern Alberta Institute of Technology (SAIT) students' knowledge, attitudes, and beliefs about interprofessional practice. We also examined what was being accomplished through interaction and communication between these groups of students in the collaborative lab, specifically, how this lab influenced the construction of their professional identity.

Research Question:
1. What is the influence of a collaborative lab on the RT and BN students' knowledge, attitude and beliefs about inter-professional practice?
2. How does a collaborative lab serve to construct professional identity for RT and BN students?

Methods: Quantitative and Qualitative
A mixed methods approach was utilized to address the research questions. The Readiness for Inter-professional Learning Scale (RIPLS) questionnaire (Curran, Sharpe, Forristall, & Flynn, 2008) was administered to both sets of students before and after participating in collaborative oxygen delivery nursing labs (30 labs in total). Paired-samples t-tests were conducted to analyze the quantitative rating scale data collected from nursing and RT students separately. An analytic interpretive approach to discourse analysis was used to analyze qualitative data gathered through individual interviews and focus groups (Holstein & Gubrium, 2005) |

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Pine	**Sample Size** During the Fall 2015 and Winter 2016 terms, 110–130 BN students and 10–20 RT students completed the pre and post lab questionnaires that gathered quantitative data. Qualitative data was gathered through individual interviews and through focus group sessions. **Findings** Preliminary analysis of the data indicates that both groups of students had a positive perception of the interprofessional collaboration and learning offered through this lab. Students reported that the lab offered them an opportunity to clarify their roles in oxygen delivery, and to reflect on their own developing professional identities **Implications for Healthcare** Evidence generated from this study could contribute to the existing literature regarding IPE. This evidence could support the thoughtful integration of IPE into health professionals' curricula, and thereby optimize the development of their practice and ability to provide quality patient care.
Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Willow	**Shared Learning as Partners in Research:** **Experiences Through SoTL** **Jennifer Lock, Carol Johnson, Noha Altowairiki,** **Chris Ostrowski, University of Calgary** **Laurie Hill, St. Mary's University** ***Research on Teaching and Learning*** The evolution of a student-faculty partnership in SoTL research relies on a willingness to build relationships focused on supporting the project. The partnership requires purposeful planning, careful scaffolding, and thoughtful nurturing grounded in "respect, reciprocity, and shared responsibility" to "take common practice to a much deeper level" (Cook-Sather, Bovill, & Felten, 2014, p. 204). The value of this partnership lies in the "collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualization, decision-making, implementation, investigation, or analysis" (Cook-Sather, et al., 2014, pp. 6–7). Yet, it cannot be assumed that implementing this partnership occurs without challenge or tension (Bovill & Felten, 2016). In this presentation, we share our experiences as a team of five graduate students and two academics as partners in research, as well as the impact of this partnership on the project. We embarked on a two-year (SoTL grant funded) project to revitalize the online learning environments of four Bachelor of Education Field Experience courses. Through a design-based research approach, we used the principles of Universal Design for Learning (CAST, 2015) to inform the re-design of the online environments. Using this evidence-

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informed approach, we iteratively refined the design of the environments and how we supported instructors in using the environments. By respectfully nurtured and challenging each other's perspectives and opinions, we strengthened the design and the educational development we offered to instructors. Over three design iterations, the data informed the re-design of the online environments and was shared with the instructors in annual debriefings.

In partnership with academic staff, the five graduate students were central to: 1) conceptualizing the project; 2) implementing the design, development, and research; 3) facilitating educational development; and 4) sharing knowledge mobilization. Throughout the project, they actively took part in decision-making and shared leadership, evolving as researchers and practitioners. This shared ownership and participation was critical toward creating robust learning environments, which surpassed the life of the project. Through the practical, hands-on learning experience of being active partners in research, the research affected the students' professional and research practice.

In the presentation, we use Schön's (1983) reflection-on-action process to: 1) describe our roles and responsibilities for which we took leadership in the work; 2) articulate how this SoTL experience affected our instructional design, teaching and research capacity, and 3) identify the advantages and challenges of fostering student-instructor partnership in research. Attendees are invited to share their experiences, to draw on our experiences to inform approaches to SoTL work, and to consider other ways of engaging with graduate student as partners in research.

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School-University Partnerships Within and Epistemology of Practice

Kevin O'Connor, Gladys Sterenberg, Ashlyn Donnelly
Mount Royal University

Research on Teaching and Learning

The purpose of this research is to investigate the barriers and strategic approaches to supporting relationships through the development of school-university partnerships within the context of an extended school-based practicum. We claim that the development of school-university partnerships provides opportunities for teacher educators to consider generative possibilities for theory-and-practice integration.

Reforms to teacher education have called for extensive practical experience for teacher candidates and many of these calls have advocated for strong school-university partnerships as a means for providing these (Darling-Hammond, 2006). However, there is also widespread recognition of the challenges and difficulties in

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Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Black Bear	establishing and maintaining school-university partnerships. Verbeke and Richards (2001) list a daunting array of issues that face partnerships—shared goals, institutional differences, assessment and accountability, individual differences, communication, time, resources, roles and responsibilities, and evaluation. It is these challenges that our research investigates. Our four-year teacher education program is in the midst of implementation and we are developing our program intentionally to support theory-and-practice integration. For this research presentation, we examine how to facilitate this by attending to relationships between schools and universities as we initiated partnerships. Our collaborative SOTL study focuses on how partnerships between schools and universities can contribute to teacher candidates' learning when they are engaged in an extended practicum. Since fall 2013, we have been engaged in conversations with potential partners. We have met with administrators and teachers from individual schools, we have had joint meetings with partners who have expressed interest in our project, we have engaged in conversations with critical friends, and we have kept research notes about our experiences. Qualitative data was gathered from recorded conversations with partners, focus groups with mentor teachers, recorded conversations among our research team, and journal entries that included researcher notes alongside critical friend responses. Multiple data sources provide trustworthiness as experiences were explicitly documented and analyzed by teacher educators, student researchers and their critical friends in various forms and sites. Data was coded across these sites according to emerging themes. Themes emerging in the data included: co-constructing a common vision, negotiating alumni loyalties to other institutions, developing communities of practice, and tensions between institutional requirements and partner desires. In this presentation and in collaboration with our student researchers and school partners, we present some of the challenges we encountered, how we attempted to resolve issues that emerged in our relationships, and the triumphs we experienced through this investigation. As teacher educators, this study helped us become more attuned to the importance of relationships between schools and universities as we confronted the complexities of theory-and-practice integration. The results will enhance the learning experiences of our teacher candidates through a better understanding of our practice as we design and implement more integrative practicum experiences in the context of school-university partnerships. This research links our developing professional knowledge to ways teacher educators can support the formation of robust partnerships within teacher education.

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Lynx	**Interdisciplinary Collaboration as a Means to Support International Student Writing and Argumentation in a First-Year Science Course** **Ashley Welsh, Amber Shaw, Joanne Fox** **UBC Vantage College, University of British Columbia** ***Research on Teaching and Learning*** Within undergraduate education, scholars have been designing and implementing writing intensive courses to address and enhance students' abilities to communicate their ideas within various disciplines (Baram-Tsabari & Osborne, 2015; Brent, 2005). This explicit curricular focus on writing and communication is critical given the increasing diversity of students from a variety of international, cultural, social, and linguistic backgrounds in Canadian classrooms (CBIE, 2015). As a result of this diversity, it is important for educators to assess the impact of inclusive classroom strategies and assessments designed to support student learning and communication. This presentation will showcase a SoTL research project exploring English Language Learners' (ELL) writing, argumentation, and critical thinking skills in a first-year science communications course (SCIE 113). This course is part of the core curriculum of a new first-year experience program where international students complete their disciplinary courses in tandem with an intensive academic English program. Within the program, each disciplinary course is paired with a weekly one-hour language course (VANT 140), to help students with "academic and subject-specific vocabularies, genres, and ways of constructing knowledge" in particular subject areas (Nikula, 2015, p.1). As such, science and language faculty work closely to develop and facilitate activities, assignments, and assessment to improve ELL student learning and communication. As science and language instructors within the program, we were curious as to how our collective curriculum and pedagogy influenced student writing, argumentation, and critical thinking in SCIE 113. Students' writing assignments and in-class written reflections were collected and analyzed for this project. A comparison of students' first and last unit writing assignments revealed statistically significant improvements in their writing structure and logical argumentation. Within their reflections, students commented that SCIE 113 and VANT 140 enriched their ability to critically analyze scientific research and media, and to provide evidence-based arguments when communicating about science. Our experiences working in this first-year program for English Language Learners has enabled an open exchange between science

Friday **November 11, 2016** **8:30 a.m. – 9:10 a.m.** Lynx	and language faculty. Furthermore, it has allowed us to develop interdisciplinary pedagogy and SoTL research to better inform the learning and communication of a diverse group of students. During the presentation, we will engage the audience in discussions about how such collaborations could translate to their own context and how we can enhance the teaching, learning, and SoTL occurring in our increasingly intercultural classrooms.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Aspen	**Designing a MOOC Through Research, Dialogue, and Practice** **Derek Briton, Marti Cleveland-Innis** **Athabasca University** ***Teaching and Learning Through Technology*** The much ballyhooed emergence of MOOCs was wildly celebrated by some (The New York Times declared 2012 "The Year of the MOOC"), and soundly denounced by others (Times Education Review, "Five Myths About MOOCs," 2014). But all debates regarding their efficacy withstanding, MOOCs did rekindle a wide range of educators to commit to providing greater access to bodies of knowledge validated and/or created by academic researchers. The speed with which MOOCs emerged and spread across the educational landscaper meant the phenomenon skirted the normal rigorous evaluation process that accompanies design and delivery in higher education; consequently, many questions regarding efficacy, appropriateness, and responsibility were left unanswered. The research project described in this presentation seeks to address those questions, and others such as: "Which instructional design and delivery principles are applicable to MOOCs, given increased class-size, unpredictable and wide-ranging academic backgrounds, availability of open education resources, and varied desires among learners?" "Which instructional design principles are most appropriate and what might be added in consideration of unique MOOC characteristics and/or subject matter?" This presentation outlines the rationale, methodology, planning, and findings of a Massive Open Online Course (MOOC) research project funded by the Bill & Melinda Gates Foundation and Athabasca University. The project was inspired by the concern that a plethora of MOOCs that paid little heed to an established distance education literature on the relationship between online pedagogy(s) and subject matter were appearing and proliferating on the educational landscape. The project began by examining the relationship between MOOC design, open education resources (OERs) and modes of delivery in reference to long-standing and well-researched principles of instructional design. ▶

Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Aspen	Based on findings from eighteen in-depth interviews with seasoned higher education faculty from universities across Canada, and ongoing discussions with an advisory group of experienced online educators from Athabasca University, a MOOC that prepared learners how to learn online was designed from the ground up. The aim of the MOOC was: (i) to increase access, (ii) to foster equity in a learning environment that is inherently unbiased, (iii) to create affordable, convenient learning opportunities, and (iv) to develop expanded learning skills that foster self-direction, self-regulation and collaboration. The presentation outlines the methodology of the project's preliminary investigation, its planning process, goals and design, and finally its delivery, facilitation, and evaluation. A second offering of the MOOC is currently underway, and adjustments made to the design of that MOOC based on formative and summative feedback from the first will also be presented. Keller (2008) and others have long argued that changes in technology "constitute the most consequential set of changes in society since the late nineteenth century" (Preface xi), and technology is undoubtedly "going to force all academic enterprises to rethink their place and purpose" (Beaudoin, 2003, p. 520). MOOCs may not be perfect, but they offer an opportunity to harness technology in the service of broad educational provision. But such success requires the ready access to high quality knowledge through high quality pedagogy.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Birch	**It All Adds Up: Implementing Strictly Cumulative Grading** **Katrin Becker, Mount Royal University** ***Research on Teaching and Learning*** The typical allocation of grades in a course invariably involves braking up the total marks possible into various portions: so much for assignments, so much for exams, and so-on (Assignments = 30%, Lab exercises = 10%; Midterm - 20%; Final = 40%). Students must do well on all parts to earn a top grade. If - for whatever reason - they mess up on any single component they may ruin their chances of getting an A, no matter how well they actually knew the material. This sort of grading is reductive and, by extension, punitive. This approach to grading creates an inherent risk for students, and in some cases can even work to discourage students from trying something innovative. Is this really the mechanism we want to use to encourage students to be innovative and demonstrate their mastery of the course objectives?

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The Power of Collaborations:
Incorporating Student Partners in SoTL Research

Julia Evanovitch, Melec Zeadin, Nancy Fenton
McMaster University

Involving Undergraduate Students in SoTL

In keeping with the Symposium's theme 'Learning in and Across Disciplines', we explore the value of developing connections, and what this means in a teaching and learning context. The aim of this presentation is to showcase the ways in which student partners were involved in a SoTL research project and the power of collaborating with them as part of a Leadership in Teaching & Learning Fellowship (LTL Fellowship) program at one Ontario University. Allin (2014) argues that collaboration is a powerful component of 'pedagogical action research' that can influence change within the culture of teaching and learning in higher education. In particular, students as partners can transform teaching and learning practices in higher education by helping students to develop a deeper understanding of the pedagogical practices they witness in the classroom. Through these collaborations, it is argued that university staff and faculty develop a deeper appreciation of today's university learner, and the valuable experience they can bring to SoTL research (Allin, 2014). Felton (2013) also believes the principles of conducting good SoTL practices involves engagement in student partnerships, as this shared responsibility and ownership helps to explore new possibilities in the research that is being conducted.

During this presentation, we will discuss the newly launched Leadership in Teaching & Learning Fellowship program and describe the ways in which student partners played an integral role to the project by bringing their own unique perspectives and insights to conducting research. The qualitative study employed a collaborative autoethnography (CA) approach whereby researcher-participants and student partners worked in community to collect their individual reflections and analyze and interpret data collectively to gain a meaningful understanding of the sociocultural phenomena reflected in their individual experiences (Chang et. al., 2013). Six faculty members who assumed Fellowships aimed at assessing the impact of their new teaching and learning practices were interviewed at various stages throughout the Fellowship. The student partners involved in this study helped to refine the semi-structured interviews that were conducted with each of the Fellows developing individual and cohort stories for dissemination. The student partners involvement have been critical as they bring unique perspectives and experiences to discussions on teaching and learning, helping the research team reflect deeply on the assumptions embedded in the research design, and valuing the diversity helped enrich the program's development, and research process (Felten et al, 2013).

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Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Cedar	During this process, the research team developed inclusive and collaborative practices to ensure student voice is integrated within the program (Felten et al, 2013). This experience highlights the value of developing student partners in enhancing SoTL research and transforming educational experiences in higher education and encouraging various approaches to explore ways to foster student partnerships within this fellowship and beyond. Participants will have an opportunity to discuss: the value of student partners in SoTL research; the challenges that may be encountered in engaging in student partnerships; and, the approaches session participants use in their own institutions to foster student partnerships in transforming teaching and learning practices.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Maple	**The Languages of the Wilderness Across Teaching and Learning** **Jennifer MacDonald, University of Calgary** ***Collaborating Beyond the Single Classroom*** In the age of ecological crisis, and as the time we spend in front of screens increases, there is a critical awareness that our seeing, experiencing, and understanding of the lived-world is implicated by how we identify and interact with the world around us. Exposing students to the outdoors is then vital to develop meaningful relationships with nature. This interdisciplinary research around teaching and learning will explore the language associated with wilderness, sustainability, and the climate change discourse, and how they influence our understanding of these experiences. Through interactive dialogue, participants will first reflect on their own place meanings and memories, outdoor experiences, and interpretations of nature and wilderness, and reflect on that of their students. Against this interpretive and experiential backdrop, we, as a collective, will consider three broad questions: What meanings might students create about wilderness, sustainability, and climate change based on the language used in schools – curriculum, movement, the natural and built environments, pedagogy, text books, and/or media? How might students perceive spending time outdoors in the 21st century—the benefits and the risks? How might educators across all disciplines collaborate to provide multiple entry points and wider perspectives on these issues? This interdisciplinary presentation is positioned in multiple fields and derives from both theoretical research and personal experiences as a classroom and outdoor education teacher. To facilitate activities, story telling and discussion, scholarship from two emerging fields will be combined. Environmental hermeneutics (Clingerman, Treanor, Drenthen, and Utsler, 2014) connects philosophical hermeneutics—the study of forming meaning and interpretations—with environmental thought,

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Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Maple	helping us understand how our historical, environmental and cultural backgrounds influence our environmental relationships. Ecolinguistics (Stribbe, 2015) analyzes the ecological impact of environmental discourses and the influence of language on the human and non-human world. Through discussion and participation we will move into exploring pedagogical transformations that may assist getting at what is concealed in our familiar use of language across disciplines. It will be of interest to practitioners because we will address the alternate approaches at this time, and in the topic of balancing screen time with our students in the natural world. Participates will engage in an activity based in the notion of poetic dwelling (Heidegger, 1971) in and with the wilderness. This will provide a useful tool to conceptualize the natural world in imaginative ways, ultimately nurturing a sense of curiosity and wonder for our students. As with poetry, this dwelling allows the individual to "reach towards what is absent because of its concealment behind language, opinion, ideology" (Oelschlager, 1991, p. 279). By abandoning these conventional categories we may imagine a shift towards ecological identities across the all disciplines.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Pine	**Who Cares? Exploring Understandings of Care in Practice** **Catherine Smey Carston, Monica Pauls** **Mount Royal University** ***Research on Teaching and Learning*** The concept of care is viewed as a foundational ethic in the Bachelor of Child Studies (BCST). Although the degree incorporates the concept of care into its curriculum, it has been unclear how students understand and experience care as they move into practice. The notion of care is of particular interest to the researchers because it represents a key component of practice and in many ways, defines the work, yet the idea of caring is often devalued by greater society (Austin and Halpin, 1989, as cited in Stuart, 2013, p.7). The responsibility of teaching students to care in practice then becomes a challenge for faculty; to effectively explore and teach the concept of caring in a way that is distinct to a profession, while understanding that students are often drawn to this work because of an innate passion or calling to work with children (Stuart, 2013). Noddings (2012) explains how caring requires a relationship between two people, 'the carer and the cared-for'. This relationship may be equal or not, but both people contribute to how care is established and maintained. Noddings acknowledges that care as a foundational ethic means more than having regard, interest or inclination towards something or someone (2013). It requires the carer to have a genuine

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Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Pine	interest in not only the assumed needs of the cared-for, but also the needs expressed. The carer should be attentive, thoughtful, competent and responsive (positively or negatively) to the cared-for while maintaining a caring relationship (Noddings, 2012). Considering care as a foundational ethic in practice emphasizes the importance of incorporating the concept into educational programs. Teaching about care in a general sense creates wholeness in learning, connects people, allows for the construction of new knowledge and builds trust (Noddings, 1995). It also implies a search for competence; a full range of talents are uncovered when people want to do their best for the objects of their care (Noddings, 1995). In part one of this study, students explored the connections that made between theory and practice through the use of an innovative digital story telling methodology. Digital storytelling requires the participants to reflect on a particular topic and, using both narrative and digital content, tell a story that represents their own experience. As graduates entering the field, this experience supported their developing professional self-awareness and gave voice to their reflections and experiences. Part two of this study invited faculty members who teach in the degree into the 'care' conversation. Exploring and teaching about care in a way that is distinct to these professions, is an important consideration when preparing future practitioners, therefore it is critical to understand the effectiveness of teaching the concept of care in practice. This presentation will feature the digital stories developed by students along with the preliminary findings from two of the study. If accepted to the conference, it is our hope to have some of the student participants from the study accompany us and take part in the presentation.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Black Bear	**Going Beyond Experiential Learning in Post-Secondary Science Education to Explore the Real Life of a Scientist** **Hagar Labouta, Ru Li, Natasha Kenny, Leslie Reid, David Cramb University of Calgary** ***Research on Teaching and Learning*** The Nanoscience Program at University of Calgary is a relatively new undergraduate minor program at the Faculty of Science. The learning strategy adopted within this program is "learning-science-by-doing-science" (LSDS) by trying to make the students act and think like scientists, wherein students across science disciplines undertake real research projects for solving a problem they choose themselves within or outside their disciplines. The LSDS thus goes beyond experiential learning and focuses mainly on how to make a hypothesis and design an experiment to test that hypothesis, which is key to becoming a scientist.

Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Black Bear	In addition, labs are mostly student-driven wherein they work in teams to design their own experiments. The skills to do this are taught in classes through lecturing and problem-solving tasks, and then they are reinforced by students using the scientific method to design an experiment. This creates an ownership on students' part for their own learning. This is also much different than other traditional science labs, which involve students following a procedure already written with a known outcome. All this constitutes the students-driven LSDS model which is "To teach students nanoscience (as an example of a scientific knowledge) in such a way that results in the students thinking, presenting, writing, and experimenting as scientists", as quoted by one of the instructors of the Nanoscience program. This project takes on the LSDS pedagogical model and aims to answer a main research inquiry; how effective is LSDS at achieving its intended learning outcomes and experiences? To help answering this this study evaluates the program in view of the knowledge, skills and abilities the students gain, as well as the students and faculty perceptions on how these are planned, enacted and experienced throughout the courses through the program – curriculum mapping. This will help identify gaps and strengths of the LSDS to further improve student learning. The main attributes of the LSDS model were successfully defined. From the director and instructors perspective, this program with the adopted LSDS learning model, gives high weight on translatable skills in a nanoscience context including interdisciplinary skills, experiential skills, problem-solving skills, creativity and curiosity, research skills, technical skills, critical thinking, communication skills and collaboration skills. Data from director, instructors, students and Alumni are collected and analyzed using qualitative tools as well as statistical quantitative tools to determine the gaps and strengths of the LSDS model (mixed methods approach – questionnaires and focus groups). This study pinpoints the strengths and gaps of the LSDS model as a model of expected high potential within post-secondary Science education. The inclusion of students' perception strengthens the curriculum mapping phase and could thus be regarded as a novel methodology of curriculum mapping in higher education in Canada and elsewhere.
Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Lynx	**Visions of the Possible: Building Bridges Between SoTL and Librarians** **Caitlin McClurg, Nancy Chick, University of Calgary** **Margy MacMillan, Mount Royal University** ***Collaborating Beyond the Single Classroom*** Our panel is built upon a question: Why don't more librarians and SoTL researchers work together? For librarians, SoTL offers rich opportunities

Friday **November 11, 2016** **9:15 a.m. – 9:55 a.m.** Lynx	for research, collaboration, and dissemination to wider audiences. For SoTL scholars, librarians can offer a range of expertise, from working across disciplinary boundaries, to conducting microstudies of classroom learning, to possibilities for improving dissemination. So why are these two groups working largely in isolation from each other? Our partnership between a leader in SoTL and two librarians (one with extensive SoTL experience, and the other just beginning) has explored this question and will present rationale for why SoTL scholars and librarians might consider working more closely together, as well as a series of models for how those collaborations can work. The key point of intersection between SoTL researchers and librarians is student learning. A strong theme in current SoTL discussions are the places where students get stuck, evident in the conference theme of "decoding the disciplines," in wider discussions of "threshold concepts," and in any number of other projects that seek to understand why some students succeed and others don't. Academic librarians often serve as trusted intermediaries between bewildered students and the arcana of academia, which provides insights into those bottlenecks and troublesome "intermediate learning" stages described by Bernstein and Bass. These insights may offer another different ways of looking for and at evidence of student learning. Involving undergraduates in research processes is another current SoTL discussion where librarians have something to offer as they have been studying aspects of the this learning for over 50 years. There has been some discussion in the literature that SoTL researchers may find themselves in 'stuck' places as well, where they face challenges in searching and using literature outside their disciplines (Weller). Here too librarians have some experience with disciplinary fluidity and can offer both technical expertise in identifying useful information resources and practical tips in learning a new discipline's jargon and information flows efficiently. Our panel will illustrate the potential of these partnerships through models of collaboration that highlight benefits to individual researchers and projects, and the promise that deeper institutional integration holds for developing SoTL culture on campuses. We will bring our diverse perspectives to suggestions for building productive relationships between librarians and SoTL researchers and some considerations of how these might work in the participants' institutions. We will invite participants to share their stories and questions about librarian-SoTL collaboration.

Poster Presentations

Easels and Poster Boards (3'x4' or 4'x3') with fasteners will be set up and available in the Castle/Assiniboine Rooms on Thursday, November 10, 2016. Please display posters upon your arrival at the Symposium.

