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23rd – 25th May 2019

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## Schedule at a Glance

<table>
<thead>
<tr>
<th>Wednesday</th>
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<td>Poster Session and Reception</td>
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<td>18:30</td>
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<td></td>
</tr>
</tbody>
</table>

Where nothing else is given, the location is within Grieghallen.
For more information, refer to the detailed program at the end of the conference book.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELCOME</td>
<td>2</td>
</tr>
<tr>
<td>ABOUT ISSOTL</td>
<td>4</td>
</tr>
<tr>
<td>ISSOTL CONFERENCE PEDAGOGY</td>
<td>7</td>
</tr>
<tr>
<td>ISSOTL18 CONFERENCE ORGANIZERS</td>
<td>10</td>
</tr>
<tr>
<td>GENERAL INFORMATION</td>
<td>11</td>
</tr>
<tr>
<td>LOCATION AND VENUE MAP</td>
<td>13</td>
</tr>
<tr>
<td>INFORMATION FOR PRESENTERS</td>
<td>15</td>
</tr>
<tr>
<td>SPECIAL MEETINGS ISSOTL COMMITTEES, INTEREST GROUPS &amp; MORE</td>
<td>16</td>
</tr>
<tr>
<td>PRE–CONFERENCE WORKSHOPS</td>
<td>20</td>
</tr>
<tr>
<td>PLENARIES</td>
<td>27</td>
</tr>
<tr>
<td>PAPER ABSTRACTS</td>
<td>31</td>
</tr>
<tr>
<td>PANEL ABSTRACTS</td>
<td>171</td>
</tr>
<tr>
<td>WORKSHOP ABSTRACTS</td>
<td>190</td>
</tr>
<tr>
<td>POSTER ABSTRACTS</td>
<td>208</td>
</tr>
</tbody>
</table>

Note: Abstracts within each category are presented alphabetically by first author. Please refer to the program overview or search the dynamic online program to find the session and time slot for each presentation.
Welcome to Bergen and the 15th annual conference of the International Society for the Scholarship of Teaching and Learning. Speaking for all my colleagues on the ISSOTL Board of Directors, I want to say how happy and how humbled I am that so many people from so many countries with so many diverse interests, ideas, and presentations have gathered in this beautiful city to share what they know and to help us expand the learning culture that is at the heart of SoTL.

I think it’s fair to say that when we founded ISSOTL in 2004, we had many hopes and many dreams for our new society, but that none of us could imagine just how rapidly those hopes and dreams would be realized. This week, more than 600 scholars and students from dozens of different academic disciplines, as well as academic leaders, administrators, and faculty developers from an incredible breadth of institutional contexts, trajectories, and missions, from around the world are here to share what we know, to ask questions, and to build new connections. To that end, I urge you to break out of your conference comfort zone and attend a talk by someone in a field, or with a methodology utterly different from yours. Sit down at a lunch table with someone you’ve never met. GreeF a first time attendee, or if you are a first time attendee, greet someone who isn’t. Take advantage of this moment to create new connections, find new colleagues, and then stay in touch in the weeks, months, and years after you go home. It is these connections that give us strength, help generate new and exciting ideas, and lead to ask questions we might not otherwise think of. In short, they help us build new learning cultures that will last throughout our careers and will benefit our students for years to come.

Surrounded by the incredible natural beauty and the rich history of this wonderful city, we are inspired to think broadly about what it is we are about in SoTL. As our hosts remind us, SoTL is an intricate tapestry of many learning cultures. It is inclusive, it is diverse, it is focused on students, and it is reflected back on us as teachers, administrators, and developers. When you stare up at the surrounding mountains or stroll past the Bryggen at night, I hope you will be inspired to find new ways to think about those cultures of SoTL and what they mean for you. 

In my capacity as ISSOTL President, I am pleased to report that our society continues to grow and prosper. Our membership numbers continue to grow and our journal, *Teaching and Learning Inquiry*, continues to set the standard for quality in publishing in our field. As a long time advocate for open access scholarship, I am particular proud of the fact that TLI remains open and free to the community of learners interested in SoTL. I hope you will consider submitting your work to our journal in the near future. I also want to urge you to become more involved in ISSOTL. There are many ways you can contribute to and participate in the work of our society, ranging from service on a Board committee to joining one of our many Special Interest Groups.

Finally, I want to offer a special thank you to our hosts here in Bergen. Hosting the annual meeting of a scholarly society is a two-year endeavor that begins with an expression of interest and culminates with the arrival of hundreds of excited attendees. Our Bergen hosts have been incredibly organized, efficient, good-humored, and helpful throughout the past 18 months and have done everything humanly possible to ensure that we have a magical experience here in their home city. When you see one of our hosts or one of the many volunteers helping us this week, please thank them personally. They are truly amazing!

Mills Kelly
President, ISSOTL
WELCOME FROM THE CONFERENCE CO-HOSTS

Welcome to Bergen, and welcome to the 15th annual conference of the International Society for the Scholarship of Teaching and Learning (ISSOTL). The University of Bergen and bioCEED - Centre for Excellence in Biology Education are thrilled to be co-hosting what we think is the most engaging and collegial conference around, bringing together scholars, students, instructors, and administrators passionate about student learning in higher education.

As conference hosts and organizers, we started this journey excited and determined, but a little nervous about how many delegates would dare to travel to our beautiful and rainy little corner of the world. We needn’t have worried, and we are delighted to welcome almost 650 participants - including 400 attending ISSOTL for the first time - to think together about how we create, maintain and enhance a learning culture in higher education. Our conference theme, "Toward a Learning Culture" demands that we engage in rich discussions about the collegial, cultural, interprofessional and interpersonal dimensions of the Scholarship of Teaching and Learning:

- **A culture for learning**: How do we generate and sustain meaningful teaching and learning that have a lasting impact, within and across courses, programs, departments and institutions?
- **A culture of learners**: How do we engage and support the many players and complex relationships that together comprise a learning environment?
- **An inclusive learning culture**: What happens when we connect student learning to life and work experiences beyond the (physical or virtual) classroom? What does teaching and learning look like, and what does SOTL look like, when inclusivity (of diverse perspectives as well as a diversity of people) is not an add-on but core to our practices?
- **A culture that learns**: How is SOTL changing, and how can SOTL practice foster development and growth in higher education?

We hope that at the end of our four days together, you leave with new reflections and insights toward a learning culture in your own institutional and national context, new questions to investigate, and new colleagues and relationships to sustain you.

The conference this year would not have been possible without contributions from our many volunteers and sponsors. We want to extend our gratitude especially to our colleagues at the Faculty of Mathematics and Natural Sciences and the Department of Education at the University of Bergen and bioCEED for their great generosity and enthusiasm. We are particularly grateful to Oddrun Samdal, our Vice-Rector for Education, and Vigdis Vandvik, bioCEED Centre Leader. The conference would not be what it is without wonderful support from the ISSOTL Board of Directors. We extend a special thanks to Mary Ann Danielson, Jessie Moore, Sarah Bunnell and Margy MacMillan for their tireless efforts, patience and encouragement.

Enjoy ISSOTL18 and enjoy Bergen!

Oddfrid Førland  
Advisor  
bioCEED  
University of Bergen

Roy Andersson  
Associate Professor  
bioCEED and  
Lund University

Yael Harlap  
Associate Professor  
Department of Education  
University of Bergen
ABOUT ISSOTL

The International Society for the Scholarship of Teaching & Learning (ISSOTL) serves faculty members, staff, and students who care about teaching and learning as serious intellectual work. Through building intellectual and collaborative infrastructure, the Society supports the associational life that fosters scholarly work about teaching and learning.

The Society provides this support by:

- recognizing and encouraging scholarly work on teaching and learning in each discipline, within scholarly societies and across educational levels,
- promoting cross-disciplinary conversations to create synergy and prompt new lines of inquiry,
- facilitating the collaboration of scholars in different countries and the flow of new findings and applications across national boundaries,
- encouraging the integration of discovery, learning, and public engagement, and advocating for support, review, recognition, and appropriate uses of the scholarship of teaching and learning

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ISSOTL Conferences around the World
2004: "The Scholarship of Teaching and Learning: Perspectives, Intersections, and Directions" in Bloomington, Indiana, USA (October 21-24)
2005: "Commitment, Community, and Collaboration" in Vancouver, British Columbia, Canada (October 14-16)
2006: "Making a Greater Difference: Connecting to Transformational Agendas" in Washington, DC, USA (November 9-12)
2007: "Locating Learning: Integrative Dimensions in the Scholarship of Teaching and Learning" in Sydney, Australia (July 2-5)
2008: "Celebrating Connections: Learning, Teaching, Scholarship" in Edmonton, Alberta, Canada (October 16-19)
2009: "Solid Foundations, Emerging Knowledge, Shared Futures" in Bloomington, IN, USA (October 22-25)
2011: "Transforming the Academy through the Theory and Practice of SoTL” in Milwaukee, WI, USA (October 20-23)
2012: "Research on Teaching and Learning: Integrating Practices” in Hamilton, Ontario, Canada (October 24-27)
2013: “Critical Transitions in Teaching and Learning” in Raleigh, NC, USA (October 2-5)
2014: “Nurturing Passion and Creativity in Teaching and Learning” in Quebec City, Canada (October 22-25)
2015: “Leading Learning and the Scholarship of Change” in Melbourne, Australia (October 27-30)
2016: “Telling the Story of Teaching and Learning” in Los Angeles, CA, USA (October 12-15)
2017: “Reaching New Heights” in Calgary, Alberta, Canada (October 11-14)
2018: “Toward a Learning Culture” in Bergen, Norway (October 24-27)
2019: “SoTL without borders” in Atlanta, USA (See advertisement in the front)

Membership Privileges and Fees
ISSOTL membership entitles you to the following benefits:
   ● Direct access to ISSOTL's journal, Teaching and Learning Inquiry
   ● Voting rights in organizational business, including the election of officers
   ● Discounted ISSOTL conference fees
   ● Opportunities to develop or join ISSOTL Interest Groups
   ● Access to members-only sections of the ISSOTL website
   ● Opportunity for interaction and collaboration with an international scholarly community
   ● Opportunity to shape an exciting international organization
   ● Advance notices of ISSOTL activities and conferences

Beginning July 2012, ISSOTL's membership fees, which include its official journal Teaching and Learning Inquiry, are $75 for administrator/faculty/staff, $65 for retired faculty/staff and part-time faculty/staff and $40 for students.
Teaching & Learning Inquiry (TLI) is the flagship publication of the International Society for the Scholarship of Teaching and Learning (ISSOTL).

TLI represents one of the world’s most active organizations in the scholarship of teaching and learning (SoTL) with a worldwide readership of the field’s leading thinkers and those pursuing SoTL at every level. Teaching & Learning Inquiry has earned a strong reputation for scholarly excellence, and one valuing creative as well as traditional approaches to understanding teaching and learning and ways to share that understanding.

Published twice annually, TLI features original research and commentary on SoTL. TLI publishes insightful research, theory, commentary, and other scholarly works that document or facilitate investigations of teaching and learning in higher education. These may include empirical and interpretive investigations, theoretical analyses, thought-provoking essays, or works employing other genres.

TLI values quality and variety in its vision of SoTL. The journal showcases the breadth of the interdisciplinary field of SoTL in its explicit methodological pluralism, its call for traditional and new genres, and its international authorship from across career stages. TLI thus welcomes submissions from all disciplines, research traditions, and perspectives related to teaching and learning. TLI also encourages authors to take advantage of its open and online platform. Send queries to TLI@issotl.com.

Submit your work to Teaching & Learning Inquiry. Visit the TLI online submission portal at tiljournal.com. Publishing in TLI is an effective way to reach a broad, influential audience.

50,003 downloads since June 2016

ARTICLES 3,000-7,000 words Pieces documenting completed SoTL projects, theoretical or scholarly essays, systematic reflections, syntheses of literature, or reports on the field.

DIALOGUE 1,500-5,000 words Informed responses to articles in previous issues.

INNOVATION 1,000-3,000 words Systematic reflection through creative products.

TLI/REVIEWS 1,000-3,000 words Reviews of books, external articles, web resources, or conferences.

734 citations of TLI articles since 2013

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thejournal – http://tiljournal.com
on Twitter – @TLI_ISSOTL

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(as of Oct 2018)

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ISSOTL CONFERENCES PEDAGOGY

ISSOTL conferences convene faculty members, staff, and students from across the disciplines and around the world as a community that fosters inquiry and disseminates findings about what improves and articulates postsecondary learning and teaching. This purpose leads to an inherently complex conference culture: participants with diverse backgrounds and common goals. ISSOTL conference participants bring high aspirations to do important work—to improve learning and teaching in higher education and to contribute to what’s known about meaningful student learning. We also believe that we are working together (or at least side-by-side) toward these goals. Over time, these assumptions have led to a conference pedagogy—an approach to knowledge-sharing at the conference—that is scholarly, engaged, inclusive, and collegial.

We embrace the “S” of SoTL by taking a scholarly approach. In our conference sessions, we ground our work in relevant literature and connect it to significant issues in learning and teaching that matter to other conferees. Recognizing that SoTL is the common ground for everyone at the conference, we also situate our work within the field of SoTL, implementing, reflecting on, and problematizing its “principles of good practice” (Felten, 2013). We are also intellectually humble, curious about what we don’t know, eager to learn something new, and aware that our individual inquiries won’t lead to an answer that applies to all settings.

We are engaged with our audiences, and share our work interactively. In this way, how we present is also scholarly, or based on evidence-based teaching practices. We may have some slides (or a poster), prepare handouts to capture our main points, and read aloud an occasional excerpt, but our presentation styles—regardless of session type—encourage conversation, facilitate interaction (or even active learning), solicit feedback, and of course invite questions.

Because SoTL is situated in the particular contexts of discipline, institution, country, culture, language, etc., ISSOTL invites and embraces diversity. Its conferences are international and multidisciplinary. Its participants include instructors, students, academic developers, and administrators. Some are SoTL veterans, some are newcomers, and many are in between. This diversity of perspectives and experiences is one of ISSOTL’s strengths. It also reminds us to clarify our specific identities, contexts, and approaches, as well as the implications of these particularities. While acknowledging these differences, we also work to foster conversations about teaching and learning that bridge the differences, and we make a deliberate effort to engage with people we don’t know. This bridging is also reflected in the fact that our conferences take place in varying locations around the world, and our presentations use engaging pedagogies and the common language of English.

We support this diversity by being inclusive, making our work accessible, and providing a variety of ways for people to engage. We make sure our presentations, activities, slides, and handouts are accessible to audiences with varying intellectual, sensory, and physical needs. We explain our approaches and our contexts, define our terms and avoid unnecessary jargon, abbreviations or technical language, pace our presentations appropriately, and offer alternative formats for engaging with us and our materials (e.g., describe our presentation visuals, offer digital or paper text to augment spoken delivery, take written questions [index cards or e-polling] as well as spoken ones, bring materials to the audience rather than expect them to easily move around the room).

Because we are committed to ISSOTL’s diversity, we are collegial in ways that express inclusivity. We listen across differences, asking what we can learn from others about our own situations. We ask questions that call for answers by multiple scholars from a variety of cultural and disciplinary contexts. We strive to make our fellow conferees feel welcome in the field of SoTL while also maintaining space for respectful critique as we try to make sense of SoTL’s contradictions and messiness.
This statement was written in July 2017 by Nancy Chick and members of the ISSOTL Board of Directors: Sarah Bunnell, Peter Felten, Bettie Higgs, Aaron Long, Karen Manarin, Beth Marquis, Katarina Mårtensson, Kelly Matthews, Jessie Moore, and Lauren Scharff. It will evolve to meet the needs of the Society and its conferences.

Materials from the conference call for proposals provide some guidance on how this conference pedagogy is part of specific sessions. The descriptions of the format and methods for the different kinds of presentations, as well as the criteria for reviewing proposals, highlight the characteristics and typical components of ISSOTL’s conference sessions.

Types of Presentations at ISSOTL Conferences

Panel Discussions
Panel discussions are particularly appropriate for topics that benefit from multiple perspectives, including disciplinary, institutional, and national perspectives. The goal for panel discussions is to provide panelists and audience members the opportunity to exchange insights, engage in discussion, and learn from each other’s experiences, so panel sessions will include at least 20 minutes for discussion among panelists and audience members.

Papers
Single paper presentations are ideal for presentations on completed SoTL projects but also include topics about or related to SoTL itself. The goal of paper presentations is to provide presenters the opportunity to share knowledge and facilitate critical dialogue with conference participants. Single paper presentations will be combined into groups of three, and the final presenter will serve as session chair. Each paper will last a maximum of 30 minutes, including 10 minutes for questions and discussion.

Concurrent Workshops
These workshops offer an opportunity for hands-on work on a SoTL question, research method, or topic during the concurrent sessions of the conference. Workshops are highly interactive and demonstrate effective practices in both SoTL and workshop pedagogy.

Posters
Posters present preliminary SoTL work, completed projects, or considerations of the field of SoTL in general. To inspire detailed dialogue and critical engagement, at least one author will attend the poster session to present and discuss the work with other conference participants. The poster session has become a central and lively component of ISSOTL conferences.

Criteria from the Proposal Submission Process

Questions and Rationale
• Important question(s) related to SoTL, the conference theme, and/or the conference threads are identified, articulated, and explored.
• An understanding of SoTL issues and/or existing scholarship in the field is demonstrated.

Theory/Methods/Framework/Models
• The theories/methods/frameworks/models being used are explained and justified.

Outcomes and Insights
• Evidence and/or findings are reported. - A description of how the work contributes to the understanding or practice of SoTL is provided.
Reflective Critique
- A critical/reflective evaluation of the work is offered.

Audience Engagement, especially for workshops
- Planned opportunities for active audience engagement in the session are described.
- Opportunities for audience participation in the discussion are included.
- Effective pedagogical practices are demonstrated.
ISSOTL18 CONFERENCE ORGANIZERS

Conference Co-Chairs
Oddfrid Førland, Advisor, bioCEED, University of Bergen
Roy Andersson, Adjunct Associate Professor, bioCEED and Associate Professor Lund University
Yael Harlap, Associate Professor, Department of Education, University of Bergen

Conference Core Team
Tina Dahl, Advisor, bioCEED, University Centre in Svalbard
Robert Gray, Associate Professor, Department of Education, University of Bergen
Ragnhild Gya, PhD student, Department of Biological Sciences, University of Bergen
Kristin Holtermann, Senior Executive Officer, bioCEED, University of Bergen
Margy MacMillan, Professor/Librarian (retired), Mount Royal University
Ivar Nordmo, Associate Professor, Department of Education, University of Bergen
Jonathan Soulé, Chief Engineer, bioCEED, University of Bergen
Vigdis Vandvik, Professor and bioCEED Centre Leader, University of Bergen

Program Committee
ISSOTL Co-president 2017-2018: Beth Marquis
ISSOTL Co-president 2017-2018: Katarina Mårtensson
ISSOTL Communications committee chair: Jessie Moore
ISSOTL Student representative: Sam Lucie Dvorakova
ISSOTL European leadership representative: Rie Troelsen
2017 Conference host representative: Nancy Chick
2018 Conference host team: Oddfrid Førland
2018 Conference host team: Roy Andersson
2018 Conference host team: Yael Harlap
2018 Conference host team: Vigdis Vandvik

Local campus champions at the University of Bergen
Oddrun Samdal, Vice-Rector for Education
Harald Walderhaug, Vice-Dean for Education, Faculty of Mathematics and Natural Sciences
Astrid Tolo, Department Head, Department of Education
Pedagogical Academy, Faculty of Mathematics and Natural Sciences

ISSOTL2018 Logo design
Stine Berg and Mads Andersen

Contact and connect
ISSOTL18 is hosted by the University of Bergen and bioCEED - Centre for Excellence in Biology Education.

Email: issotl2018@issotl.com
Twitter @ISSOTL18, #ISSOTL18
GENERAL INFORMATION

Conference Commons
The Conference Commons is a signature component of ISSOTL’s annual conferences. Conference participants are invited to visit with new and old colleagues here, and leave or find messages for each other on the message board.

Registration Desk
Registration desk will be at the entryway to Grieghallen, Foyer 1 PG (level 1). The registration desk will be open Wednesday 8:00am to 5:30pm, Thursday from 7:30am to 6:00pm, Friday from 7:30am to 7:30pm, and Saturday from 8:30am to 12:30pm.

ISSOTL18 Volunteers
Student volunteers will be available at Grieghallen wearing blue ISSOTL18 t-shirts. Ask them for help!

Exhibition
Be sure to check out the conference exhibitors and conference bookstore in the Foyer 1 PG (level 1).

Conference bookstore
The conference bookstore will be opened:
- Thursday 8:00am to 7:30pm
- Friday 8:00am to 6:00pm
- Saturday 8:00am to 1:00pm

Conference Lunch & Refreshment Breaks
Lunch (Thursday and Friday) will be served at the Foyer 2GH (level 2). Please note that lunch on Wednesday and Saturday is on your own. Coffee breaks will take place at the Foyer 2PG (level 2).

Dining outside the Conference
For local restaurant recommendations, see the Bergen Restaurant guide for ISSOTLers in your Conference Folder.

Program Changes
Changes to the program will be listed at the conference registration area and will be updated in the dynamic program online (http://issotl18.w.uib.no). Please check for changes daily.

Internet
Free WiFi is available throughout Grieghallen. To access the WiFi, select the network (SSID): grieghallen-guest on your device. Password is nystemten.
Lost and Found
Any found item may be turned in to the Registration Desk located in the entryway to Grieghallen.

Luggage Storage
There will be a storage facility with limited space at the conference venue in Glassrommet, Foyer 1 PG (level 1).

Parking at Grieghallen
There is car parking in Grieg Park P-house under Edvard Grieg's Square. The driveway is from Lars Hillesgate and the exit is at Strømgaten. The cost is 49 NOK per hour between 6.00 AM to 11.00 PM. Remember to stamp the ticket in the vending machine at the main entrance. Cars may be driven onto the Grieghallen forecourt to drop off and pick up mobility-impaired passengers. You will also find parking in the CityGarasjen at Bergen Storsenter, Bergens largest parking garage open and staffed 24 hours a day.

Electricity
The electrical supply in Norway is 220 volts, 50 HZ. Electric appliances use continental-style two-pin plugs.

Emergencies
In an emergency, dial 112 for Police, 113 for Ambulance, or 110 for Fire Service.
The opening session on Wednesday will take place in the University Aula at the University of Bergen (see map below). It is situated in The Museum of Natural History at the heart of the UiB campus. It is within walking distance of the city center and the conference hotels. The walking distance from Grieghallen to the University Aula is approximately 500 m. The University Aula is in walking distance from the main conference hotels approximately 600m from Scandic Bergen City, 700m from Scandic Byparken and 1200m from Scandic Neptun.

Grieghallen will be used for the pre-conference workshops on Wednesday and for the conference sessions on Thursday, Friday and Saturday. Conference activities in Grieghallen will take place on three levels (see venue p. 14); level 0, level 2 and level 3. The entrance is located at Foyer 1 PG (level 1). All plenary sessions will take place in Peer Gynt (level 2). Breaks will take place in Foyer 2PG (level 2) and lunch will be in at Foyer 2GH (level 2).
INFORMATION FOR PRESENTERS

Presentation Room Technology and Setup

Presentation rooms will be equipped only with an LCD projector and screen (or a big LCD TV screen). *Laptops will not be provided. VGA and/or HDMI cables will be available to plug in PC laptops, but presenters must bring any adaptors needed.*

Grieghallen has wireless internet access, but please download everything you need for your presentation beforehand (e.g. media files, presentation files, etc.) since the large number of participants may affect Wi-Fi quality and reliability.

All concurrent session rooms will be set up either classroom-style or with small-group tables.

Papers and paper session chairs

The lead presenter of the final paper in each group of 2 or 3 (as listed in the program) has been designated the Session Chair. The Session Chair will introduce presenters by name, affiliation, and title of presentation, and keep time throughout. Session Chairs are instructed to intervene and cut each presentation off at the 27 minute mark, leaving 3 minutes for the transition between papers. Managing time is critical to ensure that each paper in the session has adequate time.

Poster Setup

Poster presenters may set up their posters anytime after 1:00pm on Friday, October 26, and at least one of the poster authors should stand by their posters during the poster session. Posters must be taken down immediately after the poster session and no later than 8:00pm. ISSOTL will provide the backing boards and push pins for displaying the posters.
## SPECIAL MEETINGS ISSOTL COMMITTEES, INTEREST GROUPS & MORE

### OVERVIEW

**WEDNESDAY AFTERNOON 4:00-5:00pm**
- **New to ISSOTL**
  - Nina – level 3

**THURSDAY MORNING 7:30-8:20AM**
- **ISSOTL Fellow Community Consultation**
- **International Society for the Scholarship of Teaching and Learning in History (HistorySoTL)**
  - Klokkeklang – level 0
  - Bekkelokken – level 0

**THURSDAY LUNCH 12:30-1:30PM**
- **U.S. Region Members Meeting**
  - Foyer 2GH – level 2
- **European Region Members Meeting**
  - Foyer 2GH – level 2
- **Asia Pasific Region Members Meeting**
  - Foyer 2GH – level 2
- **Canada Region Members Meeting**
  - Foyer 2GH – level 2

**THURSDAY AFTERNOON 5:30-7:00PM**
- **Teaching & Learning Inquiry: The ISSOTL Journal**
  - Gjendine – level 0
- **Multinational Teaching Fellows Special Interest Group**
  - Klokkeklang – level 0
- **Meet and Greet: Learn about the bioCEED Centre for Excellence in Teaching**
  - Trolldtog – level 3

**FRIDAY MORNING 7:30-8:20AM**
- **Advocacy and Outreach Committee Meeting**
  - Småtroll – level 0
- **Communications Committee**
  - Gjendine – level 0
- **The Scholarship of Leading Special Interest Group**
  - Bekkelokken – level 0
- **Joint Meeting of Student Engagement and Students as Co-Inquirers Special Interest Groups**
  - Klokkeklang – level 0

**SATURDAY MORNING 7:30-8:20AM**
- **Arts and Humanities Special Interest Group**
  - Gjendine – level 0
- **Information Literacy Special Interest Group**
  - Småtroll - level 0
MEETING DETAILS

WEDNESDAY AFTERNOON 4:00-5:00 PM

New to ISSOTL
Room: Nina – level 3
An informal meeting and greet where people new to ISSOTL will mingle in small groups with ISSOTL leaders.

THURSDAY MORNING 7:30-8:20 AM

ISSOTL Fellows Community Consultation
Room: Klokkeklang – level 0
The ISSOTL Board is creating a fellowship of leaders who have made exemplary contributions to the scholarship of teaching in learning at the local, national, regional, and/or international levels. This fellowship – at its core – is a community of learners committed to scholarship, mentorship, leadership, and engagement in SoTL in its many forms. Our aim is to develop an ISSOTL Fellows program that will benefit all members of ISSOTL and have an impact on the landscape of higher education internationally. Fellows are champions, allies, and advocates for SoTL and they are mentors for emerging SoTL leaders. Furthermore, these fellows represent diverse models of excellence in their disciplinary fields, professional roles, and scholarly engagement. The two Fellowship Coordinators, Dr. Heather Smith (UNBC) and Dr. Jessica Riddell (Bishop’s) are hosting a community consultation process to engage members of ISSOTL in the creation and implementation of this fellows program.

International Society for the Scholarship of Teaching and Learning in History (HistorySoTL)
Room: Bekkelokken – level 0
If you teach history or history pedagogy, please come along to this meeting to exchange ideas, initiatives, research and experiences and explore ways in which we might be able to work together in the future.

THURSDAY LUNCH 12:30-1.30 PM

Regional members meetings:
Lunch with reserved tables for regional lunch meetings: Foyer 2GH - level 2

U.S. Region Members Meeting
Come join us for a gathering of ISSOTL members from the U.S. Region. We will discuss SoTL opportunities within the U.S. region, share new ISSOTL initiatives and how you might participate, and gather your suggestions for ISSOTL to bring to the Board.

European Region Members Meeting
At this meeting we will - besides networking - discuss how SoTL is practiced in Europe and how we (the participants at the meeting and/or ISSOTL) can help facilitating the enhancement of SoTL in Europe.

Asia Pacific Region Members Meeting
Asia-Pacific friends, come along to network, connect and share with your fellow SoTLers from below the Equator. Your regional VPs will host an informal, yet informative conversation aimed at fostering
collaborations, inviting feedback on key ISSOTL activities, and enticing candidates for a 2019 regional VP space on the ISSOTL Board.

**Canada Region Members Meeting**
Please join us for a regional meeting. Connect with colleagues, discuss the various trends in Canada around SoTL and explore possible collaborations with scholars in your region. Hosted by the two VPs Canada, Dr. Heather Smith (UNBC) and Dr. Jessica Riddell (Bishop’s), conversations will be edifying and delightful.

**THURSDAY AFTERNOON 5:30-7:00 PM**

**New Developments and Opportunities: Everything You Ever Wanted to Know about Teaching & Learning Inquiry: The ISSOTL Journal, and How You Can Contribute**
Room: Gjendine – level 0
An Open Meeting sponsored by the Publications Advisory Committee
The Publications Advisory Committee (PAC) works to ensure that TLI supports the work of ISSOTL members and advances the mission of the organization. This session will provide an overview of important recent developments, including a new editorial model that will build leadership for the journal and help to make it sustainable. Additionally, you’ll have a chance to hear from TLI editors and PAC members about the various ways you can contribute to the journal—for instance by turning the good work you’re presenting at the conference into a successful submission.

**Multinational Teaching Fellows Special Interest Group**
Room: Klokkeklang – level 0
The Multinational Teaching Fellows SiG will meet to consider and discuss projects relating to SoTLVision as well as reflect on the past year of group activities. The meeting is open to all delegates and serves as a wonderful forum to meet with colleagues, inspire aspiring fellows and work towards a network for inclusive practice. For further information, please contact the co-chairs Earle Abrahamson - Earle1@uel.ac.uk and Duncan Cross - D.Cross@bolton.ac.uk.

**Meet and Greet: Learn about the bioCEED Centre for Excellence in Teaching**
Room: Troldtog – level 3
An informal meet and greet with bioCEED. bioCEED is a Norwegian Centre for Excellence in Education, focusing on biology education, and one of the hosts of ISSOTL2018. If you are curious about our work, come chat with our staff and students.

**FRIDAY MORNING 7:30-8:20 AM**

**Advocacy and Outreach Committee Meeting**
Room: Småtroll – level 0
Please join us for a gathering of ISSOTL members who are interested in SoTL Advocacy and Outreach (A&O). Grab your breakfast and take a seat! At least three presentations at ISSOTL18 are direct products of A&O Committee work during the year. Come contribute your voice to this important dialogue about the relevance of SoTL for improving learning and for policy development. This meeting is open to all conference attendees and the committee welcomes new membership.
Communications Committee
Room: Gjendine – level 0
ISSOTL members are invited to meet with the Communications Committee for updates about the Society’s website. Attendees will learn about volunteer opportunities to write for the ISSOTL blog, collaborate on resources for the website, and more. The Communications Committee is responsible for developing and maintaining effective communication with and among Society members. The committee contributes to and monitors the website, blog, and social media pages as primary means of communication with current and potential members. The committee, in collaboration with the Publications Advisory Committee and the Advocacy and Outreach Committee devises and creates materials to represent the organization to public audiences.

The Scholarship of Leading Special Interest Group
Room: Bekkelokken – level 0
The Scholarship of Leading Special Interest Group (SIG) is committed to pursuing scholarly work on the relationships between leading, teaching and learning. The mission of this SIG is to create opportunities for dialogue, to promote scholarly research on the topic, and to provide support to ISSOTL members interested in and engaged in leadership. This year’s meeting will include a brief overview of some of the findings from last year’s survey of the SIG, and provide time for sharing of key questions SIG members are exploring/want to explore related to the Scholarship of Leading.

Joint Meeting of Student Engagement and Students as Co-Inquirers Special Interest Groups
Room: Klokkeklang – level 0
This will be a joint meeting of interest groups focused on Student Engagement and Students as Co-Inquirers. The ISSOTL Interest Group on Student Engagement serves as an international, interdisciplinary network for ISSOTL members who are committed to pursuing SoTL projects on the topic of student engagement. This group offers opportunities for dialogue, encourage and promote scholarly research on the topic, and provide support to ISSOTL members interested in student engagement. The Students as Co-Inquirers interest group aims to create a cross-disciplinary, international community of SOTL scholars dedicated to tapping into students’ expertise on teaching and learning, sharing promising practices for co-inquiry with students, exploring the many positive outcomes of this work and amplifying student voices within the international society.

SATURDAY MORNING 7:30-8:20 AM

Arts and Humanities Special Interest Group
Room: Gjendine – level 0
If you are a teacher-scholar in the disciplines of the humanities (literature, philosophy, classics, religion, history, languages, et al) seeking a sense of community within ISSOTL, please join us for our annual check-in and planning session.

Information Literacy Special Interest Group
Room: Småtroll - level 0
If you are interested in how students find, evaluate, and use different information sources, please join us for this first-ever Information Literacy SIG meeting. We will be discussing what information literacy means in a SoTL context, how information literacy is relevant across disciplines, and the roles each of us play in teaching information literacy. Our primary goals this year are 1) to get to know each other and 2) form an informal online working group for sharing ideas and collaboration. All perspectives are welcome!
PRE-CONFERENCE WORKSHOPS

WEDNESDAY MORNING 9:00-11:45 AM

Workshop #1: The SoTL Commons: Cultivating a SoTL Culture on Your Campus and Beyond
Brian Smentkowski, Laura Cruz and Balbir Gurm
Room: Nina – level 3

Whether building, sustaining, or growing a SoTL culture on your campus, this session will provide novice and experienced scholars and leaders alike with an inventory of strategies designed to enhance your impact and transform institutional culture. This inventory is drawn from the collective work of project team members Mary Huber, Pat Hutchings, Balbir Gurm, Teresa Johnson, Laura Cruz, and Brian Smentkowski, whose current research spans 20 years of building SoTL communities. This interactive session will explore the interests, obstacles, and unifying environmental factors associated with building community and changing culture to support the scholarship of teaching and learning.

Our goal is to provide a framework for building, supporting, and studying SoTL culture within and across institutional contexts and to help you chart your own course to a flourishing SoTL culture. Through a series of collaborative exercises drawn from recent research in systems thinking, social network analysis and organizational development, you will work collaboratively with others to enhance your role as an agent of organizational change and to create a personalized blueprint for strengthening SoTL on and beyond your campus.

Brian Smentkowski is Founding Director of the Center for Excellence in Teaching and Learning, Director of Service Learning, and Associate Professor of Political Science at the University of Idaho (US). He has published and presented extensively in the fields of educational development, SoTL, and political science and presently serves as Editor of To Improve the Academy: A Journal of Educational Development. From 2006-2009 he was a member of the Carnegie Academy for the Scholarship of Teaching and Learning’s Building SoTL Communities cluster, and continues to develop, write, consult, and present on strategies to build sustainable SoTL communities.

Laura Cruz (Ph.D., UC Berkeley, 2001) most recently served as the Director of the Center for Teaching and Learning at both Tennessee Technological University and Western Carolina University. She has held multiple leadership positions in the field of educational development, including a term on the national board (called Core) for faculty developers and as editor of To Improve the Academy: A Journal of Educational Development. Her publications include work in her first discipline (history) as well as the areas of instructional design, educational development, educational technology, and organizational change in higher education. She has been a frequent keynote and invited speaker in the areas of educational technology, course/curriculum design, and the Boyer model of scholarship.

Balbir Gurm, RN, BSN, MA, EdD is an award winning educator in the Faculty of Health at KwantlenPolytechnic University, the founding editor-in-chief of Transformative Dialogues: Teaching and Learning Journal (www.kpu.ca/TD), founding member and facilitator of the Network to Eliminate Violence in Relationships (NEVR), an Education Developer and a Diversity and Organizational Change consultant. Dr. Gurm is interested in how policies and culture impact organizational and societal
practices and how academic knowledge is used to solve complex issues. Through sitting on a variety of boards and committees she takes academic knowledge and translates it to actions to improve communities. She has written about different ways of knowing and conducted teaching/learning studies and presented them at local and international conferences. Since 2002, she has facilitated reading circles, written collective bargaining language, organized brown bag lunches helped define SoTL, founded an international journal on teaching and learning and conducted workshops to create a SoTL community.

Workshop #2: Using self-determination theory (SDT) to inform professional development, understand why active learning works, and foster the Scholarship of Teaching and Learning (SoTL)
Chantal Levesque-Bristol, Lucas Jeno and Vigdis Vandvik
Room: Trolldog – level 3

The totality of our work as professional developers and teachers can greatly benefit from being informed by a strong theoretical framework. In this workshop, we will provide an overview of self-determination theory (Deci & Ryan, 1985; 2017), a theory of motivation which has been developed and empirically tested for the past 40 years. In this workshop, we will discuss the core concepts of Basic Psychological Needs and the Continuum of self-determination. Through demonstrations and discussions, you will leave this workshop with practical examples of 1) how to apply the motivational principles of self-determination theory to your work as professional developers; 2) how to use self-determination theory to understand the mechanisms underlying effective active learning pedagogies (team-based learning, group work, problem-based learning) at fostering engagement, motivation, and learning; and 3) how to design SoTL projects emanating from teacher development programs and the application of active learning pedagogies following the motivational principles of SDT.

Chantal Levesque-Bristol is Professor of Educational Psychology and Executive Director of the Center for Instructional Excellence at Purdue University. She holds a Ph.D. in social psychology from the University of Ottawa, and has been a Visiting Professor at the University of Rochester and Professor of Psychology and Director of the Faculty Center for Teaching and Learning at Missouri State University. She has taught courses in statistics and research methods at the undergraduate and graduate level. Her scholarly work is in the area of human motivation generally and academic motivation specifically. Using the theoretical framework of Self-Determination Theory, she conducts basic research in motivation and social psychology and applied research in education, learning, and retention, and has been active in several Teaching and Learning program. As Executive Director of the Center for Instructional Excellence (CIE), she provides support for the instructional community and resources to faculty interested in teaching and learning pedagogies as well as the Scholarship of Teaching and Learning (SoTL). CIE is also a collaborating partner in the large course transformation project IMPACT (Instruction Matters: Purdue Academic Course Transformation) at Purdue. Levesque-Bristol is the recipient of several Teaching and Research Awards. She is a grantee of the National Institute of Mental Health and the Department of Education (First-in-the World grant). She has presented and conducted workshops at several institutions of Higher Education in the U.S., and overseas, on motivation and learning principles. She can be reached at cbristol@purdue.edu or at linkedin.

Lucas M. Jeno is a Researcher at the University of Bergen at the Centre of Excellence in Biology Education. He holds a Ph.D. in Education at the University of Bergen, and has been a visiting scholar at the University of Rochester. Jeno’s research interest is centered around all aspects of students’ motivation, and how it is applied to areas such as active learning, technology, and learning. These
research areas have been investigated through the lenses of the motivational theory of Self-Determination Theory. Jeno teaches statistics at the undergraduate level, and conducts workshops in different active learning techniques for faculty. He can be reached at Lucas.Jeno@uib.no

Vigdis Vandvik is a Professor of ecology at the University of Bergen and leader of bioCEED (Centre for Excellence in Biology Education). Her biology research projects typically involve field work and long-term field experiments; activities that offer ample opportunities for student involvement in the research. Since 2014 Vandvik has been the leader of bioCEED. bioCEED’s vision is that we can develop and improve biology educations through exploiting the interrelationships between theoretical foundations, practical skills, and societal relevance of biology. Vandvik is an active participant in the Norwegian public debate, particularly relating to developments in higher education, nature management and climate change, and science in society more generally. Vigdis can be reached at vigdis.vandvik@uib.no.

Workshop #3: Get started with SOTL
Andrea Webb and Melanie Hamilton
Room: Bekken – level 3

This pre-conference workshop will support participants in designing and/or refining a SoTL investigation; from developing a research question, through considerations of methodologies, methods, data analysis, and dissemination. We invite students, instructors, and anyone interested to join us discussing how we can improve postsecondary teaching and learning. We tackle the nuances of how SoTL can differ from disciplinary approaches, as well as, the goals, audiences, and implications of SoTL. This will be a hands-on workshop, where participants will work in small groups to discuss concerns, capture ideas, and map out next steps in starting a SoTL project.

Andrea Webb is a Lecturer in the Faculty of Education at the University of British Columbia and a Senior Fellow in the Higher Education Academy. She is also a member of the instructional team for the UBC International Program for the Scholarship of Educational Leadership: Certificate on Curriculum and Pedagogy in Higher Education. In this role, she advises on the development and design of SoTL research projects across campus, acts as an external examiner for SoTL portfolios, and facilitates a professional development program for adjunct faculty in the Faculty of Education. She is a Board member of SoTL Canada.

Melanie Hamilton is the SoTL Research Program Lead at Lethbridge College in Alberta, Canada. For the past decade, she has been actively involved in many SoTL projects at the micro, meso, and macro level. Her work includes: humor in the classroom, academic integrity and dishonesty, and supporting early career researchers with SoTL. She has presented extensively at the local, provincial, national, and international level on a variety of topics. She currently serves as the Vice-Chair for SoTL Canada.
Workshop #4: Innovative methodological approaches to SOTL
Stephen Bloch-Schulman, Peter Felten, Johan Geertsema, Yahlnaaw/Aaron Grant and Heather Smith
Room: Nina – level 3

Abstract: This workshop will focus on three research methods (conceptual methods, oral histories, and think alouds) and a meta-methodological approach (student-faculty partnerships) that are potentially useful but still relatively rare in SoTL. We will explore:
- Conceptual methods allude to a host of techniques that “consist of thinking, without any Special interaction with the world … [for example, without direct] measurement, observation or experiment” (Williamson, 2007, p. 1), but with close attention to textuality and language.
- Oral history interviews, which ask study participants to describe their past experiences, often by referring to specific documents or other learning artifacts linked to those experiences.
- Think alouds, which ask study participants to talk aloud while doing an activity and analyze what is said to understand, for example, the differences between novices and experts.
- Students as Partners, with a focus on how this approach to research can be paired with any number of methods to deepen and inform them; in our example, we highlight the use of Indigenous knowledges as a corrective to common SoTL practices and ways of knowing.

For each, we will present an overview and then dig in to a specific example so that participants will leave the workshop having experienced some different ways of gathering evidence to address teaching and learning problems – and having reflected on the ways their own SoTL practice might draw on and be informed by these methods and approaches. We will be particularly attentive to identity, both group and individual identity, and context — where the research and learning are taking place — in our approach to research, students, teaching and learning. This workshop is well-suited for both those new to and those experienced in SoTL.

Stephen Bloch-Schulman, Associate Professor and Chair of Philosophy, Elon University (Elon, North Carolina, U.S.A.) works at the intersection of political philosophy and the scholarship of teaching and learning and has written about methods, most recently, in Teaching and Learning Inquiry: The Journal of the International Society for the Scholarship of Teaching and Learning. He was the inaugural winner (2017) of the Prize for Teaching Excellence in Philosophy, co-awarded by the American Philosophical Association, the American Association of Philosophy Teachers, and the Teaching Philosophy Association.

Peter Felten is a professor of history, assistant provost for teaching and learning, and executive director of the Center for Engaged Learning at Elon University. His books include the co-authored volumes: The Undergraduate Experience: Focusing Institutions on What Matters Most (Jossey-Bass, 2016); Transforming Students: Fulfilling the Promise of Higher Education (Johns Hopkins University Press, 2014); Engaging Students as Partners in Learning and Teaching (Jossey-Bass, 2014); Transformative Conversations (Jossey-Bass, 2013); and the co-edited book Intersectionality in Action (Stylus, 2016). He has served as president of the International Society for the Scholarship of Teaching and Learning (2016-17) and also of the POD Network (2010-2011), the U.S. professional society for educational developers. He is co-editor of the International Journal for Academic Development and a fellow of the John N. Gardner Institute for Excellence in Undergraduate Education.
Johan Geertsema is Director, Centre for Development of Teaching and Learning, National University of Singapore. His current research focuses on integrated approaches to academic practice; the relation between educational research and the scholarship of teaching and learning; learning communities and teaching academies; and how to evaluate teaching achievement.

Jah! Xaaydaga ‘las! – “Hello! Wonderful People!” Yahlnaaw / Aaron Grant is Skidegate Haida from the Islands of Haida Gwaii and was born and raised in Lax Kxeen (Prince Rupert, BC) on Ts’msyen territory. Yahlnaaw is a Master’s student at UNBC in First Nations Studies. Yahlnaaw’s name broadly translates to “leads an exceptional life”. By advancing her education in First Nations Studies with a focus on Indigenous Language and Story Revitalization, she aims to fulfill the meaning of her name. Yahlnaaw’s work also revolves around Decolonization, Indigenization, Reconciliation, and the importance of introducing these concepts to children. In a joint effort with Edōsdi / Dr. Judith Thompson at UNBC, they presented their work, Decolonizing our Colonized Minds, at Provincial, National, and International levels.

Yahlnaaw is aware of what it is like to be an Indigenous person growing up in a colonized world and wants to aid in creating a pathway for upcoming Indigenous brothers and sisters in academia. Yahlnaaw believes that her work at UNBC’s Centre for Teaching, Learning, and Technology, Campus Cousins Student Leadership Program, and various other community and academic based platforms will aid in her goal of encouraging growth for our future Indigenous leaders.

Heather Smith is a Professor of Global and International Studies at the University of Northern British Columbia, Prince George, BritisSmith is a Professor of Global and International Studies at the University of Northern British Columbia, Prince George, British Columbia, Canada. She is a 3M National Teaching Fellow, a 2018 B.C. Campus Scholarly Teaching Fellow and Visiting SoTL Fellow at the Dalhousie University Centre for Learning and Teaching.

Workshop #5: Writing for Publication in SOTL
Mick Healey and Kelly Matthews
Room: Trolldtog – level 3

‘Going public’ is one of the key features of SoTL. This workshop will unpack some of the mysteries of publishing in internationally refereed teaching and learning journals and help colleagues find their voices through a variety of writing genres. The intended audience is primarily faculty/academics or staff and students who have limited experience of publishing about their SoTL work in academic journals, whether discipline-based or more generic SoTL outlets. However, our approach and strategies could also support and guide more experienced colleagues to enhance the quality of their articles and success in achieving publication. We argue that writing is an integral part of developing an identity as a SoTL scholar and conclude that we need to move beyond a narrow best-practice model of writing successfully about and for SoTL.

Participants at the workshop are asked to bring to the workshop the title and abstract (150-200 words) of a SoTL article they are either currently writing, or would like to write, for publication in an academic journal.

Mick Healey is an HE Consultant and Researcher and Emeritus Professor at the University of Gloucestershire, UK. He is currently The Humboldt Distinguished Scholar in Research-Based Learning at McMaster University, Canada. He was one of the first people in the UK to be awarded a National
Teaching Fellowship and to be made a Principal Fellow of the HE Academy. In 2015 he received the Distinguished Service Award from the International Society for the Scholarship of Teaching and Learning. Mick is an experienced presenter. Since 1995 he has given over 500 educational presentations in 25 different countries. He has written over 200 papers, chapters, books and guides on various aspects of teaching and learning in HE and is widely cited. He was joint editor of the Journal of Geography in Higher Education (1992-95); co-editor of the International Journal for Academic Development (2010-13); and is currently Inaugural Senior Editor International Journal for Students as Partners (2016-).

Kelly Matthews is an Associate Professor in Higher Education at The University of Queensland in Brisbane, Australia. Her research explores students’ experiences of learning and student-staff partnerships in higher education. She co-develops, and teaches into, learning and teaching preparation programs for new tutors and academics. Kelly has collaborated on 24 funded teaching and learning projects worth $2.5 million, received five awards (four for teaching; one for research), and publishes extensively. In 2015 she was awarded an Australian Learning and Teaching Fellowship focused on Students as Partners to explore how students and staff working together can transform university education. She is currently an elected Vice-President for the International Society for the Scholarship of Teaching and Learning, co-editing a special issue on student success for Higher Education Research and Development, and an inaugural co-editor for the International Journal for Students as Partners. Mutual engagement and shared responsibility for learning and teaching amongst students and staff (including faculty/academics) to shape higher education keeps her motivated!

Together, Mick and Kelly led the 2015 ISSOTL International Collaborative Writing Groups.

Workshop #6: International perspectives on engaging students in SoTL
Lucy Mercer-Mapstone, Chris Ostrowski, Paul Taylor, Sophia Abbot and Rachel Guitman
Room: Bekken – level 3

Peter Felten’s ‘Principles of Good Practice in SoTL’ (2013) argues that good practice in SoTL means that SoTL is “conducted in partnership with students” (p. 122) and “requires engaging students in the inquiry process” (p. 123). Taking up this gauntlet, this workshop will focus on international perspectives on the what, where, how, why, and who of engaging students in SoTL. Facilitators will focus on extending the inclusion of students beyond that of collecting the student voice to explore how students are actively engaged as partners in the co-inquiry process. The workshop will include:

- Case studies as key focus points for discussions on SoTL as co-inquiry including challenges, benefits, and necessary support mechanisms and resources
- The integration of participants’ own knowledge and experiences as sources for mutual learning among all workshop attendees
- Activities to engage participants to reflect on engaging with students in their own SoTL practice
- Collaborative networking opportunities for participants to build a community of connected, like-minded practitioners
- A focus on praxis such that participants leave with tangible steps to implement workshop learning in their own contexts

The workshop will be coordinated by ISSOTL’s Special Interest Group on Student Engagement Co-Chairs, and will include student and staff/faculty facilitators with experience in student engagement, student-staff partnership, and SoTL from diverse international and institutional contexts.
Lucy Mercer-Mapstone is an Endeavour Research Fellow at the University of Edinburgh. She recently completed her PhD at the University of Queensland (UQ), Australia. Lucy has a passion for student engagement in higher education with a particular focus on student-staff partnership, a topic on which she has facilitated workshops internationally. Lucy brings experience in a range of fields including the student engagement through partnership, higher education research and development, student engagement program design, scholarship of teaching and learning, science education, science communication, and development of graduate attributes. She has been involved an Australian Learning and Teaching Fellowship focused on Students as Partners and was an inaugural co-editor of the International Journal for Students as Partners. Lucy was a member of an ISSOTL International Collaborative Writing Group, has numerous papers published top-tier higher education journals, and was the recipient of three PhD scholarships.

Chris Ostrowski is a PhD student in Educational Research (Learning Sciences), and since 2016 he has been a SoTL research assistant at the Taylor Institute for Teaching and Learning. In this role, he has engaged in several SoTL projects including leading research on local learning spaces, creating the ISSOTL 2017 digital program, initiating a improv-theatre workshop series about sharing SoTL work, developing a SoTL specific writing-group model, and leading a student professional development program. He is also the Student Engagement Advisor for SoTL Canada and a co-chair of the ISSOTL Student Engagement Interest Group.

Paul Taylor is the Pro Dean for Student Education in the Mathematics and Physical Sciences Faculty at the University of Leeds. Paul’s main pedagogic activities concern undergraduate research, in particular opportunities for undergraduates to disseminate their findings through undergraduate journals and conferences. Paul is proud to be part of the team that will host the British Conference of Undergraduate Research (BCUR) in Leeds in 2020. Paul is also exploring ways of bringing research to a wide audience through on-line digital learning and has a long-standing interest in student engagement and partnership working. Paul’s scientific research interests are in cancer research.

Sophia Abbot has been a practitioner and researcher in the area of student-staff partnership for the past six years. For the past three years, she was a fellow at Trinity University’s Collaborative for Learning and Teaching, where she founded and leads Tigers as Partners - a student-staff pedagogic partnership initiative. Her work as an undergraduate in the Students as Learners and Teachers program has deeply informed this practice and research. She has presented extensively on partnership work, including co-facilitating in the first two International Summer Institutes for Students as Partners. She currently serves on the International Advisory Board for the International Journal for Students as Partners and is completing a masters degree in higher education at Elon University.

Rachel Guitman is an undergraduate student in her fourth year of the Arts and Science program at McMaster University. She has been working at McMaster’s MacPherson Institute on various Students as Partners projects and support since 2016. Rachel is passionate about student partnership and has been involved in researching and participating in the International Students as Partners Institute (ISAPI). She co-created ISAPI’s ‘Connect’ feature with colleagues at the MacPherson Institute, consisting largely of bimonthly #SaPChat partnership discussions on Twitter. Rachel is also a co-editor for the International Journal for Students as Partners (IJSaP) and has presented at several conferences about her research thus far.
PLENARIES

WEDNESDAY OPENING PLENARY 5:30-7:00 PM

How Norway went SoTL
Terje Mørland with friends
Room: University Aula

The opening keynote will describe and analyze the rapidly growing collegial quality culture in Norwegian Higher Education, supported by testimonials from some of the key stakeholders.

In January 2017 the Norwegian Ministry of Education and Research launched the White paper Culture for quality in higher education. The white paper motivates the need for a culture shift to promote the quality of higher education in Norway, and outlines five main strategies and a series of actions towards this goal. Together, these strategies share many of the underlying ideas and perspectives of the Scholarship of Teaching and Learning movement, including development and use of evidence-based teaching and learning methods, promoting student-centered perspectives and practices, and growing a collegial quality culture in higher education. This requires seeing educational quality as a joint responsibility and development as joint venture, where teacher, students and management are partners in a community that develops a quality culture. It also entails bringing the best characteristics of the well-established research culture into the teaching and learning culture.

But a cultural change does not magically emerge simply because a decree is issued by the government. While the development of a culture of quality must be supported from above, it grows from the bottom up, through the teachers, students, and educational support staff. Here SoTL can guide the way. Therefore, we explore what a quality culture of teaching and learning looks like from the policy, institutional, student and teacher perspective.

In this keynote, we will get broad overview over how Norway is now moving towards a collegial learning culture. This will be interspersed with first-hand testimonials from teachers and students in Norway, tied together by the director of The Norwegian Agency for Quality Assurance in Education.

Terje Mørland has been the Director General for NOKUT (the Norwegian Agency for Quality Assurance in Education) since December 2008. NOKUT is an independent expert body under the Ministry of Education and Research, and seeks to enhance and assure quality in Norwegian higher and tertiary vocational education, as well as formally recognize foreign education qualifications. Terje has a degree from the Norwegian University of Science and Technology (NTNU) as a graduate engineer in biophysics and medical technology. Formerly, he worked as the Director of Research Administration at the University of Oslo, and an Adviser and Special Adviser at the Research Council of Norway with a portfolio that included climate and environmental research, international collaboration, organizational development, and the development of policy instruments for research-based innovation.

Terje will be joined by Mari Vold Bjordal, Endre Lygre, Ragnhild Gya, Håkon Randgaard Mikalsen, Øyvind Fiksen, Vigdis Vandvik and Oddrun Samdal.
THURSDAY PLENARY 8:30-9:25 AM

People who are not thinking are capable of anything: What are students learning, how are students learning it, and does it make them better people

Elizabeth Minnich
Room: Per Gynt – level 2

The work that has deeply engaged me for decades springs from questions about the relations among knowledge, thinking, and moral political responsibility. More particularly, I have been haunted by this question: Why have there been so many evident, even egregious, failures of moral political principle and/or judgment among well-educated people? Rather a large tangle, that: I certainly make no claim to have sorted it all out, but focusing on what and how students are learning with us in the specific ways I have has led to some reflections and suggestions about which I hope you will think with me.

Is the way to bring knowledge and moral concerns into fruitful relation to teach one particular moral code, religion, philosophical system’s principles? Or: If moral political neutrality, objectivity, or, perhaps, an entirely non-judgmental pluralism are the positions we should take as educators and researchers of student learning, what do we do with our concerns about injustice, inequality, prejudice? Are such concerns proper when we consider how to create a learning community, or how we are teaching and students are learning, but improper with regard to the what, to knowledge? Ought student learning to be thus compartmentalized?

In this talk, I will make a case for the view that moral political concerns are entirely appropriate and indeed intrinsically necessary to higher education specifically with regard to its intellectual claims and standards. That case reflects the journey of my work, beginning with a focus on transforming knowledge to include – not just add on – study of society-wide injustices, and landing most recently on study of how the perpetrators of "extensive evils" (e.g. genocide, racisms) think – or fail to.

If the case succeeds, moving from consideration of the knowledge students learn to a focus on the importance of thinking, we arrive at further questions that implicate us and are suggestive for our teaching and on the lines of inquiry we pursue as SoTL researchers: Should, and how might, we make the restless, troubleshooting activity of thinking the heart of all education? How do students learn an ability, a practice, an art that is the very wellspring of human freedom? How might we engage purposefully with all learners such that thinking what we are doing becomes second nature?

My earlier questions have brought me, then, to this: How do we learn and teach thinking independently and always also with many diverse others so that those who are educated – as many of us as humanly possible – are simply disinclined to take seriously, let alone give their minds, their consciences, their work, their power to anyone or anything that requires them not to think?

Elizabeth Minnich is an educator and philosopher who works at the intersection of moral, educational, and political issues. Her first book, Transforming Knowledge, won the annual Frederick W. Ness Award for best book in liberal education. She has published on teaching thinking in Change magazine; spoken and consulted widely on inclusive education; and has held the Alexander Chair for Public Philosophy at Scripps College, and the Whichard Distinguished Professorship of Humanities and Women’s Studies at Eastern Carolina University, among other faculty and administrative positions. Most recently, she has published The Evil of Banality: On The Life and Death Importance of Thinking, a book given the rating of "essential" in Choice, the journal of the American Library Association.
FRIDAY PLENARY: 8:30-9:25 AM

**Institutional leadership reflections for developing a Scholarship of Teaching and Learning in institutional culture**

*Renuka Vithal*

Room: Per Gynt – level 2

It has been shown that a Scholarship of Teaching and Learning (SoTL) can be developed institutionally when conceptualised as multi-dimensional, inclusive and grown through an organic approach over time, in the case of one South African university (Vithal, 2016). This presentation follows from and builds on this case in contributing to a “scholarship of leadership”, which seeks to embed SoTL in institutional culture by asking the question: what aspects of university leadership have the potential to facilitate shifts in institutional culture toward valuing and developing SoTL? Drawing on my knowledge and experiences as a Deputy Vice-Chancellor for Teaching and Learning, in this retrospective, reflexive account, selected institutional leadership features and enablers (or constraints) for growing SoTL university-wide, are identified. These are then analysed and discussed from an insider leadership perspective, drawing on contemporary higher education leadership theories and approaches.