Refreshments will be available in Alpine Meadows

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Interprofessional Communities of Practice:** **Fostering Resilience in Post-Secondary Students** **Candi Raudenbaugh, Kristen Gulbransen** **Red Deer College** ***Collaborating Beyond the Single Classroom*** Student resilience impacts student success (Beauvais, A.M. et al., 2014, Hartley, M.T., 2011, Maddi, S. R. et al., 2009). The purpose of this study was to examine students' self-ratings of resilience at the beginning and at the end of the academic year (September to April) and to compare this to their participation in interprofessional communities of practice. Students from a variety of health care programs were chosen to participate in the study. All first year students from three health care programs (Practical Nursing, Pharmacy Technician, and Occupational/ Physical Therapist Assistant) were invited to participate in community of practice sessions throughout the academic year to discuss strategies to improve resilience and coping as they transitioned into the college setting and student role. The poster presentation explains study results, discusses factors that improve student resilience, and identifies ways to support post-secondary students in becoming more resilient.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Effectiveness of Videos on Student Retention** **Jewell Cleo Gapasin, Chris Lovallo, Karen Ho** **Mount Royal University** ***Teaching and Learning with Technology*** Instructional videos for chemistry students were introduced as a tool to teach students on how to properly use equipment used in the laboratories, and as a tool to prepare students for their experiments. Therefore, the purpose of this research study is to evaluate if laboratory instructional videos do improve the lab skills and grades of first year undergraduate chemistry students, also to evaluate their Chemistry retention spans. Students were separated into two test groups: one group watched the laboratory videos, and the second received a script version of the same lab videos. A sample of these students were recruited to participate in

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a tasked interview involving a questionnaire and a short experiment. The grades of the students were also collected for the analysis.

Despite the hypothesis that the group that watched the videos would perform significantly better on the experiment, both test groups found difficulty in performing the experiment given at the tasked interview. In the short term analysis, it was discovered that the script test group had better laboratory grades than the video test group. In the long term analysis, it was found that there were no significant differences between the test groups based on their background knowledge, their confidence levels and the grade they received from the researcher.

Therefore, the videos alone are not effective teaching tools for students. However, the researchers found that the students did prefer watching the videos as compared to a script. It was decided that the current videos would have to be improved on so that they would be effective teaching tools for students.

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Using GradeMark to Improve Feedback and Engage Students in the Marking Process

Alison Graham, Sara Marsham
Newcastle University, United Kingdom

Teaching and Learning with Technology

Students frequently express frustration with assessment and feedback: e.g., marking criteria are too generic, feedback does not relate to a specific criterion, feedback is too negative. Students struggle to understand academic standards when they are presented in the form of written marking criteria or rubrics (O'Donovan et al. 2004). While one challenge lies in the wording and structure of the criteria – in that students find it difficult to apply written criteria to their own work without guidance (Orsmond et al. 1996) – a second challenge lies in the students' misconception that criteria outline explicit standards (i.e. directives or instructions). For the staff who develop criteria, the rubrics serve less as explicit guidelines and more as frameworks for the application of implicit evaluative skills, acquired over numerous years of learning within the discipline (Bloxham and Boyd 2012). This divide between student and staff expectations is compounded when the criteria aim to articulate more complex or higher-level tasks, since these are even more often 'tacit' and implicit to the discipline (Nicol and Macfarlane-Dick 2004). Many students would also like feedback to be a dialogue between assessor and student, for markers to pose challenges or praise successes, and allow students to ask questions about their learning. In response to this, our project aimed to improve the clarity of marking criteria, link feedback more explicitly to criteria, and initiate a dialogue that would improve student performance on future assessments. Additionally, we wanted to produce a system that created equity between marks and feedback even if the work was marked by

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Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	different assessors. Our project therefore had two components: a series of tutorials that provided opportunities for the students to practice using criteria to mark exemplars, and a trial of GradeMark® as an electronic platform to provide feedback on coursework. Recent studies have reviewed online tools for assessment and feedback, highlighting how online comment banks and feedback tools can increase the speed and efficiency of marking for staff (e.g. Buckley and Cowap 2013). In particular, several studies have noted how GradeMark® software enables markers to tag specific aspects of students' work with pre-set comments: a function that lessens staff workload while also facilitating lengthier comments that may be perceived by students as a form of dialogue. Online assessment also has a seemingly greater capacity to engage students with feedback, although the electronic format alone is not enough to ensure student engagement. Within GradeMark®, we developed libraries of feedback specific to a particular assessment and its marking criteria. This allowed us to pose questions to students to improve their understanding of content and skills and provide positive feedback. Using a bank of feedback comments improves consistency between markers and allows for a dialogue to take place that follows from the tutorials but is not heavily reliant on staff time. Our presentation will give an overview of our experience in developing and using assessment-specific marking criteria and discuss the impact of using this learning technology within two academic schools, and across the wider University.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**What Do I Know? A Peer Mentoring Exploration for Culturally Dynamic Partnerships** **Catherine Smey Carston, Yasmin Dean, Che Burnett, Tera Graves, Jenna Duszynski, Mount Royal University** **Involving Undergraduate Students in SoTL** This study describes the development of a peer mentoring program that supports Canadian university students to field school partnership with a uniquely managed ashram in India. Preparation for the field school includes working with students on how to effectively engage with children at the ashram. Arts and Studies majors peer mentored peers engaged with disciplines of social work, psychology, business and journalism about how to foster meaningful and culturally dynamic relationships with children. The concept for this study rises out of global education experiences of Canadian university students and a partnership with a uniquely managed ashram in India. The Sri Ram Ashram (SRA) model provides a home for orphaned and abandoned children for their entire childhood and adolescence, with the relationship stretching into their adulthood. Ashram staff strive to create a family atmosphere, while providing for

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| **Friday**
November 11, 2016
10:00 a.m. – 11:25 a.m.
Alpine Meadows and
Castle/Assiniboine | the children's basic needs and education. Visiting Canadian students live with this community during their stay in India providing an international connection to the residents, while learning how this community provides for its children in a safe, loving and respectful manner.

Preparation for the field school included working with students on how to effectively engage with children from the ashram along with discussion about the points of discomfort that typically frames study abroad opportunities where visiting students' experiences are privileged over that of the host community. This approach involved conversations about the attributes and actions of respectful guests, and developing a limited relationship with children who have experienced many life challenges (i.e. poverty, family loss, separation anxiety, anxiety). This mentoring process took place through workshop development and implementation, ~~and~~ ~~actual~~ site ~~modelling,~~ ~~initiating~~ conversations and coaching supports about emerging topics (i.e. how to ~~initiate~~ ~~a culture with children.~~)

~~In~~ ~~this~~ poster presentation, students and faculty will share their learning about the peer mentor experience within the context of an innovative field school model that supported mentoring and learning within the context of cultural relevance and respectful child engagement. Students will share their participant perspective and emerging understanding of mentoring and knowledge translation, through the critical aspects of child and adolescent relationship development within the context of cultural relevance.

The professional knowledge for this poster derives from three bodies of knowledge; international best practice, child and adolescent engagement, and peer mentoring. |
| **Friday**
November 11, 2016
10:00 a.m. – 11:25 a.m.
Alpine Meadows and
Castle/Assiniboine | **A 3D Intervention Addressing Enzyme-Substrate Interactions Misconceptions**

Cassidy Terrell, University of Minnesota Rochester

Research on Teaching and Learning

Many students enter biochemistry courses with enzyme-substrate interaction misconceptions stemming from prior biology and chemistry courses where this core concept is inadequately illustrated, explained, and/or assessed. Moreover, research has shown two-dimensional representations not only fail to effectively convey biochemical concepts, but also propagate misconceptions. Reported enzyme-substrate interaction misconceptions highlight the necessity for better, targeted instructional tools and assessments. We hypothesize that three-dimensional (3D) physical models used in conjunction with targeted active learning assessments will increase student understanding of shape, stereochemistry, and electrostatic interactions involved in |

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Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	enzyme-substrate interactions. We further propose that the use of these physical models will decrease the amount of time needed to complete the active learning assessments while also facilitating a deeper understanding of enzyme-substrate interactions, therefore offering the instructor more time to cover other course topics. This intervention study also addresses several biochemistry threshold concepts, including the physical basis of interactions and free energy; and supports the "Vision and Change in Undergraduate Biology Education: A Call to Action" report by offering concept-oriented active learning opportunities. A series of active learning assessments, with corresponding learning objectives and physical models designed by a team of undergraduate students, were developed to address the identified misconceptions of space, electronic interactions, and stereochemistry in enzyme-substrate interactions. Here we aim to present (1) the design and development of these assessments and corresponding 3D physical models along with (2) the preliminary results of this study. In a control classroom, the active learning assessments were administered and video-recorded in the absence of 3D physical models. After a second control semester, the physical models will be implemented simultaneously with the assessments into the classroom. In addition, the validated Enzyme-Substrate Interaction Concept Inventory (ESICI) survey is administered at the beginning and end of each semester to establish a baseline for each class, measure gains in each of the three misconception areas, and offer a comparison against the published national average. Likert-scale coded scoring of individual questions in the active learning assessments, ESICI results and observational evaluation of the recorded activities will be analyzed for the control and experimental classrooms using a mixed-methods approach that includes quantitative inferential and descriptive statistical analysis. Preliminary data has been collected and analyzed on the first control semester in Spring 2016 and is planned for Fall 2016. Further development and results of this study set the stage for curriculum wide development of enzyme-substrate interaction targeted assessments.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Early Perceptions of Athletic Therapy Students with a Clinical Presentation Curriculum Delivery Method** **M.R. Lafave, M. Yeo, J. Owen, K. Westbrook, D Valdez, B. Eubank, and J. McAllister** **Mount Royal University** ***Research on Teaching and Learning*** **Introduction** The clinical presentation (CP) model of curriculum delivery is driving competency-based education at the Mount Royal University athletic therapy program as has been mandated by the Canadian Athletic

Therapists' Association (Lafave et al, 2016). A CP model of curriculum delivery is similar to problem-based learning methods whereby students are given information about a patient and asked to piece the various clinical or basic scientific aspects of the case together to better understand it (Schmidt et al, 2009).

Purpose
The purpose of the current study was to gather student perceptions on learning athletic therapy competencies through their use of a CP logbook that tracks student progress over time.

Methods
A CP model of curriculum delivery was implemented in the Fall, 2015 year in the Bachelor of Health and Physical Education (BHPE), Athletic Therapy Major (AT herein). The inaugural cohort of the AT students were recruited to participate in the study in three AT courses: Clinical Musculoskeletal Anatomy (HPED 2112), Prevention and Care of Athletic Injuries (HPED 2505) and Professional Practice Practicum (HPED 2050). A mixed methods approach included participation via two mechanisms: 1) use of logbooks that tracks the number of exposures to CPs in theory and practical classes in the AT program. In addition, students self graded their competence on a 21 point scale that measures their progress from novice to competent practitioners; 2) semi-structured interviews were performed at the end of the year to evaluate the impact of using the CP model for AT student learning. Interviews were transcribed and themed to determine trends in students' perceptions of the logbooks as a tool to develop competence in their second year of the BHPE, AT major.

Results
Twenty-two AT students signed the study consent to participate in the study. Five students submitted personal logbooks at the end of the Fall, 2015 semester and one student at the end of the Winter, 2016 semester. Eight students agreed to be interviewed, but only two were actually interviewed. AT students were exposed to a wide range of CPs over the two semesters with ankle and knee CPs dominating the total exposure (n = 201 & 150, respectively). Semi-structured interviews of students revealed that the CP model and logbooks appeared to have limited use in the second year of the program. They suggested that the CP model and logbooks might be more useful in years 3 and 4 of the program, indicating that they saw the potential of the logbooks as a tool for reflection.

Discussion
Exposure to a greater number of CPs is central to student learning. Formal exposure to CPs is in the early stages of the AT program and thus limited. As a result, student participation was expectedly limited as well. Data from the semi-structured interviews confirmed suspicion that a more formal integration of CPs earlier in the curriculum will help deep learning for students in later years.

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Conclusion** More formal linkages will be made in the second year of the program to address gaps in the curricular change. Formal credit for assessment of the logbooks will be instituted. **References** Lafave, M.R., Bergeron, G., Orecchio, E., Peeler, J., Streed, K., Elliot, J., Parr, K., McKenzie, K., Valdez, D., Klassen, C., & DeMont, R. Consensus Statements from the Canadian Athletic Therapists' Association (CATA) Education Task Force. *Athletic Training Education Journal*, 2016; 11 (1): 5-9. Schmidt HG, Van der Molen, Henk T, Te Winkel WW, Wijnen WH. Constructivist, problem-based learning does work: a metaanalysis of curricular comparisons involving a single medical school. *Educ Psychol*. 2009;44(4):227–249.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Reflections on Reflection: Exploring the Course Experiences of Management Education Students Learning Through the Pedagogy of Community Service Learning** **Christian Cook, Mount Royal University** ***Research on Teaching and Learning*** Community service learning (CSL) is a high impact teaching practice. It is also "a potentially transformative pedagogical practice and theoretical orientation…[to] strategy." (Butin, 2005, p. vii). For a discipline specific, capstone course, it was identified as an appropriate teaching approach for students studying strategic human resources in their penultimate year/semester of a Bachelor of Business Administration (BBA) degree program. In 2015/2016, it was introduced as the primary teaching pedagogy to this course. To better understand the experiences that students had with the course and its pedagogy, and to begin to explore whether CSL enabled transformative learning to occur, the instructor implemented a pre-course and post-course survey for anonymous, confidential completion. The surveys were linked to individual (coded for anonymity) students to assess their pre and post-course feelings toward several factors, including their level of engagement with the community partner, their personal assessment of practical and theoretical knowledge of the subject, and their experience and perceived utility of reflective journals/ practice. The survey contained both quantitative and qualitative questions. The quantitative questions employed a Likert scale of 1 – 5, with 1 reflecting "that does not sound like me at all" and 5 being, "that sounds exactly like me". The quantitative questions posed same/ similar questions at each data collection stage such as, "I believe what will learn/what I learned in this course will give me the skills to gain a competitive advantage when seeking employment after graduation" and "I feel professionally confident given my level of knowledge in human

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	resources"). Open ended, qualitative questions were also posed, such as (pre-course), "What do you anticipate to be your greatest challenge in completing the CSL project as it has been described?" and (post-course) "In the completion of this project, I consider one of my greatest achievements to be…". The research poster presentation and summary handouts will focus on an interesting area of the projects, and a requirement of the CSL pedagogy, which is reflection. Most students cited the reflective practice expectations through the maintenance of a reflective journal during the course to be their least valuable work as well as their least preferred assessment. Concurrently, students shared they experienced deep and even transformative learning through their time in the course and completion of the project. The findings contrast with the instructor's assumptions (based in Mezirow, 1990, 1997) of the necessary element of reflection to enable deep learning. As part of assessing this data, the researcher has returned to the literature, and will present possible rationale for this divergence, which may include flaws in the instructional delivery of the course, failures or assumptions around the presentation or understanding of the purpose of the reflective journal, and a deeper analysis of potential errors in the prompts delivered for the intention of reflection. Specific components of the expectations (including the rubric used and the literature researched to create it) of the reflective journal, as well as the prompts delivered for students to direct their weekly contributions will be presented and explored for discussion at the poster session.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Blended Learning Techniques in a Liberal Arts University: Its Application to First-Year University Introduction to Chemistry Course** **Vladimir Pitchko, Concordia University of Alberta** ***Research on Teaching and Learning*** This poster presents an on-going investigation of the effectiveness of blended learning strategies. A number of F2F lectures in an Introduction to University Chemistry course were replaced with students' out-of-class learning activities. A questionnaire was developed to inquire whether and how the students' general perspective of the course changed, how it helped them understand difficult material, and how it changed their strategies to prepare for the midterm and final exams. The answers helped the instructor understand better which material in the lecture part of the course could be more effectively delivered by using "flipping classroom" technique.

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November 11, 2016
10:00 a.m. – 11:25 a.m.
Alpine Meadows and
Castle/Assiniboine

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What do Undergraduate Students Learn During an Immersive Summer Research Experience?

Lynn Taylor, Carol Johnson, University of Calgary

Research on Teaching and Learning

Undergraduate research experiences (UREs) in diverse contexts provide "high impact" learning experiences (Kuh & Associates, 2008). Significant learning outcomes of UREs include: deeper conceptual understanding, learning how to critically assess existing literature, and acquiring research design and data analysis methods. Intellectual skill development outcomes include critical, creative and independent thinking, problem solving, and gains in communication and collaboration skills (Craney, et al., 2011; Holmes, Weiman, & Bonn, 2015; Lopatto, 2006; Lopatto & Tobias, 2010).

To better understand and improve learning experiences in an immersive summer URE program in a large Canadian university, we conducted a study with 2 successive cohorts of participants (2014 and 2015). The study focused on students' perceptions of the impact of this URE on their development of conceptual knowledge, research skills, critical thinking, writing process, problem solving, communication, collaboration, organizational skills, and independent learning.

All URE participants (N = 131) were invited to participate in a series of three surveys that captured snapshots of perceived learning at entry, midpoint (8 weeks) and exit from the URE summer program. Participants created a unique code that protected anonymity while allowing their coded responses to be tracked across the study. A total of 20 students completed both entry and exit surveys; 19 participants completed both entry and mid-point surveys to create anonymous, individual, comparative student records. Respondents were from the sciences, humanities and professional faculties, and in years one through four of their undergraduate programs. Qualitative data were collected during student focus groups held at the end of each URE cycle. Additionally, faculty mentors' perspectives were collected through an online mentors' survey conducted at the end of the URE experience for the 2015 cohort (n = 23).

Research findings demonstrate that this URE had the strongest perceived impact on the development of problem solving, organizational skills, collaboration, research skills, and independent learning. Results also revealed that certain skills develop at variable rates. For example, from entry to midpoint, the greatest perceived gains were in conceptual knowledge, problem solving, organizational skills and independent learning. From midpoint to the completion of the URE, greatest gains were in writing processes and problem solving.

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Alpine Meadows and
Castle/Assiniboine

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Faculty mentors perceived that the URE had the highest level of impact on problem solving and learning independently, followed by conceptual knowledge development, writing, communication, and organizational skills. While faculty mentors perceived the URE as having a higher impact on students' learning than students' survey-based self-assessments, both students and faculty members perceived that the URE had a high impact of the development of specific academic and research skills.

The results also suggest areas for improvement. Generally, student survey results show a flattening of the learning curve from the midpoint to the end of the URE. This was particularly true for research skills, collaboration, organization and critical thinking, suggesting that the level of challenge in the second half of some URE experiences should be examined. More specifically, the development of writing skills takes place later in the URE, and could be intentionally addressed earlier in the experience.

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Friday
November 11, 2016
10:00 a.m. – 11:25 a.m.
Alpine Meadows and
Castle/Assiniboine

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The Testing Effect in a University Classroom

Heather Poole, McMaster University

Research on Teaching and Learning

Background. Being tested on material benefits later retention of that material. This well-established pattern is known as the testing effect. In spite of demonstrations of the testing effect across a variety of materials, findings are limited mainly to laboratory studies using quite simple and artificial learning tasks, such as remembering word lists or basic facts1. The robustness of the testing effect has not been established in the classroom, where it is most relevant. Studies attempting to investigate the effect in a classroom setting have had major methodological weaknesses (e.g., professor was not blind to experimental condition2; participants were a small subset of volunteers from a university course and test performance did not influence grades3). The present study used a more powerful design to investigate the effect of testing in a university statistics course.

Relevance. Students in a classroom are more likely than laboratory learners to vary in terms of interest in and motivation to learn the material, and time spent studying4. Furthermore, students in a classroom must retain knowledge longer than is typically required in a laboratory setting: successful performance on a final exam requires memory of material learned several months ago, while laboratory studies typically test retention at most one week after learning. Considering these differences and the potential benefits to students with access to many testing opportunities, it is crucial to determine whether the testing effect holds in a classroom setting. In addition to evaluating how the testing effect generalizes beyond the laboratory, this study used online testing, thus evaluating learning strategies that are particularly relevant to instructors and students in a modern classroom environment.

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Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	Methods. Throughout the term, students completed 3 weeks of each of the following conditions. Review. Students read a series of statements about material covered in class that week. Traditional quiz. Students completed an online quiz about the material covered in class that week. Mastery quiz. Students completed an online quiz about the material covered in class that week. To obtain course credit for the quiz, they had to repeat the quiz until they obtained a grade of 100%. The design was within-subjects and counterbalanced; all students completed all conditions, but in different orders. All conditions were delivered online through the course LMS. At the end of each 3-week segment, all students completed an in-class test; grades on each test were compared to evaluate the impact of the different conditions. Results. Exam grades indicated no clear testing effect, although performance on some activities was linked to exam grades. In contrast to laboratory studies1, there was no clear benefit of repeating quizzes to mastery. This study indicates that frequent online quizzing does not improve learning in a course setting. However, performance on quizzes may act as an indicator to students regarding their exam performance, and thus may be useful to guide studying and instruction.
	Student Logs, Interviews, and Classroom Observation: How Can Student Engagement in Five-Day Block Week Courses be Accurately Measured to Implement Change? **Cornelia Burian, University of Calgary** ***Research on Teaching and Learning*** My SoTL project, entitled Enhancing Educational Leadership, Student Engagement, and Community Ties: The Untapped Potential of Block Week Courses, for which I have received a three-year (2016-2019), $40,000 grant through the University of Calgary's Taylor Institute for Teaching and Learning, focuses on enhancing student engagement in large classes—or, rather, in a particular type of large class: the five-day block week course. My aim with this project is to inspire, facilitate, and influence change far beyond my own teaching practice. The project, which draws on the findings of Kucsera and Zimmaro, Wlodkowski and Ginsberg, and others who argue that intensive courses can be at least as effective as traditional courses, will involve and benefit instructors from across the faculties while simultaneously allowing me to enhance my educational leadership skills. My initiative is multi-facetted, as it addresses a specific teaching and learning opportunity of interest to all universities, faculties, and programs that already offer block week courses as well as to those that plan on offering them in the future. The initiative will help instructors strengthen their teaching practice while improving student learning through increased engagement in these intense, accelerated classes.

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	My presentation aims to highlight a particularly challenging aspect of this project: the process of accurately assessing student engagement, and of developing practical recommendations and resources for colleagues who are teaching classes in this still rather unusual format. My notion of student engagement is informed by Elizabeth Barkley's definition of the concept as "a process and a product that is experienced on a continuum and results from the synergistic interaction between motivation and active learning" (8). Assessment of student engagement will unfold in several stages: during block week, students will be asked to complete a personal log that tracks their engagement by inviting them to reflect on their level of motivation, the intensity with which they interact with the material, and the ways in which they learn actively and collaboratively. I will further seek student volunteers who have taken block week in the past and conduct interviews to find out more about their motivation to enroll and their learning experiences and outcomes in these courses. I will also start an open classroom block week initiative (inspired by the Taylor Institute's Open Classroom Week) to allow for teaching observation and feedback, and organize lunchtime panels to give instructors the opportunity to engage in open dialogue with each other and with students. Lastly, I will start collaborative writing groups. Colleagues and graduate student assistants will collaboratively put together a handbook for block week instructors with resources and strategies for improving student engagement. I am hoping that my presentation will spark lively debate and feedback to help me improve and refine my approach to assessing engagement. This presentation can thus help all instructors—not just those who are teaching large classes or intensive formats—reflect on their own understanding of student engagement, and help them find reliable ways of measuring, analyzing, and improving the dynamic interplay of motivation and active learning that fosters success.
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Testing Math Skills of First Year Students Across Disciplines and Institutions** **Daria Ahrensmeier, Simon Fraser University** *Calls for Collaboration, Triangulation, and Development* As instructors of first year university courses, particularly in the Sciences or Engineering, we expect our students to have the basic math skills needed to learn the new material in our courses. But for the past decade or so, there have been complaints and concerns about the decline in math skills of first year students in Canada and other countries [1]. Many universities have started to offer self-assessment tests for students, supplementary study materials and remedial math courses. However, discussions about the severity of the problem often reveal differing views between instructors, depending on their disciplinary and/or geographical background [2]. They also reveal that the concerns

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	are mostly based on anecdotes and the general feeling that things are getting worse, but not on actual data. International test instruments like PISA only test very specific problem solving skills, but there are few data about how successful students are solving the specific type of math problems that their instructors expect them to be comfortable with when they arrive at university. To address this lack of meaningful data, I propose to design a self-assessment test, starting from existing materials at various universities, and to administer it at all participating institutions. The purpose of the collaboration is to ensure that the test addresses the math skills required for a variety of disciplines, to make use of local experience with existing tests, and to create buy-in at the local level. The test can then be used to establish a baseline for longitudinal studies at each individual university, and also for cross-country studies by the institutions that are interested in collaborating. Aside from the data collection, the process of developing the test will allow the participating instructors to clarify for their institutions (or even just for themselves) which skills students are expected to have by the time they enter university, and what they are expected to learn during the first year. The benefits of this approach are discussed in [3].
Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	**Decoding the Disciplines Applied to Game-Based Learning** **Victoria Mondelli, Mercy College, New York** ***Calls for Collaboration, Triangulation, and Development*** Increasingly, Game-Based Learning (GBL) is capturing the attention of educators. The learning theory undergirding GBL addresses cognitive and affective domains, and, at this moment, a generation of highly competent gamers are enrolling in all levels of school, including college and graduate school (McGonigal, 2011). Some faculty and faculty developers who are intrigued by this starry alignment await more scholarship about GBL's efficacy in improving student learning. It is this recognition that prompts us to believe that faculty members would benefit from a scholarly model for GBL to ensure teaching and learning effectiveness. Further, this poster session serves as a call for collaboration to co-inquire and study the effects of the new model for learning game design. The presenter will introduce key concepts, and offer an overview of the method for designing and integrating learning games into curricula that is inspired by the Decoding the Disciplines (DtD) seven-step methodology. David Pace and Joan Middendorf introduced DtD in 2004, as a seven-step methodology to discover and unclog bottlenecks in learning, through a collaborative process for faculty to make their disciplinary ways of thinking explicit to novices in the disciplines. By adapting the DtD model, we can encourage faculty members to

Friday **November 11, 2016** **10:00 a.m. – 11:25 a.m.** Alpine Meadows and Castle/Assiniboine	create learning activities for deep learning that require the practice of disciplinary skills as part of the learning process. When learning games are designed in alignment with deep learning, engagement, and assessment principles, GBL alleviates cognitive and emotional bottlenecks in learning. While some faculty at the presenter's institution are experimenting with this approach, the presenter is interested in collaborating with SoTL / DtD practitioners to explore the new methodology across the curricula and in diverse educational contexts. Learning Game planning/implementation begins with the desired student learning outcome(s) with which students commonly struggle (a bottleneck in learning). Faculty members are guided through a series of steps which are akin to the DtD model, and yet, allow the design process to unfold in a supremely creative manner, unhindered by a specific order of operations. In the design process, faculty members are prompted to uncover types of game mechanics that align well to the specific disciplinary or trans-disciplinary skills and habits of mind which students ought to gain in the learning activity or course. The steps, paired with a gamed-up brainstorming session, is facilitated among faculty from diverse disciplines to make the thinking explicitly manifest. The method is fun, collaborative, and provides a "safety" check, so that the instructional planning is sound. Also, the method helps to ensure the optimal placement of a learning game within a module or section of a course. Importantly, too, the method helps the faculty member think about the alignment of all elements, including how students will receive feedback. Planned discussion topics: • Key concepts in GBL • Obstacles to implementing GBL • How DtD offers the beginnings of a scholarly framework for learning game design • Building on DtD methodology for learning game design • The threshold concept as game design tool • Variations for digital and non-digital learning games • Ideas for collaborative research projects
Friday **November 11, 2016** **11:30 a.m. – 12:30 p.m.** Alpine Meadows and Castle/Assiniboine	**Lunch**

Friday **November 11, 2016** **12:30 p.m. – 2:00 p.m.** Castle/Assiniboine	**Plenary** **The Decoding Interview: Live and Unplugged** **Margy MacMillan, Michelle Yeo, and Genevieve Curry** **Mount Royal University** **With commentary and discussion facilitated by David Pace** Scholars of teaching and learning around the world and in many disciplines have been using the Decoding the Disciplines process to make explicit the mental operations that students much master to succeed. Teachers, as experts in their disciplines, often hold this knowledge in tacit and implicit ways that are not easily accessible to novices, resulting in "bottlenecks" to learning. A key stop towards addressing bottlenecks is a Decoding interview in which teachers uncover and unpack crucial thinking with the help of two interviewers outside their field. The interview can yield important insights for teachers, generate data for SoTL work, and also play an important role in developing the community and trust necessary for collaborative teaching and research projects. To illustrate how an interview unfolds, this plenary will feature a live Decoding interview conducted by experienced Decoders from Mount Royal University, with follow-up commentary and discussion facilitated by Dr. David Pace.
Friday **November 11, 2016** **2:00 p.m. – 2:30 p.m.** Alpine Meadows	**Coffee**
Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Birch	**I Deserved a Better Grade:** **Qualitative Analysis of Student Responses to the Question,** **"Did You Earn the Score You Think You Deserve?"** **Kelsey Metzger, University of Minnesota Rochester** **Paula Soneral, Bethel University** **Brittany Smith, Minnesota State University Mankato** **Research on Teaching and Learning** Undergraduate students often express a disconnect between their perceived mastery and their actual performance on assessments (1). Further, students can feel that the grade they earned does not represent their knowledge or the effort put into learning the material on the assessment; that is, students can be left feeling that they did not earn the grade that they deserve. To investigate student attitudes toward earned scores on summative assessments, exam wrapper and reflection assignments were used in an elective upper division genetics course. Immediately after completing an assessment, students were asked to predict their earned grade. When exam scores were returned, students were asked to respond to the statement: "Did you earn the score you

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think you deserve on this assessment?" with a forced yes/no response. Additionally, students were asked to explain their response to the "deserve" question with an open-ended item.

To extract meaning from the open-ended student comments, student responses were first bifurcated based on the "Yes/No" item. Qualitative analysis approaches aligned with grounded theory (2-4) were then utilized to discern themes in the open-ended student responses, resulting in an initial scoring rubric. The framework of the coding rubric consisted of four primary codes: 1) Yes, I earned a good score and I deserved it; 2) Yes, I earned a poor score and I deserved it; 3) No, I earned a good score and I didn't deserve it; 4) No, I earned a poor score and I didn't deserve it. These primary coding categories were several further defined with sub-codes that emerged from initial reading of student responses. Student responses were iteratively re-read and assigned a theoretical category code according to the rubric, which was also refined with respect to sub-codes to differentiate themes in student responses (5). Responses in the primary coding categories "Yes, I earned a good score and I deserved it" and "No, I got a poor score and I didn't deserve it" yielded the most diversity of sub-codes (six each), while responses in the primary coding category "No, I got a good score and I didn't deserve it" yielded only one sub-code category.

The percentage of students who replied that they had earned the score that they deserved fluctuated across assessments from a maximum of 74% of students agreeing on the first assessment to a minimum agreement of 33% on the fourth assessment.

One-way ANOVA revealed significant differences in performance between students who responded that they deserved the score that they earned as compared to peers who responded that they did not deserve the score that they earned for assessment 1 (F ratio = 8.2044, p = 0.0080). Further, there is a statistically significant difference between the mean performance of students in each of the primary coding categories for assessment 1 (F ratio = 12.8674, p=> 0.0001). The most frequently cited rationale, both for deserving a higher assessment score or for having earned the score deserved, involved the time and effort spent preparing for the assessment.
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When Undergraduate Researchers are Necessary to Answer the SoTL Question: An Undergraduate-Led Study on the Use of Study Drugs on Campus

Suzanne Wood, University of Toronto

Involving Undergraduate Students in SoTL

When designing studies, it is imperative to employ techniques that can best answer your research questions. This can pose challenges specific to SoTL research, especially when we are trying to capture data
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Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Cedar	as delicate as our students' perspectives on controversial or personal topics. One way of surmounting this obstacle and best avoiding a range of ethical issues is by partnering with students to design and run your SoTL study. This high level of student involvement is a win, all-around: not only does it provide high-impact learning experiences for your students, but it can also enhance the quality of your data, for certain SoTL questions. This presentation will tell the behind-the-scenes story of an undergraduate-led research project on the use of study drugs at a large university.
	While the use of study drugs (e.g., Ritalin, Adderall) by healthy individuals is discussed primarily as a student health concern, it also critically relates to student learning. For example, students may use study drugs to facilitate pulling all-nighters to cram for exams, a pattern that is well established to lead to poor long-term retention (e.g., Seabrook, Brown & Solity, 2005). Users may thereafter fall into a cycle of use, in which they believe pharmacological aids are necessary to perform academic endeavours they perceive to be difficult (e.g., DeSantis & Hane, 2010), leading to a sense of disempowerment in regards to their own learning capabilities. In addition, students who do not use, but believe that their peers are using, can perceive that users have "an edge" in their learning and course performance. This may lead to pressure to take these drugs to stay competitive in an academic setting (e.g., Greely et al., 2008), and an accompanying feeling of disempowerment in their ability to learn. We are educators seeking to empower students to take learning into their own hands, and to inspire lifelong learning; these objectives can be directly hindered by study drug use.
	Study drug use has been characterized by a number of research studies in the US, but very little is known about use in Canada (Ragan, Bard & Singh, 2013). As a first step in understanding attitudes towards study drugs and outlining patterns of use at a large Canadian university, I partnered with undergraduate researchers to design focus groups for their peers. This presentation will outline our research process, from background literature review and hypothesis generation to focus group guide design and the implementation of the study by undergraduate researchers. I propose that the data gathered by the undergraduates in this study have more validity than if they were gathered by those who more typically generate research data at universities (e.g., graduate students or faculty).
	As is true for many SoTL questions, undergraduates were the experts for several aspects of this study. Instead of being passive recipients of new knowledge, they actively helped generate it.

Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Maple	**Using the CEL-SoTL Data Archive to Reexamine Scholarship of Teaching and Learning Evidence** **Jessie Moore, Elon University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** Lee Shulman has addressed the challenge of balancing large-scale studies and bodies of published research (Evidence 1) with continual data collection and assessment in local contexts (Evidence 2). He argues that education stakeholders need a "systematic set of protocols" for reexamining evidence, for analyzing the categories of evidence in play, and for combining types of evidence to form practical arguments (Evidence 3). Of course, to reexamine evidence, scholars need shared access to that evidence. The Center for Engaged Learning Scholarship of Teaching and Learning Data Archive (CEL-SoTL) is a curated SoTL data archive designed to provide that access. The data archive was created in 2016 to facilitate additional analysis of – and across – existing SoTL data sets. CEL-SoTL accepts both quantitative and qualitative SoTL data. Access to CEL-SoTL is password protected, and some datasets are available only to affiliated research teams until the teams' publications are complete. Using CEL-SoTL data sets, researchers can: conduct content/text/discourse analyses of similar data sets from different institutions or time periods, complete secondary analyses of related data sets from different learning contexts, or pursue meta-analyses, among other possibilities. This presentation introduces the CEL-SoTL data archive and examines how it supports Evidence 3 work in SoTL. The speaker will demonstrate how to submit a data set and how to search the data archive for data sets related to a scholar's inquiry questions. Then the speaker will facilitate a discussion about the inquiry questions SoTL researchers might answer using the CEL-SoTL data archive. If time allows during the discussion, the speaker will share two examples of Evidence 3 inquiries that use data from the CEL-SoTL data archive, but the speaker will prioritize exploration of in-the-room inquiry questions brainstormed by audience members. Evidence 3 scholarship of teaching and learning informs the stories we are able to tell national and international audiences about student learning by allowing scholars to explore themes across data sets, institution types, and geographic locations. Evidence 3 SoTL, as facilitated by the CEL-SoTL data archive, also enables scholars to test learning theories against data sets from varied teaching and learning contexts, exploring the generalizability of theories. As a result, the CEL-SoTL data archive not only supports reexamination of SoTL evidence but also has the potential to inform advocacy and outreach work by increasing access to a broad range of SoTL data sets and fostering the (re)combination of different types of evidence to form practical arguments. The methodologies and innovative approaches to data gathering and analysis track offers a space to introduce this new data archive to a wider audience of SoTL scholars and to examine the ways it can foster Evidence 3 SoTL.

Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Pine	**The World's Greatest Challenges:** **Building Interprofessional Understanding and Collaboration** **Among Business and Social Work Students** **Catherine Pearl, Brent Oliver** **Mount Royal University** ***Collaborating Beyond the Single Classroom*** Socially engaged students face complex and rapidly changing environments that pose new challenges to practitioners, students, and educators engaged in social innovation and community change. This presentation will discuss an innovative use of interprofessional education pedagogy to prepare social work and business students for the challenges of working together to address critical social problems. Recognized as an innovative approach to tackle social challenges, interprofessional education is an important component in the professional disciplines. Many postsecondary institutions are including interprofessional education within teaching and learning strategies and several disciplines encode this approach within existing Canadian accreditation standards. Defined as a critical approach to professional practice, interprofessional education involves students from two or more professions learning together with the object of cultivating collaborative practice. Several core competencies have been identified that can be taught interprofessionally with students; including values and ethics for interprofessional practice, interprofessional communication, roles and responsibilities, and teams and teamwork. However this approach to teaching and learning can be difficult to design and implement and insufficient evidence exists as to the efficacy of interprofessional education and its contribution to effective outcomes in these core competencies. In 2015 Mount Royal University was one of many universities across Canada that participated in an initiative to develop a change maker strategy and create partnerships across institutional and sectoral boundaries to better engage students in social innovation and social justice activities. Within this organizational context two educators from the business and social work departments initiated a collaborative project to break down departmental lines and engage business and social work students in a dialogue about social justice and the world's greatest challenges. In this participatory presentation we will discuss our experiences working with students engaged in social innovation, community development and leadership studies and how we utilized creative strategies and experiential pedagogy to assist students in developing a critical awareness of global issues, social responsibility, and community practice.

Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Pine	An assignment was developed in which students from both disciplines were asked to individually create and prioritize a list of the world's greatest challenges, as well as identify one potential solution to address each challenge. Short video clips and class discussions were held over three classes aimed at exploring the global environment, its challenges, along with possible solutions. The results from this assignment/exercise were striking in that student engagement, discussion and perceptions were centered on viewing these challenges from a 'blended or shared value" perspective and considerable overlap existed between the two disciplines. Collaborative environments are the hallmark of social innovation, social work and the business professions. This exercise points to the importance of millennial engagement in 'real time' and 'collaborative learning' pedagogical approaches.
Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Willow	**Preparing Students to Learn Across the Disciplines: Pedagogical Interventions in Community-Service Learning** **Roberta Lexier, Melanie Rathburn, Andrew Vespa** **Mount Royal University** **Research on Teaching and Learning** Community-service learning (CSL) allows students the opportunity to participate in a service experience that is integrated within the curriculum, meets the actual needs of the community, and incorporates critical reflection to connect their academic learning with their experiences. This project examines how students understand community-service learning. Specifically, we were interested in determining how different pedagogical interventions help students prepare for and understand community-service learning. To answer this question we asked students to reflect on their understanding of CSL at the start of the course, after pedagogical interventions, and following their hands-on experiences. We compared data from two different cohorts, one of which had significantly more pedagogical interventions than the other. We will share our results with the ISSOTL community to create further dialogue on how others have approached this pedagogy and to develop a list of best practices that fully realize the potential of CSL.
Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Black Bear	**From Learning Objectives to Experiences: Community-Engaged Learning Across Disciplines** **Christine D'Onofrio, Kathryn Grafton** **University of British Columbia** ***Collaborating Beyond the Single Classroom*** What is revealed about student learning when conventional teaching boundaries are expanded from within to across disciplines, from theory

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to praxis, and from classroom to community? In this presentation, we share our experience designing a cross-disciplinary, community-based learning unit for 100 students in UBC's Coordinated Arts Program (CAP), a multidisciplinary cohort program for first-year students. We focus on learning objectives: how we developed objectives that met both the program's outcomes and the disciplinary needs of two courses, how we designed activities and assignments to meet these objectives, and how students' experiences aligned with, and departed from, our pedagogical aims.

Our work on community-engaged learning is located in the curricular context of CAP, which brings together courses into broad research streams, such as "Global Citizens" and "Law and Society." CAP is a learning community, a group of students taking connected courses (e.g., Evenbeck and Ross 214). These communities foster integrative learning: multi-modal pedagogy that encourages students to think critically across contextual boundaries through diverse practices (e.g., Huber, Hutchings, and Gale 4), including community-engaged learning. While there is scholarship on community learning in higher education (e.g., Bringle and Hatcher), there is a gap in published research on community-engaged pedagogy for learning communities as well as cross-course, community-learning initiatives.

Our initiative is the first to apply CAP's multidisciplinarity to community learning: we designed the unit for the Media Studies stream, which includes our courses, Academic Writing/English and Visual Arts. With colleagues, we designed the 2015/16 community-learning experience in partnership with the New Media Gallery (New Westminster). Students and faculty visited the exhibition, 5600K: Temperature of White, featuring contemporary artworks on the physiology of light, accompanied by a curatorial lecture. Students then examined this experience through two disciplinary lenses. For Academic Writing, students summarized a scholarly article, using the exhibit to illustrate and complicate how the theory works in practice. This summary addressed a learning objective to synthesize and take a persuasive position in a scholarly argument. For Visual Arts, students executed two appropriated artworks, visually responding to their experience with the exhibit. This assignment addressed the objective of poiesis, the transfer of intuition to intellect. Students also responded to critical reflection questions before and after the unit. These reflections helped students to "make meaning of experience" (Bringle & Hatcher), self-assess their engagement with praxis—unifying theory and action—, and identify how the two disciplines informed their research projects.

We present how our program and course objectives overlap and diverge, the challenges we faced with our initial pilot and how we revised the curriculum accordingly. We then engage the audience in questions of

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Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Black Bear	cross-disciplinarity by asking them respond to an interactive experience from their own disciplinary positions and compare responses. We show works from the exhibition, our assignments, and a summary of student reflections. We highlight patterns of student experiences in relation to our learning objectives, particularly the notable influence of a learning community on community-engaged learning. More broadly, we reflect on the ways that community learning across disciplines contributes to Booth's vision of "a re-imagined higher education that is multi-dimensional, outward facing and grounded in the complexity and plurality of meanings that characterize contemporary life" (53).
Friday **November 11, 2016** **2:35 p.m. – 3:15 p.m.** Lynx	**Design Thinking for Layers of Collaboration** **Kimberley Grant, Jodi Latremouille** **University of Calgary** ***Collaborating Beyond the Single Classroom*** Design thinking is a generative, human-centered approach to addressing challenges through phases of empathy-building, problem-defining, ideating, prototyping, and testing. This approach to design, gleaned from and widely applied in the fields of technology and business, is now garnering increased attention in its application to teaching and learning (Diefenthaler, 2013; Razzouk & Shute, 2012). Design thinking is "an iterative and interactive process" (Razzook & Shute, 2012, p. 334) which can be utilized by educators as they plan student learning experiences as well as by students who are provided opportunities to design creative responses to authentic disciplinary and interdisciplinary challenges. The co-presenters have begun to explore, both independently and collaboratively, the potential of design thinking strategies as a means to engage in deep learning with other educators, with our students, and with the community. Building on the insight that all individual innovation flows from creative collaboration (Sawyer, 2008), we have found that design thinking provides opportunities for rich, engaged learning in and across the disciplines. One presenter will share how she and a colleague from a different disciplinary background used design thinking to coordinate, implement, and assess two separate courses with the same cohort of students. The other presenter will provide exemplars of work produced by students who used design thinking practices to make meaningful connections with the wider community in order to begin to address some important societal challenges such as homelessness, decolonizing education and sustainable food choices.

Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Aspen	**Comparative Analysis of Three Blended Courses:** **Learner Variables as Determining Factors in Engaging Students** **in Meaningful Learning and Attaining Learning Outcomes** **Shani Beth-Halachmy, Diane Salmon** **National Louis University** ***Research on Teaching and Learning*** This presentation focuses on a comparative analysis of three blended classes, with a specific focus on learner variables as determining factors in engaging students in meaningful learning and meeting learning outcomes. The three courses, taught by the same instructor, were part of a pilot program studying pedagogical, curricular, and design aspects of blended learning. A group of faculty met regularly with university instructional designers and the Director of Teaching and Learning, completed an initial course map, read and discussed variety of resources (Bergmann & Sams, 2014, Bonk & Graham, 2006, Garrison & Vaughan, 2008, Vaughan & Garrison, 2006), attended a three-week webinar, and shared and discussed their course plan and the online and in-class components of the course during the planning phase of the course and throughout the quarter. All the blended courses were designed to alternate between in-class and online learning, meeting in-class once every two weeks. This research was done in the e spring 2016, at a Midwestern US private college of education. Whereas the basic design was the same across the three courses, students' characteristics, goals, and prior knowledge were significantly different. Ten students who took an undergraduate course in Educational Psychology had wide range in prior content knowledge, significant differences in self-regulatory skills required for online learning, and varying degrees of writing abilities. There were also wide range of ages and life experiences, and few of the students knew one another or had prior courses together. The second class consisted of fourteen graduate students who were in the final quarter of coursework before beginning an internship in school psychology. The course focused on deepening cultural awareness and cultural competence required for providing prevention and intervention school psychology services in culturally diverse learning environments. The third class consisted of twenty doctoral students, mostly in their first year of doctoral studies. They were in a Doctor of Education program (Ed.D.), designed to prepare doctoral level school practitioners or college/university faculty as scholars or scholar practitioners. Analysis of the three courses revealed significant differences between the undergraduate and graduate courses in learning engagement and in quantity and quality of task completion during the online periods. The results highlighted the importance of considering students' prior

Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Aspen	technology and content knowledge as well as self-regulations skills required for successful attainment of learning goals during online periods. Blended instructional design must therefore include planning for additional support for students beginning their academic learning and/or new to online courses.
Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Birch	**Concepts Over Computations:** **How Innovative Assessment Practices Highlight Student Misconceptions of Statistical Concepts** **Brad Quiring, Collette Lemieux** **Mount Royal University** ***Research on Teaching and Learning*** In an effort to reinforce students' conceptual understanding in an introductory business statistics course, the authors designed an intervention that transformed how the course was delivered and assessed. The intervention used stories, coupled primarily with Excel generated computations, to illustrate and explore statistical concepts. The stories typically centered around two characters involved in an emotionally engaging dispute, were structured around a simple plot inviting some statistical analysis, and required a student response for their final resolution. The aims of the intervention included the following: • Shifting the focus of the class from formulae and computations (which can be readily generated by computers) to a broader focus on statistical reasoning and thinking. • Incorporating more real-world data. • Focusing more on active learning and discovery using stories. • Moving away from a heavily exam-based approach of assessment towards alternative forms of assessment, such as written analyses of stories and group activities in response to stories. How students were required to respond to these stories varied: some of the assessments required students to take the position of one of the characters and respond with a written argument; others required students to complete parts of the story by writing actual dialogue between the two characters; and others required students to engage in small or large group discussions about a story they had read prior to class. Through these alternative forms of assessment, students were expected not only to generate relevant statistics and visual representations but also to explain the concepts they were learning about. What quickly became apparent was that, while most students were able to generate relevant statistics and visual representations (i.e. demonstrate

Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Birch	procedural understanding), many revealed either a superficial conceptual understanding or outright misconceptions about core concepts. This paper argues that assessing student responses to stories can offer insights into student misconceptions that may otherwise be missed under more traditional assessment methods. Firstly, this paper analyzes how this type of assessment allows for misconceptions to be revealed. We will illustrate the process using several examples of students' misconceptions about the characteristics of sampling distributions. Finally, this paper provides suggestions for how these misconceptions, once revealed, can be addressed. The data collected for this study includes student work and interviews. The data will be analyzed using a grounded theory approach which will allow the themes to emerge from the data. The authors have completed the data collection for the study and are at the data analysis stage of the research.
Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Cedar	**CLIPS (Communication Learning in Practice for Scientists) as a Vehicle for Student Partnership and Student Scholarship of Teaching and Learning** **Susan Rowland, University of Queensland, Australia** ***Involving Undergraduate Students in SoTL*** Communication has been defined as a Threshold Learning Outcome for Science graduates in Australia (Jones, Yates, and Kelder, 2011) and a Core Competency for biology graduates in the USA (AAAS, 2011). In a content-heavy curriculum, or in large-class teaching, it can be difficult to find time and space to specifically and comprehensively address the multiple areas in which students struggle with communication. Science program designers have dealt with this challenge in multiple ways – these mechanisms include specific communication courses for undergraduate students, stand-alone postgraduate Science Communication programs, and remedial co-curricular communication and writing modules for students at all levels. These programs support a diverse array of learnings, the scope of which is complicated by the distinction between a scientist who communicates about their work, and a professional Science Communicator. In order to help undergraduate students communicate science, The University of Queensland has developed an online resource called CLIPS (Communication Learning in Practice for Scientists). CLIPS does not aim to develop professional Science Communicators. Instead, the goal is to help students master the basics of genre-specific communication of science. Large class sizes, mixed student abilities, and student demand

Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Cedar	for online (rather than in-person) learning all provide the imperative for the development of CLIPS. We envisage that these are familiar challenges for educators at other institutions as well. The CLIPS team is comprised of academics, a science communicator, a recent science graduate, undergraduate students, and a fourth-year Honours student. Together the team members are workshopping, designing, creating, and evaluating the effectiveness of teaching resources in collaboration with the wider academic community and students from the potential user groups. CLIPS is modular – so far we have addressed (i) answering short answer questions; (ii) graphical representation of data; (iii) poster production and presentation; (iv) public speaking; (v) slide preparation; and (vi) presenting calculations. Undergraduate students are contributing to CLIPS in a number of ways. They generate resources for CLIPS, taking inspiration for topics from their own experiences. Some of our student contributors are peer mentors – they are able to draw on the struggles of their mentees as they design materials. In both cases they produce resources on topics (and use technology platforms) that they know other students will find accessible and interesting. They appear in some of the CLIPS videos and act as accessible peer mentors. The student participants also evaluate the effectiveness of CLIPS resources; they work with more junior first-year students to conduct controlled testing of their abilities pre- and post-exposure to the resources. Once the resources are complete we plan to draw on the abilities of English as a Second Language students to produce voiceovers and transcripts in languages other than English. In this talk I will introduce CLIPS, show some of the resources the students have produced, and present the results of their evaluation work.
Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Maple	**The Stories of Technology, Tables, and Chairs:** **Using Ethnography to Understand Learning Spaces and the** **People That Use Them** **Chris Ostrowski, Nancy Chick** **University of Calgary** ***Methodologies and Innovative Approaches to Data Gathering*** ***and Analysis*** Learning spaces facilitate the physical experiences of learning in and across disciplines. Institutions have realized the effect of learning spaces on teaching and learning (Boddington & Boys, 2011) and are creating customizable, technology-rich environments for use by

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instructors and students from a range of disciplines. With these new or revitalized spaces comes the challenge of identifying methodologies that meaningfully and comprehensively assess the impact of learning spaces on teaching and learning. Boys, Melhuish, and Wilson (2014) argue behaviourist and quantitative approaches alone fail to capture the "inseparable entanglements among people, physical environments, technologies, and educational practices" (p. 4). We will present the limitations of these methods to preface our lines of inquiry and how we are assessing them in more meaningful ways.