*Renuka Vithal is a former Deputy Vice-Chancellor: Teaching and Learning, Dean of Education and Professor of Mathematics Education of the University of KwaZulu-Natal, South Africa. Her research interests and publications span a number of areas, including, the social and political dimensions of mathematics education, teacher education, educational research and more recently, higher education.*

SATURDAY CLOSING PLENARY: 12:10-1:30 PM

**A learning culture – more about how than about what**

*Torgny Roxå*

Room: Per Gynt – level 2

Learning is different from teaching. Teaching can be planned, foreseen, and even budgeted. Learning is transcendental; it offers new horizons, a new world. In dramatic forms it takes us through portals previously unseen and changes who we are. Once I have learnt my agency is enriched. The experience can be dramatic or go unnoticed.

Culture is constructed and maintained by people, continuously. Culture is always in the making. It influences members as they influence the culture. These entangled processes makes it less interesting to talk about what is a culture and more interesting to focus on how it is constructed. Arguably: Cultural change is an outcome of new things being talked about, new experiences being shared with new people, and new ways to see things appear. After a change process meaning is constructed in different ways.

ISSOTL is a culture, but is it a learning culture? Does it inspire other cultures to learn? Is it a culture of learners? Does ISSOTL change?
Through examining how things are done at this conference in Bergen, Norway, in October 2018, this closing keynote strives to challenge participants and organisers to think about how we together form what is the culture of our conference.

Torgny Roxå is an Associate professor at Lund University, Faculty of Engineering. He has 30 years of experience in academic development with a focus on developing quality cultures in higher education organisations. He developed the first pedagogical academy, the Lund ETP, which now runs on its 17th year and inspired both Swedish and international institutions. He has taught engineering teachers for the last 25 years. And, he is currently engaged in the implementation of a new quality assurance system based on the experiences gained from the ETP-system. His research is focused upon strategic change in teaching cultures within higher education organisations, especially significant networks and microcultures. He is also appointed Distinguished Scholar in Educational Leadership at McMaster University in Canada.
Does Technology-Based Instruction with Non-Binding Assessments Enhance Students' Learning Outcomes?

Shahad Abdulnour, Joan Simalchik

This session lies within the theme of "a culture for learning". Traditional teaching, especially in humanities and social science courses, has been supported mainly by readings from textbooks and common examinations or essay assessments (McLaughlin et al., 2014). Incorporating instructional technologies facilitates a more interactive learning environment than the traditional one and they are powerful tools for delivering course material. This integration should be more acceptable to students since it mirrors students’ real-life habits (Henderson, Selwyn, & Aston, 2017). In a pilot study, we explored the use of interactive videos through a single-blinded study in a third-year humanity and social science course at the University of Toronto Mississauga in Canada, that provided health literacy to science and non-science students. Five times during the course, a test sample of 33 students were given quizzes both before and after completing one of its several interactive videos. Students were told that points would be assigned on the basis of completion and submission of the assigned work and not on the correctness of their responses. The test sample post-quiz results were pooled and then compared to those for a control group of students. The control group consisted of 35 students who completed the same course two years earlier, but the readings were assigned as homework exclusively and were not presented in the classroom. Significantly (P<0.001), the sample students' post-quiz grade mean was 33.19% higher than their pre-quiz mean. Also, the test sample students' post-quiz mean (82.66±1.35%) was significantly higher than that of the control group (70.08±1.73%, P<0.001). These findings suggest that students are more likely to achieve a course’s expected outcomes when integrating technology-based lessons in a classroom that reflect "students' real-life habits" with low-risk assessments. Moreover, the outcomes demonstrated that students' learning was enhanced when they were given an opportunity in class to explore their misconceptions and understandings by discussing their mistakes. Through the non-binding and low-risk formative assessment defined by the pre- and post-quiz quizzes that were a component of this intervention assessment, it became evident that students were more engaged and interested in the content itself rather than aiming to achieve higher marks only. Furthermore, the opportunity to expose students to video snippets that support course concepts also has the benefit of showing students that the course instructor is aware of their comfort with technology; hence, it further enhances students' engagement within the course.

Is the Writing on the Wall? Using Padlet to Help Students Understand Feedback

Earle Abrahamson, Melissa Ferro, Colm Gregory

The current corpus of research on feedback acknowledges its role in directing learning (Shute, 2008; Hattie & Timperley, 2007). However, for feedback to be an effective tool for learning, students must first understand what the gold standard is for their work, be able to identify the gaps between that standard and what they have produced, ad understand how to use feedback to alter that gap (Sadler, 1989). They also require the time and space to receive and process the feedback they receive (Winstone et al., 2017). More recent research (i.e. Jonsson, 2012; Nicol, 2013; Nicol, Thomson, & Breslin, 2014) supports a shift from a transmission model of feedback to a dialogic approach, so that students develop the knowledge, skills and dispositions to make evaluative judgments about their
own work and the work of others. Despite the multitude of research on feedback, Winstone et al. (2017) note a dearth of studies that actively investigate the dynamics of the process for feedback, and the use of technology to facilitate the interactional guidance students receive in understanding how to use feedback in ways that also develop their self-efficacy.

This small-scale SoTL study has its foundations in the ‘seven principles of good feedback practice’ published by Nicol and Macfarlane-Dick (2006) that emphasises the importance of feedback as a two-way communicative process. Using Padlet, a virtual notice board hosted online, students are provided the time and space to receive, organise and collate both inter and intra modular feedback comments and assessment criteria for later use during open dialogues with peers and their instructor/s. The intent of these discussions is to enable students to navigate and close gaps between their current performance and what they have come to understand as the relevant standards. Our research-in-progress includes the collection of qualitative and quantitative data through student and staff surveys and semi-structured interviews, where participants are asked to provide their thoughts on the use of Padlet to engage in dialogues related to students’ effective use of feedback and their confidence to use these strategies and skills in the future. This study has profound implications for Higher Education Institutions (HEIs) with similar widening participation agendas. Session participants will have the opportunity to consider the impact of effective feedback on student attainment, share their experiences, make recommendations for research-in-progress, and develop a more inclusive culture for learning and enhancing the first-year student experience.

Experience and Expectations of a Collaborative Writing Group: Forging a Learning Culture for SoTL

Earle Abrahamson, Nicola Simmons, Jessica Deshler, Carolyn Oliver, Susan Moron-Garcia, Karen Manarin, Barbara Kensington-Miller

Building on Felten’s (2013) work, we explore how collaborative partnerships, through an international writing group, develop and foster networks for scholarly input, reflection, and contributions to SoTL outputs. In so doing, we discuss how we have built a collaborative learning culture for SoTL by challenging our philosophies and experiences through writing partnerships. Felten elucidates five pillars for SoTL that serve to scaffold the value and impact for SoTL output: (1) inquiry into student learning, (2) grounded in context, (3) methodologically sound, (4) conducted in partnership with students, and (5) appropriately public. Taken together, these five principles can be guideposts for developing and refining individual SoTL inquiries and larger SoTL initiatives.

Our session explores the dynamics within our collaborative SoTL writing group that came together in Hamilton 2011, moved apart to consider a range of scholarly outputs, and reconvened in Calgary 2017 to share experiences, renew friendships, and reflect on past memories and expectations. In 2017, at the Calgary ISSoTL conference, we explored metaphors pertaining to mountain peaks and reaching new heights. As a group, we engaged in debates around travelling and travellers and sought to understand the value of our journey both individually and collectively. Whilst the formal presentation documented our journey, an informal meeting after provided opportunity to question our purpose and future growth, whilst acknowledging the strength and continued support within the group. This experience prompted a renewed vision to continue the narration of our experiences and map our future expectations. Through our collaborative enterprise and experience we ask: How does a group that formed over five years ago on a common interest of wanting to explore SoTL scholar identity operate within individual, institutional, and international contexts? What is the value and impact of the group? This group has enabled a micro-community of practice to explore themes and threads in and through the SoTL landscape by celebrating successes yet simultaneously being cognisant of differences in views, direction, and output.
We invite new and experienced SoTL inquirers and practitioners to join our ongoing journey in exploring challenges within higher education through a SoTL lens. The authors will present international perspectives on what being part of a SoTL writing group means beyond the simple output of scholarly work. We conclude our paper presentation by examining how expectations for future collaboration stem from individual and collective experiences.

Democratic Education and Community Engagement: Lessons for Transformation in Teaching and Learning

Hannah Abrantes, Janice McMillan, Nicholas Longo

Our research in Cape Town, South Africa, indicates that students tend to learn more about issues such as democracy and social justice by how it is practiced on campus. This research paper seeks to understand how engaged pedagogy can play a significant role in civic, political, and racial transformation. Using the qualitative research methods based on interviews and participatory observation, this paper presents findings and analysis from a course on “social infrastructures” with engineering students in Cape Town. Themes and reflective practices which emerged from this case study on how educators and learners can focus on the relational aspects of teaching and learning — to each other, to knowledge, and to the world beyond the university — in creating new possibilities for transformative teaching and learning.

Re-Conceptualizing the Assessment of Teaching: Two Contrasting Examples of Policy Uptake

Arshad Ahmad, Torgny Roxå, Rob Cassidy, John Van Maaren, Janette Barrington

Literature on the assessment of teaching has historically focused on problematizing student evaluations of teaching (SET) even though SET is one of many possible pathways for assessing teaching. Research suggests that, as a primary evaluation mechanism, SETs are biased and suffer validity and reliability issues (e.g., Wright & Jenkins-Guarneri, 2012) undermining their use to enhance teaching and learning (Uttl, White & Gonzalez, 2017). This has led universities that use SET exclusively for formative or summative teacher assessment to remain stuck with faulty policies and procedures. The underlying question is what does satisfactory and outstanding work on teaching and learning look like and how can we identify and promote it so that it influences higher education in productive ways?

To address the question of how institutions can best promote teaching, we propose a system-based model (SBM) grounded in well-understood theoretical frameworks. The SBM highlights characteristics that mark: (1) all stakeholder perspectives (Reynolds & Saunders, 1987; Trowler, 2014, Xu, 2012), (2) pedagogical competence (Olsson & Roxå, 2013), (3) the role of teaching portfolios (Zubizarreta, 1999), (4) students as partners in assessment work (Healey, Flint & Harrington, 2016), and (5) theories of change in higher education (Kezar, 2014; Bamber et al., 2009). It is further informed by two contrasting case studies.

The first example characterizes a scientific management theory of change in which leaders establish their own vision of quality to drive changes in performance (Kezar 2014). This approach is known to be problematic in the context of higher education where academic freedom is sacred and tensions can exist between central administration and departments (Westerheijden & Kohoutec, 2014). The second example characterizes a more dynamic social/cultural approach where policy or theory is introduced, observed over time, and then adjusted (Bamber et al., 2009; Kezar, 2014). In this
approach, opportunities are created to strengthen formative and summative approaches inherent in a teaching assessment system thereby promoting fruitful discussions on good teaching.

Our goal is to unpack both examples, how they have each affected the notion of policy uptake over a 30-year period, and to illustrate how SET has been taken up differently in each case. Participants will have the opportunity to discuss their own context for the assessment of teaching with colleagues and to offer their critique of our case studies, thereby providing collective feedback on how to re-conceptualize the assessment of teaching towards a culture for learning.

Reimagining the Curriculum: Educating Civic Practitioners

Nuria Alonso Garcia, Nicholas Longo

There seems to be an increasing demand in the liberal arts education to focus on “workforce preparation” as a central part of the undergraduate experience, while also continuing to prepare graduates for democratic citizenship. While these objectives appear conflicting these aims can be integrated. This paper explores how the designing of a capstone experience can be a catalyst for re-imagining a curriculum to focus on career and civic preparation. Authors will discuss the research results of a comparative study of capstone models, along with a participatory design process involving students and community partners to reimagine the Global Studies curriculum at Providence College, a liberal arts institution in the US. The presentation will include essential reflective practices for creating a culture of learning, including the use of democratic education, community engagement, and electronic portfolios, and invite participants to reflect upon the civic dimensions of their disciplines.

A Cross-Disciplinary Collaborative Approach to Undergraduate Communication Instruction

Meghan Aube, Eric Jandciu, Jaclyn Stewart

Academic and professional communication skills are essential outcomes of higher education (Bath, Smith, Stein, & Swann, 2004), yet faculty members can be uncomfortable or unwilling to teach them, and they can be difficult to integrate into curricula (Bath et al., 2004; Jandciu et al., 2015). Communication skills, which are typically introduced in first-year composition courses, are often considered secondary to and separate from the disciplinary content (Wentzell, Richlin, & Cox, 2013). Movements such as Writing Across the Curriculum advocate for a more discipline-specific approach to communication with a goal of encouraging students to think more like practitioners within their fields (McLeod & Soven, 2000; Stock, 1986). In addition, research has shown that extensive, discipline-based writing practice helps students both learn the writing genre of the discipline and consolidate their understanding of the subject matter (Kuh, 2008; Ellis, 2004; Osborne, 2010). Institutions are starting to appreciate the importance of academic and professional communication skills as key learning outcomes (Mercer-Mapstone & Matthews, 2017), and scholarly approaches to curriculum design, instructional design, and faculty professional development are all key to meaningful learning.

The University of British Columbia has been changing its approach to teaching academic and professional communication, both through top-down initiatives and grassroots change. To date, we have established new communication courses in some STEM programs, a Writing Across the Curriculum Program supporting instruction of all types of communication, and a set of scholarly support documents for developing writing skills. Currently, a group of key stakeholders is overhauling first-year writing and communication in particular, to help ensure equity for students and to build a
collaborative, learning-focused culture for faculty who teach writing and communication-intensive courses across campus. To date, there has been very little contact between faculty teaching writing in one discipline and another; this new approach is already beginning to break down these barriers while still keeping a strong writing in the disciplines focus. In our paper, we discuss the impetus behind these changes, as well as the scholarly literature we are drawing from to guide them, and finally, our expected outcomes and plans for measurement and assessing both the impact of the changes on student learning and a sense of community among faculty. Through open discussion we will also encourage attendees to share their experiences incorporating academic and professional communication skills into their curriculum.

The Uneasy Marriage between Research and Teaching? Exploring Culture(s) of Research-Rich Education

Grant Bage, Peter D'Sena

‘Research’ and ‘teaching’ characterise the work of many higher education institutions, but the pedagogic interactivity between the two and the consequent impact on the student experience can vary widely, depending upon individual universities’ cultures (Elken and Wollscheid, 2016; Tight, 2016; Healey and Jenkins, 2018). In some, there is prima facie evidence of an intimate, well-established, even a nurturing relationship, tantamount to a happy marriage; while in some others, there can be self-evident and declared distancing, inequality, or even distrust, hostility or unease. Healey and Jenkins, whose early work has helped to shape twenty-first century expectations of higher education’s research-teaching nexus, advised that to improve the relationship between these two core components of work, close attention should be paid to all levels of academic staff engagement with institutional practice and national policy. In pursuit of that quest, a project, based in a post-1992 university in the UK, has examined the perceptions, culture and experiences of over one hundred academic staff, ranging from experienced educators, institutional leaders and departmental managers, to those new to teaching. The data, derived from and triangulated between surveys, interviews and published policies, explored three questions about complex cultures of the nexus (Spronken-Smith et al, 2011). How and why is the relationship perceived and manifested by practitioners; what are their aspirations for its future; and how can it be made to work better?

The project’s findings have led us to develop a testable, tri-partite cross-disciplinary paradigm of ‘research-rich’ education which draws on the critical notion, established elsewhere, that distinctly different cultures or views of research-educational links can operate in close proximity (Light and Calkins, 2015). Findings also lead us to agree that there is cachet in designing and disseminating common ‘research-based principles’ (Weston, Ferris and Finkelstein, 2017); while targeting educational research, and consolidating practice through Academic Developers can play a pivotal role (Gannaway, et al, 2013; Healey and Jenkins, 2018). Significantly, prevalent and emergent cultures suggest to us that institutions should aim to foster a ‘listening marriage’ in which ‘social processes’ of dialogue can shape and improve practical, productive relationships between teaching, learning, research and scholarship (Brew and Mantai 2017). That would go a long way towards underpinning any model of systemic cultural change and move the research-teaching nexus away from uneasy cohabitation towards a more symbiotic, co-dependent and, hopefully, a more mutually respectful, equitable and productive relationship (Fung, et al, 2017; Aarstad, Sinderud and Snildal, 2017).
What Makes a Good Teacher? Examining Teaching Assistants' Concerns of their Teaching

Hillary Barron, Lorelei Patrick, Julie Brown, Sehoya Cotner

Undergraduate students in science classes are more engaged and demonstrate increased performance when instructional methods implement authentic science practices and active learning strategies. In these courses, students report greater self-confidence in their abilities to understand scientific concepts, particularly female and underrepresented minority students. Creating such inquiry-based, active-learning centered, and authentic science experiences also promotes inclusion and meaningful learning in the classroom. However, these models of science instruction are typically relegated to majors-only science students. Non-majors students (i.e. those enrolled in science classes because they need to fulfill a requirement) typically receive instruction that is more lecture-based and prescribed, which often contributes to disinterest, diminished self-expectations, and lower performance.

Mediating these untended outcomes is a critical part of creating an inclusive and empowering science learning community in undergraduate science. Teaching assistants (TAs) are prime candidates to engage in these change processes as they often interact more closely with students than lecture instructors. However, existing research on how TAs teach doesn’t delve deeply into what concerns TAs have about their teaching capabilities. We collected data throughout an ongoing TA training program and sought to answer the following questions: 1) what are TAs’ concerns about teaching? and 2) How do TA concerns evolve over time? Are there consistencies in TA concerns over time? Data sources included pre- and post- workshop survey questions at the beginning and end of a workshop before the fall semester as well as open-ended reflection prompts given at four time points throughout the academic year.

First and second cycle qualitative coding analyses were conducted to establish themes of TA concerns and to explore if and how those themes changed over time. Preliminary analysis revealed that TAs concerns in general tended to be linked specifically with science content. This indicates that TAs are comfortable with their science content knowledge yet unsure if that knowledge is effectively translated to their students. Additionally, TAs were concerned about being inclusive in their teaching practices, citing insecurity about what techniques were appropriate. Finally, TA concerns, while moderately fluctuating over time, were consistently student-centered in nature. These findings show that as teaching assistants developed their instructional techniques and identities, how to connect their teaching with their students was integral in their reflective processes.

Giving Voice to Learning in Mathematics

Arlene Barry, Barbara Bradley, Karen Jorgensen

We can engage and support the adolescents we teach by asking them what kinds of instructional materials, teacher practices and classroom structures helped them learn best. It is important to give individuals voice because learner insights are rarely sought yet can be profoundly informative (Groves & Welsh, 2010). Additionally, scant research has examined the role of the math textbook from the student perspective (Thomas, 2013). Determining the quality, readability, and willingness of students to actually read the text is critical information. There is little research that documents the text features that students like and use, or even how they engage with their textbooks. Now with the rush to technology-based learning, text use becomes even more expensive and complicated and the perspective of, or benefit to, the learner is still in question (Cheung & Slavin, 2013). Therefore, in order to determine the learner perspective, a literacy and math collaboration solicited reflections on learning math from 1,212 students. Items in an online, anonymous, semi-structured survey were used to gather information. Included were both open and closed response formats (Fowler, 2014).
Survey highlights indicated that a majority of respondents (57.54%) preferred to learn math with a traditional print textbook, rather than digital (24.56%) or electronic (16.14%) because there was less distractibility, less eyestrain, and no connectivity issues. In qualitative feedback, learners emphasized the advantages of a being able to navigate a physical text and their preference for its tactile properties (e.g., “Something about being able to touch the book and flip pages helps me process the information better” (Q35). Their tendency to highlight and write notes in a book was another prominent comment. Regardless of text type, the text features identified as most helpful to learners for better understanding concepts were: examples, practice problems, answers, explanations, definitions, visuals, and vocabulary (Q20).

Despite their affinity for a print textbook, 30% of learners reported that they "never" or "rarely" read their math book (Q32). This may be due to the fact that when providing qualitative descriptions of how they best learned math, respondents lauded the value of collaboration with “small groups” or “peers.” Overwhelmingly, these learners declared that their learning occurred “with the help of a good teacher,” one who “explained,” “demonstrated,” “answered questions,” who “knows the material,” and is “excited to teach math” (Q38). Perhaps the billions spent annually on textbooks would be better spent on teachers.

Identifying Components That Foster a Culture of Learning One Course at a Time

Dina Battaglia

There has been a recent surge of research studying the importance and role of instructor presence on student learning in online learning environments (CCRC, 2013; Creasman, 2012; Kolowich, 2010; Morrison, 2012) but not face-to-face. Furthermore, research that has examined instructor presence in face-to-face environments have done so in “traditional” style classrooms, not ones specifically designed for active learning (Buskist, Sikorski, Buckley, & Saville, 2012; LeFebvre & Allen, 2014; Witt, Wheless, & Allen, 2004). Our newly designed Active Learning Center presented an optimal opportunity to investigate the relationship between instructor presence on student-reported learning and intrinsic motivation for learning in a face-to-face, non-traditional style classroom.

During the summer of 2017, we designed and installed a brand new active learning center (ALC). With this new addition and “tool” for faculty to better implement learner-centered teaching strategies, we began wondering how taking a course in an actual active learning center may affect instructor-student rapport and intrinsic motivation for learning because of proposed increased instructor-presence. Instructor presence was measured with the Teacher Behaviors Checklist (Keely, Smith, & Buskist, 2006), the Professor-Student Rapport Scale (Wilson, Ryan, & Pugh, 2010), and the Nonverbal Immediacy Behavior Scale (Richmond, McCroskey, & Johnson, 2003). Additional instruments administered included a Demographic Questionnaire, the Intrinsic Motivation Inventory (www.selfdeterminationtheory.org), and measures for student self-reported learning gains. “Instructor presence” (Buskist et al., 2012) in an active learning classroom was predicted to be positively correlated with student self-reported learning and intrinsic motivation.

Session participants will learn about research on instructor-presence, instructor-student rapport, and the data we collected from a multidisciplinary group of undergraduates who experienced an entire semester in our new active learning center. Following this initial presentation, participants will be invited to engage in discussion about how the results from this study can inform educational development programming on their own campuses.

This research supports three of the four conference theme threads: a culture for learning, a culture of learners, and a culture that learns. Each of the variables under study helps us to better understand individual components of the learning environment (i.e., instructor characteristics, learner
characteristics, and learning space characteristics) that, together, may foster a culture of learning one course at a time.

What Is a Scholar? Life on the Edges of an Idea

Eevi Beck

What constitutes scholarship of teaching & learning (SoTL)? As a research area SoTL seems to hinge on an idea of ‘scholarship,’ an illusive notion at least since Boyer (1990) proposed it as a 4-pronged conceptualisation which included teaching. Boyer wished to expand views of what ‘the professoriate’ does, especially to “move beyond the tired old ‘teaching versus research’ debate” (p.14). Yet, not only has ‘scholarship’ remained recalcitrant to definition within SoTL, the debate did not necessarily move beyond that ‘tired’ dichotomy (cf. Potter & Kustra 2011, who proposed more rigorous definitions).

To Palmer (2007), good teaching is forming community engaged in ongoing ‘conversation about things that matter’: What ‘matters’ for developing our own (mine, others’) capacity to teach? How does forming community around this relate to ideas about scholarship in SoTL?

The purpose of this paper is to contribute to transcending the dichotomy by bracketing attempts at definition. Attempts at articulating a sense of SoTL and its boundaries, including through discussing definitions, refines awareness and is important. Rather than on reaching agreement, importance is placed on wondering/wandering about (some of the periphery of) what ‘scholarship’ is/can be. Seeing the author and readers as teachers as well as researchers and more, it traces some of life on the boundary of the term ‘scholarship’.

I present two empirical (auto-ethnographic) examples. One is my reading of the Review Guidelines for this conference for its notion of scholarship. Another comes from an Academic Development course where participants are invited to enquire into conditions for their teaching through listening forth from each other a challenging teaching experience, and through getting acquainted with tension in their bodies. By explicitly focusing attention on experiential knowledges rather than published work, this course contrasts with other courses participants also take.

This paper wishes to ‘trouble’ easy assumptions about the knowability of ‘scholarship.’ Any boundary is subject to continuous (re-)construction, and the contested status of the term (not only through competing definitions/requirements but deeper) reveals its fluidity and permeability. Further, pushing at the question of what scholarship ‘is,’’ and ultimately, asking about its deeper purpose (inspired by Walter Benjamin), may contribute to additional ways of working in SoTL to those presently imaginable.

‘Scholarship’ needs not exclude experiential approaches to understanding. To practice this, interested participants will be invited to engage in two simple activities of observing movement of the body and of the mind.

Conversations about Diversity and Inclusion: Bringing Instructor Identity into View

Carol Berenson

A growing body of SoTL research explores issues related to equity, diversity, and inclusion on the postsecondary landscape (Hockings, 2010; Lawrie et al., 2017). As expected, research in this area typically situates the identities and experiences of diverse students at the forefront. For example,
learning experiences of students with disabilities have informed the expanding SoTL discussion about ‘universal instructional design’ (Burgstahler & Cory, 2009; Marquis et al., 2016; Ouellet, 2004), which has come to be seen as a hallmark for inclusive approaches to teaching.

What’s missing in the SoTL inclusivity conversations however, are the identities and experiences of instructors. When the instructor is left out of the inclusivity research equation, s/he/they are presumably understood to be a disembodied, benign presence in the classroom. This assumption of ‘teaching from nowhere’ does not adequately acknowledge diversity among instructors nor does it capture a full picture of student learning. The research that does acknowledge instructor identity indicates that those associated with some identity groups (based on gender, race/ethnicity/culture, first language/’accent’, country of origin, sexual orientation, etc.) are viewed differently in the classroom than their more mainstream counterparts. This can lead to negative course evaluations (MacNell et al., 2014) and challenges to authority, teaching competence, and scholarly expertise (Alexander-Snow, 2004; Pittman, 2010).

Building on the literature that makes instructor identities visible, this session describes a workshop that was developed to support faculty to consider the relevance of their identity in teaching and learning and to strategize around identity-related challenges they may face (Zhang, 2014). We implemented a critical, strength-based approach by inviting participants to recognize how their identities could be used as a source of strength and opportunity rather than as a deficit in their teaching and learning practices and relationships (Yep, 2014). Individuals left with a call to action to think about questions they might subsequently want to ask from this standpoint about student learning in their classrooms.

Participants in this session will: take away information and resources from a workshop entitled ‘Identity in the Classroom: Exploring Instructor Impact; discuss SoTL and educational development initiatives that they might implement in their settings to make instructor identity visible and learn about its impact. Given the current impetus towards internationalization, Indigenization, and inclusivity on university campuses, the experiences of diverse instructors need to be addressed in order to ensure an equitable teaching and learning culture for all.

On the Need to Teach Question-Asking as a Skill

Stephen Bloch-Schulman

In this paper, I will forward the case that we have a responsibility to teach question-asking, and that this should play a prominent role in our course goals. Specifically, I will argue that we should have as one of our goals that students should be able to identify different types of questions that matter within a discipline or class, and when and how they are and ought be utilized. I will then claim that to accomplish this, we need to have students practice, and ultimately be graded, on their abilities with regard to questions, specifically, in asking good questions and in identifying types and uses of questions. I will give examples and ask for attendees to share how this works in their own classroom.

Learning Together: Inclusion, ‘International’ Students and a Language-Connected Curriculum

Bernice Bond

As Universities aim for increased numbers of international students, it is important to highlight how this shift is impacting students and staff. This paper reports on a 1-year project funded by a newly established Institute for Teaching Excellence (LITE). It investigates the connection between language,
disciplinary content and knowledge communication, and touches on the key issues of internationalisation, inclusion and teaching excellence in HE.

Three case studies explored where and how teachers and learners find that language and disciplinary content knowledge diverge and intersect using an Academic Literacies ethnographic framework (Lea & Street, 1996). Using inductive content analysis, findings gathered from data including fieldnotes, interviews, observations and documents as artefacts suggest that issues of identity, trust and agency are key for developing practice in this area. Language is seen to have an impact across all aspects of students’ academic development and experience and as central to all forms of knowledge creation. Yet the linguistic practices of disciplines often remain occluded.

I also suggest that much support for international students remains outside the core of academic teaching and learning, and therefore argue that language in particular needs to be a more explicitly integral part of any HE curriculum. Thus, I propose a framework for pedagogical content knowledge (Shulman, 1996) that includes an explicit focus on language across the social, cultural and academic domains of HE where academic language is viewed as a threshold concept (Meyer & Land, 2003) in its own right.