We seek to understand (1) how students and instructors experience the learning spaces as learners and teachers, (2) the ways in which they use the furniture, technology, and overall space to facilitate teaching and learning, and (3) the actions and practices they use to negotiate teaching and learning in these spaces. To answer our lines of inquiry, we are using an ethnographic approach. Students' and instructors' experiences of learning spaces result from social, pedagogical, and spatial practices—all informed by what students and instructors bring to the space and by its situated context (Boys et al., 2014). This complexity warrants a deeper exploration of users' experiences to better understand their relationships with spaces and learning.

To tackle the research questions and respond to Chick's (2014) call for more qualitative SoTL research and multiplicity in gathering meaningful evidence, we are collecting data from focus groups, interviews, observations, photographs, videos, patterns of space and technology usage, and artifacts of learning experiences (e.g., Tweets, Padlet notes). We will analyze the data by exploring emergent themes, and how the data intersects and interplays in response to the three lines of inquiry.

This data can offer rich and layered accounts of how material spaces can affect students' and instructors' experiences of learning, as well as how they co-construct these learning experiences. Moreover, the findings can describe the ways different individuals from different disciplines experience the same spaces. Using ethnographic thick descriptions, SoTL researchers can explore ways of understanding the role of learning spaces as part of a holistic effort to improve teaching and learning. Broadly, we aim to share assessment approaches and their findings to inform infrastructure planning, educational development strategies, and future SoTL projects involving learning spaces.

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Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Pine	**The Effect of Prior Knowledge on Student Performance in Upper-Level Undergraduate Courses** **Johnathan Mee, Mount Royal University** ***Research on Teaching and Learning*** Learning involves connecting new information to prior knowledge (Vygotsky,1978; Ambrose, 2010). To successfully acquire and assimilate advanced knowledge, students must already possess basic foundational knowledge (Bransford et al., 1999; Shulman, 1999). Hence, students are required to successfully complete prerequisite foundational courses prior to enrolling in upper-level courses. But, the transfer distance between a current upper-level course and the contexts within which basic foundational concepts were learned can vary greatly among students; one student may have taken a prerequisite course last term, whereas another might have taken the prerequisite two years ago (Barnett and Ceci, 2002). Through small and large group discussion, we will explore creative practical strategies to assess students' prior knowledge at the beginning of upper-level undergraduate courses, and we will discuss the sources and implications of variation in students' prior knowledge and student performance. We will analyze empirical data from an assessment of prior knowledge using a concept inventory in an upper-level ecology class. By the end of this session, participants will be able to: • critique the effect of prior knowledge on student performance; • create their own concept inventory to assess prior knowledge. A central goal of this session is to come up with creative solutions for accurate and relevant assessment of prior knowledge, and create methodologies to assess the linkages between prior knowledge to student performance. I will be drawing on the input of session participants to interpret empirical quantitative data and decipher the story that emerges.
Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Willow	**Reflections on Residential Field Courses:** **Overcoming Barriers to Participation and Engagement** **Graham Scott, University of Hull, United Kingdom** ***Research on Teaching and Learning*** Residential field courses are a signature pedagogy of programs in the biological and environmental sciences. They are assumed to break down traditional barriers between students and faculty; to offer opportunities for learning beyond disciplinary skills/knowledge; and to facilitate deeper learning through the interaction of the cognitive, psychomotor and affective domains. However, they are costly (in time, in human resources and financially) and often perceived by faculty involved as

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under pressure in a crowded timetable and in the face of increasing austerity. In spite of all of this they remain relatively under-researched. Here I discuss results of an ongoing project the broader aim of which is to enable an understanding of the wider value of the residential field course and the ways field course design might be developed to meet the needs of a diverse student body. Whilst grounded in environmental field-based learning my work may be transferable to other disciplines for which learning outside of the classroom important, an area I will explore through a dialogue with meeting participants.

Traditionally student perceptions of field courses are collected through a synthesis of interview data and data from survey tools such as the ifield index of Goulder et al (2013) collected before, during and after field courses. Here I present such data but alongside it I consider data derived from a novel application of the balanced reflective practice advocated by Blair and Deacon (2015) (the first application of the method to undergraduate field courses to my knowledge). The evaluation of the utility of balanced reflective practice in this context is a primary aim of this paper.

Specifically I address the following questions and the implications for course design that they present:

What determines student choice of field course and engagement with field based learning how are learning and the student experience affected by this choice?

Can student participation in balanced reflective practice inform students and faculty about positive/negative engagement with field-based learning and improve student experiences?

My students have had varied experiences of field work and the outdoors prior to their enrollment on one of 3 very different field courses; one based locally in the UK; one on the island of Mallorca (typical of the European vacation destinations familiar to many of the students); and, one based in the tropical forests of Brazil (for the majority of students a wholly novel experience). The courses bring together students and staff (often strangers to one another) from a wide range of programs at my home institution and/or from my own institution and another university. From a faculty perspective this diversity presents students with a wealth of opportunities but my research reveals that from a student perspective a range of barriers to participation limit choice. Furthermore the potentially bewildering array of novel experiences involved can overwhelm students and inhibit their engagement with in-situ learning. Understanding (and developing responses to) these barriers to learning in the context of field courses is key to improving engagement and student outcomes, and enhancing the fieldwork experience.

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Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Black Bear	**What Debriefing Uncovers:** **Student Success and International Field Schools** **Joe Pavelka, Mount Royal University** ***Research on Teaching and Learning*** Canadian universities are faced with increasing student demand for educationally enriching international experiences. The demand for internationalization from students is underscored by societal demand to produce good global citizens. Globalization has created a need for culturally-aware and globally-minded students across North America and around the world (Wood & St. Peters, 2014). The field school model is a short-term international experience, usually 2-4 weeks in duration, though it may be as long as 8 weeks (Brooking, 2010; Engle & Engle, 2003). Field school programs are often interdisciplinary in nature, composed of small student groups, and led by a member of faculty from the student's home institution. The field school model is a synthesis of four dominant structures and pedagogies: 1) short-term study abroad, 2) experiential education, 3) transformative learning, and 4) international service learning. The literature on study abroad suggests a number of important benefits relating to intercultural competency and awareness, increased civic engagement locally, increased cross-cultural adaptability, and increased global-mindedness. However, benefits of study abroad are "typically more assumed than studied" (Tiessen and Epprecht, 2013). The existing literature is limited to mostly case studies with small sample sizes. There are a few exceptions to the case study standard, most notably the Study Abroad for Global Engagement project (Paige, Fry, Stallman, Josi , & Jon, 2009) which examines the long‐term impact of study abroad on various forms of global engagement. The study employs a retrospective tracer study and mixed methods research design. Survey results from 6391 study‐abroad participants reveal that study abroad has had an impact on five dimensions of global engagement (civic engagement, knowledge production, philanthropy, social entrepreneurship and voluntary simplicity, which matched 30,000 study abroad trips with 20,000 academic records in Georgia in order to assess the long-term and large-scale effects of study abroad. This study represents an exploratory study with the aim of replicating the work with a large sample of field schools from Canada and the United States. The purpose of this paper is to present the results of a pedagogically driven debriefing exercise carried out with a group 19 students from a variety of disciplines engaged in a 33-day international field school to Peru. The focus of the field school is community development and sustainable tourism and involves student primary research, reflection observation and student outdoor leadership opportunities in the Andes

Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Black Bear	and Amazon. The debriefing exercise includes four similarly worded questions pertaining to one's view of self, global issues and fears and aspirations related to the field school experience itself. Data was collected in a pre and post trip format and brought together on the final day of the experience for a comprehensive debriefing exercise. Pre and post questioning occurred because as a debriefing exercise students were able to review their pre-trip response as part of post trip reflection. Results suggest that students' view of self undergoes considerable change as does their view of global issues. Both student fears and aspirations related to the field school underscore the importance of social factors, especially acceptance and offer important pedagogical insights for planning and execution of field schools. The research presents value as a pedagogical tool for reflection as a well as way to empirically assess student success in the international field school context.
Friday **November 11, 2016** **3:20 p.m. – 4:00 p.m.** Lynx	**Conscious Connections:** **Phenomenology and Decoding the Disciplines** **Genevieve Currie, Mount Royal University** ***Collaborating Beyond the Single Classroom*** Decoding the Disciplines is a model which can assist faculty to unpack disciplinary concepts that students are having difficulty learning and understanding (Pace & Middendorf, 2004). As a member of a faculty learning community using the decoding the disciplines process as a teaching and learning strategy, I was involved in interviewing seven faculty members from four diverse disciplines within a research project about the bottlenecks that they were experiencing while working with students. During analysis of the transcripts I began using phenomenology as a starting point for interpretation of the faculty descriptions of their disciplinary bottlenecks during the Decoding process (Laverty, 2003; Merleau-Ponty, 1945;Van Manen, 2014). Using phenomenology as a method of inquiry helped me to better understand faculty's lived experience of acquiring disciplinary knowledge which was revealed during the Decoding interviews. In addition the Decoding interview process unpacked the bottlenecks faculty had learned while being immersed in their disciplinary practice and made this process conscious. These perspectives were captured within rich descriptions from faculty members. Several themes emerged from the Decoding interviews using phenomenological inquiry. These themes can be useful within teaching and learning to better understand how bottlenecks are manifested, ways to understand them, and eventually unpack bottlenecks for student learning. These themes included ways of practicing, prereflective practice, and embodiment of disciplinary knowledge. These three themes will be described in the presentation as well as implications for educators Suggestions for educators using the Decoding the Discipline process will also be explored within the presentation.

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Aspen	**Using a Flipped Design for Learning in a Large-Enrollment Biochemistry Course to Help Students Appreciate the Role of Creativity in Scientific Inquiry** **Isabelle Barrette-Ng, Carol Bereson, Miranda MacCallum** **University of Calgary** ***Research on Teaching and Learning*** Formulating research questions and proposing hypotheses are highly creative skills that few students learn through lecture-based high-enrollment courses. This is a serious problem, because a lack of understanding of the critical importance of creativity in scientific inquiry leads many students to undervalue the role of creativity in scientific discovery. As a result, there is a clear need to develop new strategies to help students grasp the critical importance of creativity and other higher level cognitive skills like problem solving and critical thinking to scientific inquiry. To meet this challenge, we hypothesized that flipped learning approaches could provide rich, new opportunities for students to develop a greater appreciation of the role of creative skills in scientific inquiry (Bergmann and Sams, 2014). A few previous studies suggest that a more highly structured learning environment can promote the development of higher cognitive skills such as creative problem solving (DeHaan, 2011). Active learning, particularly involving discussion and associative thinking among peers, appears to foster the development of skills like creativity, but the relative value of specific techniques and approaches for promoting the development of creativity and problem solving remains poorly understood (Hadzigeorgiou et al., 2012). To assess the effectiveness of our flipped design strategy on the development of a greater appreciation of the role of creativity in scientific inquiry, we are conducting a research study that compares cohorts of students who have been exposed either to a flipped design or a lecture-based approach. Using previously validated surveys, we assessed understanding of scientific inquiry (Lederman et al., 2014) and basic content acquisition (Villafane et al., 2011); in addition, we conducted end of term focus groups. Some of our key, initial findings include improvements in both content acquisition and a greater understanding and appreciation of the importance of creativity in the process of scientific inquiry. We report on our preliminary results from this ongoing study and discuss ways in which other high-enrollment courses in biology may be able to foster the development of creative problem solving. By the end of this interactive session, participants will be able to: • explore how flipped-learning approaches can help develop higher level cognitive skills such as creative problem solving and critical thinking; and • design structured learning environments that remain learner centered but allow for creativity.

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Birch	**Assessing Interdisciplinary Thinking Using a Card Sort Activity** **Chris Addison, James Charbonneau** **University of British Columbia** ***Research on Teaching and Learning*** The Science One Program is an interdisciplinary first year science program offered to 75 students each year at the University of British Columbia. Encompassing first year physics, mathematics, biology and chemistry, this team-taught program aims to provide a unique educational experience that presents important scientific topics in an integrated and unified format. Our program is motivated by the increasing interest in teaching students in such a manner due to the fact that (1) it helps students break down the barriers in thinking that prevent them from taking knowledge in one subject and transferring it to another and 2) it potentially makes a student's knowledge more robust. On the other hand, a common observation in "traditional" (disciplinary-based) science courses is that students exhibit a "silo" mentality: They have difficulty drawing upon material and concepts learned in one discipline in order to solve problems in another. While one of the goals of an interdisciplinary program like Science One is to break down these silos, few tools exist to assess development of such interdisciplinary thinking. We are currently developing a card sorting tool to measure student abilities to identify major concepts that span disciplinary boundaries. Card sorting, in which participants sort cards into groups based on their identified characteristics, has previously been used to distinguish expert-like versus novice-like thinking within disciplines, including physics, biology and chemistry. In our card sort instrument, students are provided with a nine "cards", representing three questions each from biology, chemistry and physics. Students are asked to sort these cards into groups using whatever categorization method they think is appropriate. In the context of our study, we hypothesized that students displaying novice-like thinking would sort these cards into their disciplinary categories, while those displaying expert-like thinking would instead sort the cards into groups corresponding to major interdisciplinary concepts. In our presentation, we will discuss the theoretical basis for our work, outline major steps in the development process, and discuss results from initial offerings of the instrument to students in traditional and interdisciplinary science courses.

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Cedar	**A Cross-Disciplinary Study of Undergraduate Students' Perception of Research** **Nirma Samarawickrema, Robyn Benson, Basia Diug, Janet Macaulay, Monash University, Australia** ***Research on Teaching and Learning*** This study explores the inter-relationship between teaching and research and its impact on student learning within the Bachelor of Medicine Bachelor of Surgery (MBBS), Bachelor of Biomedical Sciences (BBiomedSc), Bachelor of Science (BSc) and the Bachelor of Health Sciences (BHSc) degrees at a research intensive university in Australia. A better understanding of this complex inter-relationship is particularly important in preparing undergraduate students to be effective professionals who critically evaluate evidence, interpret and apply contemporary research findings in all aspects of their professional lives1. Strengthening these connections between learning, teaching and research is fundamental to developing these attributes in students2. In order to explore this inter-relationship between learning, teaching and research, we adopted a discipline-based approach because mechanisms of knowledge construction and research methods differ between disciplines3. The current study focused on second year undergraduate students enrolled in the above health, allied health or related professional courses and sought information on their understanding and experiences of research, perception of research, their attitudes towards research and their perceived impact of research exposure on their learning. Students were invited to complete a survey questionnaire consisted of Likert scale and ranking style questions. It also included an open-ended question for qualitative feedback. Data of the four student cohorts totaled to approximately 600 respondents. This survey data were analysed using SPSS and the responses to the open-ended questions were analysed according to themes. The emerging findings indicate that across all cohorts, a majority of students understood what research was and revealed diverse exposure to different aspects of research. Their engagement with research varied with the course they were enrolled in, confirming disciplinary variances despite the common health-science related professional background and the disciplinary influence on the teaching and research nexus. The findings of this study so far have already influenced our practice as educators of future health professionals, and continue to do so as we incorporate contemporary research experiences and opportunities in our teaching. The findings also serve as a valuable evidence base as we develop an academic development program to support fellow educators. This includes developing learning designs and curricula that are more explicitly aligned with research and a research culture with clear and unambiguous initiatives that prepare students to be effective health professionals. The next stage of this study will investigate the diverse ways teachers will implement research based activities into their teaching.

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Maple	**Using the Echo Technique and Interpretive Phenomenological Analysis to Understand the Student Experience of Blended Learning** **Karl Mueller, Jason Openo** **Medicine Hat College** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** Nursing instructors at a comprehensive community institution chose to blend two courses in a Nursing baccalaureate program because blended learning boasts stronger outcomes, reduced dropouts, increased exam rates, and flexible learning methods (Freeman, et al., 2014; UBC Office of the Provost, 2014). Students strongly favour recordings in order to re-watch content they do not understand, prepare for exams, and they value the ability to watch them anywhere, anytime (Pale, et al., 2014; Bacro, et al., 2011; Soong, et al., 2006). Online discussions help students prepare for class, learn discussion skills, practice writing skills, and learn from each other (Centre for Teaching Excellence, University of Waterloo, 2016). Blended learning has become the new normal in education, but would these alleged benefits be perceived by undergraduate nursing students? How did those students experience blended learning? What did they value, and why? What did they struggle with? How did blended learning affect their lived sense of time and their human relationships? In order to come to a deeper understanding of how undergraduate nursing students experienced their first blended learning experience, a mixed methods approach was selected. Mixed methods integrates quantitative and qualitative approaches to gain a thorough understanding of the research problem. Mixed methods acquires individual perspectives to highlight statistical trends for the purposes of discovering practical solutions and outcomes. This presentation focuses specifically on two of the qualitative data gathering and analysis techniques employed by a statistics instructor and the manager of teaching and learning, who were not affiliated with the Nursing program or the process of instruction. The approaches include the utilization of the Echo technique to validate the Blended Learning Satisfaction Survey findings, and an interpretive phenomenological analysis of focus groups with students who experienced the blended courses. Phenomenology was selected as a research methodology for this project because of its ability to highlight the student experience and its popularity as a research methodology within the Nursing discipline. Focus groups were organized because phenomenology can easily overwhelm the researcher with data, and focus groups offer an economical method to produce a high volume of data in a short amount of time. Van Manen suggests phenomenology is a "carefully cultivated

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Maple	thoughtfulness" rather than a technique, and that phenomenology is a "method without techniques." Even so, this session explores the methodological technique of phenomenology where research participants are "experts in their own experience." Interpretive phenomenological analysis uses small, purposive, homogenous samples where meaning is co-constructed by the participants and the researcher, and van Manen's highlighting and line-by-line approaches will be discussed. The presenters will conclude with some reflections on how they plan to integrate qualitative with the quantitative data gathered in the study, and how this informs their understanding of designing blended learning environments.
Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Pine	**The History Essay and Its Alternatives** **Mills Kelly, George Mason University** **Adrian Jones, LaTrobe University, Australia** ***Research on Teaching and Learning*** Two historians, one based in Australia, the other in the United States, both of them Slavic historians, will lead the audience in a discussion of the history essay and its alternatives in the rapidly changing environment for "writing" in today's university classroom. Both presenters are professional trouble-makers in their teaching, each in his own way stretching the boundaries of the possible, and encouraging their students to challenge conventional and customary approaches to writing about the past. Both presenters believe that their colleagues are guilty of over-reliance on continuous assessment by conventional essays and that this over-reliance on a traditional form creates an environment where students must sink or swim based on their ability to master a type of writing most will never use again once they leave the university. The panelists will discuss (1) alternatives to the conventional history essay, and (2) ways of better mentoring student writing. Various forms of writing will be discussed, with an emphasis on how to help students master these forms, and how faculty can assess student learning through these forms. Audience members will be encouraged to take part in this conversation by offering examples from their own teaching practice. Both presenters have written extensively recently on the heritage and futures of history teaching in universities and colleges. Their writing on writing about the past has appeared in monograph length studies, as well as in recent articles in international journals focused on the scholarship of teaching and learning in the humanities.

Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Willow	**Getting Into the Canoe** **Marya Helena Myllykoski, Mount Royal University** ***Research on Teaching and Learning*** Getting into the Canoe: Testing the Contact Hypothesis in the Context of Canadian Aboriginal Communities This intention of this presentation is to provide opportunity to discuss the impact of directed, workshop experiences that students participate in, with Canadian Aboriginal community members, upon student nurse professional role development. The content is founded research conducted in spring 2016 with student nurses attending the MRU BN nursing program. Borrowing from social-psychology theory in the form of contact hypothesis testing, the researcher is seeking to uncover whether student nurse attitudes, biases or the professional role of advocacy are affected following an experiential workshop focused upon Aboriginal awareness and community experiences resulting from historical policy. Contact hypothesis considers that prejudices and interracial hostilities are reduced and mutually beneficial goals may be realized through increased contact between majority and minority groups. The phrase "getting into the canoe" was adapted from an experience the researcher had at a similar Aboriginal workshop whereby an elder described a story told by Chief Dan George, of the Tsleil-Waututh Nation of the west coast of British Columbia. As is often heard, 'we are all treaty people' and the impact of residential schools and other historical policies that have and continue to impact aboriginal community and population health calls us to come together and work toward healing, empowerment, change and positive outcomes for all involved. In terms of nursing education, opportunities to begin to build relationships and foster mutuality in understanding to positively impact health status.
Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Black Bear	**Making Personal Connections with Global Issues?** **Lessons from a Global Citizenship Class** **Priscilla Wamucii, Mount Royal University** ***Research on Teaching and Learning*** Global citizenship courses are uniquely positioned to address various complexities in the global arena. Economic inequality, human rights, environment, culture, security and global health are at the heart of teaching and learning about global citizenship. This study defines global citizenship as a moral and ethical disposition that guides individuals or groups' understanding of local and global contexts and their responsibilities within different communities. The study's objective was to examine the ability of students enrolled at a Canadian university in making personal connections with concepts and issues related to global citizenship. Specifically, the study assessed

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students' knowledge, perceptions and sense of agency based on course content. In evaluating knowledge, the study attempted to determine the degree to which students were able to apply concepts associated with global citizenship to local experiences and global issues. At the practical levels, the study examined the students' sense of agency or the extent to which they feel motivated or equipped to engage in global activities. The study utilized the constant comparative method of data analysis.

Theoretically, the study used a narrative approach that seeks situate individuals as global actors in the global story. This approach is derived from Molly Andrews' (2010) work on the use of stories for teaching and learning. Andrews emphasizes the importance of bringing lived experience into the classroom and combining personal story telling and global ideas.

The study's findings reveal the benefits of using the narrative model to increase student engagement and critical thinking. The use of narratives empowered students with freedom to determine areas of interest, identify gaps in how global stories are written, explore key actors, and retell the stories in ways that allowed them to reimagine the world. The students' reflections highlighted how they understand their relationships with others at the local levels and international levels. The reflections also revealed contradictions that can emerge through the process of critiquing dominant stories and retelling the stories in alternative ways. In many ways the students reflections demonstrated both uniqueness and universality. Moreover, students' analysis illuminated tensions generated by their privileged social and geographic positioning.

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Partnering for Late Night Engagement:
Are Students Learning at 2 a.m.?

Elizabeth Rennie, Kathy Gaynor, Sara Wolfe, Charles Harris
Thompson Rivers University

Collaborating Beyond the Single Classroom

In organizing a campus Long Night against Procrastination, the Library and Student Services were attempting to hold an unorthodox event that both created a sense of campus community and supported students' academic success. While the Library literature has addressed the student need for late-night spaces (Sewell, 2013), there is little research on these exact types of overnight events that provide both late-night space and intentional temporary learning communities; the first cross-Canada Long Night occurred in 2014.

We were not expecting a huge turnout; instead we saw 200 students working on research essays and group projects throughout the night, and attending 2am workshops. This success was seen twice more when the event was repeated, suggesting to us that students were needing

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Friday **November 11, 2016** **4:05 p.m. – 4:45 p.m.** Lynx	a supportive, collaborative environment in which to work on research assignments and develop research and writing skills outside of regular service hours. Our event has now run three times, each seeing 200 students working on research essays at midnight. The challenge of pulling a collaborative all-nighter, combined with the novelty of being in campus spaces normally closed at 2am, appears to have provided motivation for numerous students to join in creating environments in which faculty were then able to provide academic supports and mentoring. Student surveys were sent out to all 600 event participants in order to provide us with formative feedback about how to improve the event in subsequent semesters, and to assess whether we were meeting our event goals. Specifically, we were wanting to determine whether the event was building campus community, encouraging student engagement with academic support services, and helping students avoid procrastination. In this session, we will summarize our goals for creating these diverse and supportive writing communities, from the perspectives of multiple campus partners. We will share qualitative and quantitative feedback results from 3 semesters' worth of participant surveys addressing the appeal of 2am workshops and student motivations for attending the learning events. Research results speak to how the event goals were met, and hint at what motivates students to join these events at the cost of sleep – an area of increased interest to those involved with the project, especially as we attempt to reconcile obvious student demand and support with concerns from colleagues about encouraging bad habits and possible "binge writing" (Wagman, 2016). What began as formative event feedback and an interest in cross-campus learning and writing communities has grown to newfound interests in student procrastination (Rabin 2011; Washle 2014) and student writing motivation (Cerino 2014). While we intend for both the event and the survey to be ongoing, and will share evidence that our event goals are being met, we are also seeking Symposium delegate feedback on future research methodologies we might employ to obtain more fulsome data about what students are accomplishing and learning at the event, and are curious about similar experiences other institutions may have encountered as we continue to research our own.
Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Aspen	**Death to Deadlines 2.0** **Katrin Becker, Mount Royal University** ***Research on Teaching and Learning*** It seems that almost all of the work we assign in Higher Ed has more or less strict deadlines attached - often with severe penalties for late submission, especially in the sciences. How many of us have stopped to ask ourselves why we do this? There are practical reasons for set deadlines to be sure, but are they always necessary? Are we short-

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Aspen	changing our students by attaching strict deadlines to all the work we assign to them? What effect do hard deadlines have on more mature students or those who must juggle increasingly heavy workloads at school and at work while trying to complete a degree? Do late penalties act as a deterrent for lateness or do they discourage students from handing things in at all? Do late penalties encourage students to hand things in on time or penalize them for taking extra time to complete work? With increasing awareness about student mental health and the effect stress has on student performance, an examination of strict deadline policies reveals one place where we can better support student learning without compromising standards. While it can be argued that students need to learn to work within specific time frames, there are also times in life when no clear deadlines exist. We rarely seem to provide our students with opportunities to learn how to work when there are no deadlines. What happens when there are no hard deadlines in a course except the one at the end of term? The author has been experimenting with a variety of alternatives to strict deadlines for projects and assignments since 1998 and this presentation will highlight some of the successes and failures. This presentation examines a variety of ways in which flexible deadlines have been implemented and reports on how this has helped students succeed. Most students have reported that they appreciate flexibility when it comes to deadlines, but many also admit that such flexibility presents challenges for those who struggle with time management. Working with the students, these challenges can be addressed in a variety of ways. This presentation is intended for instructors, administrators, and instructional designers in all sectors.
Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Birch	**Do We Have Access to Clean Water?: Using Local Environmental and Civic Issues to Model Interdisciplinary Instruction in Science and Social Studies for Elementary Educators** **Katrina Roseler, Scott Wylie** **Chaminade University of Honolulu** ***Collaborating Beyond the Single Classroom*** In elementary classrooms, not all subjects are created equal. In a report by the Noyce Foundation, science instruction in elementary classrooms ranges between 2-3.5 hours per week; less than half of the time spent on math and one-fifth for ELA (Blank, 2012). If there is a bright side to that depressing fact, it is that science is still regularly taught. Time spent on social studies instruction is limited to only 14 minutes a week (Passe, Good, & Libresco, 2014). The instructional time removed from science and social studies instruction has been used to increase instruction in math and ELA.

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Birch	The overwhelming focus on language arts and mathematics in elementary classrooms is mirrored in teacher education programs. One possible solution for counteracting this imbalance is to combine the existing instructional time in science and social studies instructional methods. The study of a place-based environmental and civic issue allows faculty and students to explore the interdisciplinary nature of science and social studies education and address the instructional imbalance in these fields.
	Drawing on the scholarship of integration (Boyer, 1990), the authors of this proposal have designed an interdisciplinary science and social studies instructional methods course – a space for "making connections across the disciplines, placing the specialties in larger context, [and] illuminating data in a revealing way" (p. 18). The course incorporates the Next Generation Science Standards and the College, Career, and Civic Life Framework for Social Studies. The topics addressed within this interdisciplinary curriculum are (1) rooted in student engagement with science and engineering practices, (2) provide multiple and diverse opportunities for civic engagement, and (3) make authentic connections with students' knowledge and experience connected to their sense of place in Hawai`i.
	Our university is located within Hawaii's Ala Wai Ahupua`a watershed along the Palolo stream, feeding into the Ala Wai Canal. The Ala Wai Canal was built in 1928 in order to drain the wetland region that would eventually become Waikiki. The construction of the canal had (and continues to have) significant environmental, economic, and social effects. As students participate in a guided investigation of the impactsof the Ala Wai Canal, they will (1) engage in science and engineering practices, (2) evaluate solutions for managing natural resources, (3) describe the ways that political and economic systems have influenced the environmental characteristics of the watershed, and (4) work toward addressing social and environmental issues through civic action.
	Our presentation advances SoTL knowledge and practice by outlining our process of faculty collaboration beyond the single classroom. This interdisciplinary instructional methods course is the result of "research at the boundaries where the fields converge" (Boyer, 1990, p. 19). By demonstrating how these fields converge, we will provide a space for our university students to translate their learning experiences into practical and tangible instructional resources they can use in their future classrooms. This interdisciplinary approach will not take time from mathematics and language arts lessons, but will instead enrich the content and address the inequity of science and social studies instruction.

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Cedar	**The Intersection Between Professor Expectations** **and Student Interpretations of Academic Skills:** **A Multi-Disciplinary Approach** **Laura Schnablegger, University of Guelph** ***Research on Teaching and Learning*** Through a cross-unit research project, we identified, a series of disconnects between the learning, writing and information literacy (research) skills professors expect students to possess and the skills students think they possess when they enter the course and between professor and student understandings of where students should develop these skills (i.e. in class or outside of class). Numerous studies exist on how and to what extent course instructors in higher education are embedding or directly teaching writing, learning and research skills in their courses (Cilliers, 2011; Crosthwaite et al., 2006; and Mager and Sproken-Smith, 2014). Yet, disparity within the literature demonstrates that there is no consistent approach to the scaffolded development of these necessary skills within courses, programs, disciplines, or across disciplines. Preliminary research has also revealed that professor communication of expected or required student skills is often limited or unclear (McGuinnes, 2006). In order to investigate this intersection between professor expectations and student interpretations of academic skills, we asked the following research questions: a. Is there a gap between the professor and student expectation of academic skill possession? b. Which skills do professors explicitly articulate to students and do they indicate which will be taught in class and which students are expected to develop outside of the course? c. Which skills do students seek to develop and where do they believe they will develop these skills? Three surveys were conducted in 2015 in 24 third year university courses. In the first survey, 24 instructors identified which skills they believe students required to be successful in their course. In the two student surveys, conducted during the first two weeks and the final two weeks of class, students identified the skills they believed were necessary to be successful, whether they possessed those skills, and where they believed they should learn the skills. The second student survey included self-reflective questions and confidence ratings for research, writing and learning skills. This study found a discrepancy rate of approximately 63% between instructor and student responses. The skills with the highest degree of

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Cedar	discrepancy included the ability to analyze and present data, problem solve and select an appropriate writing style. Affective skills such as motivation, concentration and confidence were also frequently cited. The most common discrepancy found that when students indicated they already had a skill, instructors indicated it would be taught during course time. This research study has led to recommendations for clear faculty articulation of expectations of required skills in course outlines and resources for developing these skills. We suggest a curriculum-based approach to understanding skill development needs and addressing these through appropriate instruction and resource development. Throughout this oral presentation, we will present an overview of our research project; present our key findings; offer initial interpretations on student understandings of course outlines; demonstrate the value of cross-unit and cross-departmental collaborations; and offer recommendations and potential areas for further research. After our presentation, we will welcome dialogue and questions.
Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Maple	**How'd the Exam Go? Using Post-Exam Reflections as a Data Collection Method for Investigating Student Metacognitive Profiles** **Kelsey Metzger, University of Minnesota Rochester** **Brittany Smith, Minnesota State University Mankato** **Paula Soneral, Bethel University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** Metacognition plays an essential role in effective learning, yet students often lack metacognitive skills (1, 2). Previous work emphasizing reflection as an essential component of effective learning showed that engagement in regular reflective self-questioning relevant to learning can facilitate the development of metacognitive skills in students (3,4). Therefore, instruments and pedagogical interventions that measure metacognition linked to learning tasks and assessments can not only help students iteratively develop their metacognitive skills, but also assist faculty in diagnosing the relationship between metacognitive habits and performance. We constructed and validated a research instrument, the Student Metacognition and Study Habits (SMaSH) survey, which provides opportunities to incorporate metacognitive reflection within the context of the assessment cycle of a course as a diagnostic tool. SMaSH was used to investigate student metacognitive profiles, study habits, and perception of performance on multiple summative assessments within the structure of introductory biology courses at three undergraduate institutions.

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Maple	Factor analysis was utilized to explore the dimensional structure underlying student responses to the SMaSH survey items. Three-fold repeated Principal Components Analysis (PCA) revealed robust support and alpha values greater than 0.6 for four of the six factors identified – "Perceived Difficulty", "Study Habits", "Social Learning", and "Help Seeking" - while the remaining two factors – "Self-Monitoring" and "Adaptive Behaviors" - received only tentative repeated support with low percent of variance explained, and alpha values less than 0.6.
	Analysis of Variance (ANOVA) testing revealed that student responses to items in three of the factors - "Perceived Difficulty", "Use of Learning Supports", and "Study Habits" - show a predictive relationship with student performance metrics of: 1) performance on the first exam of the semester, 2) average exam performance across the semester, and 3) overall course grade. Student perception of course difficulty, when diagnosed following the first assessment of the semester, was predictive of semester-long performance: students who responded that they disagreed the concepts and course were difficult (Course Grade mean = 85%, N=39) significantly outperformed students who responded that they agreed the concepts and course content were difficult (Course Grade mean = 78%, N=21).
	Similarly, ANOVA results for the Factor "Study Habits" yielded significant results for Exam 1, Exams overall, and Course Grade: students who responded that they "Strongly Agreed" to the study habits items performed significantly better in the course (Course Grade Mean = 86%, N=39) compared with peers who responded that they "Somewhat Agreed (Course Grade Mean= 81%, N=37), and peers who responded "Neither Agree nor Disagree" (Course Grade Mean = 77%, N=13).
	These findings suggest that early student perceptions obtained from a singular offering of the SMaSH instrument in a course can provide valuable information to both the instructor and student about the student's likely trajectory of performance in the course.
	This work is useful for educators who wish to cultivate intentional approaches to reflection and metacognition in their courses, and for researchers investigating aspects of metacognition in other student populations. In addition, our teaching has been informed and changed as a result of our research on student metacognition.

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The Market Value of an Unfinished Assignment:
Enhancing Decoding of Disciplines with Learner-Sighted and
Self-Regulated Learning Practices

Dan German, Indiana University Bloomington

Research on Teaching and Learning

Critical thinking is thinking that assesses itself. To the extent that
our students need us to tell them how well they are doing, they are
not thinking critically. Didactic instructions can make students overly
dependent on the teacher. In such instruction, students rarely develop
any perceptible intellectual independence and typically have no
standards to assess their thinking with. All students are inherently
motivated to learn, but they quickly learn to be unmotivated if they fail
repeatedly. All students have the basic need to belong, be competent
and influence what happens to them; motivation to learn usually
exists when these conditions are met. Students must perceive the
classroom as a safe environment, both physically and psychologically;
high self-esteem should not be a goal, but a consequence of mastering
the material. Decoding of Disciplines (Decoding) is a process in seven
steps designed to help instructors and educational consultants find new
ways to increase student learning; its single most important contribution
consists in the systematic and concerted effort of helping experts
uncover their own tacit knowledge for the benefit of their students.
Though clearly a learner-centered process, Decoding's emphasis is on
transforming teaching for the benefit of learning. We present a very
effective (in our experience) enhancement to Decoding, in four steps,
to empower students with responsibility while effectively teaching
them to become accountable to themselves and to others. To succeed,
instructors must (a) ensure that any unfinished assignment can be
reliably graded; (b) keep the process transparent, i.e., let students know
the details and invite them for appeals; (c) introduce self-assessment
in order to share responsibility with their students and (d) put in place a
regulatory mechanism for grading (we present one such device, called
"thermometer game"). Originally as a part of a larger project aiming
to identify threshold concepts and bottlenecks in Computer Science
and Informatics, our goal was to improve student learning outcomes
in separate courses, but also to develop and investigate assessment
methods that could be used effectively across an entire curriculum.
Decoding instructs us to reflect carefully as we teach students how to
think in our discipline. But reliable communication between instructor
and students calls for a common vocabulary. The use of self-assessment
in Decoding (although not at all straightforward) gives students
a measure of accountable responsibility while also allowing the
instructors to trace and examine their students' thinking as it actually
develops. Studies show that inaccurate self-assessment is associated

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Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Pine	with poor self-regulation, and poor performance. Conversely, students who assess their work accurately (that is, the same way as their instructor does) tend to be higher achieving and more motivated. Self-regulated learning is a series of practices that virtually every learner can understand and develop; however, these practices need to be taught, rehearsed and honed. Our data indicates that self-assessment effectively opens the door to self-regulated learning which in turn accelerates convergence toward the last desiderate in Fink's taxonomy: when students learn to learn by themselves they become responsible, independent, and self-regulated epistemic agents in their new discipline.
Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Willow	**Generating Enthusiasm for Community Based Research in Introductory Psychology** **Bill McConnell, Jen Wrye, North Island College** ***Research on Teaching and Learning*** Social science educators face a perennial challenge. While they endeavor to cultivate enthusiasm for empirical methods, and encourage undergraduates to recognize the importance of objective evidence in the generation of knowledge, their students resist these overtures, expressing disinterest in taking methods and statistics, (e.g., Briggs, Brown, Gardner & Davidson, 2009), anxiety over methods and statistics (e.g., DeCesare, 2007) and a preference for almost any course other than research methods (Rajecki, Appleby, Williams, Johnson & Jeschke, 2004). This is quite discouraging, particularly for those who teach quantitative methods. However, while students appear disinterested in acquiring and using quantitative skills, they nevertheless respond positively when exposed to hands-on research experience. Completing a final-year project, for example, was considered an essential component of the bachelor's degree (Brewer, Dewhurst & Doran, 2011), while conducting research projects in methods and statistics courses was associated with enhanced perceptions of the utility of methods and statistics (Ciarocco, Lewandowski & Van Volkom, 2013). Hands-on research experience can increase appreciation of the value of empirical methods even in introductory courses: Self-efficacy for quantitative methods increased in introductory psychology after completing mini-research projects (Bluestone, 2007); endorsement of empiricism increased after participating in a research simulation (McConnell & Marton, 2013); and volunteering as a research participant contributed to positive perceptions of research (Bowman & Waite, 2003). These findings are significant for two reasons. First, it is conceivable that developing positive perceptions of research in introductory courses will reduce the disinterest in empirical methods commonly found later among social science majors. Second, since students from numerous disciplines take introductory social science

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Willow	courses as an elective, and since some of these students take no other courses in the discipline, introductory courses represent the sole opportunity to strengthen many undergraduates' perceptions of the scientific value of our disciplines. We propose that, by focusing on "real world" research questions, community-based research represents a constructive way to engage introductory social science students in the business of research, particularly when the students consider the research question meaningful. To address this, we invited 108 students in four sections of introductory psychology to gather data for course credit in a community-based climate change survey. Working in pairs, the students were trained to administer a structured interview to community respondents in a door-to-door survey. Almost 80 percent of the students enjoyed participating in the survey, and many provided thoughtful critiques of its methodology. Using internally consistent scales, we found that three variables predicted positive perceptions of participating in the survey: interest in acquiring and using research methods; endorsement of the value of research methods; and interest in climate change. We draw on these findings to offer recommendations for enhancing introductory students' engagement in course-based research.
Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Black Bear	**Practicing Altruism: Sociology in Action** **Nancy Angel-Doetzel, Mount Royal University** ***Research on Teaching and Learning*** A passion for sociology is often sparked when students gain insight bout Auguste Comte, father of sociology, and the scholar who coined the term "altruism". Altruism suggests living for others; it is the definitive formula of human morality and gives a direct sanction exclusively to our instincts of benevolence, a common source of happiness and duty. Comte's version of the term suggests that "Altruism" is an ethical doctrine that holds that individuals have a moral obligation to help, serve, or benefit others, and if necessary at the sacrifice of self-interest; altruism calls for living for the sake of others. This presentation would honor Comte, by demonstrating ways sociology students can practice altruism and being a good sociologist throughout their semester. Being altruistic coincides with being a good sociologist and research introduced within Post and Neimark's book titled: "Why Good Things Happen To Good People. " Through such active learning, as practicing altruism, students often gain a passion for learning and an ability to attach meaning and purpose to their curriculum.

	Measuring University Students' Teaching and Professional Skills Development in a Community-Based Learning Program **Beth Levinson, Erin Allard, Sandeep Raha, McMaster University** ***Collaborating Beyond the Single Classroom*** The competitive labour market facing new post-secondary graduates has lead to a call that students develop transferable professional skills that will be beneficial regardless of their eventual career choice (Canadian Association for Graduate Studies, 2008). One approach to address this need is to engage students in community-based learning – learning, teaching, and research through mutually beneficial partnerships between post-secondary institutions and their communities (Korzun, Alexander, Cluskey-Belanger, Fudger, Needham, Vsetula, Williamson, & Gills, 2013; Gelmon, Holland, Seifer, Shinnamon, & Connors, 1998). McMaster Children and Youth University (MCYU) is a pioneering Canadian program based the McMaster University campus as a lecture series offered to the community by faculty members. While MCYU successfully attracted many youth and their families to campus, community organizers from Hamilton's priority neighbourhoods shared that many of their residents could not attend lectures due to a number of barriers. They requested that MCYU be expanded into the community so that more youth and their families could benefit from the partnership. In response, the MCYU in the City outreach initiative was launched. It includes a series of inquiry-based workshops developed and delivered by interdisciplinary teams of undergraduate and graduate student facilitators. These workshops, based on the facilitators' areas of expertise and/or research, are communicated in an accessible and engaging manner to the community. The McMaster Institute for Innovation and Excellence in Teaching and Learning (MIIETL) supports the development of teaching and learning training for MCYU in the City facilitators through two half-day boot camp sessions that include education on: the principles of community engagement, the Hamilton Neighbourhoods Action Plan, lesson planning and delivery, inquiry-based learning, and broad professional and transferrable skills (e.g., effective communication, project management). Following this training, student teams meet independently to design and submit their workshop lesson plan, and receive written feedback from program managers. Thereafter, teams rehearse their workshop three times and receive constructive feedback from both program managers and fellow facilitator teams. Each rehearsal is expected to reflect revisions based on previous feedback. The student teams eventually deliver their workshop in the community at a public school, after school program, or public library. To overcome challenges faced in evaluating the quality of the facilitator training program, a pre/mid/post survey methodology was piloted. Facilitators were asked to complete a survey upon agreeing to be a facilitator (pre), after both boot camp training sessions (mid), and after delivering their

Friday **November 11, 2016** **4:50 p.m. – 5:30 p.m.** Lynx	workshop in the community (post). All measures focused on teaching and transferrable skills. To improve the measures and ensure alignment with Guskey's (2002) critical levels of professional development evaluation (particularly, level 1: participants' reactions, and level 2: participants' learning), the pilot test results were discussed, and revisions made, at a MIIETL retreat. This presentation is intended to advance SoTL, particularly for collaborating beyond the single classroom, by: 1) describing how the MCYU in the City program provides an avenue to develop students' teaching and transferrable professional skills, 2) sharing the revised evaluation measures being employed, and 3) furthering discussion on good practice in evaluating professional development programming in post-secondary education.