Within a language-connected curriculum, there is a necessary move towards a praxis of uncertainty (Meyer & Land, 2005), where a culture of learning involves both students and staff. Collaboration and co-construction of learning between content and language experts is required. Cultural and linguistic differences cannot be viewed as static or easily labelled, suggesting a constant need for reflexive exploration of the diverse needs of each different cohort of students. Therefore, we move away from a focus ‘on how international students can be ‘enabled’ to succeed academically . . . [towards] how they might influence curricular enhancements’ (Ippolito, 2007:750) and ultimately towards a higher education ‘premised upon the explicit aims of inclusion and diversity’ (Lillis, 2003:192).

Finally, I outline the practical impact my project has had within my own institution. As part of a growing institutional culture of SoTL, it has encouraged development of a more inclusive, international approach to education. Lessons learned from this work could be applied to other contexts.

Changing the Culture of Learners through a Programme of Engagement

Catherine Bovill

Research evidence suggests that the relationships between students and teachers in higher education are a key factor in fostering student engagement, and contributing to positive student outcomes (Lampert, 1993; Zepke & Leach, 2010). Increasingly, the relationships between students and teachers are also recognised as laying the foundations for good student-staff partnership working (Cook-Sather, Bovill & Felten, 2014, Cook-Sather & Chiles, 2011). In addition, Roxå and Mårtensson (2009) have examined significant networks and microcultures in higher education and have demonstrated how university departments considered successful in terms of learning and teaching tend to be those that encourage informal connections between teachers where they can talk about learning and teaching. Drawing together the work on significant networks and microcultures with the literature about the importance of relationships within students as partners work, Woolmer, Marquis and Bovill (2017) have recently begun to investigate the informal conversations taking place between staff and students.

In this paper, I present details of a programme of initiatives taking place at the University of Edinburgh, which aim to change the culture of learners through enhancing the relationships and
increasing conversations about learning and teaching between staff and teachers. These initiatives include a new student engagement network for staff and students involving regular events, a new set of practical booklets focused on different aspects of student engagement, and ‘coffee and cake conversations’, a scheme that connects a volunteer staff member with three volunteer students from the same School to go for free coffee and cake. Each of the initiatives will be presented in more detail.

Each initiative has been evaluated using questionnaires sent to participants after the first year of operation. Respondents describe the initiatives in terms of being fun, having relevance, and as a stimulus for changing teaching practices to become more engaging. I will present the evaluation findings in more depth to illustrate how the programme of engagement is slowly contributing to changing the culture of learners at the University of Edinburgh. Participants will be invited to share any similar schemes at their own universities aimed at changing the culture of learners and enhancing student and staff engagement.

**Examining Learning in the Course, "Inclusive Leadership for Sustainable Peace"**

*Edward Brantmeier, Destin Webb*

This study examined a course that aimed to create an inclusive learning culture where co-learners participated in the following: self examination of leadership values and approaches; the study of non-Western global peace leaders; and local community engagement. The research presentation will explore foundational course questions (Bain, 2004), learning goals, learning activities, key assessments, and learning impact of this course. Johansson and Felten (2014) maintain that transformative learning involves engaging students in semi-structured, often messy learning processes that promote reflection and action in iterative cycles. Focusing on “glocal” (global + local) community engagement through a “critical pedagogy of place,” students were asked to “re-inhabit” their communities and “decolonize” their minds and relationships (Gruenewald, 2006). Co-learners partnered on a community gardening project with a local refugee organization to attempt to create healthy ecosystems, social equity, and viable economies (Nolet & Wheeler, 2010).

The primary research question of this study is “what do students learn about themselves, others, and their ability to change the world from engaging in this course?” Participants included ten (N=10) undergraduate students from a predominately white, large masters-comprehensive university in the United States. The instructor of the course and an undergraduate teaching/research co-inquirer conducted this qualitative study using a priori coding methods (Saldaña, 2015) to examine the primary data: an inquiry project paper; threaded online discussions; a letter to the seventh generation; and the final exam. In pre and post assessments, students answered the following foundational course questions that served as the first assignment and final exam for the course:

**Foundational Course Questions:**

1. What are your core values, philosophy, and approach to leadership?

2. How do impactful peace leaders navigate opportunities and barriers to sustainable peace?

3. Where is your power to make changes to alleviate violence and suffering in a world in need — to build sustainable peace, community, and happiness

Preliminary findings indicate that research participants gained personal value and career clarification, deeper understanding of how to navigate opportunities and barriers to achieve sustainable peace, and commitment to education as a means of planetary change. The problematics of a self-study of
one’s dream course will be explored to advance rigorous and self-reflexive qualitative SoTL methods (McKinney, 2007). This research presentation itself will utilize contemplative pedagogical practices used in the course: a brief experiential activity; mindfulness; and reflective dialogue.

Shared Thoughts - Shared Meaning? Integrating Diverse Concepts about Teaching and Learning

Thorsten Braun

The integral idea of SoTL is the systematic and public reflection about teaching, learning, and all that comes with it. One central issue is omnipresent: what contributes to a successful learning process of our students? This simple question generates a multitude of mental concepts, theories, approaches and assumptions. SoTL is dedicated to bring them all to the light and foster a sound and scholarly discussion. However, the sharing of those diverse theories and empirical approaches about teaching and learning comes with a serious challenge: Are we really talking about the same? How can different views and approaches in SoTL be integrated in a solid and scientific way? Aren’t we leaving the academic ground, if we compare and relate e.g. psychological, sociological, quantitative, and qualitative statements without hesitation and second thoughts?

The presented paper proposes a theoretical framework for the integration of diverse theoretical and methodical views on teaching and learning. It offers SoTL professionals an approach to mediate and moderate the diversity of concepts and theories in the SoTL community. The framework relies on a general theory of action which is rooted in the sociology of knowledge by Alfred Schütz, Peter Berger, and Thomas Luckmann. The integral part is the lifeworld concept as a place to produce and successfully share meaning about the world. This approach will be developed into the field of SoTL, exemplified by the chosen topic “requirements for successful learning”. After a brief introduction to the theoretical framework, the paper presents results from a qualitative content analysis of 17 widespread frame models about successful learning. This serves as an example for the integration of diverse approaches. Participants are encouraged to engage in self-experiment afterwards.

While practical application of the proposed framework within SoTL discussions is possible, the main goal of the presentation is to raise the awareness for theoretical grounding in order to avoid the critique of eclecticism.

Expected learning outcomes are i) reflection on the limitations of scientific reasoning, ii) basic knowledge about the usefulness of a general action theory for the integration of diverse approaches, concepts and empirical results about teaching and learning, iii) motivation for further inquiry and critical thinking about the theoretical integration of thoughts, meaning, and SoTL results.

How to Stimulate and Assess Students’ Argumentation and Critical Thinking in (Online) Discussions?

Jens Breivik

Discussing online is a commonly used learning activity in higher education. Developing new knowledge, scrutinizing established conceptions, and contrasting conflicting views require the ability to think critically, propose sound arguments and evaluate arguments tenability. Discussions with peers may enhance such capacities. For this presentation, the context is online discussions, yet, the key points are relevant for classroom discussions as well.

Educators and researchers strive to understand how participation in online discussions influence students learning, and how to best facilitate learning discussions. To investigate such topics,
researchers need a framework to analyze the quality of discussants’ postings. An extensive number of different frameworks and coding schemes to analyze participation in online educational discussions have been suggested in the research field; however, no consensus about framework and coding schemes is established. For teachers and facilitators of discussions for learning, a sound conception of critical thinking and argumentation is a useful guide.

A commonly used framework based on the Toulmin-model categorizes discussion posts as: 1) Simple claims without any kind of evidence, 2) Grounded claims that provide evidence but lack limitation of the context wherein a claim is valid, 3) Qualified claims that limit the context where the claim is valid but lacks evidence, 4) Grounded and qualified claims that provide evidence and limit the context where the claim is valid, 5) Non-argumentative moves. According to this framework, category 4 – grounded and qualified claims – represent the most rational argumentation while categories 1 – claims without evidence – represent the less rational argumentation.

How adequately does the framework that builds on Toulmin operationalize critical thinking and rational argumentation in (onlin) educational discussions?

During the session, the audience will articulate and discuss their conceptions of critical thinking and rational argumentation. Further, audience will analyze excerpts from discussions according to the Toulmin-model and discuss the usefulness of this model. Activity will take place as challenges to the audience during the presentation and as a short discussion at the end.

**What Are We Calling Evidence? The Tinder-Box, the Smock and the Master-Thief**

*Mike Bryant*

Knowledge of teaching, in its various forms, is central to SoTL (Kreber & Cranton, 2000). The need for increased attention to evidence in the development of SoTL has been recognised for some time (Hutchings et al., 2013; Trigwell, 2013). However, no model of educational improvement has been found that can substantiate the normative assumptions underpinning the concept of “evidence-based practice” (Price & Kirkwood, 2013; Prinsloo, 2017).

In consequence, there have been multiple recent calls for a re-invigorated consideration of the relationship between empirical evidence and knowledge of teaching (Brown et al., 2017; Godfrey, 2017; Guerriero, 2017). Recent extensions in the use of computation and analytics have created new possibilities for the role of evidence within a scholarly culture (Jivet et al., 2018).

This study takes the form of a desk review whose aim was critically to analyse recent existing research in this area. The review included research based in higher education, schools and other occupational contexts, written mainly but not exclusively in English.

The search strategy involved repeated database and bibliography searches followed by a two-phase approach to screening using relevance criteria. This was in order to provide the broadest possible sample, also mitigating potential cultural and confirmation biases.

Analysis involved the development of a coding rubric. An exploratory approach was taken, involving multiple phases of identifying and refining descriptors and domain categories. This method was chosen to enable emerging ideas to be considered in relation to the literature sampled, and to reflect the diversity of contexts and perspectives represented.

The outcome of the study was the identification of salient patterns in existing literature about the nature and role of evidence in SoTL.
In this paper, I will briefly describe the experience and method of the study. An important element of its presentation will be the opportunity for the audience to contribute by sharing experiences and ideas about teaching knowledge and how, if at all, it relates to evidence.

I will then present an overview of the findings metaphorically in the form of three narratives taken from European folklore: the tinder-box, the smock and the master-thief. Each narrative, the study suggests, represents a commonly found, implicit conceptualisation of the role of evidence within SoTL.

The session will conclude by discussing the implications for thoughtful use of evidence in contemporary teaching scholarship, and by suggesting personal interpretive frameworks as a promising area for further research.

**Assessing the Impact of the Instructional Skills Workshop (ISW) in an International Context**

*Alyson Brown, Julia Evanovitch, Michael Agnew*

The Instructional Skills Workshop (ISW) is a comprehensive teacher development program designed to enhance the teaching effectiveness of both new and experienced educators, strengthen teacher capacity and delivery skills, foster institutional dialogue and collaboration on teaching and learning, cultivate student-centered teaching and learning practices as well as active learning strategies. The ISW was chosen as one of the central components of a faculty development program, which would be best suited for faculty at T.A. Marrishow Community College (T.A.M.C.C.) in St. Georges, Grenada. The ISW would be one component of a faculty development initiative that developed as part of a 5-year partnership with McMaster University in Hamilton, Ontario, Canada.

A report released by Dawson et al. (2014), which focused on teachers within Ontario, Canada, found evidence that the ISW can influence participants to become less-teacher focused and more student-centered after completing the program. This study also found that teachers reported incorporating more active learning strategies into their teaching after having completed the ISW and that generally, teachers reported that their perspectives on teaching and their practice was fundamentally transformed by the ISW process.

As Dawson et al. (2014) observed; however, although the ISW has now been incorporated into faculty development programs at most Canadian universities (including McMaster), and has trained thousands of post-secondary instructors globally, research on its impact on teaching practice and on its sustainability over time has been limited. There has also been little evidence to support its impact on teaching effectiveness and student-centered instruction outside of North America.

In this presentation, we will explore the notion of creating and cultivating a culture of learning. Although this research largely focuses on the ISW and its impact on teaching and learning within the classroom, part of this work also examines the impact of the ISW on the teaching and learning culture at TAMCC. Drawing on work from Roxå and Mårtensson (2009), we will discuss our preliminary evidence from Instructors describing their conversations about teaching and learning that occur informally or ‘backstage’ and whether or not these conversations have been impacted by participation in the ISW.

In this session, participants will be invited to discuss their experience with the Instructional Skills Workshop (ISW) and different models of evaluation for faculty development programs.
The Transformative Power of Interdisciplinary Team Teaching across the Arts/Humanities and Sciences

Sarah Bunnell, Aimee Knupsky, M. Soledad Caballero

What happens when you encourage faculty and students to engage in team-taught, interdisciplinary teaching and learning? This paper presents the results of a three-year, multi-institutional grant investigating interdisciplinary team-teaching between the arts/humanities and the sciences. Previous literature on interdisciplinary team-teaching suggests that it is valuable for faculty, if resource intensive (Anderson & Speck, 1998; Rives-East & Lima, 2013). Less is known about how students engage in interdisciplinary thinking and how they might use this new skill to engage later learning. The grant investigated the common intersections and challenges of inviting students and faculty into cross-disciplinary explorations. Across 10 team-taught, interdisciplinary courses at four liberal arts colleges, faculty and students were asked to consider the challenges and benefits of learning or teaching in an interdisciplinary framework, as well as how their own views of their discipline changed in response to these interdisciplinary experiences. Faculty were asked to reflect on their experience teaching with a colleague from outside of their discipline, while students were asked to reflect on their learning experiences when taught by a team of faculty from disparate disciplines.

Data were collected at four time points (beginning, middle, end of semester, and a six month follow-up). Instructors developed pre- and post-test synthesis assignments that were shared and coded using the AAC&U Creative thinking and Critical thinking VALUE rubrics. Analysis of student reflections indicated that the benefits of interdisciplinary team-teaching far outweighed the structural challenges; benefits included being exposed to multiple perspectives, the ability to construct a more well-rounded understanding of a concept, the creation of a community of learners, and a decentralization of power in the classroom. These perceptions connect with the rationale that has been used in calls for embracing interdisciplinary learning (Ausburg et al.; 2013; Tuana, 2013). Faculty reported immediate benefits including increasing their pedagogical skills and serving as co-learners in the classroom, along with long term benefits of collaborative scholarship. For students, thinking in an interdisciplinary way came to mean more than taking on multiple perspectives and grew to include the goals of applying knowledge to real-world contexts, finding connections, thinking creatively and generating new ideas, and appreciating challenge and complexity.

Participants in this session will be invited to interrogate their working definitions of interdisciplinarity. They will also be asked to imagine how engaging in collaborative, interdisciplinary teaching and learning may impact their disciplinary thinking, the skills and problems they approach, and their professional development.

Working Toward SoTL: Cultures of Professional Learning for Non-Academic Staff of Teaching Centres

Megan Burnett, Marie Vander Kloet

In Canada, teaching and learning centres (TLCs) at colleges and universities are operated by academics and non-academic staff (often comprised of managerial, unionized, contractual or student staff). Centres have grappled with an increased focus on SoTL alongside work in educational development. As SoTL garners interest and validity in the Canadian academy, TLC staff are tasked with both developing programming and supports for faculty and engaging with SoTL themselves. For leaders of TLC centres, this can pose challenges for developing internal cultures and practices for professional learning and development of non-academic staff including identifying suitable professional development opportunities for staff with varying levels of training as scholars and familiarity with SoTL.
In this paper, we consider how to lead and mentor staff (both permanent and contract) through the fostering of a workplace culture that cherishes learning and appreciates that learning is complex, time-consuming and at times unproductive (a dangerous word in an increasingly measured and impact-focused academy) (Davies & Bansel, 2010; Peseta, Barrie & McLean, 2017). Drawing from our work at a large, research intensive university in Canada with a centre staffed almost entirely by non-academic staff (most of whom are members of unions with precise parameters around professional development), we employ a collaborative, autoethnographic writing and discussion (Chang, Ngunjiri & Hernandez, 2013; Davies & Gannon, 2006) process to engage in a scholarly and personal thinking through of our leadership work. At the crux of our collaborative, autoethnographic writing are three questions: how do we take up the responsibility for enabling and sustaining a learning culture in our centre? How do we work through and around institutional constraints to workplace learning? And, when a learning culture leads to new work and opportunities for staff, how do we maintain energy through staff hiring and training processes?

Our analysis, which is both highly specific and localized, as autoethnographic writing demands, offers two central contributions for scholars concerned with academic development, TLC leadership and professional learning. First, we provide a rich and intricate portrayal of the minutiae of the everyday leadership and the systemic planning needed to create a culture of learners in a workplace. Second, we interrogate how the organization of labour in the academy intersects with the development of SoTL within a TLC. This work, which draws neither tidy conclusions nor readily transferable application, offers a local, specific and provocative consideration of learning cultures as created, contextual and contested.

Graduate Students as SoTL Specialists: Facilitating Faculty-Student Collaborations in a Large University

Kristi Carey, Kari Grain, Patrick Dubois, Nathan Roberson, Firas Moosvi, Bruce Moghtader, Paulina Semenec, Trish Varao-Sousa, Simon Ho, Trinh Nguyen Kn, Ido Roll, Adriana Briseño-Garzón

Supporting scholars who wish to engage in researching their own teaching can be challenging, requiring awareness of each scholars’ unique disciplinary background and varying experience with SoTL. The very nature of SoTL activity often requires faculty to question and go beyond their familiar methodological and epistemological frameworks. To overcome this tension, with the goal of making SoTL accessible to a wider audience, institutions are continuously developing programs that aim at scaffolding and sustaining faculty engagement with SoTL within and across disciplines (Dobbins, 2008; Webb, Wong, Hubball, 2013). On the other hand, a call to engage students as partners in SoTL has emerged vocally in the SoTL landscape (e.g. Manor, Block-Schulman, Flannery, & Felten, 2010; Werder, Pope-Ruark, & Verwoord, 2016).

With this in mind, we identified the potential of expert graduate students (termed “SoTL Specialists”) to support faculty members as they engage with SoTL. This program identifies outstanding graduate students, provides ongoing SoTL training and professional development, and matches them with faculty members who seek support. The SoTL Seed was implemented at the University of British Columbia (UBC) in 2015, with the goal of supporting faculty as they embark in SoTL activity. SoTL Specialists are graduate students with diverse backgrounds and interests, mainly from the behavioural and educational sciences. They are positioned as experts and partners who help both novice and experienced faculty build capacity in SoTL. While each SoTL Specialist partners with faculty on specific projects, they are also at the core of an inclusive learning community of graduate students, where each member contributes and supports other members of the team from their own disciplines, areas of expertise, perspectives and skillsets. The team of students, with its diversity and
internal cohesion, enriches the full spectrum of the SoTL projects we support and contributes to personal growth and wellbeing of its members.

Our presentation will highlight how this institutional program at a large research intensive university is impacting graduate students’ identities as researchers, scholars, and partners in SoTL, and also as members of an inclusive learning community. The SoTL Seed program is a unique example of how institutions can successfully support SoTL activity by building on the expertise, commitment and diverse perspectives of their own students.

After getting to know our team members’ experiences with SoTL, participants in this session will be inspired to discuss whether our program could inform the implementation of similar support strategies at their own institutions.

Creating a Culture of Learning: The Impact of Learning Communities Supporting Practitioners

*Catherine Smey Carston, Joanne Baxter*

The scholarship of teaching and learning (SoTL) is relevant for adult learners situated in the broader community. This paper describes how a community-based research project explored how to support the learning and implementation of a provincial-wide, early learning curriculum framework. We will illustrate how through the creation of a culture of learning, over forty-five practitioners were engaged and supported through a multi-leveled pedagogical leadership approach to create a sustainable learning community. Based upon the principles of good SoTL practice (Felten, 2013), this project was grounded in context (pedagogical leadership and early learning literature), focused on a co-inquiry approach and was conducted in partnership with participants and the broader community.

A variety of pedagogical supports were developed to provide support and meaningful resources to participants. A strong focus of the learning community was to develop pedagogical leadership skills in order to facilitate the implementation of the curriculum framework in practice. Many administrators in programs with young children noted how they executed their administrative roles as managers. Very few administrators practiced as pedagogical leaders; to guide and lead the curriculum and co-inquiry practice most suitable for young children. Therefore, this model was created around two foundational pieces; learning communities and pedagogical leadership development.

Program administrators were invited to participate in monthly learning community sessions with a pedagogical leader, who shared key concepts from the curriculum framework. The learning community provided a semi-structured approach, where each concept in the framework was delivered systematically. After discussion and dialogue, the administrators, in collaboration with a partner, would determine how the concept would be taken up in practice in their programs. These selected pedagogical partners then worked individually with each administrator as they put tenets of the framework into action.

The learning community quickly became the center for sharing of concepts, identity, and leadership as they related to practice. The pedagogical leader and partners provided a range of individualized strategies including instruction, modeling, observation and reflective practice based on the administrators’ needs. Pedagogical supports will be presented, including aspects of building relationships and learning culture, mentoring, coaching and how the use of technology supported distance learning. Project outcomes and learning from participants will be shared as well as recommendations for community-based SoTL practice.
Rethinking Leadership in Learning: Culture, Criticality and Conflict

Lisa Cary, Jennifer Howell, Mike Bryant, Kathryn Harrison-Graves

Considerations of leadership, within and beyond institutions, are increasingly seen as fundamentally linked to the development of SoTL (Hutchings et al., 2011), but studies of leadership cultures in contemporary further and higher education learning and teaching contexts commonly point to dissonance as well as to harmony (Marshall et al., 2011; Smith and Swift, 2014). In this paper we will ask how cultural dissonance can most helpfully be understood, explore the experiences of leaders of learning of operating in dissonant environments, and discuss how these theoretical perspectives and practitioner experiences can support leaders in SoTL.

Cultural dissonance (Ade-Ojo and Duckworth, 2016) refers to problems of alignment in the perceived salient features, practices and symbols of a group or organisation. We theorise that harmony, its opposite – dissonance, and the metaphoric extreme, ‘toxicity’, have a critical and contemporary relevance to leadership cultures in SoTL at all levels. This relevance arises from the special nature of the role of an educational leader (Quinlan, 2014), as well as from the complex tensions arising from the uses of ‘culture’ in higher education.

This paper will centre practitioner experiences across sectors and countries, framed by a discussion of the theoretical underpinnings that shape leadership in learning in a SoTL context, including the following considerations: 1) How might we best theorize leadership in learning as a way to situate and negotiate the tensions and challenges of working within the institutionalised cultures of further and higher education? 2) How do these leadership journeys play out within institutional and structural support and recognition for effective leadership in learning? 3) What relevance do our own experiences of hyper-marketsisation, cultural aggression, the “false promises” of constructivism, and current debates about “evidence” in education have for a theory of cultural dissonance?

It is worth noting that the journey into formal educational leadership roles is not always intentional. More commonly, it is a pathway triggered by unexpected opportunities, or the prompting of line managers. This incidental transitioning is often thought to affect the identities of leaders of learning as variously characterised in our contexts, their perceptions of ‘doing’ leadership and culture, and their trajectories in their roles (Stewart, 2014; Trowler and Knight, 2000). Also, the broader concept of leadership is itself complex in its application to SoTL, and so far lacks both an extensive associated body of research and established theoretical underpinnings (Hargreaves, 1998; Fear, Adamek and Imit, 2002; Biesta, 2015).

Toward a Learning Culture, Enabling Learning Networks: How Can SoTL Transform the Way We Lead?

Huang Hoon Chng, Johan Geertsema

Leaders of teaching and learning face increasingly complicated challenges and opportunities. The complex character of these strategic positions is widely recognized (McDonald et al., 2016), as is the conceptual confusion about what leadership in higher education entails (Marshall et al., 2011). We investigate educational leadership from the vantage point of two levels: institutional leadership and practice, and the arguably more liminal space of strategic support, by linking the scholarship of teaching and learning with the ideas around organisational leadership and fostering a learning culture.

An organisation that continuously creates conditions for its members to learn is likely one that emphasises growth (Senge, 1990). Given the speed and complexity of change, there is even more
reason now to cultivate a mindset based on an attitude towards continuous learning – a growth mindset (Dweck 2006) – that underpins the organisational culture. If a key characteristic of SoTL is an evidence-informed and iterative spirit of inquiry into teaching and learning, then adopting a SoTL frame means that as part of our everyday practice we start with a problem, determine a means to investigate the issues, gather the data to inform the problem-solving process, and iterate this learning process to arrive at a solution. Such a frame of inquiry demands that we take institutional leadership as itself an object of serious intellectual work. It also requires us to keep on learning – from grasping the current situation, problematizing it and reflecting on possible, better futures. This, to us, is one link between a SoTL mode of inquiry and the starting point of a learning mindset and culture.

“How can SoTL practice change the way we lead in higher education”? We explore the above links: the connection between a SoTL frame, a distributed, collaborative approach to institutional leadership and strategic support of it, and the implications of these links for organisational learning and leadership. We argue that embedding SoTL in institutions provides a frame for an institution to rethink its own approach to leadership in creating a learning culture. We illustrate this argument by reflecting on our diverse but complementary efforts in providing leadership for fostering a SoTL/learning culture at our institution.

The Pedagogical Use of Virtual Field Guides in Geoscience Fieldwork Education

Anthony Cliffe

This paper investigates the educational benefit of 3D Virtual Field Guides (VFG) to enhance and aid student learning. Over the last decade there has been increasing interest in the use of web-based and mobile technologies to support the fieldwork of professional geoscientists and to alleviate issues of inclusivity for disabled students (Stewart et al., 2010). Geoscience has often been under represented by students with a disability due to the many active outdoor field trips (Rose, 1993; Hall, Healey & Harrison, 2004).

Unmanned Aerial Vehicles (UAV), popularly called ‘drones’, are an emerging mobile technology that show potential for use in geoscience fieldwork and teaching. A small structured VFG was created from UAV data and used to facilitate learning on two university geoscience programmes across all levels of undergraduate teaching. This model was developed in partnership with practitioners and students to facilitate their inclusive and accessible learning needs. This project covers the conference theme of a Culture for and of learning along with the development of inclusive learning.

Undergraduate geoscience students (n = 91) from two North West of England Universities completed a questionnaire assessing attitude to fieldwork, technology use, and experience with UAV technology. Students (n = 14) were then approached to participate in focus groups and practitioner and student interviews (n = 10) were conducted to assess the impact that the VFG had on their learning.

Preliminary findings indicate the VFG technology enhances the field trip learning experience for students. The VFG reduces time pressure of teaching key points on the fieldtrip by spending more time in the Virtual landscape and prepares students for their time in the field, thus maximising their learning. Early findings have identified that the model and subsequent data outputs can be a positive educational tool for geoscience students and has further benefits in allowing fieldwork to be more inclusive for disabled students or for those who cannot go on the fieldtrip for access reasons. In conclusion, this project has identified the potential for VFG technology to enhance student learning and contributes new understanding to practical applications of such technologies within Higher Education.
Addressing the Disability Gap - Embedding and Sustaining Inclusive Practices in a Learning Culture

Trevor Collins, Victoria Pearson, Chetz Colwell, Anne-Marie Gallen, Gareth Davies, Kate Lister, Elaine McPherson

This paper explores the process of moving from inclusion in principle to inclusion in practice by considering three case studies of embedding and sustaining inclusive teaching and learning within a distance learning institution. These good practice examples are: the emergence of disciplinary-based accessibility working groups; the revision of course specification procedures; and the development and implementation of an institutional accessibility policy. Through these, we explore the extent to which a learning culture is emerging that encourages staff to share their experiences beyond their traditional institutional networks. This culture empowers staff to share responsibilities of ensuring that inclusive practices are embedded and anticipate students’ needs; and enables universities to realise the opportunities they provide for their students.

Evidence indicates that a completion and attainment gap exists between students that declare a disability and those that do not (Eurostat, 2014; ECU, 2017). While addressing this degree awarding gap is a priority for all universities, in the UK it is complicated by reforms to the UK government’s Disabled Students Allowance (DSA), that have moved funding away from individual students and increased the expectations on universities to support students with disabilities. In this context, we present examples where UK universities are increasingly looking to reconsider their curriculum design and delivery practices to improve their inclusivity. By sharing and discussing these and other examples identified by the community, we intend to establish good practice that can be adopted in higher education institutes internationally.

An inclusive learning culture also requires a holistic approach that is not confined to the academic content and delivery of courses, nor is it limited to support and guidance, but considers all aspects of a student’s journey as part of an ongoing quality enhancement process (May and Bridger, 2010). Therefore, the development of inclusive practices requires a networked form of working, in which groups of people with complementary roles and distributed expertise (e.g., knowledge of disabilities, accessibility and technology, pedagogy and discipline knowledge) can collaborate, share experiences and develop practices for the benefit of all students. We provide a model for an inclusive learning culture that values collaboration and a diversity of expertise in those delivering the educational experience, as well as in those participating in it.