MOUNT ROYAL
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Detailed Program –
Saturday, November 12, 2016

Saturday **November 12, 2016** **7:00 a.m. – 9:00 a.m.** Alpine Meadows/ Castle/Assiniboine	**Breakfast available until 9:00 a.m.**
Saturday **November 12, 2016** **8:30 a.m. – noon** Hotel Foyer Reception Area	**Registration Open**
Concurrent Sessions	
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Aspen	**Impacts of the Fall Break on Student Stress and Academics: A Mixed Methods Approach** **Heather Poole, Michael Agnew, Ayesha Khan** **McMaster University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** Recently, universities and colleges across Canada have introduced a fall break into their term calendars. In 2015, a full-week fall break was introduced at our university as a way to improve students' academic performance and mental well-being. The need to support student mental health is well established in the literature: university students report higher levels of stress than the general population[1] and over 10% of students are diagnosed with depression or anxiety, with almost half reporting recent feelings of overwhelming depression or anxiety[2]. Poor mental health predicts lower grades[3] and an increased chance of withdrawal from university[4]. Although a fall break seems an effective way to decrease student stress and provide opportunities to study, there is no published research documenting whether fall breaks actually support academic success and mental health. We used the following mixed methods approach to assess the impact of the fall break on student stress and academic performance. Stress measures. A) All undergraduate students received an email survey before and after the fall break. Surveys assessed demographic variables and self-reported stress, using validated measures. Pre-post analyses of over 2300 responses indicated, contrary to expectations, that post-break stress was higher than pre-break stress. In spite of

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Aspen	this, 80% of respondents perceived the fall break positively. B) We also conducted focus groups, which provided a detailed narrative of students' perspectives on the fall break. C) As a pilot component of the study, we assessed salivary cortisol levels (pre- and post-break) from students at our university and a university without a fall break. Cortisol is a hormone that is a physiological indicator of stress. Contrary to survey stress measures, analyses indicate that cortisol levels decreased in conjunction with the fall break. We will repeat this component of the study in October 2016 with a larger sample size. Academic measures. We will assess aggregate grades and withdrawal rates from Fall 2014 and Fall 2015 to assess the impact of the fall break on student academic performance. We are currently awaiting these data from our registrar. Behavioural correlates. To assess whether students spent their fall break completing academic tasks, and to link this with stress and academic performance, we asked students to consent to communicating with us over the fall break (N=604). Using an approach that is, to our knowledge, completely novel in this field, we contacted students by text message several times per day over the fall break, asking them to respond indicating what they were doing at that moment. This immediate reporting offered a much more accurate summary of behaviour than would retrospective reports that are typically used in the literature. Analyses of responses indicate that students' pattern of behaviour is associated with several demographic variables and our stress indicators. This research is imperative in order to gain a comprehensive understanding of how institutional policy impacts student stress and academic success. During this session, our mixed-methods findings will be shared and participants will be invited to discuss our methodological approach and the impacts of student stress-reduction interventions at their institutions.
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Birch	**Using GradeMark to Improve Feedback and Engage Students in the Marking Process** **Sara Marsham, Alison Graham** **Newcastle University, United Kingdom** ***Teaching and Learning with Technology*** Students frequently express frustration with assessment and feedback: e.g., marking criteria are too generic, feedback does not relate to a specific criterion, feedback is too negative. Students struggle to understand academic standards when they are presented in the form of written marking criteria or rubrics (O'Donovan et al. 2004). While one challenge lies in the wording and structure of the criteria – in that students find it difficult to apply written criteria to their own work without guidance (Orsmond et al. 1996) – a second challenge lies in

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Birch	the students' misconception that criteria outline explicit standards (i.e. directives or instructions). For the staff who develop criteria, the rubrics serve less as explicit guidelines and more as frameworks for the application of implicit evaluative skills, acquired over numerous years of learning within the discipline (Bloxham and Boyd 2012). This divide between student and staff expectations is compounded when the criteria aim to articulate more complex or higher-level tasks, since these are even more often 'tacit' and implicit to the discipline (Nicol and Macfarlane-Dick 2004). Many students would also like feedback to be a dialogue between assessor and student, for markers to pose challenges or praise successes, and allow students to ask questions about their learning. In response to this, our project aimed to improve the clarity of marking criteria, link feedback more explicitly to criteria, and initiate a dialogue that would improve student performance on future assessments. Additionally, we wanted to produce a system that created equity between marks and feedback even if the work was marked by different assessors. Our project therefore had two components: a series of tutorials that provided opportunities for the students to practice using criteria to mark exemplars, and a trial of GradeMark® as an electronic platform to provide feedback on coursework. Recent studies have reviewed online tools for assessment and feedback, highlighting how online comment banks and feedback tools can increase the speed and efficiency of marking for staff (e.g. Buckley and Cowap 2013). In particular, several studies have noted how GradeMark® software enables markers to tag specific aspects of students' work with pre-set comments: a function that lessens staff workload while also facilitating lengthier comments that may be perceived by students as a form of dialogue. Online assessment also has a seemingly greater capacity to engage students with feedback, although the electronic format alone is not enough to ensure student engagement. Within GradeMark®, we developed libraries of feedback specific to a particular assessment and its marking criteria. This allowed us to pose questions to students to improve their understanding of content and skills and provide positive feedback. Using a bank of feedback comments improves consistency between markers and allows for a dialogue to take place that follows from the tutorials but is not heavily reliant on staff time. Our presentation will give an overview of our experience in developing and using assessment-specific marking criteria and discuss the impact of using this learning technology within two academic schools, and across the wider University.

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Cedar	**Empowering Undergraduate Students Through a Community-Based Participatory Research Project** **Gemma Punti, Nitya Chandiramani, Chelsea Steffens** **University of Minnesota Rochester** ***Involving Undergraduate Students in SoTL*** It has been well-documented that undergraduate research is a 'high-impact practice' that increases rates of student retention and student engagement (Kuh, 2008). In addition, past research indicated how collaboration between faculty and students has a beneficial effect on students' educational aspirations (Hathaway, Nagada, & Gregerman, 2002). However, the majority of the existing literature examines the student-faculty relationship and its subsequent impact on conventional academic markers, such as GPA and retention rates (Kuh, 2008). Minimal research has been conducted on the collaborative experiences between undergraduate researchers, their peers, and their research subjects with regard to how it shapes their learning and academic identities. Further, not much scholarship on teaching and learning illustrates how undergraduate students participate in the analysis of their own learning. This study analyzed the community-based participatory research (CBPR) experiences of underrepresented undergraduate students from a health sciences university. Specifically, it investigated how undergraduate students' academic identities and self-perceptions changed as a result of their research with underserved high school students. The CBPR consisted of 12 undergraduate researchers developing research questions with high school staff and students, administering surveys and facilitating focus groups among four local high schools in a midsize city in the Midwest. The research questions were concentrated on understanding the barriers the high school students faced towards graduating and pursuing higher education. A novel component of this CBPR was that both the undergraduate researchers and high school subjects came from underrepresented backgrounds. Most of the students were of color, and/or low socioeconomic, and/or first generation college student status. The benefits of this commonality was twofold, it aided in establishing trust between both groups and enabled the researchers to critically analyze their journey as underrepresented learners. This presentation uses the principles of CBR to empower two undergraduate researchers in the analysis of their own learning in collaboration with a faculty member. Data collected included undergraduate students' reflections, their pre-post educational autobiographies, a pre-post survey design, and a post-research focus group to assess the undergraduate students' learning outcomes. Grounded theory was used to organize and analyze the data. The two

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Cedar	undergraduate researchers and the faculty member coded the same set of data separately and then met to discuss results through a debriefing process that generated more focused categories. Initial findings indicated that the collaborative model of CBPR allowed undergraduate students to strengthen their critical thinking and analytical skills through joint discussions on the educational experiences of high school students. In addition, it furthered their interest in community engagement and fostered a sense of social responsibility. Comprehensively, the students embraced a newfound academic identity as researchers that was distinct from the scientific-research identity they had been surrounded by in their health science education. The research indicates that undergraduate research done in collaboration with the community (CBPR) motivates the students to be socially and intellectually engaged, expands their worldview, and fosters empathy towards community members. The findings from this research study inform the pedagogical power of CBPR to promote critical thinking and civic engagement education among undergraduate students.
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Maple	**A Methodological Road Trip: How 3 SoTL Researchers Used Autoethnography and Narrative Analysis to Inform Their Study on Students' Experiences with Journalism Ethics** **Maria Victoria Guglietti, Amanda Williams, Sally Haney** **Mount Royal University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** A methodological road trip: How 3 SoTL researchers used autoethnography and narrative analysis to inform their study on students' experiences with journalism ethics. Our methodology presentation is one that follows a road trip plot line. Two years ago, we three researchers packed our bags with questions, some funding, reflection instruments, literature reviews, methodology plans and some hunches about how we thought students in our degree program might be developing professional identities. This presentation focuses on some pivotal junctions along the way. One — where and how we decided to use a narrative approach to better understand how our students were experiencing professional ethics. Another — where and how we decided to situate ourselves in the study through the use of autoethnography. The journey has brought us both joy and tension, some of which we will share in our presentation. Attendees can expect a review of narrative decision-making as it relates to our project. We will provide snapshots of several approaches ▶

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Maple	to examine participant experiences through their stories (such as Clandinin & Caine, 2008; Flick, 2000; Bates, 2005). We will also unpack why we privileged certain approaches over others. For example, one member of the team was deeply inspired by a world-renowned narrative inquiry scholar, Jean Clandinin, who suggested to repeatedly connect with our research participants (1 or 2 per researcher) over time. We were intrigued but hadn't the resources nor time to follow that exact route. We were also stimulated by the work of Robin Mueller, on episodic narrative, who outlined an approach to examine student stories through a more focused, single episode. We worried, however, that this approach might restrict our ability to answer our broader research questions. We found our way with a narrative approach that enabled us to engage 13 students to share with us their experiences of professional practice with a focus on the navigation of ethics. Ethics became our departure point because our previous research illustrated this was a point of tension for our students in their learning process. We also asked students to bring an artefact to the interviews. They arrived with items such as a DSLR camera, an academic research poster, a photograph, and examples of their professional work. Our presentation will delve into how those artifacts elicited stories we might have otherwise missed. We have hit some bumps in the road, including our struggle with how to best approach narrative analysis. A fluid thematic coding is providing structure for the team to move forward but this flexibility has also made us question our focus and aim. Another challenge has been the issue of where and how we should situate our own researcher-stories in this study, which exposes the space between what our students say about professional practice versus what they experience as practitioners. Trahar's work on the role of researcher self-reflection in narrative work (2009) has been deeply informative, challenging us to engage in an "autoethnographic exploration" of our own practice. As we come into the final stretch of our trip, we know more about narrative and autoethnographic methods. We have also come to know ways we might prepare differently for our next SoTL journey.
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Pine	**Learning Together: Facilitating Reciprocal and Collaborative Global Learning In and Out of the Classroom at Home and Abroad** **Lisa Semple, Margo Underwood, Dianne MacDonald, Mount Royal University** **Elizabeth Underwood, Calgary Board of Education** **Meg Karmann, Mount Royal University** ***Collaborating Beyond the Single Classroom*** **Background:** Global field schools and service learning experiences are considered to be high-impact practices that provide post-secondary

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Pine	students with opportunity for deep learning as they engage in broader cultural contexts, gain an appreciation for innovative global strategies, and reflect on their often ethnocentric perspectives (Kuh, 2008; Clayton, Bringle & Hatcher, 2014). Increasing opportunities for student participation in global learning when abroad (mobile learning) and at home (non-mobile learning) is a goal of the Government of Alberta and Alberta post-secondary institutions. Funding from the Alberta Innovation and Advanced Education Internationalization at Home in Science Education (i@home) program (www.iae.alberta.ca/iathome) enabled two Mount Royal University (MRU) community health and child health professors to investigate new approaches to improve nursing students' global knowledge and competencies for 1) 'mobile learners' participating in a Dominican Republic (D.R.) field school and 2) 'non-mobile learners' in Canadian classrooms. The success of this pilot project was directly related to the strong foundation of long-term collaboration and asset-based community development approaches undertaken by an interdisciplinary and intersectoral team of Canadian and Dominican partners (Mawji, Lind, Loewen, Underwood, & Thompson-Isherwood, 2014; Miller-Young et al, 2015; Underwood, Gleeson, Konnert, Wong, Valerio, 2016). **Design:** This project, undertaken by MRU in 2015-2016, was one of 20 i@home funded pilot programs investigating new approaches for internationalizing the Alberta classroom, curriculum and student experience at Alberta post-secondary institutions. A proof of concept method was used to demonstrate the feasibility of capturing Canadian and D.R. nursing peers (male and female, aged 18-45 years) perspectives and learning (e.g., sustainable development goals, global health, culture, equity, and appreciative approaches) and then disseminating that learning back into multiple Canadian classrooms. Learning was captured using photos, videos, journals, discussions, reports, posters, and photo reflections. The Canadian mobile learners (n=10) also completed pre and post-field school i@home surveys that captured quantitative and qualitative data. **Results/ Discussion:** The i@home surveys identified significant shifts in mobile students' knowledge, skills and perspectives in these areas: sustainable development goals, technology in other global contexts, cultural safety, appreciative approaches, and global health. The i@home funding enabled us to engage non-mobile learners through: 1) developing three documentary videos focused on global health and sustainable development for use in multiple classrooms and interdisciplinary contexts; 2) integrating photos and videos into formal presentations to MRU faculty and peers (n=40); 3) using peer-to-peer discussions in multiple classrooms and field school sessions (n=80) ; 4) increasing global health library resources and audiovisual equipment; and 5) sharing learning about sustainable development goals with

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Pine	Calgary Board of Education (CBE) teachers and middle-school students (n=110). An unanticipated result was the cycle of reciprocal learning that occurred as MRU students learned (pre-field school) from CBE teachers and students about effective pedagogical strategies and sustainable development goals, integrated their learning into the D.R. context as they provided health promotion education (750 ages 5-15 students in two schools, plus teachers and parents), and then post-field school shared their learning with CBE teachers and students. During the presentation i@home video clips, case studies, and photo reflections will be shared; study results examined; and application of the project findings into other contexts with mobile/non-mobile learners will be discussed.
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Willow	**The Art of Nursing Leadership:** **Exploring Fourth Year Nursing Students' Transition to** **Professional Practice Through Arts-Based Learning Strategies** **Joanna Szabo Hart, Sonya Jakubec, Katherine Janzen** **Mount Royal University** ***Research on Teaching and Learning*** Nursing is an art and human science, the art of which is described, communicated and expressed through relational and lived inquiry, which necessitates the complexity of supporting students to explore challenging abstract concepts of leadership, art, nursing and the art of nursing leadership. The language used in theoretical capstone courses raises more than a challenge of semantics in a course entitled, Issues and Trends in Nursing Leadership. The language necessarily invites critique that requires reflection on history, context and a critical reflective inquiry into the relational (practical) aspects of what "nursing leadership" may mean for individuals and groups (of students). The complexity of living and embodying these contextualized experiences in the transition of students who are becoming professionals is the gist of what we explore through arts-based learning activities. The intent was to encourage participation and engage praxis through reflective components by incorporating the lived experiences of students in their clinical practical settings (leadership practicum concurrent with this course and other concurrent student employment in healthcare). Examples of the nine possible arts-based learning ▶

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Willow	activities that explore complex transitions for becoming-Registered Nurses: 1) photo-story; 2) collage and; 3) parallel poetry. The intention of engaging these participatory activities is to support more inter-active layered questioning of assumptions that construct theory. A/R/Tographic representations of research require the artist-teacher-researcher to weave learning-teaching/researching/art-making into a metonymic movement of knowing-being-doing mutually co-created with students who necessarily become spect-actors and inter-rupture our understandings of the world and how we live the world. This presentation is based on the findings of a Scholarship of Teaching and Learning research project. The research question guiding the study: What do becoming-professionals in the discipline of nursing reveal about nursing leadership through their participation in (and representations of) arts-based learning strategies? The themes that emerged from the data analysis: 1) Time management, organization and prioritization are all the rage; 2) (Dis)covering and recovering; 3) Fully loaded to inevitable burnout? and; 4) Nerve "wrecking" ups and downs. The arts-based method of dwelling with and analyze the data shared by participants used narrative excerpts excavated as poetry and reflective art making as an iterative enmeshing, weaving voices and images into a tapestry representing each theme. We will elaborate on the study approach, offering arts-based representations of how students grapple with concepts through these learning activities. We will also speak to our collective reflective journey as A/R/Tographers evolving our curricular journey into new and interesting capacities of growing an organic, authentic approach to the art of nursing leadership.
Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Black Bear	**Processes and Indicators:** **Clinical Instructors and Student Learning Contracts** **Mohamed El Hussein, Olive Fast** **Mount Royal University** ***Research on Teaching and Learning*** The purpose of this research process is to explore the indicators and processes that clinical instructors use to place a student on a learning contract. Nursing as a practice profession depends on competent nurses who are capable of providing safe and complex nursing interventions. Preparing nurses takes an average of 4 years, during which time students are expected to meet certain competencies to ensure their readiness for practice. Evaluating students in clinical settings is a challenging process. Part of the difficulty of the process comes from the fact that clinical evaluation tools used by clinical instructors are often based on broad and abstract course learning outcomes. These learning outcomes have little connection to students' actual work, which leads to success or failure in the clinical setting. In addition, while curricular

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Black Bear	outcomes evaluate concepts that are linked to theory content, clinical instructors are evaluating students on performance instructors' perceive makes a competent nurse in the practice setting. Students who struggle are usually placed on a learning contract that hones in on objectives they need to meet before the end of the rotation. A learning contract highlights the student's challenges and delineates strategies to help the student overcome these challenges. While learning contracts are meant to help students and provide them with constructive feedback to set them up for success, students often perceive learning contracts as a punitive or penultimate step prior to failure. Clinical instructors find that placing a student on a learning contract is stressful and lonely and are inconsistent in their decision-making processes. The lack of consistency creates tension and frustration, influencing the rigor and purpose of clinical education. Findings from this study will provide deeper understanding of clinical instructors' reasoning processes and increase educators' ability to create evaluation guidelines of students' clinical practice. Clinical instructors and coordinators at Mount Royal University have been invited to participate in the study. Participants are involved in a 30-45 minutes semi-structured interview. Grounded theory is being used to gather and analyze data. Theoretical sampling and coding for processes will continue until the theory that capture's the participants' main concern is constructed. The PI conducted 7 interviews so far, each interview was discussed with the Co PI to add conceptual rigor to the process of data analysis. Preliminary analysis of these interviews showed that there is lack of consistency with regards to the reasoning processes that clinical instructors used to place a student on a learning contact. Clinical instructors and clinical coordinators had different interpretations and understandings of the benchmarks and learning outcomes. Patients' safety and critical thinking were empirical generalizations that surfaced during the interviews as guiding principle in their decision making process. Furthermore, while learning contracts were valuable tools in identifying gaps in the students' knowledge, skills and attitude yet it was the clinical instructors "gut feeling" that guided their decision-making processes. Learning contracts as described by one instructor were like a "death sentence" for some students, as such they lead to dysfunctional anxiety. Data also suggested that there was difference in the reasoning processes between new clinical instructors and seasoned clinical instructors. While experienced clinical instructors were relatively independent in their reasoning process, novice clinical instructors asked for validation and reassurance from the respective clinical coordinators. As theoretical sampling continues we expect to unearth additional patterns that will eventually lead to building a theory that explains the clinical reasoning processes that clinical instructors use to place students on learning contract.

Saturday **November 12, 2016** **8:30 a.m. – 9:10 a.m.** Lynx	**Adaptive Cycles of Teaching:** **An Integrative Framework for Teacher Preparation** **Diane Salmon, Ruth Freedman, Ayn Keneman, Xiuwen Wu,** **Madi Phillips, National Louis University** ***Collaborating Beyond the Single Classroom*** Effective teacher education demands a well-coordinated balance between theoretical and experiential learning. This presentation illustrates how three undergraduate teacher preparation programs collaborated to achieve this balance. The effort began with the elementary education program where a faculty team engaged in design research to develop and implement a practice-based learning model, the Adaptive Cycles of Teaching (ACT), to guide experiential learning across the program's instructional domains of literacy, math, science, and social studies. Building on success with a core set of literacy practices in elementary education, the team extended the ACT literacy instruction model to the early childhood and special education programs. In this presentation, we explain how the ACT model facilitated novice teacher learning; illustrate the opportunities teachers had to impact student learning; and evaluate the feedback novice teachers needed to strengthen their performance. We discuss both the benefits and ongoing challenges of designing practice-centered teacher education.
Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Aspen	**The Importance of Relationships in the Flipped Classroom** **Brett McCollum, Cassidy Fleming, Kara Plotnikoff,** **Darlene Skagen, Mount Royal University** ***Research on Teaching and Learning*** A variation of the flipped classroom that favored assigned readings over the use of pre-lecture videos (Bergmann and Sams, 2012) was initiated in 2015. The readings came from a free instructor-tailed open educational resource: ChemWiki. With the project now complete, the results are both reassuring and surprising. Participant interview comments, student reflections, and student evaluations of instruction were coded following the practice of grounded theory, an inductive set of procedures that allowed researchers to develop abstract categories from individual responses and focus groups (Glaser and Strauss, 1967; Glaser and Strauss, 2009). The reassuring aspects of the conclusions relate to particular features of my flipped approach: academic reading circles (ARCs) (Daniels, 2002; Shelton-Strong, 2012; Seburn, 2015), open-response multi-attempt (ORMA) group unit quizzes, and in-class peer leaders (Gosser and Roth, 1998; Gosser et al., 2001). The role that each of these flipped techniques played in student success will be discussed.

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Aspen	The surprising feature of the conclusions was the primary importance that learners placed on relationships within the flipped classroom. Analysis associated to this affective characteristic of flipped learning will be discussed in light of social-comparison concern (Festinger, 1954) and achievement goal theory (Dweck & Leggett, 1988; Pintrich et al., 2003). Finally, the impact that student perceptions of the flipped classroom should have on instructor practice will be discussed in relation to the experiences of Yestrebsky (2016) and Van Sickle (2016). The results can guide decisions made by instructors, departments, and institutions that endeavor to undertake flipped instruction methods.
Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Birch	**Learning That Lasts? What do Students in a First Year Elective Course Retain and Remember From It One Year Later?** **Alison Thomas, Douglas College** ***Research on Teaching and Learning*** In any introductory-level course it is to be expected that a significant proportion of students may never pursue that subject any further, in spite of our best efforts to engage them. In the case of the students to whom I teach introductory sociology, I have discovered that the majority take it as a required or recommended course for other programs to which they are already committed, and only a few go on to take any further courses in sociology. I have therefore had to come to terms with the fact that whatever these students learn about sociology is, one a ter a week semester is likely to be the only formal exposure to the subject most of them will experience. This prompted me to question what I could reasonably expect students to learn from this course that would make me feel that it was worthwhile for them, as part of their general education (cf. Howard and Zoeller, 2007), and - maybe equally important - make it motivating for me to teach them with continuing enthusiasm. The answer quickly became clear to me: sociology is capable of having a major transformative impact on students from the very start, when they encounter the 'sociological imagination', a threshold concept (Meyer and Land, 2003) that can radically alter their view of their everyday world. I thus embarked on a quest to discover how many of my students end the course not just with a passing grade, but with a level of learning deep enough that this way of looking at the world will stick with them, even well after the course is over. Over the past three years I have collected data from a total of 365 students in twelve first year sociology classes, using various Classroom Assessment Techniques (Angelo and Cross, 1993) to track their understanding of the 'sociological imagination' throughout the semester.

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| Saturday
November 12, 2016
9:15 a.m. – 9:55 a.m.
Birch | This research has revealed a number of interesting differences amongst students, both in how long it takes them to grasp this concept and in how well they are able to apply it by the end of the course, thereby demonstrating their ability to 'think like a sociologist' (cf. Pace and Middendorf, 2004). In a second phase of the research I have invited participating students to complete a follow up survey approximately one year after the end of the course, which assesses retention of this core concept both directly and by asking them what they believe they have learned. This survey, too, has shown me how variable the impact of their exposure to sociology has been – some of it encouraging and some rather disheartening! In my presentation I will report findings from both phases of my study and discuss how doing this research has re-energised my approach to this course and influenced my teaching practice. I will conclude by inviting audience members to share their own insights into how best to assess the longer-term impact on students of what they are learning in our classes. |
| Saturday
November 12, 2016
9:15 a.m. – 9:55 a.m.
Cedar | **Students as Teachers: Engagement of Student Researchers in Assessing the Effectives of the Case Study Teaching Method**

Kevin Bonney, New York University

Involving Undergraduate Students in SoTL

This session will engage participants in a discussion about the lessons learned from planning, executing, and reflecting upon a project designed to directly engage students in the scholarship of teaching and learning. The pedagogical research question addressed by this project was: Does the inclusion of case studies in an introductory biology course promote student engagement and learning? Undergraduate student researchers were involved in many aspects of the project, including synthesis of novel course materials, discussion of the research methods used to collect and analyze data, evaluation of relevant data, and the writing, editing, and submission of a manuscript for peer-review. Despite the potential of case studies to promote learning in science courses, little evidence had been previously published to demonstrate the effectiveness of case studies at promoting specific learning objectives of core biology courses. This study demonstrated that case study teaching increased performance on exam questions related to a range of core biological concepts, including osmosis and diffusion and DNA structure and replication. Case studies were also shown to increase student perceptions of learning gains associated with written and oral communication skills and the ability to form connections between scientific concepts and their real world applications.