Jigsaw Learning versus Traditional Lectures: Impact on Student Grades and Learning Experience

Teresa Costouros

Despite significant research supporting active learning, many professors continue to use traditional lectures as their primary teaching method, particularly in introductory level courses. While many pay “lip service” to the benefits of active learning, the reasons for not embracing it are justified by such comments as not enough time for lesson preparation or material they must get through. Others have stated that students prefer the lectures over active learning. They don’t come to class to do the work of the professor, but to get “fed” the content. Admittedly, I have felt this way at times. Those thoughts led me to researching how jigsaw cooperative learning (JCL) compares to lecture style teaching in my introductory insurance business classes. Jigsaw learning is not teacher-centered. It engages all students, and is beneficial in facilitating relationship-building. Each member of the group has an opportunity to research, teach and learn from others, further developing a strong culture of learners.
In JCL each member of a group is assigned a “piece” of the puzzle (content). They are expected to research and consult with members from other groups who have been assigned the same topic. They learn from each other further developing their knowledge. Reporting back to their home group, they teach their “piece” of the puzzle to their teammates. In this way JCL facilitates a strong culture of learners.

My research question explores JCL and the impact it has on student grades and their learning experience. Effective teaching techniques where all students are engaged is valuable in cultivating a culture of learners. In addition to explaining what JCL is, through a small group discussion, I will encourage participants to consider how JCL might be used in their own courses. I will share the results of my study which compares the grades between the two teaching methods as well as a comparison of the student experience. The results will also be shared comparing two distinct student groups: 1) Traditional university group of diverse students, and 2) International cohort of students from India.

**Can Mixed Assessment Methods Make Biology Classes More Equitable?**

*Sehoya Cotner, Cissy Ballen*

In many countries (including the US and Norway), women who enter college in any of the STEM (science, technology, engineering and mathematics) disciplines exhibit greater attrition than do their male peers, a gap that continues throughout most STEM professions. Some explanations for this phenomenon relate to student preparation or academic abilities, which is collectively known as the student deficit model. We have proposed the course deficit model, whereby instructional decisions exacerbate or minimize gaps in performance and retention. We offer evidence—from our own work and that of others—in support of the course deficit model, in our discussion.

Among the factors proposed to explain the attrition of women in science is the lower performance of women in introductory courses. Thus, we will focus on the “introductory course problem,” whereby introductory courses effectively “weed out” students—disproportionately women. We hypothesized that mixed methods of assessment would benefit women by reducing gender gaps in performance on a number of low-stakes assessments rather than a few high-stakes exams. Specifically, we analyzed gender-based performance trends in nine large (N ~ 1000 students) introductory biology courses. Females underperformed on exams compared to their male counterparts, a difference that does not exist with other methods of assessment. Next, we analyzed three case studies of courses that shifted grading schemes to either de-emphasize or emphasize exams as a proportion of total course grade. We found that the shift away from an exam emphasis benefits female students, closing gaps in overall performance. These data confirm our previous findings, which revealed the negative impact of test anxiety on female—and not male—performance in introductory biology. We conclude by challenging the student deficit model, and suggest the course deficit model as explanatory of these performance gaps, whereby the microclimate of the classroom can either raise or lower barriers to success.

**Faculty and Student Perceptions of Course-Based Research Experiences at 78 Degrees North**

*Sehoya Cotner, Tina Dahl, Eike Stübner, Pernille Eidesen*

The benefits of engaging students in meaningful research are well established, and include increased understanding of scientific processes, persistence in science, and interest in science as a career. However, traditional, “apprentice”-style research experiences are typically restricted to a select few
students, further expanding gaps in equity in science, technology, engineering, and math (STEM). Course-based research experiences (CREs), or those embedded in a standard curriculum, can lower barriers to access to research experiences and give a broad range of students the ability to develop key science-process skills (e.g. developing a hypothesis, designing and executing experiments, interpreting data, etc.). While many educators have taken the initiative to design CREs in areas such as microbial ecology, experimental evolution, and marine biology, we are in our infancy not only with regard to curricular transformation, but also with respect to assessment.

The University Centre in Svalbard (UNIS) is the world’s northernmost institution for higher education, and is specialized for field-based inquiry and education in the High Arctic. UNIS courses are characterized by CREs, therefore UNIS is an ideal location to investigate questions related to optimizing these experiences—for both students and faculty. Further, the field-based nature of these courses allows us to consider the unique challenges and potential of field courses. These courses are often expensive and require more planning and internal resources than traditional lecturing in a classroom setting. Given the costs associated with field courses, it is critical to quantify and optimize their benefits.

We will introduce UNIS, give an overview of some of the CREs, and present our findings from a survey- and interview-based study of students and faculty in Winter 2017. Specifically, we found that faculty employ a range of different types of inquiry in their courses—from open inquiry, to discovery-based inquiry, to CREs. Faculty value the integration of research and teaching, but worry about exploiting student efforts for the faculty’s research aims. Student perceptions are similarly positive. On a post-course survey, students were asked about their level of investment during course-based research projects; on average, students claim to have been “very invested” in the research projects. An emergent concern involves the collaborative aspect of the research projects, and how best to navigating challenging inter-cultural group dynamics. Thus, our discussion will center on ways to facilitate effective group work, with a consideration of culturally relevant pedagogy, in future courses.

**Developing SoTL in Learning Communities: Cultural, Inter-Professional, and Interpersonal Outcomes**

*Milton Cox*

Specific types of learning communities (LCs) for instructors and professional administrators, sometimes called communities of practice (CoPs) or faculty learning communities (FLCs), have now been in place in higher education for 40 years. Tools, methods, and recommendations for building these yearlong LCs have been developed and reported. The organizational, leadership, and facilitation skills important to developing, implementing, and sustaining FLCs have been described by the paper presenter.

One important component of these LCs has been an evidenced-based approach to identify, design, and disseminate SoTL projects. These are usually individual projects selected by members of the LC with development supported by the LC members during literature review and planning in the first term followed by engagement, data collection, analysis, and dissemination during the second term. Interdisciplinary LCs can also provide examination and discussion of different perspectives of SoTL rigor. Early-career faculty participating in a cohort-based FLC (in this case, all members of the FLC are early-career faculty) are able to produce and present SoTL projects that are blind-refereed conference presentations in just over one year. The developmental approaches and leadership used to foster SoTL in FLCs has been described by the paper presenter. Evidence of the impact that FLCs and CoPs have contributed to an individual participant’s interest and development of SoTL has been
measured in the U. S. and, on a smaller scale, in Hong Kong.

FLCs and CoPs have been change agents with respect to learning culture in higher education, sometimes moving institutions in the direction of becoming learning organizations). These changes involve building community to enhance collegiality, risk-taking, and group support. The changes can be multidisciplinary and inter-professional because colleagues from different disciplines and professional schools participate or because colleagues within a division or professional school interact, for example in a medical school. The changes involve interpersonal impact because of the community and trust built during the year.

People follow those they know and trust.

**Fostering Confidence and Enhancement of Teaching Practice through Peer Observation**

*Sally Crighton, Andrew Potter*

This work, motivated by our institution’s strategic priority of “community building” for Associate Lecturers (ALs) in a distance learning context, explores how staff development initiatives for a subject-specific group of teaching practitioners contributes to enrichment of teaching practice. One of the themes emerging from evaluation of annual face-to-face development events was that ALs were surprisingly lacking in confidence in the presence of their peers. This caused us to reflect that our strong community of practice (Wenger-Trayner, E. and B., 2015) could be better harnessed to boost AL confidence and morale in changing times, and reinforce the value of their work. Following Dweck’s (2012) work on developing a “growth mindset”, the idea of a “peer-observation scheme” was introduced. The second-round of observations is currently underway. The fundamental tenet of the scheme is that observations should focus on being easily achievable in an AL’s busy schedule, with the essential ingredients of humour and humility (Schein, 2013).

Another emerging theme was that ALs, teaching mathematics modules, felt less comfortable with reflective writing than colleagues in other disciplines. The peer-observation scheme supports ALs to prepare for professional recognition of their teaching enabling them to form a new academic identity as educational researchers, similar to ideas of Gardner, A. & Willey, K. (2016).

We have seen already that peer observation, focusing on giving positive feedback, fosters a dynamic, mutually supportive community as a means of improving AL confidence and producing practical examples of good practice. We consider how best to initiate and sustain peer observation and evaluation projects and share feedback demonstrating the impact of this focussed peer-support on teaching practice.

Central to this work is the belief that enhancing quality measures in line management of academic staff is essential for the fostering of such scholarly, engaged, inclusive and collegial academic communities. Projects such as the peer-observation scheme allow ALs to develop their teaching skills drawing strongly on the skills within the community. This resonates with the notion of “using employees talents to a greater degree and giving them more responsibility”, from Hertzberg (1968-2003), to increase well-being and motivation of employees. Work in progress is to identify a measure of how this observed enhancement of practice can lead to “happiness” within the AL role.

More broadly, this work contributes to development of models for building sustainable academic communities in in our institution.

Audience participation is included – do please come along and join in!
SoTLVision - An Evaluation of a Pilot Multi-Site Conference/Workshop

Duncan Cross, Earle Abrahamson

Gary Poole in his 2017 ISSOTL Keynote discussed the concept of ‘Constructive Inclusionism’ (CI) as a key element of SOTL Ideology which can be defined as ‘the effective engagement of all colleagues in the participation of SOTL’. Poole identified CI through the facilitation of participation and rigour which in essence questions ‘Who gets to reach’ and ‘how effectively we reach’ them. This lead to a discussion on how effectively we are reaching our colleagues within our institutions and disciplinary communities. SOTLVision was established at ISSOTL 2017, following the Multi-National Teaching Fellow group, through a desire to include and reach colleagues who may not be engaging in SOTL due to institutional research or funding priorities, or perceived costs (Maloney et al., 2017). SOTLVision is a multi-site workshop that considers the same thematic concepts in real-time and connected through video/teleconferencing. The concept is based on the Eurovision song contest with institutions or local events ‘calling in’ to share their thoughts and feedback, which facilitates both physical and virtual networking opportunities.

This session will discuss the qualitative evaluation of a pilot event undertaken in January 2018 hosted by 2 UK institutions. Attendees from 6 institutions provided feedback on the event/concept and the workshop exploration of Felten’s (2013) 5 principles of SOTL. The potential for further UK and international hubs will be discussed and participants will engage in a 10 minute discussion with the presenters on how this could be potentially used to increase engagement with inclusive learning cultures in continuing professional development, virtual conference attendance, membership of ISSOTL, and innovations in conference delivery to celebrate and promote a wider culture of SOTL.

SoTL in the Polytechnic Sector, Part 1: Creating Fertile Ground for a Culture of SoTL

Eileen De Courcy, Heidi Marsh

Over the past twenty years, scholars of teaching and learning have strengthen the SoTL discourse “such that its findings have informed teaching and learning practices in widespread and meaningful ways” (Marquis, 2015, p.19). There is no doubt that “the scholarship of teaching and learning is part of a broader transformation in the intellectual culture of higher education” (Hutchings, Huber & Ciccone, 2011, p. 3). Accordingly, the time has come to weave SoTL into the fabric of academic life (Hutchings, Huber & Ciccone, 2011; Marquis, 2015), and into the mission of all educational institutions. Yet, for many institutional types, such as colleges and polytechnics, research, of any kind, is secondary only to teaching schedules and community service; and research expertise amongst faculty is varied (Morest, 2015), as such, SoTL remains on the periphery of faculty work and institutional activity. Furthermore, for reasons of “professionalism, pragmatism and policy” (Shulman as cited in Felten & Chick, 2018, p.13) building a culture that learns is necessary and vital for success but does not occur without challenges (Marquis, 2015, p.29). In this session, we will describe one institution’s approach to creating a culture that learns (Hamilton, 2014; Smith, 2011) and how the manifestation of a SoTL culture, in the polytechnic context, can foster development and growth in higher education (Hutchings et al., 2013; Marquis, 2015). Considering the complexity of this institutional type and its current socio-cultural norms, and recognizing that “requiring” faculty to engage in SoTL work “would be the kiss of death” (Ciccone, Huber, Hutchings, & Cambridge, 2009 as cited in Hutchings et al., 2013), we will describe the early steps taken to create fertile ground for a new culture of SoTL. We will provide examples of how a culture of SoTL is being socially constructed (Roxå & Mårtensson, 2009; Umbach, 2007) while maintaining a delicate balance between a faculty driven approach (Hutchings et al., 2013) and the institutional support required for integration (Marquis, 2015). We will share our culture building approach including the use of language and
rituals that facilitate an institutional commitment to “make a serious investment in SoTL” (Shulman as cited in Felten & Chick, 2018, p.13). We will outline markers of success (or lack thereof), lessons learned, including challenges and triumphs as we work to develop a “vibrant and collaborative community around SoTL work” (Marquis, 2015, p. 29).

Using Bibliometric Data to Identify SoTL Activity in an Organization: Why, How and for What Purpose?

Josephine Csete, Carmel McNaught, David Chin, Kimberly A Sheen

Identifying SoTL activity and the people involved within an institution is complex as such activity is dispersed across departments and discipline areas and dissemination may be widely scattered among venues. This paper reports a study of SoTL activity across a seven-year period (2011–2017) conducted within an institution in Asia of over 1200 academics. The methods used, rationale for methodological decisions as well as types of results obtained and intended uses of the results will be shared in detail so that other institutions can adopt or adapt the study to their own contexts.

The study purpose is to identify teachers who are conducting and disseminating SoTL and, by collating this information across multiple years, to build a picture of the trends over time as well as “pockets” and nature of SoTL activity within the institution. This profile provides important information for benchmarking past and current performance and identifying potential people and research areas for supporting the advancement of SoTL within the institution.

This paper will present the following information in detail so that other institutions can adopt or adapt the study to their own contexts:

- challenges in identifying SoTL activity;
- a rigorous reproducible process for identifying SoTL “outputs”; 
- types of results obtained (including analysis by document type, departments and schools, and individuals involved in SoTL dissemination);
- the intended uses of the results.

Conducting the ratings is useful for developing an understanding of the possible range of what constitutes educational research (ER) as well as SoTL. One important result of the study is an increased awareness of the impact SoTL criteria and definition may have on encouraging the direction SoTL takes within the institution.

Learning Goals and Outcomes

As suggested by the session title participants will have the opportunity to:

* consider the benefits of understanding current patterns of SoTL activity within their organization (“why”);
* review a specific methodology for identifying SoTL activity within an institution and consider whether it is adoptable or adaptable to their own context (“how”);
* view the study results for a specific institution (to see the kinds of outcomes of the study methodology); and then
* discuss the potential uses of such study information in their own contexts (“for what purpose”).
A Culture for Learning - Using Team-Based Learning to Buffer Loneliness for Undergraduate Students

Amy De Jaeger

Feelings of isolation and social loneliness among undergraduate students have been reported at rates as high as 32% – globally (Bauer-Wolf, 2017; Paddick, 2017). SoTL research indicates that a sense of belonging and social connectedness (rates at which people come together and interact) in the classroom can create a memorable experience and enhance student learning (Biggs & Tang, 2011). Fostering interpersonal connections between students can provide instructors with the opportunity to cultivate and sustain a culture for learning that will and have a lasting impact across courses and programs. Team-Based Learning (TBL; an instructional strategy that utilizes student teams throughout the duration of a semester) has been demonstrated to result in enriched and memorable learning for students (Wu, Farquhar, & Compton, 2018). Previous studies indicate that TBL courses can lead to increased interpersonal accountability between students. While accountability is important for positive team dynamics, accountability is not analogous to social connectedness. This pilot study contributes to the conversation about social connectedness and belonging within a TBL framework.

The goal of this project was to determine if modifications to a traditional TBL framework could foster social connectedness between students in an undergraduate psychology course. The course included several in-class application activities aimed at developing positive team behaviours and a term-long assignment in which students assumed various familial roles in order to “raise” a virtual child. Students’ reactions to the team process and interpersonal development activities were recorded using online discussion forums and a summative course evaluation. Narrative analysis was used to extrapolate themes related to perceptions of teaming and social connection (among others). Results from this pilot project included themes related to positive social connectivity, friendships sustained beyond the classroom, and empathy for weaker team members. Several students indicated that interpersonal connections fostered through the Virtual Child activity increased the value they placed the course content. Findings from this project make a significant contribution to SoTL as they demonstrate at that simple strategies within a specific pedagogical example can impact student feelings of social connection within a course and offer a potential buffer to feelings of loneliness. TBL does not fit the design of every course; however, activities utilized within this pilot project can be easily adapted to other instructional formats. Small group discussions will be used to generate dialogue among audience members around how the activities used in this project can be adapted for multiple contexts.

A Call to Action: Moving Towards Learning by Reducing Stress and Anxiety

Yasmin Dean, Shannon Kell, Andrea Kennedy, Dalbir Sehmby, Jurate Motiejunaite, Genevieve Currie

The thread, “A culture for learning,” may require a “Call to Action: Moving towards Learning by Reducing Stress and Anxiety.” Even though the public image of a university is of one unified entity with equally qualified and experienced professors functioning across departments fostering cultures of learning and growth, the truth is that the contemporary university can be a sprawling, fragmented entity with an uncertain or non-uniform attitude towards both learning, and a key population, the student. Traditionally, the “sink-or-swim” approach leaves students to fend for themselves. More recently, in part because of student suicides and other stress-related crises, universities have become more open to addressing mental health and well-being. One path to create greater student fulfillment and greater unity on a campus, at a university, and even across universities is a path that
addresses one thing all students face: stress. By adopting a vision of achievement that addresses stress, a university can help their students succeed.

Within the Western university context of North America, students are subject to mixed messages about staying competitive in a fast-paced demanding educational institution while maintaining a capacity for learning in a slow and measured way. While studied extensively in K-12, mindfulness practice remains a relatively innovative approach for higher education (Frank, Jennings & Greenberg, 2016; Roeser, Skinner, Beers & Jennings, 2012). In this paper, we will discuss how post-secondary educators have a responsibility to role model and teach stress reduction as a foundation for professional practice resiliency and sustainability. As part of the discussion, we will be addressing ways that SoTL might also begin addressing the need for mindfulness research and stress reduction activity in higher education.

Drawing upon classroom and scholarly experiences, the authors will demonstrate practice examples of ways that stress reduction activities enhances teaching and learning by lowering anxiety and reactivity, and raising awareness of intrapersonal (self), interpersonal (others) and environment (Davis, 2014; Frank, Jennings & Greenberg, 2016). These strategies include sharing information about a global call for “Stresstival” and understanding the impacts of ‘structured periods of silence’ in helping students release stress, get a fresh perspective, and reorder their lives. Arguments for solo time in natural environments and cognitive restoration is explored as exposure to natural environments aids recovery from physiological stress and mental fatigue (Berto, 2014; Hartig et al., 2003; Kaplan, 1995; Pearson & Craig, 2014).

“We Know How to Learn”: A Collaborative Approach to Building Research and Scholarly Capacity

Anne-Marie Deitering

In 2015 an unusual Call for Participation made its way through the field of academic librarianship. Like many others, this CFP made mention of an upcoming book, but potential participants were not asked to submit abstracts or chapter drafts. Instead, they were asked to apply to be a part of a learning community. Thirty librarians were accepted, and spent a significant part of the next year exploring autoethnography, a rigorous, reflexive qualitative research method. Fifteen members of that group ultimately produced the narratives that became the book The Self as Subject, published in 2017.

While the reactions to this project have naturally focused on autoethnography, an argument can be made that the approach of using a learning community to build scholarly capacity is just as interesting, and could have even broader impact. This paper will explore this potential by sharing practical lessons and workflows, and by highlighting the importance of social and collaborative learning experiences in building research capacity.

While there may be some who believe that research and inquiry are the sole purview of those who occupy positions in the academy where that work is the primary focus, it is no longer hard to find those who believe that inquiry that informs practice will not be useful if it is conducted entirely separately from the practice environment. The challenges here are twofold. First, practicing teachers and professionals may need help learning about research methods and how to apply them rigorously and effectively. However, this is only the first step. The theories and methods that support inquiry are developed in community, over time, and must be understood in that social context. Practicing teachers, like practicing librarians, have uneven and varied experiences with formal research methods. Those who are drawn to inquiry bring a variety of practices and assumptions about research and knowledge with them, and are frequently not provided with space to reflect on or evaluate those assumptions as a part of their professional training. Using a formal learning
community can help practitioners build capacity in both of these areas, leading to research that both informs and challenges us as teachers and scholars.

Engaging Students in Active Learning by Means of Digital Response Systems

Åge Diseth

Traditional lectures with large student audiences are often characterized by one-way communication from the lecturer to the students. This may be a passivating experience for the students due to lack of possibilities for active participation. In addition, students’ fear of exposing themselves to fellow students may prevent them from responding to questions during the lectures. However, digital response systems, or student response systems (SRS), enable anonymous interaction between students and lecturers by giving quizzes and assignments which can be responded to immediately and provide the students with instant feedback on their portable devices (smartphones, laptops, etc.).

Research has indicated that use of SRS leads to improvement of short- and long-term learning (Nelson, Hartling, Campbell, & Oswald, 2012), increased students engagement and participation (Han & Finkelstein, 2013; Oigara & Keengwe, 2013), increased learning activity (Lantz, 2010), students become more focused during learning situations (Cain, Black, & Rohr, 2009), and students report increased learning outcome (Nelson et al., 2012).

This presentation reports findings from a study of 128 psychology students who volunteered to respond to a questionnaire assessing how they experienced use of SRS (multiple choice questions) in lectures during the course of a semester. The students reported a high degree of satisfaction with use of SRS. They particularly appreciated to reveal gaps in their own knowledge. They were also quite satisfied with the level of difficulty of the questions, and the extent to which SRS was utilized in the particular lecture series. However, a substantial minority of the students reported that SRS did not help them in their understanding of the subject, which is noteworthy within a framework of learning taxonomies (Krathwohl, 2002). The results also showed that students who expected poorer exam performance particularly valued SRS as a tool during lectures.

The benefits of using SRS may be explained by referring to the concept of “flow” (Csikszentmihalyi, 2000): an experience of total engagement occurring when there is a balance between abilities and challenge (level of difficulty), and when there is a possibility for immediate feedback on performance. It may also be accounted for by the so-called test effect (Herrebrøden, 2014): SRS give the opportunity to test the students’ actual knowledge by providing optimal challenges as well as immediate feedback. Hence, it is important that the students experience an appropriate level of difficulty, as the present findings indicate.

Connecting Student Learning to Professional Development Initiatives: How Inclusive Are Our Practices

Aysha Divan, Stephanie McBurney, John Balfour, Kate Watkins, Tim Goodall, Colin Pitts, Gina Koutsopoulou

This paper will outline an interdisciplinary project investigating the reasons why students do not engage in defined initiatives designed to enhance learning and graduate outcomes. Employability non-engagement data (ENED) is an innovative, institution-wide project at a research-intensive university combining input from academics, professional development staff and students. It takes an
original, data-driven approach to the examination of student non-engagement in optional teaching and learning activities, principally a year-long work placement and study year abroad.

The benefits of work-integrated learning – combining academic studies with a period of time in a professional work environment – have been well-documented. Benefits include building disciplinary knowledge, enhancing skills development, such as teamwork, self-management and problem-solving and often translates into improved academic performance. Less well-documented are the benefits of engaging in a period of study overseas, away from the home institution, although skills development (cultural awareness, adaptability, curiosity, team-working) are highlighted. A limited body of research also indicates that the ability of students to engage in these initiatives may not be equitable and subject to barriers including social background, ethnicity or gender or other qualitative reasons.

In this study we explore the following three questions: i) what are the barriers, challenges and/or reasons which may prevent undergraduate students from engaging in optional learning and teaching initiatives (i.e. work placement year, study year abroad); ii) are there any associations between particular characteristics of ‘non-engaged’ students (e.g. socio-economic background, entry tariff, gender and domicile), and iii) does non-engagement affect attainment and graduate outcomes?

Our methodology involves statistical interrogation of institution-wide data spanning over 5 years to investigate entry characteristics (socio-economic background, entry quality, gender and ethnicity) and how they map against students’ participation (or not) in defined initiatives and how these influence attainment and employment outcomes.

We will explain how inferences gained from such a large scale dataset are informing a qualitative investigation of student and alumni views through focus groups and surveys, to provide a rich and detailed understanding of the reasons for non-uptake of these extra-curricular activities. The findings from this project will be used to inform the development of more inclusive and accessible learning and teaching practices in these areas.

**Fostering Culture Change by Embracing the Particular and Transcendent Qualities of Learning**

*John Draeger*

Learning is simultaneously particular and transcendent. We decode the disciplines (Middendorf & Pace, 2004), engage in signature pedagogies (Gurung, Chick, and Haynie 2009), and take disciplinary approaches to SoTL (Healey 2000) because we recognize that learning needs to be grounded in particular disciplinary frames of reference. At the same time, however, we seek to transcend the particular to promote lifelong learning across learning contexts (Huber & Hutchings, 2004). Because SoTL is dedicated to learning about all aspects of student learning, SoTL can change institutions (Mårtensson, Roxå, & Olsson, 2011) and transform cultures (Roxå & Mårtensson, 2015). This paper argues that such change requires simultaneously embracing the particular and transcendent nature of learning.

In building my argument, I appeal to a theoretical model of culture change found in the law. Legal cases, for example, are rooted in particular contexts involving particular players in complex relationships, but the legitimacy of any legal decision depends on legal concepts that transcend the particular case at hand. Waldron (1994) argues that the vagueness of important legal concepts (e.g., liberty, fairness) allows them to be adapted to particular legal questions (e.g., university speech codes, intellectual property). Moreover, vagueness can transform legal culture because it necessitates dialogue over how the concepts are understood across the community and how they are used to justify particular decisions. Likewise, important learning concepts (e.g., critical thinking, integrative learning) are developed both within a particular context (e.g., classroom, lab, co-
curricular experience) and across courses and programs. Like important legal concepts, important learning concepts have both shape (e.g., not everything counts as critical thinking) and flexibility (e.g., critical thinking can differ in the arts, business, chemistry, and so forth). As in the law, the vague nature of these important learning concepts necessitates dialogue over how the many players in complex relationships understand the particular and transcendent qualities of learning across those communities. In much the same way that dialogue about important legal concepts can transform legal culture, I argue that embracing the particular and transcendent character of learning can transform a culture of learners across programs, institutions, and beyond.

Workplace Integrated Learning: Opportunity for the SoTL Community to Flourish in the Face of Change

Michelle Eady

Given the release of the Australian Higher Educations Standards Framework (based on Higher Education award in 2011, section 5 of Tertiary Education Quality and Standards Agency Act 2011), higher education institutions are under increasing pressure to meet the demands for embedding employability across all faculties. This push for Workplace Integrating Learning (WIL) in higher education is requiring these institutions to reflect upon current policies and practice. Universities across the country are determining how to best connect student learning to meaningful work experiences beyond the classroom. When a group of people with a wide range of knowledge, experience and passion come together to discuss new policies and procedures, SoTL advocates have an opportunity to share how SOTL can flourish in WIL experiences. Using the lens of Boyer (1990), we can encourage a scholarship of discovery, integration, application and teaching through the opportunities provided by WIL. Fulfilling the requirements of WIL across the institution presents a challenge to generate and sustain meaningful teaching and learning relationships that have a lasting impact, within and across the university, as well as into our communities and with industry stakeholders.

Entering their World: Using Social Media to Support Tertiary Students in Modern Times

Michelle Eady, Corinne Green, Emily McMillan, Lachlan Munn, Caitlin Sole

Today’s media rich online environments enable us to connect with students in a variety of ways. These tools can support student success in teaching and learning at the tertiary level. Many universities use learning platforms such as Moodle, Blackboard, and Desire2Learn, which are supported by the institution and are typically used for academic purposes. While many of these learning platforms have features to connect with students and send them information, messages and reminders, social networking sites such as Facebook can also be used within university studies to support student success.

This presentation discusses one cohort of students and their academic mentor at the University of Wollongong (UOW) in Australia. Recently the requirements for students who would like to be primary school teachers in Australia has changed, mandating that students must successfully complete one full year of university before transferring into the Bachelor of Primary Education (BPrimEd). The Bachelor of Social Science: Education for Change (BSSE4C) degree was therefore established to transition students into university and then into the BPrimEd at the completion of one year of study. The students in this cohort, already deflated by the government prerequisites, were unable to join a university-based online platform in the School of Education. Therefore, the aim of this project was to use a free access social media platform, rather than a prescribed licensed
program, for the purpose of encouraging these students and providing them with access to regular support from their peers and university staff, creating a community of learners. The academic and a group of students were connected together through a Facebook group. The UOW Faculty of Social Sciences Strategic Plan 2017-2021 (University of Wollongong, 2017) states that we are trying to develop “future-oriented learning experiences that meet the needs of diverse cohorts” (p. 15) and that we do this by “connecting with and supporting students through all phases of the student life cycle” (p. 15).

This presentation discusses how the online community supported its members and encouraged the cohort through their first year of university studies. It has been co-authored by some of the students and university academics involved, and reflects an example of an inclusive online learning community.

Reflexive Cultures of University Teachers: How Portfolios/Projects Engage Teachers in the Research

Dagmar Engfer, Monica Feixas, Franziska Zellweger, Zippora Bührer, Tobias Zimmermann, Heinz Bachmann

The theories that underlie reflective teaching practices consider the teacher as a critical and reflective intellectual and understand teaching practice as a contextualized social and professional practice (Wyss, 2013). The consideration of reflective practice can be traced from the ideas of Dewey (1998), Schön (1990), Guiroux (1988), Beauchamp (2015), etc., and in the university context, among others, from Brockband and Mc Gill (1998), and Kreber (2013). They all agree that reflective practice is a systematic attitude with regards to analysis and assessment of the teachers’ own practice to design new strategies that can positively influence their teaching.

Engaging in reflexive practices is one of the main goals of the academic development programme at the Zurich University of Teacher Education. As part of the 10 ECTS training programme in Higher Education, in the past 12 years over 500 participants have been developing a reflective portfolio in which they demonstrate a sound philosophy of teaching and learning as well as evidence on competent teaching by compiling “artefacts” and reflections (Seldin, 1993; Bachmann, 2015). In recent times, we have moved towards more disciplinary programmes for single university departments and implemented a scholar approach to teaching and learning (SoTL) in the format of small-scale research studies.

This contribution presents the first outcomes of a study whose aim is to understand and provide evidence of the reflective processes of our participants as exposed in their portfolios and projects. In the research study we have:

– adopted a concept of reflexivity and a model of reflexive practice to analyse portfolios and projects of participants in a training programme;

– created a tool to analyse the reflective process of university teachers in a training;

– examined the components, scope and level of reflection appearing in portfolios and projects. We are developing a coding scheme based on a combination of features of several models (e.g. Van Manen, 1992; Fund, Court & Kramarski, 2002; Larsson, 2015);

– conducted individual semi-structured interviews at the end of the academic development programme.
In the presentation, we will introduce our analysis tool and the first results of the study. Furthermore, we will outline the determined elements that constitute a good reflective process in teaching practice.

The Benefits of Teaching Assistants Actively Engaging in Laboratory Design

MaryGrace Erickson, Dan Guberman, Elizabeth Karcher

Undergraduate teaching assistants (TAs) can influence the dynamic of a classroom environment and student learning, especially as laboratory facilitators and in active-learning (Basinger et al, 1984). Recently, discussions around creating student partnerships have proliferated, rarely taking into account undergraduate STEM TAs’ distinct roles and needs within a traditionally hierarchical system, and how to incorporate them into active learning classrooms (Cook-Sather et al, 2014). For this study, we expanded TA responsibilities prioritizing competence, autonomy, and relatedness through having them design laboratory activities (Deci and Ryan, 2002). We hypothesized that TAs would be highly motivated to perform effectively, and pursue further opportunities in the discipline (Gagne, 2014). TAs shared their experiences and outcomes as learners, designers, mentors, and teachers. Investigating undergraduate TAs’ role within a university’s learning culture may present opportunities for enhancing learner-centered instruction.

This case study explored the experiences of six undergraduate TAs during an introduction to animal agriculture course. TAs were responsible for assisting in one two-hour weekly laboratory of 50 students and outlining one lab session, including creating interactive collaborative learning stations. TAs also administered and graded weekly quizzes. During weekly group meetings, TAs discussed questions and concerns. Questionnaires given the first and last week of the 15-week course utilized open-ended and Likert scale questions to investigate TAs’ perceptions of their experience, changes in skills and motivation, and views related to active learning. Focus groups allowed TAs to further expand upon their experience by elaborating on perceived conceptual changes and factors related to their basic psychological needs.

Results indicate that TAs initially had little experience with active learning and defined it as any non-lecture instruction. They felt the laboratory stations more effectively reinforced learning than more didactic methods previously used. TAs believed they played an important role in learning and reported developing mentoring relationships with students, supporting autonomy and relatedness. Student feedback confirmed TAs were viewed as “very” or “extremely” knowledgeable (81.98%), approachable (76.12%), and engaged (79.28%) with the class. TAs cited preparing laboratory materials, leading discussion, and mentoring students as most valuable to their development. Engaging TAs in this more active role supported autonomy and relatedness by providing chances for choice, creativity, and connection. Perceived competency improvements included increased knowledge of course content and improved organization, leadership, and communication skills. These results and future studies considering the role of undergraduate TAs may generate opportunities for supporting TA development and effective incorporation into learning environments.

Love’s Labors Lost? SoTL, Amateurism, and an Ethic of Care

Peter Felten, Johan Geertsema

Our paper entertains an admittedly provocative idea—that SoTL practitioners should be, and should think of themselves, as ‘amateurs.’
Our rationale is that SoTL involves a labor of love, an ethic of care that connects students and faculty as partners within our institutions, across society and into the world. SoTL thus conceived, we contend, can fruitfully be considered through Edward Said’s understanding of the public intellectual as an ‘amateur’ who engages “in activity ... fueled by care and affection” (1994, p.82). This lens has the virtue not only of clarifying what SoTL is, but also of delineating the dangers that may arise when SoTL is professionalized in ways that come to function as a technology of control and accountability by standardising teaching practice through outcomes-based assessment (Servage, 2009; Roxå and Mårtensson, 2017; but see Graff & Birkenstein, 2011, Walvoord, 2011). We ask what is gained, and what lost, when SoTL becomes institutionalised as a means of professionalising and evaluating academics in their teaching role. While engagement in SoTL, authentically integrated with student and faculty learning, can enrich academic practice by leading to deeper dialogues about teaching (Kreber, 2013), it may become a vehicle of neoliberal managerialism when it is oriented explicitly towards recognition. This is particularly the case when going public with SoTL is understood as requiring publication (Harland et al., 2015).

We start by briefly considering how SoTL has been defined from Boyer onwards, highlighting often conflicting interpretations of its goals and scope as well as different ways in which its relation to scholarship, research, teaching, and learning has been understood. We will engage the audience by asking colleagues to position themselves relative to these various interpretations from within their diverse contexts. Finally, we turn to Said’s work on the public intellectual as an avenue for recovering SoTL as a process integrated with practice, “an imperative for all academics who teach” (Kreber, 2013, p.6). We focus on Said’s four pressures of ‘professionalism’: specialisation, the certified expert, co-option by power, and intellectual conformity. We will end by tracing the degree to which Said’s amateurism—“caring for ideas and values despite the restrictions of a profession” (1994, p.76)—holds the promise of an approach to SoTL that may result in a transformation of teaching and learning cultures in higher education: opening up spaces and time for contemplative scholarship, environments of care, and alternative means of going public.

**BIOS: A Self-Regulating Skill Training Program for Undergraduates in China**

*Justin Fendos, Ruilin Zhang*

An ongoing challenge in contemporary STEM (science, technology, engineering, mathematics) education is the development of training programs that emphasize skill learning. In China, this need for skill competence is accentuated by the fact that most published research is conducted by students, both graduate and undergraduate. It is, therefore, in the interest of Chinese higher education to build and implement effective systems that allow students to obtain skill competence as early as possible.

Drawing upon many of the lessons of active learning and scientific teaching, this paper describes the approach we took in designing and implementing the BIOS (Biology Intensive Orientation Summer) program, a five-week authentic research experience that provides comprehensive lab skill training to undergraduates. Six topical areas were represented in the program — biochemistry, cell biology, fish genetics, fly genetics, mouse genetics, and plant biology — with each student being allowed to participate in two. The BIOS program combines inquiry-based learning and groupwork with a system of process- and outcome-based assessments to verify efficacy, allowing for an evolving and self-regulating system that responds to student performance. We believe the structure of BIOS is a useful model applicable to other academic disciplines requiring improvements in skill competence, either for student research or, further downstream, in future career development.
We believe BIOS is a useful example in the larger, ongoing paradigm shift currently transforming STEM education. Many of the circumstances resulting in BIOS’s design are considerations we believe to be of interest to any academic audience that has skill development as a priority end goal. The various principles incorporated into BIOS — principles such as jigsaw learning, structured controversy, and iterative practice — can all be applied to skill learning in other fields such as history, economics, and language. In this sense, we hope a presentation of our work will be appealing to a more generalized higher education audience, not just STEM educators.

The desired outcomes for this session are as follows: 1) familiarize participants with the core concepts of scientific teaching, active learning, and authentic research experiences; 2) explain the main design features of BIOS and how the core concepts were implemented; 3) present some assessment data demonstrating the effectiveness of BIOS; and 4) convey the applicability of these concepts and decisions to the construction of similar programs in other disciplines through examples of some non-STEM education projects currently ongoing.

Building the Research-Teaching Nexus in Ecology: Three Courses to Get There

Øyvind Fiksen, Sigrunn Eliassen, Øystein Varpe

Higher education aims at developing students’ critical and autonomous thinking skills through the research-teaching nexus. This includes engaging students in research-related (sensu Magi and Beerkens, 2016) activities from when they enter campus to their graduation, and building core competencies such as ability to use the scientific method, understand how scientific knowledge is built and how science functions, also in service of society (AAAS, 2011). Simply including scientific content into the curriculum (research-led teaching) may not fully capture the potential for reciprocity between research and teaching (Griffiths, 2004); students need to do research or encounter the research process, producing knowledge themselves (Brew, 2013). Developing these competencies involves practical training in a suite of methods, skills and knowledge needed to read and evaluate science, ask scientific questions, apply scientific methods, solve problems and think critically. How can we, the teachers, do this, in practice, in class? Here, we present three course designs for undergraduate ecology level courses that include specific learning activities to connect research and teaching. In the courses, students learn content knowledge along with practical training in doing science (research-based teaching), including designing experiments, navigating the scientific literature, and solving significant problems with their peers. Other learning activities promote the ability to recognize quality knowledge, the nature and characteristics of scientific activity (research-oriented teaching). Our examples include training students in the use of models and theory to make predictions about natural systems, formulate scientific questions and design experiments to test them, plan and perform experiments with live animals (beetles, birds), do field work and participate in research projects. Students also analyse their results and present posters or write term papers with student-to-student peer-review and comment on texts. Each of these activities are active learning, and are examples of the teaching and research nexus in classrooms.

‘Ok, I need help from somewhere...”: Students’ perceptions of their social networks

Annika Fjelkner

This study contributes to research on student social networks and attainment, as it accounts for how students describe their networks and how they perceive these influence their studies. The aim is to explore how one cohort of business students (N=116) develop internal and external networks, and how these contribute to academic attainment. Personal networks are important support for students
(e.g. Eggens, van der Werf & Bosker, 2007; Thomas, 2012; Tinto, 1997; Wilcox, Winn & Fyvie-Gauld, 2005). However, there is little understanding of the nature of friendship groups, and there is a lack of research of descriptive work portraying the student experience from a network perspective (Biancani & McFarland, 2013). In addition, much of the literature focuses US-based institutions where a majority of students live on campus and study in a more flexible course system. This study offers insight into the experiences of students in a HE institution where a majority of students commute, and courses and programs are less flexible, leading to that students follow the same cohort for three years.

This mixed-method study involved two steps; 93 students answered a quantitative survey mapping student internal (students they work with, learn from and are friends with) and external study related networks. Second, semi-structured interviews were conducted with a purposeful sample of 15 students with different backgrounds, specializations, networks and level of attainment.

In line with previous research, results indicate that students maintain emotional, social but also task oriented relations with students they work closely with. Contrary to Wilcox et al. (2005), students describe their professional network of students they work closely with as essential for success. Students you learn from are mainly important as role models and sources of inspiration. The larger group of friends makes it fun to come to school and external relations (parents, siblings and old friends) mainly offer emotional support (venting). The most important contribution of the study is to highlight how students describe their small professional, strong tie networks within their cohorts, and which student participants perceive as central for attainment. In addition, the larger weak ties group of friends are important for fun and for sharing information and ideas. However, there is a vast difference between levels of connections in different networks, leading to different experiences and possibilities. The question then is how to organize education to enable a learning culture which facilitates network formation for all students.

**Information Use in Learning Environments: Supporting Student Motivation and Performance**

*Micahel Flierl, Emily Bonem, Clarence Maybee, Rachel Fundator*

The ways students engage with information may be an essential aspect of student learning. Intentional and creative engagements with information in a disciplinary learning environment may yield more sophisticated producers and consumers of information and at the same time yield better disciplinary learning (Bruce, 2008). Yet, little research has explored the relationship between how students engage with information and student performance or other concepts related to performance, such as student motivation. Addressing this gap, this research investigates the relationships between how students were tasked to use information in a disciplinary classroom and: a) course-level performance and b) student motivation.

Participants in the study were over 3,000 students in 102 course sections from seven different colleges at Purdue University, a large, public university in the United States. Student data were derived from an end-of-semester perception survey (46% response rate) and university records. Drawing from various instruments, the survey collected data on students’ perceptions of their learning climate (Williams, Deci, & Geen, 1996), basic psychological needs (Levesque-Bristol, Knapp, & Fisher, 2011), and self-determined motivation (Guay, Vallerand, & Blanchard, 2000; Levesque-Bristol et al., 2011). Instructor data were collected from an online survey, which included questions concerning the frequency and type of information engagements with which they tasked students.

Data analysis included a series of standard multiple regressions performed with five information use questions (for example, posing questions that require further investigation, evaluating information sources, etc.) as the independent variables and data from course grades, Learning Climate
Questionnaire, Basic Psychological Needs Survey, and Self-Determination Index as dependent variables.

The specific ways that students engage with information may play a prominent role in student learning environments, as evidenced by measures of motivation and course-level performance. For instance, the information use questions explained 19% of the variance in course grades ($p < .01$) and 17% of the variance for student perceptions of the learning climate ($p = .004$). Results suggest that synthesizing information and communicating the results through a deliverable, as opposed to other types of engagements with information, may be particularly important for student achievement, motivation and perceptions of the learning environment. In contrast, tasking students to focus on citation and attribution practices had a negative relationship with student perceptions of their learning climate. Educators may support student achievement and create more motivating and engaging learning environments by tasking students to use information in more intentional and creative ways.

Supporting a Culture of Student Engagement in Blended Course Design

Keith Foggett, Carol Miles

Engaging and consulting students as a natural part of the cycle of continuous improvement can elicit meaningful and valuable insights into the curriculum design process and provide a great deal of insight into courses they have recently completed. Students’ critical feedback can lead to improvements that may not have otherwise been considered, and their input can be far greater than the standard feedback that is currently sought. Feedback is often collected but not often used as a catalyst for change in the ways that it could be employed.

At universities throughout the world, an increasing number of courses are being developed for delivery in flipped and blended modes. Universities have directed considerable resources toward course re-design and the professional development of university teachers at all ranks, but far less focus is being placed on supporting students as they adapt their study to this fundamental change in ways of learning.

Some of these blended courses have been in place for a number of years, with student feedback an integral part of the course review process. In 2014, a faculty at a large Australian university began a concentrated initiative to convert all first year courses for delivery in a flipped or blended mode. A recent review of the feedback for these courses from the past three years provided a number of insights and directions for curriculum change and student support.

This paper presents insights gained from data gathered from student surveys regarding their experiences of blended learning, specifically aspects that they found useful as well as their opinions of required course improvements. Comments from students were sought concerning several areas relating to course satisfaction, support mechanisms and organisation through a standard university student feedback process. Many comments received related to the quality of teaching and this impact cannot be dismissed when considering the effectiveness of course delivery. Other comments were more perceptive regarding the organisation of the courses and the support required by students to be successful in this mode of learning, providing significant insights into course improvement. Universities need to develop broad and deep suites of support mechanisms that are offered over multiple modes (online, face-to-face, and blended) to aid these students in fundamentally reconceptualising their approaches to study. This paper suggests that engaging student voices in all phases of course design will substantially improve student success in blended modes of learning.
Teaching about Teaching and Its Influence on the Culture of Learning about SoTL in Higher Education

Rachel Forsyth, Peter Gossman, Stephen Powell, Claire Moscrop, Jayne Tidd, John Bostock

Taught programmes for teachers in higher education have been embedded in UK universities since the Dearing report recommended that all staff should be “trained on accredited programmes” (Dearing 1997, recommendation 47). UK universities now usually require staff who are new to teaching to achieve professional recognition of their teaching abilities as part of their induction requirements. This may be done through a PostGraduate Certificate (PGC, approximately one-third of a Masters’ degree) or through Fellowship of the Higher Education Academy. These programmes are designed to be specific to the university where the teacher is employed, but have national recognition as they are usually linked to Fellowship of the Higher Education Academy.

The overall aims of such courses have been to embed a culture of professional development around teaching, to improve the quality of higher education teaching and to disseminate knowledge about SoTL across universities more effectively. The impact of the courses is difficult to judge; many other aspects of higher education have changed during this period of time. Several authors have explored the challenges of engagement with teacher education programmes in universities (see, for instance, Gibbs, Knapper et al., 2008; Quinn, 2012; Deaker, Stein et al., 2016), and some work has been done on short-term effects (Butcher and Stoncel, 2012) and longer-term effects (Stewart, 2014) on the individual. These studies have been relatively small in scale; we decided to explore participants’ perceptions of what is learned on these programmes and whether or not this has a longer-term impact on their professional practice as teachers.

In this paper, we report on a project to survey successful graduates from PGC programmes in four different UK universities to find out what impact the courses had had on their practice over time. Requests to complete an online questionnaire were sent out to 495 teachers who had graduated from the four universities in the previous three years, asking a range of questions about their experiences of the courses and their perceptions of its impact on their practice and on their subsequent careers. 174 responses were received (34% response rate). The survey asked a range of questions about participants’ perceptions of the courses in relation to their current practice.

This paper presents the main findings from the survey as they relate to SoTL, and makes proposals about how these findings may be used to support the culture of learning about the scholarship of teaching in universities.

Strategic Plans for Teaching and Learning: Towards a Learning Culture or Leader’s Rhetoric?

Trine Fossland, Ragnhild Sandvoll

Strategies for teaching and learning will often include recommendations for changes in orchestration of teaching, and therefore put constraints on faculty to follow guidelines provided (Laksov, Mann and Dahlgreen, 2008). Despite an increased emphasis on strategic plans for teaching and learning, there is little evidence that well-intended strategies actually become implemented as planned (Gibbs, Habeshaw and Yorke, 2000, Newton, 2003). The practice of teaching and learning remains remarkably traditional. In this paper, we investigate how strategic plans refer to teaching and learning and how educational leaders and academic developers understand and enact according to these strategies. We analyse strategic plans and interviews with educational leaders at different levels at two universities, including leaders at the macro-level (educational top-leaders and administrative top-leaders), meso-level (educational leaders as pro-deans for education and heads of department) as well as micro- level (leaders of the unit of academic developers) at two Norwegian
universities. We focus on how the selected strategies emphasise teaching and learning. Which values, beliefs and moral responsibilities are upheld as important and how is teaching and learning addressed? In the interviews, we explore how leaders and academic developers understand and enact according to the strategic plans for teaching and learning at their respective universities. Do leaders and academic developers know the content of these strategies? Do they have an ethical commitment to the strategy at their university? Can we recognize these strategies in the way leaders and academic developers prioritize and work with development of teaching and learning?

The findings indicate that a chain of leaders needs to follow up the implementation of these plans. Well-intended strategies needs leaders that take actions to secure the strategic intentions within the different levels of the institutions. We find that strategic plans have a potential to create rooms for learning, but whether it is translated into actions or becomes just strategic rhetoric for educational leaders depends on how they are translated by leaders and academic developers within the institution.

Preparatory Year for Newly Arrived Refugees in Sweden

Lisa Freyhult, Jannika Andersson-Chronholm, Johan Larsson

Among the newly arrived refugees in Sweden there are many that are in need of completing their upper secondary studies to be eligible for studies at the university level. For students in science and technology there is a need to complete their degrees with respect to the scientific subjects as well as the Swedish language. In addition there is a need to bridge the gap between different educational systems. Enrolling in a preparatory year is also a good way to prepare for further studies at university level, for all students (report Teknikföretagen, 2018).

Since the fall 2017, Uppsala university is organising a preparatory year for newly arrived refugees. The education is organised by the Faculty of Science and Technology, the Department of Scandinavian languages and the local municipality of Uppsala. The preparatory year contain courses in physics, mathematics and chemistry, as well as a course in the Swedish language running in parallel throughout the year. The target group has been newly arrived students with a background in science from upper secondary school. From 2015, the largest group of newly arrived refugees in Sweden is from Syria (report Swedish Migration Agency, 2017). The educational background of the Syrian students is quite similar to the background of the Swedish students, with some notable differences (SUHF, 2018; report Nuffic, 2015). Two such differences, which comprise major difficulties for students entering the university, are the lack of about a semester’s worth of courses and experience with lab work.

During the preparatory year the content learning in science is integrated with learning the new language. Since the students have some background in science they can during the first part of the program focus more on language and general skills in the partly familiar setting of the science courses. The newly arrived students study the courses in science together with Swedish students. This enables continuously practising the language and facilitates integration of the students in the larger group of students on the preparatory year.

We will discuss the experiences of the teachers and students participating in the program, its evaluation as well as the process of establishing it as a regular part of the education offered by the university. The challenges have varied from setting up an interdisciplinary education combining language and science requiring competences of teachers not usually working together to meeting a group of culturally diverse students in the classroom.
No One Gets Left Behind: Fostering Representativeness and Diversity Amongst High Achievers

Juliette Gaunt, Mark O'Hara

Studies into academic attainment across different demographic groups of students in UK higher education settings have suggested that ethnic minority groups are under-represented. Gorard et al. maintain that “inequalities in HE (higher education) participation are evident throughout the life-course and include differences in terms of ethnicity” (2006, p. 22). Research by Richardson and Woodley not only focuses on attainment differences amongst institutions but also differences in attainment in relation to demographics. Subsequent research revealed data-sets which support the notion that students from ethnic minority groups are less likely to obtain good degrees than white students (Broecke & Nicholls, 2007; Richardson, 2008; Fielding et. al, 2008; Richardson, 2012).

In 2015, a High Achievers Recognition Scheme (HARS) was introduced into the Faculty of Health, Education and Life Sciences at Birmingham City University (BCU) to celebrate and develop students’ aspirations and achievements. Research by Frumkin et. al explored the drivers of attainment in ethnic minority adult learners (2013); some of the outcomes from this research were considered in constructing the HARS offer. BCU has a socially and culturally diverse population. The heterogeneous population has a high proportion of black and ethnic minority students (over 48%) and high numbers of ‘commuter students’ (around 70%). HARS sought to build an inclusive learning culture that recognised and promoted professional aspiration, confidence and capability. Introducing an academic ‘distance-travelled’ metric, alongside the standard end-of-year average scores acted as a counterweight to any in-built socio-economic or educational inequalities as a result of students’ highly variable prior educational experiences and/or cultural capital.

This paper outlines the impact of this Scheme for the population it serves, with a particular focus on those students with protected characteristics under UK law. The paper will briefly set out the structure and scope of HARS, before presenting an analysis of quantitative demographic data associated with the student population accessing the scheme. The underlying premise of the work was that if the selection process was effective at offsetting prior educational inequalities, then the mix of HARS students should be a good match for the diversity within the Faculty as a whole, and results acquired will tackle this premise as part of the presentation.

Participants will also be afforded the chance to consider how inclusive teaching and learning approaches with high-achieving students from highly diverse backgrounds are to be made core to our practices.

Randomized Controlled Trial of Self-Explanation Combined with Problem Solving for Learning Physics

Vegard Gjerde, Bodil Holst

Students struggle with learning by solving physics problems in the beginning stages of skill learning. Here, we will test whether students learn faster in the initial learning stages when we combine self-explanations with problem solving. We will test whether self-explanation of the solution followed by solving the same physics problem is better than either self-explanation alone or traditional problem solving for performance on two test problems with similar structure as the practice problems. Practice time will be kept constant. Self-explanations have usually been investigated in relation to studying worked examples in textbooks. We want to further this strategy for use in general problem solving. The hypotheses will be pre-registered. The trial will be randomized, controlled, and double-blinded. The hypotheses are that self-explanation paired with problem solving is better than self-explaining alone, and that self-explanation is better than traditional problem solving practice. We
expect medium to large effect sizes. To form a culture of learning we need to focus on learning strategies, because strategies are mainly what can be transferred across domains. It is also important to focus on how we can improve the initial learning stages. The qualitative characteristics of self-explanations seem to be uncorrelated with prior knowledge (Michelene T. H. Chi & VanLehn, 1991; Renkl, 1997). On the other hand, they seem to be highly important for learning effects (M. T. H. Chi, Bassok, Lewis, Reimann, & Glaser, 1989). It has also been shown that the quality of self-explanations can be improved by simple prompts (M. T. H. Chi, Deleew, Chiu, & Lavancher, 1994), and to great effect (Badeau, White, Ibrahim, Ding, & Heckler, 2017). Prompted self-explanation especially benefits students with low prior knowledge (Renkl, Stark, Gruber, & Mandl, 1998), and is therefore an inclusive strategy. We hypothesize that combining self-explanations with problem solving can give the best from both strategies, by learning more rules (VanLehn, Jones, & Chi, 1992) and generating answers (Anderson, 1987; Chen, Kalyuga, & Sweller, 2015).

### Reinforcing Excellence in Writing: A Universal, Departmental Writing Rubric

*Jennifer Gonyea, Melissa Landers-Potts, Jennifer George, Melissa Kozak*

Good teaching is founded on the critical assessment of pedagogical methods by instructors, resulting in deep learning for students (McKinney, 2003). Departmentally, our focus on good and scholarly teaching led us to collaboratively develop a universal writing rubric that promotes student writing competencies to better prepare students to critically think and write as they enter the professional world as scholars, practitioners, and policymakers. Writing assignments across courses are varied; ranging from collaboratively or individually authored literature reviews, reflective pieces, policy position papers, case studies, and lab/observation reports. The Universal Writing Rubric (UWR) was designed for use across the diversity of writing assignments within the curriculum. Because the UWR focuses on writing competencies, rather than assignment requirements themselves, it provides a tool for experienced faculty to reinforce good principles and practices of writing across the academic writing developmental spectrum. The aim of this paper is to outline the process by which the UWR was designed; explain the elements of the rubric; and present initial findings regarding its use. The goal of sharing the UWR is to provide a tool that can be widely used amongst faculty members across multiple disciplines and campuses to communicate and reinforce good writing habits, ultimately leading to improved student learning outcomes (Graham, Gillespie, and McKeown, 2013), increased critical thinking, and overall effectiveness in writing. Empirical data gathered from our students exposed to the departmental UWR throughout the 2017-2018 academic year are presented. Specifically, survey questions regarding UWR assessed the level of student exposure to the UWR and faculty behaviors related to the rubric having the most effect on bolstering students’ internalization of its principles.

The Scholarship of Teaching and Learning (SoTL) is being used to formally and rigorously assess the effectiveness of the UWR as a relevant and appropriate pedagogical and assessment strategy (Bishop-Clark & Dietz-Uhler, 2012; Felten, 2013). We expect these data will support the preliminary findings and demonstrate that students are meeting departmental learning objectives (e.g., integrating and applying theory, disseminating developmental knowledge, evaluating interconnected systems), while developing critical thinking skills and also learning to think and write within their discipline.
**Cohort Learning Communities in Graduate Student and Postdoctoral Teaching Development Programs**

*Kimberley Grant, Lorelli Nowell, Kiara Mikita, Carol Berenson*

Designing professional learning and development opportunities for graduate students and postdoctoral scholars has many logistical challenges as they often have competing demands on their time and less control over their schedules. One solution to this challenge focuses on flexibility of opportunities and the development of programming that allows participants to choose from a menu of options. The positive participation and feedback collected from our university’s teaching development workshops indicates this approach is successful. Since introducing cohort-based opportunities for graduate students and postdoctoral scholars, however, we have seen both a marked increase in participation as well as clear signs of nascent communities of learning.

We believe that a number of factors have contributed to the formation of collegial relationships among graduate students and postdoctoral scholars, leading to “significant conversations” and new learning networks. The academic experiences of both groups are often characterized by isolation and liminality, and cohorts provide opportunities for likeminded people to gather around SoTL literature and teaching and learning issues. Through establishing peer connections and engaging in collaborative work, participants begin to form clusters of influence both within and across their departmental borders. By developing trust and engaging in activities such as peer teaching, graduate students and postdoctoral scholars participate in making teaching and critical reflection public, shared activities. These collaborative and reciprocal learning communities can reduce isolation and enhance socialization, knowledge attainment, and skills development.

As facilitators within the cohort programs, we have seen numerous examples of how these communities of learning are forming organically. For example, in one section of a SoTL focused cohort group, two grad students from the same large department who did not previously know each other are planning to co-author a paper on their experiences with SoTL. In both written and verbal feedback, a number of participants articulated the main reason they attend and engage in these workshops is because they are isolated in their home faculties, and they enjoy spending time with their peers. The resulting multidisciplinary conversations have also facilitated graduate students’ and postdocs’ interest in using previously unfamiliar teaching and learning strategies as well as methodological approaches for SoTL inquiry. For international participants, these cohorts also provide opportunities to develop peer support networks as they share their stories and compare experiences across multiple contexts.

**Building a Learning-Centered, Scholarly Culture for Digital Assessment in a Norwegian University**

*Robert Gray, Magnus Nerheim*

Most courses in Norwegian universities use classroom time almost exclusively for information delivery and the final written examination for information retrieval. Most research on student learning, however, demonstrates that student learning is maximized by the constructive alignment of content, instructional methods, and assessment practices with the intended learning outcomes. Research also shows the importance of thoughtful and constructive feedback on student performance throughout the learning process.