The result of this study was the publication of two peer-reviewed manuscripts, as well as the initiation of two potentially publishable, student co-authored manuscripts that are still in progress. |

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Maple	**Understanding Mixed Methods as a Methodological Umbrella** **Erika Smith, Mount Royal University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** This presentation examines the many methodological considerations that must be considered when using a mixed methods approach to teaching and learning scholarship (SoTL). Using a case example of a recent Canadian research study employing an exploratory MMR design, the author explores issues of mixed methods research (MMR) as a methodological umbrella. As a case example illustrating methodological elements that must be addressed in MMR, the author will discuss how this mixed methods study used both qualitative and quantitative approaches to investigate undergraduate perceptions and uses of social media in their university learning. **Theoretical Framework** The theoretical framework informing the case study is social constructivist in nature. A constructivist approach is commonly aligned with exploratory MMR (Creswell & Plano Clark, 2011). Social constructivist research frameworks emphasize "meanings [which] are varied and multiple" (Creswell, 2014, p. 8), and therefore, the focus is on the participants' meanings, views, and perspectives. In conducting the two phases of this MMR study, Creswell and Plano Clark's (2011) description of multiple worldviews in mixed methods are relevant, wherein multiple paradigms (rather than a single worldview) are explicitly embraced as a part of a dialectical perspective (p. 45). **Methodology** Mixed methods research can be understood as a methodological umbrella where methods are to intentionally combined to best address the research questions (Creswell, 2014). This presentation will provide an overview of MMR methodologies (e.g., Morse & Niehaus, 2009; Creswell & Plano Clark, 2011), including the exploratory MMR design used to investigate social media in undergraduate learning in the case example. **Methods** Using MMR as a methodological umbrella, the case example illustrates how the study in question utilized a first phase qualitative component (interviews, N = 30 undergraduates), followed by a second phase quantitative component (online survey, N = 679 undergraduates). The first phase of the study employed semi-structured interviews, using generic qualitative strategies (Merriam, 2009) and constructivist grounded theory (Charmaz, 2014) techniques, including intensive interviewing, constant comparison methods, coding techniques, and member checks. The second phase survey used a cross-sectional

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Maple	design, providing an opportunity for macro-level analysis while comparing different groups (Cohen et al., 2011), employing descriptive statistics for data analysis. **Results and Implications** Both opportunities and challenges emerge when employing MMR as a methodological approach. Presenting opportunities, an intentional, systematic, and thoughtful integration of the methods which interfaced fully in the results narrative can provide rich insights to the phenomenon under investigation, ultimately addressing the research questions guiding the study, as Creswell (2014) maintains. However, in terms of challenges, several cautionary notes from the literature (e.g., Morse & Neihaus, 2009) should be heeded. Full implications and examples will be further outlined during the presentation. **Significance** Exploring a recent Canadian MMR study, this presentation will offer relevant insights into key consideration for designing mixed methods research, including several opportunities and challenges that MMR present for investigating teaching and learning. Participants will be encouraged to discuss and share ideas for innovating and mixing methodologies, while considering the enablements and constraints that these approaches bring.
Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Willow	**Professor, Peers, and Place –** **What Matters for Student Engagement?** **Victoria Holec, Richelle Marynowski** **University of Lethbridge** ***Research on Teaching and Learning*** This study proposes a new angle for a solution to an age-old question: How do we foster student engagement on a daily basis in our postsecondary classroom? Student engagement has been studied over many decades through a variety of lenses. In studying student engagement, one needs to operationalize its construct. Our approach to defining student engagement aligned with a more recent framework that accounts for behavioural, cognitive, and psychosocial components (Fredricks et al., 2004; Kuh, 2009). We constructed a novel survey instrument which was thematically constructed from the review of the literature on student engagement. Items were grouped according to the three areas described, i.e., behavioural (eight items), psychosocial (seven items), and cognitive (six items) indicators of student engagement. Our research question was: What is the contribution of the learning environment (i.e., classroom) to student engagement?

| **Saturday**
November 12, 2016
9:15 a.m. – 9:55 a.m.
Willow | As part of a larger and ongoing learning environment evaluation study, we had the unique opportunity to compare the effects of the learning environment on student engagement in two 3rd-year Education courses taught by the same instructor in the Spring semester of 2016. Notably, students in one room were a subset of students in the other room, thus making this a powerful quasi-experimental design. The two learning environments studied were (1) a traditional, collaborative classroom originally used as a science and mathematics teaching laboratory, and (2) a newly constructed, technology-enabled active learning classroom modelled after SCALE-UP (student-centered active learning environment with upside-down pedagogies; Beichner et al., 2000). This approach has been successful in improving student attitudes, increasing student attendance, and elevating student performance (Beichner 2008). However, the effects of the SCALE-UP classroom environment itself have not been studied with respect to student engagement.

Findings revealed that student engagement was consistently high for behavioural, cognitive, and psychosocial factors across both the traditional and the SCALE-UP classrooms. However, we found that compared to the traditional classroom, the SCALE-UP classroom contributed significantly more to students' encouragement to participate, to collaborate, their sense of belonging to the class, and the creation of a positive atmosphere in class. Importantly, even though the instructor was rated the highest contributing factor to these variables, the rating did not differ between the two rooms. Further, combining the scores of instructor, classmate, and classroom ratings accounted for approximately 50% of the variance in the students' self-rating of engagement. Upon closer examination, we found that in the SCALE-UP room, the classroom contributed significantly to this score, whereas the room had no contribution to the self-rating score of engagement in the traditional environment.

These findings imply that the learning environment contributes to student engagement above and beyond the anticipated contributions of the instructor and the classmates. This highlights an important consideration in both new construction and renovation of learning environments, but also has powerful implications for student engagement on an institutional level, which is often concerned with retention and recruitment of the student community. |

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Black Bear	**Capstone Experience in a First-Year Integrated Science Course: A Case Study** **Michelle Spila, Glen Loppnow, Kari Rasmussen** **Christie McDermott, University of Alberta** ***Research on Teaching and Learning*** This case study presents the research process and assessment framework that was developed for a capstone experience in a first-year, two-term, integrated science course. This independent research project allowed students to explore their own interests, produce creative products, and engage in meaningful learning experiences. It was designed to emphasize and refine skills such as information literacy, critical thinking, scientific writing, poster creation, and public speaking. Few first-year students have an opportunity to participate in learning experiences that instill in them the ability to think and act creatively, which is required for success in today's higher education system. A methodical information-literacy approach was explored to help develop students' abilities to "do research" – to read and comprehend complex materials, think analytically, write scientifically, and communicate effectively. This approach was accompanied by assessment strategies that focused on the process of learning. They also involved the students in the assessment process and allowed them to express their learning in a product that was meaningful to them. The preliminary results of this study summarize both the instructor's and students' perceptions of the effectiveness of the project in facilitating learning and creativity. As the main guide and mentor, the instructor observed key challenges that students faced as they engaged in the research project. They experienced difficulty in exploring for a topic, writing a research question, finding and using appropriate sources, and focusing their writing. However, students did write at an appropriate level and tone, create interesting and well-organized posters, and maintain professional interactions with their colleagues and the university community on presentation day. In survey and interview responses, the capstone project was consistently perceived by students as one of the most interesting aspects of the course. It was also rated as highly effective for facilitating the development of certain research skills and enhancing their overall interest in applying science, utilizing scientific literature, and participating in future research courses and projects. Observations from this study will be used to focus the design efforts for the next generation of capstone projects in future integrated and interdisciplinary science courses and inform the next phase of research analysis. We are interested in two research approaches in particular: 1) using grounded theory to let the students' words, ideas, and learning experiences illuminate a new theory about best research process strategies, and 2) taking a mixed method approach in the assessment of student learning in a hybrid project-based learning and capstone seminar course.

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Lynx	**Using Decoding the Disciplines to Support Curricular Change** **Michelle Yeo, Mark Lafave, Dennis Valdez, Khatija Westbrook, Jenelle MacAllister, Breda Eubank, Mount Royal University** ***Research on Teaching and Learning*** This presentation will describe how Decoding the Disciplines was employed to support a curricular change process within a professional program – in this case, Athletic Therapy (AT). We will explore how the Decoding process can help to make design decisions based on the nuanced insights gained about student learning. The AT Program at our university is transitioning to a competency-based model using clinical presentations. This approach uses mock simulations and clinical cases to both teach and assess students' growing competence in the field (Authors-1, in press). Two previous stages to this process were 1) content validation of the clinical presentations (Authors-1, in press), and 2) a qualitative self-study by the researchers on the curricular change process. The self-study demonstrated the importance of developing a community of practice as a key aspect of programmatic change (Authors-2, in press). The PI, a faculty developer working with the AT team, introduced Decoding the Disciplines as a means to delve more deeply into faculty members' conception of their field. Decoding the Disciplines, pioneered by David Pace and Joan Middendorf, is a process where disciplinary experts identify bottlenecks, or junctures at which "the learning of a significant number of students is interrupted" (Anderson, 1996, cited by Middendorf & Pace, 2004, p. 4). Next, the instructors participate in a Decoding interview, where two trained interviewers question and assist in first elucidating the bottleneck and second, to reconstruct how they themselves approach similar problems (Middendorf & Pace, 2004, p. 5). AT team members each chose a different bottleneck arising from their teaching experiences with students. Cognitively based, field based, and integrative bottlenecks were all represented. This range of bottlenecks is common to professional education, where theory and practice must be continuously integrated in the learning of the student. The interviews were conducted by the PI and another faculty member trained in the Decoding process. The interviewees acted as co-researchers, contributing to the analysis of the interviews. Important insights surfaced regarding individual classroom practice as well as to program design, delivery, and structure. Themes that emerged are as follows: 1) lifting the veil (or, when the problem is not the problem); 2) the emotional component of learning; 3) unpacking professional intuition in Athletic Therapy; and finally, 4) disrupting practice in the field. These themes suggest implications for progamand curriculum design, and additionally offer a practical example of how Decoding work can impact program design and delivery.

Saturday **November 12, 2016** **9:15 a.m. – 9:55 a.m.** Lynx	Finally, we noticed that working on a group of transcripts as a team yielded deeper understandings than by participating in an individual interview alone. Indeed, the AT team found that the most profound insights came from considering one another's transcripts, making this process something to consider for those working with the Decoding the Disciplines approach.
Saturday **November 12, 2016** **10:00 a.m. – 10:30 a.m.** Alpine Meadows	**Coffee**
Saturday **November 12, 2016** **10:35 a.m. – 11:30 a.m.** Castle/Assiniboine	**Plenary** **Resistance is Futile: The Oncoming OER Revolution and How LibreTexts Can Help You Navigate It** **Delmar Larsen, Ph.D., University of California Davis** "It is becoming ever clearer that new and innovative educational efforts are required to: facilitate the greater creativity, flexibility, and increased learning capability needed for post-secondary education in the future. Unfortunately, rapidly rising undergraduate fees and textbook costs are serious factors impeding access to higher education for many students; many of which do not have the funds to benefits from these new advances that are often commercialized. Growing textbook costs are a serious barrier for under-served, at-risk students and open-access resources (OER) textbooks are a growing approach to address these issue. The Libretexts project (http://LibreTexts.org) is designed as a collaborative OER effort that enables dissemination and evaluation of new education developments and approaches, with an emphasis on data-driven assessment of student learning and performance. Since its inception eight years ago, the Libretexts has been exponentially growing and currently reaches over 60 million students per year and is the most visited chemistry website in the world with traffic extending over both the United State and to every nation of the world. The success of the LibreTexts project relies on the construction of a large collaborative team extending across multiple campuses to reach students at very different levels of education, including community colleges, four year colleges, and research universities."
Saturday **November 12, 2016** **11:30 a.m. – 12:30 p.m.** Alpine Meadows and Castle/Assiniboine	**Lunch**

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Aspen	**"I Wish I'd Known What I Know Now":** **Graduate Students' Experiences with Academic Reading** **Rosemary Green, Shenandoah University** **Research on Teaching and Learning** Graduate reading is an elusive set of practices that are conducted in private; reading practices among graduate students remain comparatively invisible and unexamined. Yet, graduate students must become purposeful, critical, and proficient readers. They must master disciplinary discourse, delivered in increasing amounts and textual complexity throughout the graduate curriculum. Despite the fundamental role of reading, the literature on and interest in graduate reading are limited; we know little about how graduate students develop and understand their own reading practices. Studies that examine college students' reading practices primarily emphasize reading strategies, rather than students' experiences of and attitudes toward reading academically. Seldom do we attempt to understand the affective dimensions of graduate-level reading. In this session, I will present the insights I have gained by asking masters and doctoral students about their reading experiences and practices. I will outline findings from my small-scale study with music students enrolled in graduate research courses. Music students read multiple academic genres: music theory, philosophy and aesthetics, musicology, historical studies, as well as evidence-based and scientific studies. They draw on many scholarly forms: monographs, anthologies, dissertations, conference papers, and journal articles. They realize that academic categories differ by purpose; for example, they easily identify the rhetoric of music theory and music history. However, they find discursive forms such as expository prose, reviews of research, empirical studies, and combined genres more difficult to categorize and interpret. Graduate music studies encompass a complex variety of academic genres, which students are not altogether prepared to negotiate. In higher education and elsewhere, academic reading and writing are compartmentalized and treated as distinct literacies. Of the two, writing is the more privileged activity. Direct instruction and tutoring are usually directed toward improving students' academic writing, rather than reading. Reading proficiency of individuals who have been accepted into graduate school is assumed. Those of us who have been reading for a long time unconsciously deploy sophisticated reading practices, such as synthesis. Students, however, report that they must acquire highly specialized vocabulary and disciplinary-specific concepts that we take for granted. Many times, graduate students must read unfamiliar, complex language in order to develop the discursive practices of the academy and their research fields. Seemingly, they must learn these practices and secondary discourses on their own.

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Aspen	Rather than attend to instructional strategies and measurable reading skills, this study explores graduate music students' experiences and individual practices. They are asked questions such as, "How has reading in order to write something affected your reading style?" and "How do you feel about the types and amounts of reading you're required to do in graduate school?" Participants' voices—written, spoken, and implicit—are sought and included here. The aim of this presentation is to make visible graduate reading practices and experiences, in particular those of masters and doctoral students of music who must confront multiple forms of rhetoric in the course of their graduate studies. While the disciplinary focus of this inquiry is music, the work here has implications for other academic disciplines.
Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Birch	**Researching 'What Works' – Analyzing First Year Concept Maps for Evidence of Student Learning** **Michelle Yeo, Sarah Hewitt, Mount Royal University** **Methodologies and Innovative Approaches to Data Gathering and Analysis** This SoTL study, in progress, is attempting to measure the effect of a modified flipped classroom model implemented in a first year anatomy and physiology course for nursing students. Flipped classrooms are receiving increased attention in science education (Bishop and Verleager, 2013) as a potentially effective alternative method to the didactic teaching approach taken historically, which can lead to passive learning on the part of students. This first year anatomy and physiology course has traditionally had one of the highest failure and withdrawal rates at the university. It is an extremely content heavy course, more typically taught with a lecture/exam-based model. The biggest change in one of the co-researcher's section involved the development of skeleton concept maps. Von Der Heidt (2015) argues that concept mapping can powerfully contribute to deep learning for students. For each chapter, the students received a concept map that contained the basic concepts and layout of the chapter material. These maps allowed them to condense all of the information from a single body system onto one large map that was laid out to draw their attention to the connections between pieces of information. Outside of class time, the students filled these in and received completion marks for them. While the flipped model incorporated multiple other elements such as short online video lectures, weekly quizzes, and group work, the concept maps are the backbone of the approach. In conducting our study, we have encountered a challenge in terms of being able to effectively assess whether this approach is really working. 'What works' is an important type of SoTL study (Hutchings, 2000), but in practice, it is often difficult to demonstrate whether one pedagogical

	approach is truly better than another. Student performance on exams, and student testimonials in interviews are two commonly employed methods. However these approaches are problematic, because student marks on exams are only a proxy for learning, and testimonial evidence measures student perception more than it does learning. As part of our data collection, we collected and copied full course sets of concept maps for participating students, and have looked to the literature for possible means of assessing the learning represented (e.g. Von Der Heidt, 2015). We have developed a rubric to analyze the sophistication of these artifacts of learning, which we will present as part of this session. We further attempt to correlate these artifacts with student performance on quizzes and exams, and consider them in relation to each student's interview. We are exploring further possibilities for evidence of learning in terms of long term persistence of study habits (i.e. we have early indications that some students are continuing the practice of concept mapping on their own in subsequent courses) and exploring means to assess long term retention and application of knowledge. This presentation will explore the methodological challenges and provisional solutions for data analysis we are working with for this SoTL study.
	Exploring Undergraduate Perceptions of Learning Resources: Insights from Mount Royal's Assessment Seminar **Erika Smith, Cari Merkley, David Cloutier** **Mount Royal University** **Research on Teaching and Learning** **Introduction** Inspired by the work of Richard J. Light (2001) and a similar project at Harvard University as outlined in the book Making the Most of College, Mount Royal University (MRU)'s Assessment Seminar aimed at enriching the undergraduate student experience through a campus-wide research project spanning five years (2009-2014). Over these five rounds of data collection and analysis, MRU's Assessment Seminar captured rich qualitative descriptions of the undergraduate experience through 408 targeted student interviews. In their analysis of this qualitative data, other Assessment Seminar scholars identified student descriptions of learning resources (such as textbooks) as an area in need of further study. Furthermore, there are growing calls for higher education communities to critically consider the financial and pedagogical impacts of today's learning resource models (Hinton, 2016), including how these impacts affect the undergraduate experience from the students' point of view. Delving further into these issues, the authors will present

	preliminary findings regarding student perceptions of course learning resources such as textbooks, including their descriptions how these resources impact the undergraduate experience. Insights into and implications for traditional (e.g., print) and new (e.g., open, online) learning resource models will be shared. **Research Question and Framework** The research question guiding this study is as follows: what are undergraduate students' perceptions of university learning resources, such as textbooks? As a theoretical framing, this study takes a social constructivist approach. Social constructivist research frameworks emphasize the multiplicity of meaning, and as Creswell (2014) notes, focus on the participants' perspectives and views. **Data Sources and Analysis** Research ethics board approval has been obtained for secondary analysis of all five rounds of Assessment Seminar interview data. In alignment with the research framework, analysis of interview transcripts is founded upon generic qualitative strategies (Merriam, 2009) and constructivist grounded theory techniques (Charmaz, 2014), which inform the qualitative analysis methods employed. Specifically, researchers utilize NVivo software to assist with the searching, flagging, and subsequent coding process, and to conduct keyword searches for terms related to learning resources (e.g., textbook, book, readings, etc.). Within the interviews, student descriptions related to key terms are identified, coded, and then analyzed for emerging themes and categories. **Conclusion** Addressing growing calls for higher education communities to critically consider the financial and pedagogical impacts of today's learning resource models, this study examines undergraduate students' perceptions of university learning resources, such as textbooks. Implications for the undergraduate experience, from the students' point of view, will be shared. Discussion will consider the ways in which traditional (e.g., print) and new (e.g., open, online) learning resource models bring opportunities or challenges for the undergraduate experience.
	Will Data Really Change Everything? How the Promise (and Potential Perils) of Learning Analytics Could Affect SoTL? **Jason Openo, Medicine Hat College** **Methodologies and Innovative Approaches to Data Gathering and Analysis** Will data really change everything? And will those changes be positive? Learning analytics is now squarely in the hype cycle's peak of inflated expectations, and it may be some time before learning analytics reaches the plateau of productivity. This session covers a young ▶

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Maple	doctoral student's twisted fascination with learning analytics, his first attempts to make meaning of them in a course taught at MacEwan University, and it connects his experience to recent studies highlighting the disconnection between learning analytics and instructional conditions. It concludes with an audience discussion about what opportunities learning analytics may provide the SoTL. Social learning analytics "make use of data generated by learners' online activity in order to identify behaviours and patterns within the learning environment to signify effective process. The intention is to make these visible to learners, to learning groups and to teachers, together with recommendations that spark and support learning" (Shum & Ferguson, 2012, p. 10). In this regard, the aim of learning analytics aligns perfectly with the goals of SoTL Gasevic, Dawson, Rogers and Gasevic (2016) "posit that learning analytics must account for instructional conditions in order to make any meaningful interpretation of success prediction," and they suggest there is a "need to consider instructional conditions in order to increase the validity of learning analytics findings." They argue strongly that "learning analytics cannot be decoupled from actual, situated learning and teaching practice" without producing unintended consequences by adopting "generalized models of student success." Recent research (Whitmer, 2016) also suggests that looking at student effort in itself, without considering the course context does not lead to meaningful learning outcomes. In Whitmer's recent study, he also confirms the need to consider the importance of instructional conditions to inform learning analytics, and Whitmer's next steps include analyzing how Blackboard Learn is being used, which tools are being used, how often, and what common constellations of tools are being used that have a positive impact on learning. Using students' trace data also creates new ethical dilemmas, with some suggesting that "machine ethics, including learning analytics, stand on the cusp of moral nihilism" (Willis, 2014) because the conduct of learning time to act within frameworks of human autonomy and agency" to help redefine what is learned from past academic failures and "responsibly innovate knowing that competing values often pervade technological innovations." This session invites attendees to consider what it means to "responsibly innovate" with learning analytics in SoTL projects in order to discuss how learning analytics can work in the best interests of learners.

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Pine	**Making Connections: Designing an Integrated Approach to First-Year Science Education** **Lauren Grant, York University** ***Collaborating Beyond the Single Classroom*** First-year students in the sciences traditionally enroll in science and mathematics courses that are delivered independently of one another with varying pedagogical approaches. This may limit students' abilities to make meaningful connections across disciplines, and may impact their attitudes toward different disciplines by reinforcing disciplinary siloes at an early stage in their academic careers. This led us to question whether taking an integrated curricular approach would benefit student learning and attitudes compared to the traditional independent approach. To answer this question, we first needed to create an integrated science curriculum. At York University, our specific design challenge was to integrate first-year topics in biology, chemistry, physics, and mathematics in both the fall and winter term such that the disciplinary topics were taught in a more unified manner using evidence-based pedagogies. Our integrated curriculum was constructed by articulating interdisciplinary and disciplinary learning outcomes, and making thematic and natural connections between disciplinary topics that linked them together. Team-based teaching and learning will be used to deliver the integrated curriculum, beginning in September 2016, to a small cohort of first-year students ($n < 50$) (Michaelson, Bauman-Knight, & Fink, 2003). To evaluate our integrated approach, we will be measuring its impact on student learning and attitudes, as well as faculty teaching perspectives. To measure student learning, students enrolled in the integrated and traditional science courses will complete pre/post validated disciplinary concept inventories (e.g. Force Concept Inventory) at the beginning and end of each term. Student attitudes will be assessed using the Motivated Strategies for Learning questionnaire (Pintrich & De Groot, 1990), and Colorado Learning Attitudes about Science surveys (Adams, Perkins, Podolefsky, Dubson, Finkelstein, & Weiman, 2006). Faculty teaching perspectives will be measured using the Teaching Perspectives Inventory (Pratt, Collins, & Selinger, 2001), which will be administered at the beginning and end of each term to faculty teaching the traditional and integrated science courses. Our approach contributes to SoTL by exploring the impact of an integrated curricular approach on student learning and attitudes, and faculty teaching perspectives. It also extends team-based teaching and learning to an interdisciplinary, multi-course context, and identifies practical curricular integration points including learning outcomes, curricular themes, and team-based pedagogies. In this session, we will describe our integrated curricular design approach using practical examples of how this approach has been implemented at York University, and present some preliminary data to demonstrate the possibility of collaborating beyond the single classroom in our efforts to help students learn in and across science disciplines.