In order to begin addressing this discrepancy between utilized and effective teaching and learning practices, the University of Bergen is implementing an initiative to help instructors redesign their courses to employ more authentic and educative assessment methods. This project aims to systematically redesign the assessment plans and practices in over twenty courses from across the
University’s disciplines. The redesign is informed primarily by integrated course design (Fink), constructive alignment (Biggs), and strategies for student engagement and learning assessment (Barkley), as well as the concept of “assessment for learning” (Stiggins).

The project also involves the systematic evaluation of these course redesigns, primarily consisting of SoTL-style examinations of student performances in response to these new teaching and assessment strategies (McKinney; Bernstein et al.; Savory et al.; Hutchings et al.), but will also include other types of analysis based on discourse analysis and learning analytics.

On top of the course redesigns, the project is in the process of quantifying perceived and actual barriers for education development, from rules and regulations, effective use of teaching resources and holistic program design. These efforts will result in a set of universal guidelines in how effective teaching and learning practices can be implemented in the scope of the rules and regulations currently enforced at the University, as well as highlighting the major barriers that limit student learning at the course level and in terms of long-term intellectual development.

The session will outline how the project is being implemented and also present the considerable amount of preliminary data that will be available by the time of the conference. Key takeaways from the presentation are insight into how to adapt and apply pedagogically proven teaching and learning methods in the framework of the Norwegian/European higher education system, short and long team efforts for institutional change and renewal, and how to increase awareness for innovative assessment practices and constructive alignment.

**Literature Reviewing as Doctoral Pedagogy**

*Rosemary Green*

Literature reviewing is a signature doctoral pedagogy (Golde, 2007) through which students learn to read and write as scholars in their disciplines; develop techniques for managing large bodies of information and knowledge; and practice the skills and craft of disciplinary-specific research (Green, 2009). Often viewed as a troublesome academic exercise, the literature review seems like an obligatory writing task that precedes more meaningful projects. I propose, however, that literature reviewing is a site for practicing literacies essential for academic success. I will begin the session by describing my practice-informed, qualitative investigation of doctoral learners’ literature reviewing experiences, with the goal of presenting the literature review process as a complex pedagogical apparatus. Interview narratives from doctoral students across several disciplines, interpreted through the frameworks of critical literacy and critical pedagogy, revealed that doctoral learners became more proficient in reading, writing, information, and research literacies by engaging with disciplinary literatures. While becoming more adept at reading from and writing about the literature of their fields, they began to identify themselves as skilled, autonomous researcher-scholars. The intriguing theme of academic reading — the point at which reviewing the literature begins — emerged from the study and is one that I continue to explore. I will turn to my current SoTL research into doctoral students’ needs (West, 2013), which focuses on their experiences and struggles with academic reading (Manarin, 2012; Manarin, Carey, Rathburn, & Ryland, 2015) in the context of preparing extensive literature reviews. Despite the fundamental role of reading at the doctoral level, we know little about how doctoral students develop, understand, and deploy reading practices. Indeed, interest in reading in higher education is limited (Weller, Domarkaitė, Lam, & Metta, 2013); stakeholders in the SoTL community would benefit from deeper understanding of academic reading and its pedagogy. Student voices will be represented through examples of their written and interview narratives. I will detail a few pedagogical approaches and invite session participants to critique these examples and apply some to their own learning and teaching practices. The aims of this session are...
twofold: to consider the pedagogical potential of the doctoral literature review and to shine a light on the importance of doctoral reading (McAlpine, 2012) as an element of that endeavor. Participants will be encouraged to reflect on their students’ and their own engagements with literature reviewing and academic reading.

School-University Partnerships in Australia: A Systematic Literature Review

Corinne Green, Michelle Eady, Sharon Tindall-Ford

Across Australia and around the world, there are ongoing concerns regarding the perceived divide between theory and practice in initial teacher education (ITE) programs. This divide can result in programs where the theories of education that pre-service teachers (PSTs) study at university remain distinct and separated from the development of their practice through school placements. Research suggests that this approach may lead to graduate teachers being unprepared for the complex realities of the teaching profession.

Work-integrated learning (WIL) is a significant priority for tertiary institutions around the world, facilitating the connection of theory and practice in meaningful ways, and the development of work-ready graduates. Within ITE, WIL can be provided through school-university partnerships that utilise the expertise of in-service teachers and teacher educators to meaningfully integrate theory and practice for PSTs. This is a dynamic approach to ITE that aims to capitalise on the learning opportunities available in both the school and university contexts. As such, it aligns with SOTL discussions of best practices in work-integrated learning.

Zeichner’s (2010) concept of ‘third space’, where school and university meet, can be used as a framework for understanding and implementing such partnerships. A range of literature exists that explores school-university partnerships from a theoretical perspective, and grounded in specific examples. As these pieces of research typically provide an overview of school-university partnerships in general, or rely on findings from one or two partnerships, a broad understanding of partnerships and the research gaps that remain can be difficult to ascertain.

This presentation details a systematic literature review to provide collective evidence regarding the implementation of school-university partnerships in Australia for the purpose of developing PSTs. The systematic literature review reports on 59 sources published between 2012-2017, providing insights into the range of school-university partnerships in existence as well as the benefits and challenges encountered through their implementation. Participants in this presentation will be encouraged to critique the ideas presented and connect them with other work-integrated learning opportunities. SOTL conversations are encouraged from a specific (i.e. school-university partnerships within ITE programs) and general (i.e. work-integrated learning within tertiary programs) perspective. The review also uncovers opportunities for future research.

This presentation is linked to the ISSOTL18 conference theme through 'an inclusive learning culture'. The systematic literature review explores the benefits, challenges and opportunities associated with these work-integrated learning partnerships as they connect tertiary student learning to work experiences beyond the classroom.
Learning from and with Each Other: Networked Communities for Sustained Change

Andrea Greenhout, George Rehrey

Initiatives to promote meaningful teaching and learning in postsecondary education have proliferated in the last several years. It is now widely recognized that interventions focused on individual faculty are insufficient for systemic change to occur (e.g., Fairweather, 2009; Kezar and Gehrke, 2015). In contrast, networks appear to have great promise for fostering the sustained adoption of effective and innovative practices throughout higher education (Bryk, Gomez, Grunow, & LeMahieu; 2015; Fairweather, 2009; Kezar & Gehrke, 2015). These networks may take various forms, but those that span across disciplines and institutions have proven to be especially helpful in transforming teaching and learning cultures at the departmental level, with those changes then rippling throughout the institution.

This presentation explores how multi-institutional networks can foster widespread faculty adoption of educational practices known to improve student learning, including the Scholarship of Teaching and Learning, while also studying how change processes are sensitive to local institutional context. We will describe the efforts and results of one such network, the Bay View Alliance (BVA), comprised of nine US and Canadian research universities that are exploring strategies for cultural change around teaching and learning. The BVA has been developing a Networked Improvement Community (NIC) approach that fosters the formation of clusters of universities that together select interventions for improvement (e.g., course transformation programs or student learning analytics), test them simultaneously, and compare results in order to discover new insights and further innovation. During our presentation we will share the core ideas of the BVA network and illustrate the model by highlighting work in two of the research clusters. Discussion will address lessons learned about how networks of similar institutions, sharing ideas and evidence, can help foster individual and systemic change.

Specifically, we will share how multi-institutional networks can (a) support faculty adoption of effective, inclusive, and innovative educational practices, and (b) contribute to greater understanding of the adoption and institutionalization processes. In addition, we will explore with the audience how the networked improvement community approach can generate new ideas, sustain changes in teaching and learning cultures within targeted departments, and foster new avenues for improvements to become more widespread both within and across networked institutions. Throughout the session, we will engage the central conference theme through consideration of how institutional networks can cultivate a learning culture in higher education.

An Innovative Women’s and Gender Studies Curriculum: Objects Facilitating a Culture of Learning

Krista Greensavitch

This presentation draws from a larger project in which I seek to develop and share teaching and learning tools for object-based learning in the higher ed. humanities classroom. In the project, I explore strategies that facilitate the development of critical thinking skills with and through things – stuff, material culture, objects. I suggest – through modeling and demonstration – how other educators might incorporate objects, object-centered learning, and the creation of object histories in their own classrooms. Furthermore, I present an argument as to why educators should adopt similar practices: in asking students to consider objects as well as texts, we combat the ‘tyranny of the text’ and address the gaps, silences, and perceived omissions the inclusion of objects responds to. Ultimately, the tools I create reflect on practices, activities, and strategies used in my own classroom and represent my attempt to provide answers to a central question: “what are the possibilities when
we no longer rely on written texts as our primary means of learning, knowing, thinking, and teaching?”

Here, I focus on my process for creating a teaching and learning tool based on my curriculum development for an Introduction to Women’s and Gender Studies course, a discipline focused on the ways our intersecting identities manifest themselves in social, cultural, and political contexts. Throughout the semester, students were introduced to many of the critical questions feminist scholars have developed as tools for thinking about lived experiences. The course text, Threshold Concepts in Women’s and Gender Studies: Ways of Seeing, Thinking, and Knowing (Launius and Hassel, 2015), builds on an important contribution to SoTL: introducing students to disciplinary ways of thinking, a means of developing critical thinking skills that extend a culture of learning beyond the space of the classroom (Hassel and Nelson, 2012). In five facilitated object lessons, each presented in coordination with a threshold concept, students encountered an object or set of objects that both extended and challenged the concepts introduced in the text. I will share important outcomes of this object-based approach to teaching and learning and discuss the impact of: exploring themes and concepts with wide-ranging impact through a local lens; emphasizing the value of considering objects in discussions related to identities, especially marginalized identities; and pursuing the question “where do texts fail us?” and “how are objects uniquely suited to respond to gaps and silences, and how do we fill them?”

**Slow Course Re-Design: Promoting Mindfulness, Autonomy, and Relatedness in Course Design Programs**

*Daniel Guberman*

“When you have been teaching this way for a long time it is hard to make changes”

In The Slow Professor (2016) Maggie Berg and Barbara Seeber argue for being more meaningful and directed in our work as professors, challenging a corporatized university culture that has emphasized quantity and speed over quality. Reminiscent of bell hook’s writings, Berg discusses creating a pedagogy of pleasure in teaching, through establishing an environment that breaks down barriers, empowering us to laugh and share stories. Most discussions of slow or pleasurable teaching center around acts in the classroom, often overlooking the course design process. In fact, many centers for teaching and faculty development pride themselves on short, intensive course design programs, often taking place over a week or less during the summer.

In this presentation I detail the benefits of a slower, more mindful approach to course design based on the principles of autonomy and relatedness from Self-Determination Theory (Deci and Ryan, 2002). I begin with an overview of this underlying theory of motivation, and how this connects with Berg’s and Seeber’s writings. I share how these principles align with two increasingly prominent approaches to faculty development and course design: the Decoding the Disciplines process (Pace, 2017 and Middendorf and Shopko, 2017) and Students/Faculty partnerships (Cook-Sather, Bovill, and Felten, 2014).

Finally, I share how these principles underlie an ongoing course (re-)design process at my university, engaging over 300 faculty and 400 courses in the past seven years. Qualitative and quantitative evidence demonstrates that redesign success does not depend on the structure created (flipped, online, team-based, etc.). Instead, individual case studies, representing the variety of courses that have emerged from the program, demonstrate that improved teaching can take many forms (including lectures). Success depends on integrating outcomes, assessments, and activities based in principles of student-centeredness and motivational theory. Furthermore, reflections and observations demonstrate the importance of creating a community, which we do by combining
faculty members from different disciplines with a support team of instructional consultants, librarians, and technology specialists.

In sum, I argue that effective course (re-)design programs should not emphasize a single appropriate way to teach or a set of “best practices,” but that these programs should provide time and support for exploration, struggle, and the empowerment of teachers.

Exploring Five Approaches to Diversity and Inclusion in Faculty Development

Daniel Guberman, Jennifer Moss

Diversity and inclusion are vital topics at universities around the world. However, when we ask what inclusivity in teaching or at our universities actually looks like, answers can vary quite widely, such as the 9 dimensions identified by Nelson Laird (2014) or the approaches to institutional change identified by Takayama, Kaplan, & Cook-Sather (2017). For some, diversity and inclusion means a variety of appearances and abilities, for others a wide range of ideas, and for still others it means active attempts to raise up the status of those traditionally marginalized by societal structures. All of these ideas can work together, or they can be in opposition, especially when we add in organizational demands and governmental rules and regulations. At times, these differences can create wedges between colleagues, even among those who aspire toward similar outcomes.

When we discuss diversity and inclusion within teaching, faculty development, and institutions more broadly, different people often bring different ideas about what that means and their goals. In this presentation, we build on a set of five approaches to diversity and inclusion work, identified by the Centre for Global Inclusion (O’Mara & Richter, 2017): competence, compliance, dignity, organization development, and social justice. Building on these approaches, participants in this session will:

- Identify the frame that guides their thoughts and approaches to diversity and inclusion;
- Apply a specific frame to a classroom-based case study;
- Synthesize multiple approaches to design future programming, ensuring that inclusivity is integrated.

We begin by sharing our own experience in collaborating on workshops about inclusive teaching, and our recognition that we approached the topic from two different, but related, frameworks. Then, we ask participants to define inclusive teaching for themselves and share with partners. After that, we will share and analyze a case study, collaboratively identifying how each approach might change how we think about a situation. We close by asking the participants to reflect on how they would use these approaches to create a something for their own use, by synthesizing multiple perspectives.

Universal Design for Learning - When Inclusivity Is Not an Add-on but Core to Our Practices

Pia Haeggblom

The European Commission’s Eurydice-report (2014), Modernisation of Higher Education in Europe: Access, Retention and Employability, states that it is not enough to open the doors to our universities, we need to work systematically with widening participation. And now we are aligning our work according to European Standards and Guidelines and Guidelines for Quality Assurance in the European Higher Education Area (2015), where student-centered learning is a standard to work towards. The question is, how do we work with Scholarship of Teaching and Learning, not as an add-
on but core to our practices? The concept Universal Design for Learning, UDL (CAST, 2011) is one answer to widen participation.

This presentation focuses on the results of a project where 7 members of faculty took part in workshops learning the concept of UDL and adapting their curricula according to the principles of UDL. During 2017 that project turned into a UDL-course for faculty. The course was arranged under the umbrella of higher education development. In situations where there is flexibility both when it comes to how the students learn and how they present what they know, as well as room for feedback and reflections on learning from the students’, research has shown that the talk of different subgroups, such as students with a different native tongue (Fovet & Mole, 2013) becomes obsolete. UDL is one way of teaching and learning that sees diversity as the norm (CAST, 2011).

Feedback from faculty and pros and cons of the concept will be addressed. The presentation ends with a discussion.

Creating a Culture of Learners through Peer-Mentoring

Bryan Hall

One of the main reasons that first-year undergraduate students give for dropping out of college is that they feel like they do not belong in college (Sorcinelli, 2012; Tinto, 1993). Appropriately structured, peer-mentoring is effective in creating the right kinds of academic and social support systems to help foster this sense of belonging which likewise improves second-year retention (Colvin, 2016; Cornelius, Wood, & Lai, 2016; Sorcinelli, 2012). Although much work has been done developing peer-mentoring programs that match students together based on various demographic characteristics (e.g., gender, ethnicity, or first-generation status) in order to improve retention, what is less explored is matching mentors to mentees based upon academic characteristics (see though Morales, Abrose-Roman, & Perez-Maldonado, 2016; Zaniewski & Reinholz, 2016; Zevallos & Washburn, 2014). In fall 2016, a large private institution in the USA ran a pilot peer-mentoring program that matched academically struggling first-semester, first-year students in math/science with juniors and seniors in math/science who had received specialized training. The mentors were nominated by the Chairs of the math/science departments based not only on their high level of academic performance, but also based upon the degree to which they themselves shared features (e.g., struggling in the first year) with their mentees. The mentors met with their mentees biweekly and participated in several co-curricular events over the course of the academic year. Although the mentees were encouraged to take advantage of traditional academic tutoring to help their grades in individual courses, the peer-mentoring program focused more on creating an academic/social support network while cultivating basic college/life skills. The program was very successful from a retention standpoint with 95% of the mentees returning for their second-year as compared with 71% for students who would have been eligible for the program the previous year had it existed. In fall 2017, this institution tripled the size of the program. To encourage replication (Gershenfeld, 2014), this paper will discuss the structure of the program, the process of recruiting the mentors and the mentees, as well as the training of the mentors themselves. To enhance the data on student outcomes (Crisp & Cruz, 2009), it will report the second-year retention rate for the expanded program, the degree to which the mentees’ sense of belonging changed over the course of the academic year, and the impact (if any) on other academic indicators (e.g., GPA).
Towards Inclusive Curricula - Staff Discourses of First Generation Students’ Experiences

Claire Hamshire, Rachel Forsyth, Susan Caton, Roisin Laubscher-Kelly, Danielle Fontaine-Rainen, Makoma Mabilo

Diversity in the academy is critical for all students; to this end, Universities have, for some time been reaching out to new generations of students. However, first generation students entering higher education encounter a culture where the values and beliefs are likely to be different from their previous experiences (Bryson, 2014) and they have to make sense of their experiences as they develop a new identity (Chow and Healey, 2008). O’Shea et al (2016) cite students describing their personal transformations in terms of excitement and positive difference yet, we know that first generation students often fail to progress in higher education to the same extent as their peers who have family experience of university life (Hamshire, Forsyth et al., 2018).

The challenges faced by first generation students have been well documented in several countries (Hamshire, Forsyth et al., 2018; Laubscher-Kelly, Paxton et al., 2018) and yet students from non-traditional backgrounds continue to report considerable difficulties in adapting to university life. Academic staff play a key role in shaping the academic environment, particularly within the classroom and thus are key players in creating spaces where all students feel welcome. One of the most important investments we as SoTL practitioners and educators can make is to understand our students’ learning yet there has been limited research into how educators create an engaging environment for first generation students.

This paper reports on a collaborative project between researchers in the UK and South Africa exploring staff perceptions of first generation students’ experiences. Despite the very different cultural contexts experienced by these students, staff reported considerable similarities in the challenges they faced in integrating into university life. Ten members of staff volunteered to be included in the study at each of the participating institutions, and were invited to reflect on their perceptions and experiences, using semi-structured interviews. All interviews were digitally recorded, transcribed verbatim and subsequently analysed using a thematic approach to identify staff perceptions.

In this session, we will present key themes from the data and explore how inclusion is both facilitated and inhibited, presenting a summary of the findings as well as reflections on future developments and potential wider implications. We will also detail some of the challenges around first generation students that were identified by the staff and make recommendations for curriculum design and delivery to meet student needs and enhance inclusivity.

Implementation of a Course Evaluation System – Facilitating Faculty and Student Contributions

Hans Havtun, Ida Naimi-Akbar, Sara Nyberg, Niclas Hjelm

In 2013, our university initiated a pilot project to develop a course evaluation and analysis system yielding student feedback that could be used for course development, and enable faculty members to share their experience.

The system, termed Systematic Course Analysis (SCA) process, consists of at least three different steps in a cyclic process including evaluation, analysis, and course development before the course is offered again. In addition, teachers can choose to include student involvement in the analysis step, as well as participate in professional development through workshops and courses in teaching and learning.
For the evaluation step in the process, the pilot project developed the Learning Experience Questionnaire (LEQ). It was developed for the purpose of investigating the students’ learning environment based on findings from educational research and consists of 22 statements to be answered on a 7-step Likert scale, as well as 4 open questions.

In the analysis step, one of the main ideas was to facilitate pedagogical discussions and experience exchange between faculty at a course analysis meeting. To such a meeting, each faculty member brings a set of questionnaire data to enable e.g. comparisons between classroom practice, course design, and course assessment. Through discussions during the meeting, experience is shared and development areas for both faculty and courses can be identified. In 2017, the president of the university decided on new regulations concerning course evaluation and analysis highlighting collegial experience exchange as an important required element.

As a part of the project, the questionnaire was implemented into the university’s IT infrastructure to simplify the data acquisition process. The system automatically sends out reminders to students to fill out the questionnaire, as well as compiling statistical data once the questionnaire is closed. The IT implementation was later extended to offer a course analysis tool in which focus is turned to course development.

In this paper we present statistical data showing the penetration of the SCA process at the university. We visit departments where the process is used to varying degrees, and through interviews we investigate which steps in the process that are utilized at those departments. We present teachers’ experience with the questionnaire, the collegial analysis meetings, with including students in the course analysis and course development steps, as well as their wishes for new features in the process. We also interview members of faculty at departments where the SCA process is not used.

Engaging Students as Partners in Academic Publishing

Ruth Healey, Anthony Cliffe, Mick Healey, Lucy Mercer-Mapstone, Cherie Woolmer

The aim of working in partnership with students is to bring together different perspectives and to challenge traditional hierarchies and hegemonic practices within higher education. The Students as Partners (SaP) movement is founded on the belief that teaching and learning is enhanced when faculty and students are open to sharing power and to new ways of working and learning together (Healey, Flint, & Harrington, 2016). Fundamentally, SaP tries to develop what Brew (2006, p.xiii) calls “inclusive scholarly knowledge-building communities”. Whilst there is growing evidence of partnerships, for example, in SoTL research, curriculum development, and quality enhancement, students are largely absent from one key, powerful arena of academia: publishing. The exclusion of students from publishing denies them full participation in scholarly knowledge-building communities. If we want genuinely to move toward universities as egalitarian learning communities (Matthews, Cook-Sather & Healey, 2018), then we should be aiming to challenge the status quo by bringing students into academic publishing in an authentic way whilst redefining traditional academic publishing conventions.

Recognising the inherent issues of ownership and power relations within the traditional capitalist academic publication process, we reflect on the complexities of adopting a new approach to publishing through student-staff partnerships, including authoring, reviewing and editing. For the last two years, we have been involved in leading the International Journal for Students as Partners (IJSaP) – an open access journal about partnership which is developed and managed through partnership between academics and students. As staff and student co-editors we reflect on the complexities and benefits of our experiences of working in partnership to launch, develop and run an academic journal about teaching and learning in higher education. We critically reflect on the review process and the
experience of working with new authors and reviewers from the perspective of the co-editors, considering both the positives and the challenges of partnership in this context. These reflections are situated within the ‘culture of learners’ conference theme, offering an example of how a culture of learners including students and staff may grow within the realms of academic publishing.

We aim to contextualise and define our understanding of ‘students as partners’ and the potential role of students in academic publishing (Healey & Healey, 2018), reflecting on the experiences of the co-editors in establishing and running the journal. Participants at the session will have the opportunity to reflect on how they might include students in publishing in specific context.

**By Any Other Name? The Impacts of Differing Assumptions about Student-Staff ‘Partnership’**

*Ruth Healey, Alex Lerczak, Katharine Welsh, Derek France*

As a relatively new field, research published on ‘students as partners’ often focuses upon positive stories of effective partnership and the benefits of working with students in this way. However, inevitably in a field which challenges the traditional hierarchies and boundaries of higher education there are stories of where activities did not go to plan. We focus upon one such study where the experience of students as partners did not fully meet our expectations of ‘students as partners’ practice. Specifically, we explore the assumptions and misconceptions behind the term ‘partnership’ and how different interpretations of what partnership meant affected what was possible in the practice of working together. Over a six-month period four undergraduate students were employed to work with eight academics to re-design the second-year undergraduate curriculum on one programme to produce four new year-long taught courses (on average 40 hours contact time each) in a department at a teaching-led British university. Whilst it is common for the ‘student voice’ to be heard through programme evaluations and academic and student committees, the ‘partnership’ approach here went beyond this by involving students in course design as members of the development team (HEA 2015). Through a combination of focus groups and interviews at the beginning and end of the project, we analyse participants’ interpretations of ‘partnership’, and how these interpretations influenced the experience of working together on this project. It is argued that the assumptions and misconceptions behind the terminology used to describe ‘students as partners’ practice may hinder the process itself. Whilst some of the participants identified significant benefits to working with students in a collaborative manner, these same individuals did not ‘buy-in’ to the practice as they were averse to ‘partnership’ in this context. Despite recognising value in the practice, they were dismissive of the ‘students as partners’ agenda due to their preconceptions around what a ‘partnership’ should entail.

**Librarian and Teaching Faculty Collaboration: Early Intervention to Improve Information Literacy**

*Peggy Hedges, Justine Wheeler, Norm Althouse, Zahra Premji*

Librarians and teaching faculty at the Haskayne School of Business developed an early intervention to enhance information literacy skills of business students. First-year undergraduate students in a mandatory introduction to business skills course are becoming acculturated to the university environment and to business as a professional and academic discipline. We have found early introduction and continued expectation of a higher level of information literacy skills has resulted in students who, in later years of study, are better able to access and assess the quality of the information they need to complete research papers. While Raish & Rimland (2016) discuss the importance of academic librarians in assisting students in acquiring critical information literacy and research skills, there is little research on how best to deliver the message to the new age learner.
Over a number of years, librarians have been heavily involved in the creation and delivery of a one-shot session for the course. Early versions of the session were typically lecture-based. In some aspects, this approach was successful, however there were still a number of roadblocks to student learning and comprehension. It was not unusual for students to struggle with finding or accessing the information they needed for the significant research project in this course. This paper chronicles the implementation and evolution of a lesson study project by the instructors and librarians involved in the course. Cerbin & Kopp (2006, p.250-251) describe lesson study research as a small team that works together to “design, teach, study, and refine a single class lesson”. In order to investigate how students learn, the emphasis is placed on making learning visible. For this project, investigators used a flipped classroom approach to encourage active learning (see Arnold-Garza, 2014). To flip the lesson, key concepts from the lecture content were presented online prior to class time; this allowed the class time to be used to integrate learning into practical application activities. During the class, a librarian acted as a guide, leading students through the learning process. Data collection points were set-up throughout the process to make learning visible. In the first delivery of this lesson, the investigators learned that students struggled with a visualization aid. In response, the investigators altered the lesson, providing a more direct approach. Students in the second iteration recorded a higher level of satisfaction with the lesson. This paper will take attendees on a journey through our lesson study project.

Interactive Sessions for Large-Enrollment Classes with Focus on Conceptual Understanding

Felix Ho, Maja Elmgren

Many students in foundation science courses encounter difficulties in applying their knowledge to unfamiliar problems as well as in justifying their reasoning in a complete, logical and scientific manner. Based on our experiences as instructors, this is often due to a lack of conceptual understanding of the subject matter, which prevents students from identifying and understanding the crux of the problem at hand. This can lead to inappropriate attempts at solutions, giving wrong or even physically impossible answers, without the students even realizing it. Discipline-based education research has shown that experts and novices tackle problems in significantly different ways. Experts’ well-developed knowledge base and mental models allows them to analyze and see the deeper structure in a given problem, resulting in effective problem-solving strategies. By contrast, novices have a tendency to focus on surface features.

In order to help students redirect their focus in problem-solving from the answer to the reasoning required, as well as to develop their conceptual understanding and ability to use concepts and principles to solve unfamiliar problems, we have developed interactive sessions that can be used in a traditional lecture theater for classes of over 100 students. During the sessions, students are presented with descriptions of phenomena drawn from related scientific disciplines and everyday life, and additionally questions that required them to analyze and explain such phenomena. Students discuss in small groups and submit individual answers via a web-based mentometer system that include open-ended response functionalities. This is followed by instructor-led discussions that focus on discussing and giving feedback on the students’ argumentation and reasoning. Research has already shown that student-active teaching methodologies lead to better student learning and academic results. Furthermore, this is a teaching format that incorporates real-time formative feedback even for large-class situations, which is particularly desirable given that large-enrollment courses are commonplace in many science and engineering programs.

In this presentation we will discuss the design principles, as well as the implementation of this teaching format. Student evaluations showed that the format helped them to develop their scientific thinking and to work with the subject content at a deeper and more conceptual level. The
combination and sequence of learning activities was much appreciated. Insights about the pedagogical and practical challenges associated with using this format, including student heterogeneity in motivation and ability, will also be discussed, together with suggestions for adaptations and further development.

**Shaping a Digital Learning Culture in Irish Social Policy Education: Challenges and Possibilities**

*Eileen Hogan, Becci Jeffers*

This paper presents experiences of designing and managing a Continuing Professional Development project for third level social policy educators in Ireland, namely the SPEEDS (Social Policy Education: Enhancing Digital Skills) project. This is a two-year project funded by the National Forum for Teaching and Learning in Higher Education, which aims to enhance social policy educators’ digital skills in teaching and learning contexts through collaboration with instructional designers and learning technologists.

A key premise of this project is that harnessing digital technologies can complement traditional modes of teaching in making connections between social policy theoretical knowledge and ‘real world’ problems. This project is important in taking account of existing skill levels in social policy education in Ireland, identifying training needs, devising creative ways of tackling barriers to digital learning, and establishing a culture of digital skills enhancement within the discipline.

Through this project, we have identified and connected to a large cohort of Irish-based social policy educators. Many of these are enthusiastic learners, who are highly motivated to expand their digital skills’ repertoire and who can be readily transformed into ‘digital champions’ as an outcome of the project. However, many of the potential participants are resistant to changing their teaching and learning practices, feel ill-equipped to use digital technologies in the classroom, are fearful of experimenting with technology-enhanced learning, and are reluctant to engage in digital skills learning, citing lack of time, lack of interest/incentives, and/or lack of confidence.