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Willow	**Learning from Decoding Across Disciplines and Within Communities of Practice** **Janice Miller-Young, Jennifer Boman** **Mount Royal University** ***Research on Teaching and Learning*** Decoding the Disciplines is a process designed to help instructors articulate their thinking about difficult, or "bottleneck" concepts, and to find new ways to help students learn these concepts (Pace & Middendorf, 2004). After identifying a bottleneck, an interview is conducted to help the instructor better articulate their thinking. Most Decoding work has focused on disciplinary concepts, with less attention given to the commonalities in themes that emerge across groups of experts. By describing and synthesizing the various ways in which the Decoding the Disciplines framework has been explored and used to inform teaching, curriculum, and pedagogical research initiatives at our university, we will demonstrate how there is much to be learned by applying the Decoding framework across disciplines and within communities of practice. We conducted Decoding interviews about bottlenecks which faculty identified. Seven faculty members from four diverse disciplines, and with teaching experience ranging from 10 to 30 years, participated. Disciplines included nursing, engineering, journalism and theatre, and bottlenecks ranged from cognitive (how engineering students apply Newton's second law) to more epistemological (journalism students' beliefs in the necessity of objectivity in journalism) and ontological (being ethical in nursing practice). An inductive analysis of these interviews uncovered seven common themes related to experts' ways of thinking, practicing and being. For example, expert approaches required not only the ability to perform cognitive tasks such as deconstructing problems and recognizing patterns, but also the confidence to take agency in pursuing knowledge and to take time to explore different perspectives before coming to a decision. Importantly, these expert ways of thinking, being, and practicing were employed even when thinking through concepts which our interviewees initially thought were relatively 'simple', cognitive bottlenecks. Further, we found the Decoding interview, even when the interviewee is not involved in a research project, to be a powerful tool to help faculty become more conscious of, and thus able to critically reflect on, an aspect of their practice (Haney 2015). Based on this work as well as the work of other Decoding communities at Mount Royal (cited below), we suggest that the benefits of Decoding can be realized at an individual teacher level as well as across

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Willow	programs and curricula. We raise the following implications for teaching and curriculum development: • Teacher reflection - Looking at common themes in teachers' tacit thinking can help provide a starting point for understanding one's own hidden assumptions; further, participating in a Decoding interview can be a powerful way to generate critical reflection on practice; • Supportive communities - While others have emphasized the importance of reflecting on one's own Decoding efforts within a supportive community, reflecting on others' interviews within a community of practice can build community, challenge our assumptions, and generate new insights (Miller-Young et al., 2015); • Curriculum development – expert ways of thinking, practicing, and being can inform curriculum planning, prompting careful consideration of whether courses decontextualize knowledge from the practices to which it relates, and prioritize content and 'efficiency of transmission' over deep understanding (Yeo et al., accepted).
Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Black Bear	**An Integrative Approach Using Case Based Learning** **Lisa Semple, Genevieve Currie** **Mount Royal University** **Research on Teaching and Learning** Background: A Bachelor of Nursing program includes five specialty population areas, which students complete in 6 week block courses. Due to the fast paced nature of these courses, the classes are intense with limited time for reflection and integration, and require self-directed learning. Students report, anecdotally, that they treat each of the courses in isolation as a series of silos to work through, instead of building blocks for knowledge and understanding. To address this pedagogical challenge, we designed a learning activity to facilitate integration of concepts through active student engagement and self-directed learning. Students from two distinct specialty courses, attend a class together, where a complex integrative case study is used as a teaching strategy. This case based learning activity requires students to use knowledge and theory from previous courses as well as content from current course work to develop a plan of care for a family with complex needs. Case based learning is recognized as an effective approach for engaging students. Using case studies helps students to integrate theory into nursing practice because the learning activity is seen as relevant, practical and meaningful for their own practice. Case studies in the classroom increase capacity for critical thinking, leadership, and working within a team which is necessary for nursing practice.

Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Black Bear	Areas for further study include the effect of learning, critical thinking skills, and using strategies that integrate learning from more than one nursing course and semester within a program (Crookes, Crookes, & Walsh, 2013; Forsgren, Christensen,& Hedemalm, 2014; Ling-Na, Bo, Ying-ging, Shoa-yu, & Hui-Ming, 2014).
	Design: This scholarship of teaching and learning project, focused the learning that occurs for nursing students when engaged in a case based activity that integrates curriculum concepts. Students (n=200) worked in small groups simulating a "team conference." The scenario unfolded in response to questions considered by the students. Through this dynamic process, students gathered assessment data based on critical thinking. The "plan of care" potentially varied from group to group. Peer teaching and teamwork, were necessary ingredients for success.
	The case study is a scheduled class activity. Participation in the research was voluntary, and students who provided feedback remained anonymous. One minute papers were used to collect student responses (n=127) Open ended questions explored the impact the activity had on learning as well as the application of concepts or theories.
	Results/ Discussion: Feedback was analyzed for themes. Students acknowledged the importance of integrating several curricular concepts including health promotion, family centered care, growth and development, pharmacology, and pathophysiology. Collaboration and working as a team with intradisciplinary partners was identified as critical in understanding the complex needs of families.
	Despite challenges related to class size, the requirement for non-fixed seating and a small number of students who, described their dislike for group work, this integrative case activity generated meaningful discussion, deeper learning, new perspectives, and gave evidence that students use past learning to build upon new learning, particularly within a collaborative approach. An interprofessional dimension is anticipated in future applications.
Saturday **November 12, 2016** **12:35 p.m. – 1:15 p.m.** Lynx	**Reflecting on 6 Iterations of a Gamified Course Design** **Katrin Becker, Mount Royal University** **Research on Teaching and Learning** 'Gamification' - the use of game elements in non-game contexts - has rapidly become one of the current hottest trends. This presentation presents an overview of what gamification is and isn't, and reports on the author's experiences using this approach in a graduate level education class as well as four iterations of a freshman introduction to computers course. This design organizes all student work into various quests worth from 10 to 250 'experience points' (XP), most of which have no set deadlines. While the quests are effectively equivalent in

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grade weight to the assignments of more traditional designs, students in this gamified course start off with a score of zero (0) and every quest they submit contributes to their final grade cumulatively. A final score of 1000 is equivalent to 100%, but the total number of possible XP in the current iteration is 1559, which means that students have a great deal of choice over what they do to demonstrate mastery. All quests were made available to students at the beginning of term; some could be repeated for XP and included a variety of 'guild' (group) quests and 'solo' quests; and many quests could be repeated to earn additional XP. The presentation will provide some background on gamification, detail the course structure, highlight ongoing successes and failures, and conclude with strategies for incorporating meaningful gamification in other courses.

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Encoding the Disciplines:
Students Developing Disciplinary Identities

Margy MacMillan, Karen Manarin
Mount Royal University

Research on Teaching and Learning

Undergraduate students develop disciplinary identities through their engagement with content, research projects and faculty (See, for example, Donald, 2002; Dressen-Hammouda, 2008; Simmons, 2007; Hunter, Laursen, & Seymour 2007) This "becoming" occasionally manifests explicitly in their personal narratives, but more often appears subtly in their vocabulary, the projects they choose to pursue, and their confidence in speaking about and for their discipline. A series of interviews at an undergraduate university captured the experience of over 300 students. Our study takes a closer look at the stories told by 96 senior students to highlight pathways and barriers to entering the disciplines.

The presenters used emergent coding to identify themes in the students' stories that related to their development of disciplinary identities. These themes resolved into two related clusters. The first is identification with the discipline, seen both in explicit statements and in use of specific language, recognition of disciplinary sources of knowledge, and development of research projects that fit within disciplinary norms. The second cluster is identification as a researcher or scholar more generally; it is not necessarily tied to a specific discipline. In this cluster, students position themselves as people who know how to find things out and as people who have agency over their learning.

These findings have implications for undergraduate education. First, faculty often seek to help undergraduate students succeed within a particular disciplinary framework. For example, the Decoding the Disciplines framework (Middendorf & Pace, 2004) asks faculty to think ▶

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Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Aspen	their way back to the undergraduate level; here we have stories from undergraduates to add to our understanding of their experience of the disciplines. More broadly, however, these findings support what Gurung, Chick and Haynie (2009) describe as a meta-disciplinary awareness and link to the broader goals of liberal arts and science education. In considering the impact of our findings, we will highlight some of the characteristics, opportunities, and interactions that appear to facilitate the development of disciplinary identity, and those that may be hindrances. We conclude the presentation by asking participants to consider how these students' stories might reflect student narratives of learning in their own contexts. What markers of disciplinary identity can we foster throughout the undergraduate experience? What elements do we provide in earlier years to enable students to construct disciplinary identities? Participants will collaboratively work on worksheets as prompts for discussion.
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Birch	**On the Incremental Realization of Learning Outcomes** **Charles Morrison, Wilfred Laurier University** ***Research on Teaching and Learning*** It is common knowledge that learning outcomes should use verbs that define measurable results. And, it is easy and, frankly, logical to assume that the assessment of learning outcomes happens primarily at the end of the course: after all, we frequently preface learning outcomes by saying something like "By the end of this course, students should be able to . . ." Outcomes, by definition, are endpoints, goals, results; in short they are measured as 'having been accomplished'. Our emphasis on outcomes may result in our jumping directly from what we intend the course to do (course objectives) to what we want students to be able to do by the end of the course (learning outcomes), without spending too much time, if any, on the details of the learning activities that will be used to assist students in achieving their ultimate learning outcomes. We usually include in our assessment strategies a mid-term exam and/or a few in-course assignments, but the bulk of the proof of achieving the outcomes rests on some form of end-of-course assessment (hence the prevalence of the "Will-this-be-on-the-final" syndrome). If course objectives are the point of departure and learning outcomes the goal or destination, where is there any mention of the journey? How, where, and when are students informed of the importance of the activities on the pathway from objectives to outcomes, and that the end-of-course outcomes do not just happen, but are, rather, accomplished incrementally through a combination of various ongoing and systematic activities, processes and applications? And how do we stress that,

Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Birch	just because those ongoing activities will not necessarily be assessed formally (i.e., for grades), does not mean they are unnecessary for achieving the stated learning outcomes? In his paper "From 'Sage on the Stage' to 'Guide on the Side': A Good Start," Charles Morrison (2014) argues that information and knowledge are often conflated but are not in fact necessarily synonymous. Moreover, he states, in any truly robust education system, information must be transformed into knowledge and that knowledge is in a sense created from information through varied, intentional, and methodical processes. As it turns out, those transformational processes—which Morrison refers to as 'I2K' processes—are the very stuff of the journey between course objectives and learning outcomes and thus are worthy of careful consideration and clear articulation in course syllabi. This paper summarizes the revision of a first-year music theory course which, in the process of having the instructor switch roles from 'sage' to 'guide', sees the students involved more routinely in active-learning processes that represent Morrison's 'I2K' transformations. The focus of the course revision and the emphasis in this paper are the instructor-guided active-learning (I2K) processes, defined in terms of the expansion of Bloom's taxonomy of educational objectives (Anderson et. al, 2001), and expressed as 'incremental' learning outcomes that show the development of habits of mind and models of practice necessary for students to fully realize the course's broader learning outcomes.
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Cedar	**Empowering ELLs through Discipline-based Accelerated Vocabulary Expansion: Sharing the University of Toronto Scarborough Experience** **Elaine Khoo, University of Toronto Scarborough** ***Research on Teaching and Learning*** The significant number of English Language Learners (ELLs) in post-secondary institutions presents both opportunities and challenges. As instructors, we often question how we can help ELLs understand and use, write and acquire the skills of disciplinary thinking. Students are often expected to show critical thinking skills and disciplinary ways of analysis in their assignments but the bottleneck that many students face is the language barrier. It is essential to establish the scaffolding mechanism that enables students to develop disciplinary knowledge and be empowered agents in contributing to the diversity of perspectives in their courses and on various aspects of the academic community. This interactive session will initially present an overview of the academic vocabulary demands drawn from research (e.g. Nation, 2006, Simpson-Vlach and Ellis, 2012) that provides a key to creating a sustainable strategy to expedite vocabulary expansion and familiarity with academic language for the respective disciplines. To address

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Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Cedar	the issue of vocabulary load and learning opportunities in course texts (Nation & Webb, 2011), students use Vocabulary Expansion Accelerator (VEA), a new web-based tool that is self-customizable to individual needs (in undergraduate and graduate programs) across different disciplines, year of study and academic English proficiency levels. This session reports on part of a larger study, and will focus on addressing the following research questions based on quantitative and qualitative data from pre- and post-intervention writing samples, tests, research journals and vocabulary analysis of course reading: (a) How did the use of VEA change students' perceived difficulty levels of reading course texts? (b) What level of vocabulary gains under the VEA intervention were produced by students in one year? (c) What can be learned from journal reflections regarding educational self efficacy that can be applied to supporting language learners in different teaching contexts? (d) What aspects of academic texts enables faculty in different disciplines to shape the accelerated vocabulary expansion trajectory of their students? Participants will be invited to explore the dynamics involved in VEA usage that changes the power differential for ELLs and the impact for coping with disciplinary learning. With sustainability a key consideration in supporting the large numbers of ELLs on many campuses, pedagogical implications for changing the paradigm of support for ELLs to one that empowers learner-driven personalized language acquisition will be discussed.
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Maple	**Methodolatry and Knowledge Generation in SOTL Research** **Mohamed El-Hussein, Andrea Kennedy, Brent Oliver, Olive Fast Mount Royal University** ***Methodologies and Innovative Approaches to Data Gathering and Analysis*** Method-fetishism also known as methodolatry has dominated and overtaken the discourse in nursing and social work related to research, teaching, and learning. If the worshipping of idols is 'idolatry', the worshipping of methods might be referred to as 'methodolatry'. (Brooks, 2013, p. 51). Francis (1969) first argued that considering "method" as the essence of science was generating a sense of methodolatry within the field of research. This phenomenon has been described in the subsequent literature both as an attachment and devotion to research method, and as a rigid concern with methodology to the exclusion of other considerations (Janesick, 1994; Chamberlain, 2000). This dominant approach to research and scholarship has imposed conformity within training programs and academic life, and has restricted the space for creativity within methodological discussions (Emke, 1996). Several authors have expressed concern that methodolatry is overtaking the discourse in education and human services and that the time has come ▶

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Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Maple	to think more creatively about how we plan and conduct research (Brooks, 2013; Chamberlain 2000). Within academia, we have a responsibility to broaden perspectives, add to the body of knowledge, and create innovative practices. As scholars, we often lose track of this purpose and get stuck in belaboring mechanistic aspects of our method due to preoccupations with the purity of our approach. Religious attachment to a single method strangulates creativity and smothers knowledge generation and collaboration. Devotion to method creates tension among scholars, forcing one to think "inside the box" which inherently deprives our respect for each other and creates frustration. It is not our intention to undermine the value of the method. However, scholars are cautioned that the method is in service as the means to an end, and not the end unto itself. Ignoring this purpose will sever conceptual links to a shared reality, and threatens our moral obligations as scholars. We argue against the rigidity of following limited inquiry as it is contrary to the spirit of creativity underlying research, teaching and learning. We espouse that method-fetishism hinders us in the long run for divergent, innovative thinking that is aligned with our academic and moral purpose as academics.
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Pine	**Interdisciplinary Approach to Writing Life Story** **Krystyna Laycraft, KL Emotional Consulting** ***Collaborating Beyond the Single Classroom*** "To be able to listen to oneself is a prerequisite for the ability to listen to others.' -Erich Fromm A workshop "Writing Your Own Life Story" has been designed as an interdisciplinary approach in order to adequately address the complexity of participants' lives. Participants examine their lives by taking insights from a variety of relevant disciplines such as linguistics, psychology, theory of emotions, theory of values, philosophy, and neuroscience. Then they integrate these insights into complex and coherent images of the selves and their lives. The workshop contains six meetings with two - week breaks between them. During meetings, participants become the actors when they tell or read own stories and the receivers and interpreters when hear stories of others. These activities allow them to build a connection between themselves by identifying parallels of their situations, conditions, and experiences. During two-week breaks, participants are encouraged to reflect on the deep level of experiences such as their feelings, thoughts, memories, beliefs, choices, decisions, spirituality, and creativity and then write about these experiences.

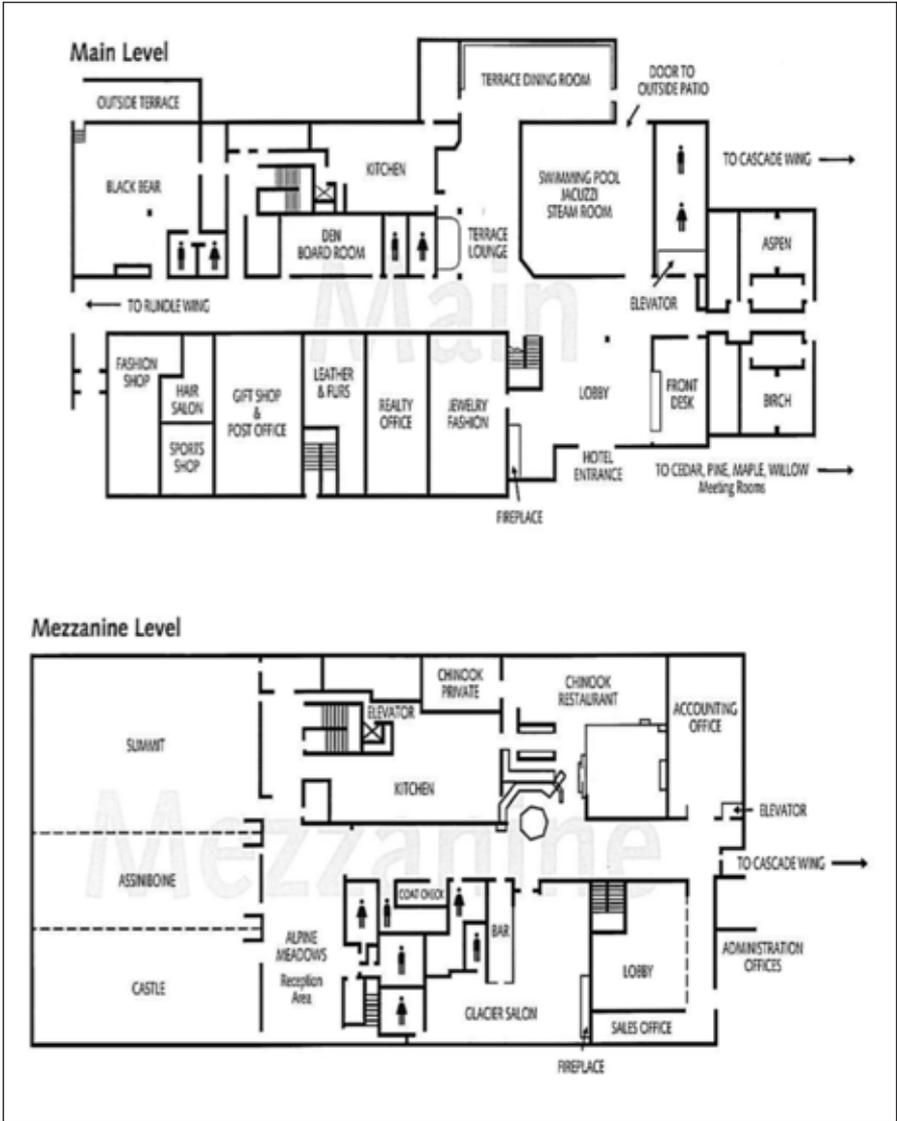|	
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Pine	In order to understand their own psychological development, participants are asked to describe six essential events in their lives and connect them into the whole life story. The main purpose of the workshop is to encourage participants to find their own voice in the writing. The various forms of personal writing such as journal keeping, diary entries, or non-fiction short stories have been discussed.
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Willow	**Foundations for Student Success** **Wallace Lockhart, Nola Joorisity** **University of Regina** ***Research on Teaching and Learning*** These new students entering our university – they are such a diverse mix! What are we going to do with them? We are a team of instructor/researchers who work closely in guiding our students through an introductory course, with a common objective of providing our students the foundations needed for success in university. In our session we will share our research results and stories about how we employ the research to improve both the teaching journey and student outcomes. Through the past several years our research has evolved through stages, with focus on student diversity, teaching innovations, and most recently foundations for student success. Building on what we have learned about student diversity (McGovern & Lockhart, 2015) and high-impact teaching practices (Kuh, 2008), we are now focusing on foundations for student success. In particular: Engagement and belongingness (Yorke, 2014) Literacy / Aliteracy (engagement, effort) (Wells, 2012, Manarin et al, 2015) Measured assessments (writing skills, inquiry, comprehension) Student perceptions of learning - value, university skills and business skills: Are they valid? (Porter, 2011) Our research examines a mix of variables: Student characteristics: gender, age, nationality, personality, academic preparedness, autonomous learning and grit. High impact practices: flipped classroom, active classroom, group work, experiential learning and learning support. Student experience: engagement & belongingness, aliteracy, measured and self-reported learning outcomes.

Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Willow	We will present results from our research and discuss implications for teaching and learning. Highlights include: Teaching practices are significant predictors of engagement and belongingness. Students reporting highest levels of engagement and belongingness generally report strong gains in foundational skills (writing, inquiry, university skills and business knowledge), though there is significant variation. Engagement and belongingness are strong predictors of student-perceived success in building foundations, but not of grades or GPA. These results are counter-intuitive. Strongest predictors of grades and GPA are student characteristics (high school grades, effort, autonomous learning and writing skills). Based on recent findings, and in light of recent criticism of survey based student research, we have broadened the research somewhat to focus in on measured, rubric-based assessments (writing, inquiry, comprehension). We need to close a gap in our understanding: In our study, engagement and belongingness are not predictors of grades. Are we measuring the right things in grading? Is there a respondent bias in student self-reported data? We are taking a closer look. We will be glad to share our methodology, results and stories – and hopefully pick up some new ideas from you!
Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Black Bear	**Moving Towards Healthy Classrooms;** **Impact on Student Health and Learning** **Sally Willis-Stewart** **University of British Columbia Okanagan** ***Research on Teaching and Learning*** Although the classroom environment is drastically changing with inclusion of technology, different modes of instruction, such as flipped classroom, and different classroom configurations, which allow for more movement and discussion, the lecture-style class and its sedentary nature, is a reality. Sitting for long periods of time is not conducive to health (1) or learning, as attention deteriorates (2, 3). The health of our students is paramount for their academic success and for success as an educational and research institution (4). Teachers need to be creative in the classroom to keep our students attention and meet their health and learning needs. A significant drop in grades and high drop-out rates after first year are noticed (4). Student health and fitness decline in first year. Less vigorous exercise and increased stress, anxiety, depression and weight gain are also observed (4). Physical activity is indicated in the prevention and alleviation of stress, anxiety, depression, chronic disease, and improves fitness, functional capacity, and self-confidence,

Saturday **November 12, 2016** **1:20 p.m. – 2:00 p.m.** Black Bear	to name a few (1). Physical activity and sound nutrition is also linked to better concentration levels, attention and learning (3, 4). The "captive" classroom environment has potential to influence student enjoyment, belonging, learning, physical activity and health, and thus, student grades and retention. The Canadian Society of Exercise Physiology recommends reducing sitting time during the day (1), and public health messages encourage frequent movement breaks for those in desk jobs, a similar scenario for university students. Research demonstrated that behaviour and cognitive ability of elementary school children improved and children felt more alert and focused after classroom activity breaks (2, 3), yet this practice is not continued into university. Evidence is mounting that student health, wellbeing and the learning environment are paramount for academic success (4). The recently released Okanagan Charter for Health Promoting Universities and Colleges "calls to action" include "embedding health into all aspects of campus culture, across the administration, operation and academic mandates." (5) The research project presented here was initiated as a pilot study in the kinesiology discipline. Instructor led movement/exercise breaks were implemented in lecture-based classes, and were well received on evaluated components such as student enjoyment, concentration, effective use of class time, and the desire for movement breaks in all lecture-based classes. Based on the positive results of this pilot, although not without bias, a series of twelve 3-minute, student-led exercise videos, were developed and implemented in 12 classes of different disciplines and at different institutions. The videos allowed for any instructor, in any discipline, to integrate exercise breaks, whether they had movement expertise or not. The impact of this 4-month, academic term intervention on student enjoyment, concentration, learning, the classroom environment, and use of class time, from both the student and instructor perspective, was evaluated using likert scales. The encouraging results and comments warrant further dissemination, and discussion and trials of classroom "break" activities, including other similar initiatives, such as the "Take a Stand" policy, to address classroom student health and learning, especially as the Charter for Health Promoting Universities gains momentum.
Saturday **November 12, 2016** **2:05 p.m. – 2:30 p.m.** Castle Assiniboine	**Closing Remarks** **Brett McCollum, Mount Royal University**

Banff Park Lodge Room Map

Main Level

OUTSIDE TERRACE

TERRACE DINING ROOM

DOOR TO OUTSIDE PATIO

KITCHEN

BLACK BEAR

DEN BOARD ROOM

TERRACE LOUNGE

SWIMMING POOL JACUZZI STEAM ROOM

TO CASCADE WING →

ASPEN

← TO RUNDLE WING

ELEVATOR

FASHION SHOP

HAIR SALON

SPORTS SHOP

GIFT SHOP & POST OFFICE

LEATHER & FURS

REALTY OFFICE

JEWELRY FASHION

LOBBY

FRONT DESK

BIRCH

HOTEL ENTRANCE

TO CEDAR, PINE, MAPLE, WILLOW →
Meeting Rooms

FIREPLACE

Mezzanine Level

CHINOOK PRIVATE

CHINOOK RESTAURANT

ELEVATOR

ACCOUNTING OFFICE

SUMMIT

KITCHEN

ELEVATOR

TO CASCADE WING →

ASSINIBOINE

COAT CHECK

BAR

ALPINE MEADOWS
Reception Area

LOBBY

ADMINISTRATION OFFICES

CASTLE

GLACIER SALON

SALES OFFICE

FIREPLACE

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