This paper speaks to the conference theme by reflecting on the challenges of creating a learning culture within the discipline of social policy that embeds digital skills in teaching and learning practices across institutions, departments, and courses in a meaningful and sustainable way. In so doing, we draw on evidence of good practice from SoTL for ideas on engaging colleagues as learners (Huber and Hutchings, 2005), barriers to change (Brownell and Tanner, 2012), learner anxiety and discomfort (MacKenzie et al, 2010; Miller-Young, Yeo and Manarin, 2018), weaving SoTL into institutional cultures in higher education (Williams et al, 2013), microcultures and informal learning in higher education institutions (Roå and Mårtensson, 2015), and leadership for change (Miller-Young et al, 2017). Conference audiences will be invited to reflect with the presenters on barriers to change and to evaluate various proposals and models introduced through this project for creating cultural change in positive, empowering, and creative ways.

**Towards a New Conceptualization of Field Excursion Learning**

*Torstein Hole, Tina Dahl, Pernille Eidesen*

Educators have for decades claimed that the potential for learning through combined research- and field disciplinary learning activities is extraordinarily high, and that learning outcomes encompass knowledge content, practical skills, and personal development (Kent, Gilbertson, & Hunt, 1997). In particular, these benefits can be fostered through student-active methods, such as authentic
research activities in the field (Behrendt, 2014; Kent et al., 1997). Learning experiences such as problem-solving also address developments in job markets, where education must encourage skills computers are less likely to develop and that are transferable to other areas, like creativity, collaborative skills, abstract thinking, and the ability to adjust plans when unexpected things happen (European Commission, 2011). Furthermore, many employers value these skills more than specific knowledge content (Hole et al., 2016).

Concurrently in the last decades, there have been advances in understanding of situated learning - that is, moving learning towards the primacy of individuals' engagement with context (e.g., Eraut, 2010; Lave, 1997). Situated learning is one of the principal strengths of field-, lab, and research-based approaches to higher education, as students learn as they construct their own knowledge. However little research is done on students’ situated learning in fieldwork. We suggest that situated learning can increasingly be implemented to understand field excursion learning, and that this perspective also enable a better understanding of how field excursions contribute to important learning.

The University Centre in Svalbard (UNIS) offers a unique possibility to investigate how intersection between research experiences and field work influence learning. Most courses at UNIS have a field component, and students are frequently involved in authentic research activities like student driven research projects or contribution to staff research. This pedagogical affordance is founded on a situated conception of learning, where the movement of students into specific contexts is important for their learning. In a study performed at UNIS during fall 2015, fieldwork was investigated to see how bachelor students’ engagement with fieldwork practices influenced their development of biological knowledge (Hole, 2018). Learning was studied as a sociocultural activity with short-term ethnographic techniques to investigate the effect of fieldwork on situated learning.

Finding My Teaching Voice: Experiences of Postgraduate Researchers with Teaching Responsibilities

Louise Howson

Postgraduate Researchers (PGRs) with teaching responsibilities are a valuable resource to Universities within the United Kingdom. They inhabit a liminal space between student and teacher as well as researcher and teacher and so can offer unique insights into their experiences of teaching within the institution.

Semi-structured interviews were conducted with PGRs with teaching responsibilities who represented five of the six faculties across the University. With questions based on previous research within the field from how they deal with the duality of being both a student and teacher (Winston & Moore, 2016), to how they have overcome anxiety (Sandler, 2016) and how they have developed their own teaching style (Knight, 2015).

It is hypothesised that PGRs may feel they are more approachable to students, however perceived as less experienced and more nervous than lecturers and professors mirroring the findings of Muzaka (2009). The work of Park (2002) also suggests that PGRs may express frustration of the duality of their role and not feel they are supported or taken seriously as a teacher within their department. Sandi-Urena et al (2011) suggest that teaching may have a positive influence on their postgraduate research and develop key transferable skills by promoting epistemological and metacognitive development.

The interviews were transcribed to identify common themes within the narratives. As a result of this analysis, the training offered to PGRs who teach will be reviewed to account for any gaps in
provision. The transcripts will also be used to create anonymous case studies and used as guidance to other PGRs who are currently, or wish to undertake, teaching alongside their postgraduate studies.

Follow up interviews with the participants will be used to discover if engaging with reflection on their teaching practice was a useful experience. This is particularly beneficial to the project as an apparent deficiency in reflective practice was identified by McLean and Bullard (2000) which led to lack of motivation and a highly self-critical cohort within their study.

**A Clinical Education Model to Support a Culture for Learning**

*Kirsten Jack, Claire Hamshire*

The aim of this presentation is to explore the ways in which a positive learning culture can be promoted within a health care practice setting. Drawing on selective findings from a completed SoTL study across 9 institutions in the North West of England, UK, we will discuss the ways in which practice educators can sustain meaningful and inclusive relationships with nursing students in the clinical setting. In the past it has been suggested that nurse educators are focused on judging, rather than supporting learners and bullying in the clinical area is not uncommon.

**Methods**

A survey was undertaken with 1425 nursing students from adult and mental health degree nursing programmes, from 9 institutions in the North West of England, UK. Unstructured interviews were undertaken with 22 nursing students from the same organisations. The data generated from both methods were thematically analysed and selected data will be presented using a process similar to framework analysis (Ritchie et al., 2013).

**Evidence**

The results from this study concur with previous research which suggests that clinical placement experiences are a complex aspect of nurse education and the quality of the educator/student relationship is essential for success (Carr, 2008). Nursing students like to feel valued and included in the practice team, however the priority for many clinical staff in this study was to complete the given tasks for the day, which left little time for student support. The data revealed many factors which could have a positive impact on the learning culture. Indeed the effectiveness of the educator was perceived as central to learning relationships and the data revealed four essential educator roles. These were: ‘role model’, ‘legitimizer’, ‘advocate’ and ‘respecter’, and these qualities will be explored using a model, which takes into account both the immediate environment and the wider influences on practice.

**Conclusion**

The importance of the relationship between clinical educators and nursing students has been highlighted in this work. If meaningful learning cultures are to be sustained in clinical practice, educators are required to engage with students in an effective way so that they feel included and respected as part of the health-care team. Ways in which the proposed model can be used to facilitate both student and educator engagement will be discussed in this presentation.
Formative Feedback for Teaching Development Processes: Survey Findings Essential to SoTL

Cheryl Jeffs, Britney Paris, Ykje Piera

Formative feedback processes, whereby instructors give feedback to students to enhance their learning, are well-established practices in higher education. In our work as educational developers we asked ourselves “what happens when you change the focus of feedback from instructor to student — from various sources of feedback to the instructor?” Hubbal and Clarke (2011) and Shute (2008) report formative feedback processes are practical, doable, and enhance teaching and student learning, yet these processes are under-researched and leave a gap in knowledge (Smith, 2001; Gromally, Evans & Brickman, 2014).

We draw upon Smith’s (2001) belief that “… formative evaluation is essential to the learning necessary for faculty to improve teaching, scholarly teaching, and a scholarship of teaching” (p. 60). Our curiosity about formative feedback processes and engagement in learning environments in higher education are the foundations of this study. We define formative feedback as an intentional, voluntary, developmental strategy for instructors to receive feedback about their teaching with the goal of better understanding and improving student learning (Brookfield, 2015; Smith, 2001; Weimer, 2013).

The research questions: 1. How is formative feedback for teaching development defined and described? 2. Is there a demand for formative feedback for teaching development resources, strategies and examples? 3. What resources are available in teaching and learning centres? 4. What are some examples of formative feedback for teaching development processes and how do these enhance the scholarship of teaching and learning?

This survey research (Andres, 2012) was conducted in winter 2018, following Institutional ethics approval. The sample was purposefully selected (Creswell, 2014), to include TLS centres in North America, Europe, and Australia. Participants were recruited via electronic listservs.

Preliminary findings indicate that formative feedback for teaching development processes are supported in most of the institutions that responded. Regarding definitions, respondents reported a range of terms, including: coaching, peer-feedback, observations, student feedback, instructor-initiated, developmental, with goals to improve teaching, student learning, and to use towards promotion and tenure. Some respondents indicated that formative feedback for teaching development was not a priority and that teaching was still not valued, while others were hopeful that it was being initiated in their institution. The respondents were generous with sharing resources and websites related to formative feedback for teaching development. These resources are categorized and posted on our institutional website. These findings will benefit learning environments that hopefully will embrace a culture of formative feedback processes for teaching development.

How Mobile Learning Can Support Student Motivation and Achievement


Developments in information, communication, and technologies (ICT) enhance and extend the learning possibilities beyond the traditional learning tools. Among the most used ICT for educational purposes is smartphones (Hashemi, Azizinezhad, Najafi, & Nesari, 2011). Smartphones have become ubiquitous and an important tool in today’s society, and thus offer learning supportive functions. For instance, according to Hashemi et al. (2011), the possibility for interaction, collaboration, ease of use, and game-like experiences might contribute to perceive such tools, relative to traditional tools, as
more relevant, engaging, and interesting, which in turn might enhance intrinsic motivation, positive moods, and achievement (Jeno, Grytnes, & Vandvik, 2017).

There have been several studies investigating the effectiveness of smartphones on student learning (e.g., Schmid et al., 2014), however, there is further need to employ experimental designs on the effect of smartphones on learning, using well-developed theories (Zydney & Warner, 2016). Building on the theoretical perspective of SDT, the present paper presents results from a randomized controlled experiment. According to Self-Determination Theory (SDT; Ryan & Deci, 2017), a leading motivation theory, the experience of autonomy, competence, and relatedness enhances students’ intrinsic motivation, which in turn, predicts intrinsic motivation, psychological well-being, and learning.

In the present study, fifty-eight undergraduate biology students were randomized to two conditions; an experimental (smartphone) and a control (traditional textbook). Pre-test and post-test measures of positive and negative affect were collected, as were post-test measures of intrinsic motivation, autonomy, competence, and achievement. Results were in line with our theoretical assumptions; students in the smartphone condition showed significantly less negative affect from pre-test to post-test. Moreover, there was a significant increase in negative affect and decrease in positive affect for the students in the traditional textbook condition. Lastly, results from a path-analysis revealed that using a smartphone indirectly accounted for increased achievement and increased positive affect. The study contributes with new insight into why and how smartphones might affect student motivation, well-being, and learning which has previously been unstudied. Moreover, the theoretical contribution allows for the ability to design smartphones applications that might support students’ psychological needs for autonomy, competence, and relatedness.

A Self-Determination Theory Approach to Understanding the Motivational Dynamics of Team-Based Learning

Lucas Matias Jeno, Arild Raaheim, Sara Madeleine Kristensen, Daniel Kristensen, Mildred Haugland, Silje Mæland

The present study investigates the effect of Team-Based Learning (TBL) on students’ engagement and learning. The study employs a Self-Determination Theory (SDT) approach to investigate the underlying motivational effects of implementing TBL among a higher education sample. Sixty-four students participated in a quasi-experimental study with a one-group pretest-posttest design. The results show that the students increased significantly from pretest to posttest on intrinsic motivation, identified regulation, external regulation, perceived competence, and perceived autonomy support, as a function of TBL. The students’ basic psychological needs for autonomy, competence, and relatedness increased from pretest to posttest. Further, the results show that the students decreased in amotivation from pretest to posttest. Lastly, the students’ engagement and perceived learning increased. A path-analytical model shows that increases in intrinsic motivation, perceived competence and external regulation predicts increases in engagement, which in turn predicts increases in perceived learning. The results are in line with SDT. A teaching method that encourages active learning, as opposed to passive learning, facilitates autonomous motivation (i.e., intrinsic motivation and identified regulation) and decreases unintentionality (i.e., amotivation). In TBL, the teacher is a facilitator of learning, as opposed to a transmitter of information, which might account for the increases in autonomy support. Moreover, functions within TBL might enhance student engagement and perceived learning. However, TBL has several requirements that might be perceived as controlling, which might explain the increase in external regulation. Based on the results, we encourage teachers to consider the motivational pulls within TBL when implementing in courses.
Old and New Hands at Academic Development: Bringing the Student Heartbeat Closer to the Action

Tansy Jessop, Claire Saunders

Graduate interns are a novel and powerful group of actors in academic development. Unlike current students, they can devote time and thought entirely to the issues of SOTL, while still bringing a fresh eye and near-student perspective to matters of curriculum, pedagogy and assessment. As recent graduates, they are credible voices in discussions with academics. Yet there is a shadow that falls between the idea and the reality of having new hands in academic development. In reflecting on the experience of hiring graduate interns at a modern British university, we pose questions about the nature of academic development seen through their eyes. Participants will predict outcomes of using graduate interns as academic developers.

Over the period of the internship, we collected written reflections on critical incidents from both the interns and the academic developers. We will share some of the raw data from these reflections with participants, who will engage in a thematic analysis of this data to identify emerging themes, triumphs and problems. Through the process of listening to the voices of interns we became much more attuned to the student perspective of learning and teaching, almost like putting a glass to the wall and hearing a conversation for the first time, a conversation which we had only caught in snatches until then. This raised ethical and tactical dilemmas for us, but also provided a rich understanding of the teaching and learning landscape at our university. The biggest challenge for us was not about getting closer to the student heartbeat, though. It was the challenge of articulating why we do what we do, and all the tacit rules of the game in academic development work which we struggled to share adequately.

Increasing Interdisciplinary Integration Using Formative Assessment

Jan Reinert Karlsen, Robert Gray

Interdisciplinary integration is a major challenge in student learning, especially when topics are shared at a social level, but not on an academic level. This is especially the case when we consider interdisciplinary subjects (e.g., the refugee crisis) that, on one hand, cannot meaningfully be delineated or understood from one disciplinary perspective alone, and on the other, cannot be addressed without considering the assumptions and limitations of the multiple perspectives of the experts addressing such issues. The challenge is increased by the fact that interdisciplinary subjects often mobilize strong emotions and personal engagement confounded by commonsensical understandings of science, differences between academic cultures, and heavily framed media narratives. This leaves us with the question: How can one integrate different disciplinary perspectives into a meaningful and critical interdisciplinary learning process that does not reproduce simplistic representations of science and society?

This paper presents the results from an ongoing course redesign process where formative assessment strategies were used successfully to increase interdisciplinary integration in a course on the refugee crisis. The original course design presented a series of disciplinary perspectives on the topic, including discussion groups where students discussed and reflected across disciplinary perspectives and academic cultures. However, when evaluating final exam papers, students’ integration of multiple perspectives was, often, insufficiently achieved.

Beginning in Fall 2017, a new student-centered approach emphasized students’ learning about the rationales and differences of disciplinary perspectives in lecture sessions and then using seminar sessions to empower students to think critically upon the issues. In Spring 2018, we added a new
process where students wrote a reflection paper after completing the reading assignment, attending lecture, and participating in a discussion session for each module. The students would then receive feedback from a teaching assistant using a specially developed rubric and providing additional, substantive comments. This new “assessment for learning” process now forms the basis for the final exam, which consists of a synthesis of the reflection papers into a coherent essay.

In order to determine whether the new approach worked, we analyze the students’ submissions, classroom observations, and course evaluations to find which strategies stimulated the most learning and fostered development of the theoretical and practical dimensions of the course subject matter (e.g., interdisciplinary communication skills). In this paper we will share our analysis and discuss the extent to which student perspectives and learning outcomes match with our intentions.

The Conference Poster: An Investigation of Its Application as a Pharmacy Undergraduate Pedagogy

John Keating, Marian McCarthy

Background
Posters are effective media of communicating information visually and are employed in healthcare settings such as community pharmacies to convey messages in a succinct, engaging manner. A clever poster design can have a lasting effect on the observer and become an iconic graphic design art form.

Implementation of the UCC Pharmacy Masters (MPharm) curriculum is ongoing, with a statutory mandate for an integrated teaching and learning pedagogical approach. Consequently, faculty are actively investigating methods of encouraging student knowledge integration, creativity, independent thinking and life-long learning across the curriculum.

This paper describes one such investigation – the development and presentation of drug-themed A0-sized posters by student teams, portraying, in an integrative approach, the drug’s clinical aspects, chemistry, pharmacology and formulation.

Methods
MPHarm3 students undertaking the module Gastrointestinal, Hepatic and Endocrine Systems were the cohort under investigation. Students were divided into four-membered teams, assigned a drug relevant to the module and provided with poster design training. A team building exercise encompassed the application of Project MUSE Entry Points to Learning art questions to artwork in the UCC Glucksman Gallery. The Gallery experience was also intended to assist teams with the poster’s overall design and aesthetic potential, and to consider it not only as a document of factual information, but as an artwork in its own right. There is strong literature precedence of the application of visual arts in medical humanities pedagogy to nurture healthcare students with their observational and communication skills.

The poster activity culminated with a Poster Conference where teams presented their posters to faculty assessors. Each team was graded by several assessors against a rubric focused on poster design, content and team-assessor engagement. Assessors provided instant feedback to each team.

The Comprehensive Assessment of Team Member Effectiveness teamwork e-tool captured individual student-generated scores and testimonies under numerous teamwork behaviours for each member of a team. Faculty- and student-generated scores were combined to produce individual student marks.

Evidence / Conclusions
Evidence from assessors and students indicated that the entire poster process beginning with the
examination of gallery artworks was a surprisingly effective means of encouraging pharmacy 
students to integrate knowledge, develop teamwork, creative, and life-long learning skills and as a 
means of expressing their multiple intelligences. The exercise is mappable to an advanced rung of 
Harden’s Integration Ladder and to many competencies of the Irish Competency Framework for 
Pharmacists.

**Awakening Learning through Community Engagement: A 6-Step Approach**

*Ayesha Khan, Janet Pritchard, Sumeet Farwaha*

Post-secondary institutions are increasingly being called upon to update and broaden their 
pedagogical approaches to keep pace with a rapidly evolving workforce. Specifically, the private 
sector has emphasized a need for educators to provide students with learning experiences that 
enhance “human skills” such as active listening, critical thinking, and social perceptiveness. For willing 
instructors, this means that we must extend our pedagogical practices beyond the focus on content-
based knowledge and increase experiential learning opportunities that encompass not only 
intellectual growth, but also the development of social responsibility. Community-engaged education 
(CEE) is a type of experiential pedagogy that uses student participation in a specific community to 
allow them to apply the content taught in the classroom in a real-world setting. CEE has been linked 
to a number of positive outcomes in academic development, including deeper understanding of 
course content (Markus, 1993), increased ability to apply course concepts (Eyler, 2002), and sharper 
problem-solving skills (Batchelder & Root, 1994). While CEE projects have shown immense promise in 
terms of enhancing the learning experience of students, they can also present unique challenges that 
require instructors to find equally unique solutions. In connection with the conference theme of “An 
inclusive learning culture: What happens when we connect student learning to life and work 
experiences beyond the (physical or virtual) classroom?” we will share specific examples from the 
literature that demonstrate how CEE positively affects student success. Through our presentation, 
we aim to provide participants with a comprehensive 6-step approach to implementing CEE at the 
classroom level. After attending this session, participants will be able to: (1) explain the rationale for 
integrating CEE in course curricula, and (2) use our 6-step method to integrate CEE into their courses.

**Fostering Synergistic Relationships between Students and Faculty**

*Alice Kim, Natasha May*

In this session, we will present the Scholarship of Teaching and Learning (SoTL) research we are 
conducting in the context of a course we are offering for graduate students. The course is focused on 
developing students’ statistical consulting skills and experience to support faculty conducting their 
own SoTL research. Our research question investigates whether the course practicum benefited 
students above and beyond the in-class experiential components. These experiential components 
consisted of role playing and simulation of consultation sessions. The aim of these experiential 
exercises was to help prepare students for their practicum, which required them to provide one-on-
one statistical support for faculty. Thus, both the faculty and students benefited from these 
interactions: faculty benefited by learning about statistics from the graduate students, whereas the 
graduate students benefited by gaining valuable statistical consulting experience. In this way, we are 
fostering a synergistic culture of learning.

We have collected qualitative data in the abovementioned course to assess the impact of role-
playing, simulation and a consulting practicum on students’ confidence in their ability to provide 
statistical support. Past research has shown that both knowledge, and confidence in that knowledge,
are critical for people to act quickly, confidently and reliably in any situation, including on-the-job (Hunt, 2003). Students reflections (written and verbal via interview) on the use of simulation and role-playing techniques were assessed for common themes speaking to the perceived effectiveness of these techniques to prepare them for future consulting. Additionally, students were asked to provide reflective feedback (written and verbal via interview) on the impact their practicum experience had on their potential future consulting work. These data were also analyzed for common themes and compared to themes extracted from the simulation and role playing data. We specifically focused on whether the practicums offered any added value above and beyond the simulations and role-playing. This work is currently in progress and the findings will help refine the design of the future offerings of this course, which in turn will impact the experience of future cohorts of students and their faculty partners. In this way the results of the study will help shed light on how to foster and promote effective, synergistic student-faculty partnerships.

**Fostering a Culture of Learning about Teaching: Ideas from Research on Expertise**

*Helen King*

A key characteristic of expert performance is continuous learning and development through a process of ‘Deliberate Practice’ (Ericsson et al, 1993) or ‘Progressive Problem Solving’ (Bereiter & Scardamalia, 1993). These concepts have been explored empirically to identify how they are expressed in a broad range of professions including athletics, music, the arts and business (van de Wiel et al, 2004). Whilst there has been some research on expertise in relation to teachers in secondary schools (e.g. Berliner, 2001; Tsui, 2003), there appears to be little so far in relation to teachers in higher education (HE).

Similarly, there has been considerable interest in ways of thinking and practising (WTP) in the disciplines (e.g., arising from Meyer & Land, 2003; Pace & Middendorf, 2004); however, research into HE teachers’ WTP is relatively sparse. More in-depth work in this area would provide useful evidence to inform professional development programmes (Saroyan & Trigwell, 2015). Furthermore, Ericsson (2017) notes that, in a variety of domains, it is has been shown that professional development activities which align to the criteria for Deliberate Practice in that field lead to enhancements in performance.

Characteristics of expertise and WTP, therefore, potentially offer interesting approaches to conceptualising teaching and its development in higher education. The consideration of such approaches provides opportunities for different types of conversations about the learning cultures of those who teach in higher education and the role of scholarship. It draws the focus of faculty development away from formal training and events, and offers a complementary alternative to the concept of reflective practice (Moon, 2001).

This paper will briefly introduce some common models for the acquisition and maintenance of expert performance exploring their potential relevance to teaching in higher education. In addition, emergent findings will be shared from the author’s research into expert educators’ approaches to learning about and improving their teaching practice.
Sparking SoTL: Triggers and Stories from One Institution

Klodiana Kolomitro, Cory Laverty, Denise Stockley

This session recounts people’s stories about the Scholarship of Teaching and Learning (SoTL) and the inspiration that led to their reflective practice. Storytelling enriches a learning culture by revealing personal and emotional journeys and our intention is to use stories as an invitational bridge towards SoTL projects. We also identify and share the challenges faculty experience in studying their teaching and offer a SoTL framework and considerations to better understand and address those challenges. This mixed-methods study took place at a mid-sized research intensive university in Canada. Information was gathered from 289 faculty members through a survey that captured the events and experiences that triggered participant interest in SoTL and their perceptions of the importance of this work. Following the survey, we conducted 3 semi-structured group interviews with 8 participants. The purpose of the interviews was to pursue an in-depth exploration of the triggers, challenges, and supports in SoTL research and to capture examples of individual stories relating to the Scholarship of Teaching and Learning and their process of self-discovery and transformation. Similar to Brookfield (1998), we propose four lenses that are defined in terms of SoTL triggers and which we name a Scholarship Window: the lens of Self; the lens of Other; Living in the Discipline; and Living in SoTL. The lens of Self identifies a trigger that emanates from personal critical reflection on our own teaching experiences and who we are as educators. The lens of Other describes a trigger that originates from incidents apart from personal reflection such as experience with students in a classroom or conversations with colleagues outside a disciplinary department such as educational developers and faculty attending teaching-related events. Living in a Discipline is a phrase that captures how individuals are shaped by disciplinary conventions in the scholarly literature. Living in SoTL is a way to acknowledge that some educators function within an environment that focuses foremost on teaching and learning. We conclude our session with considerations for the field.

A Good Place to Work and to Learn: Sustaining "a Commons" in a Graduate Peer Training Program

Marie Vander Kloet

Each year, returning staff in a graduate student, peer-led teaching training program emphasize that they came to work in the program expecting to share what they know about teaching and are surprised by how much they learn. Working in the program is consistently described as one of the most rewarding and significant teaching experiences they have had as graduate students. In this paper, I explore what makes this program, based in a Canadian research intensive university, a good place to work and learn through a consideration of aspects of the program’s design and operation in relation to three intersecting threads with SoTL focused on academic development: teaching microcultures, graduate teaching development and interdisciplinarity. To examine this program is to consider the players (permanent and parttime staff, participants) and the relationships between and amongst them.

First, I position this program within Roxa and Martensson’s (2015) types of microcultures. Through an examination of what trust and responsibility look like in the program, I illustrate why this program appears to be an exemplar of Roxa and Martensson’s “the commons”. Moreover, I highlight the unique qualities of the program that allow for a commons to be sustained despite regular changeover in staff and participants and query how intermittent fractures in trust and responsibility can occur without the collapse of this learning environment. Second, I consider this program as a learning environment and learning microculture but also as a place of work. Graduate student teaching development programs exist amongst considerable national discourse about doctoral education and employment outcomes (Aspenlieder & Vander Kloet, 2014; Desjardins, 2012;
Rolheiser et al, 2013). I posit that, although the program appears to be an exemplary “commons” what perhaps makes it a good place to learn is what makes it a good place to work: that is that people are compensated well for their work, engage in meaningful and often self directed work, and experience a connection between their work and identity as teachers in higher education. This reflexive and theoretically focused examination of the program as a learning environment is perhaps most concerned with understanding how it is collectively sustained through periods of change as graduate teaching development programs in Canada have only more change ahead.

Depictions of Suffering in Post-Secondary Education

Patricia Kostouros

Those who work as helpers may themselves become distressed from witnessing suffering. Literature related to Secondary Traumatic Stress (STS), Vicarious Trauma (VT) and Compassion Fatigue (CF; Matthieu, 2012) is a growing topic. The notion of distress from having been a secondary witness to suffering is also moving from helper as witness to student as witness (Kostouros & Wenzel, 2016). There are constructs that exist related to STS and VT that speak to the notion of secondary witness effect of the student population in particular (Care ello & Butler, 2014; Graziano, 2001; Shannon, Simmelink-McCleary, Becher, & Crook-Lyon, 2014; Spear, 2014).

Several authors (Lowe, 2015; Shannon, Simmelink-McCleary, Becher & Crook-Lyon, 2014) recognized the aporetic nature of this topic noting that while it is important to depict suffering and discuss difficult topics, there is also a responsibility in the way this is done. Care ello and Butler (2014) acknowledged that students may be overwhelmed by the nature of the subject. Teachers have a responsibility to understand that there is limited choice in the position of witness when there are assignments or grades attached.

In two separate studies, one with students and one with teachers, information was gathered about teacher use and student experience. Since this inquiry was in relation to a particular phenomenon, a qualitative study that is interpretative was conducted. The questions posed in the teacher research was: What makes depictions of suffering necessary and how can this be done well? For the students the question was: What can students’ experiences of encountering the suffering of others, in their course curriculum, tell us about learning and inform teaching practice in relation to using materials that depict suffering? According to Merriam (2002), asking about perspectives and collecting this data via interviews matches an interpretive-phenomenological methodology. In addition, since data was collected from both students and teachers and included inquiry into the teaching-learning dynamic the territory of the scholarship of teaching and learning was apparent. This research was indeed supported by the Scholarship of Teaching and Learning Institute in this researcher’s University.

Student Self-Care Curriculum

Patricia Kostouros, Deb Bennett, Andrea Shippey-Heilman

In post-secondary, student mental health is a concern as it can interfere with academic success. Potentially, the burdens associated with academic achievement can trigger or aggravate mental health difficulties. After following the progress of 48 students, Wang et al. (2014) found that over the term, particularly as assignments and expectations increased, so did stress, while the mitigating factors associated with stress such as sleep decreased. Increased stress and mental health concerns as well as fewer tools to help when struggling leads to lower grades and early withdraw (Hunt, &
Eisenberg, 2010). The National College Health Assessment (NCHA) survey (2016) showed that 33% of respondents considered stress as a factor that impacted their academic performance. Other reported factors considered higher than the national average for our university were sleep difficulties and anxiety. The pressures from studies can activate or intensify mental health challenges. However, intervention can serve as a protective factor (Hysenbegasi, Hass & Rowland, 2005). Mental health literacy leads to students accessing resources when needed (Kutcher, Wei & Morgan, 2016). When faculty are aware of student needs, they are better equipped to support the students who often approach faculty when they are struggling.

Since we are aware of the stressors associated with academia, and in an effort to create a learning culture, we studied the usefulness for students to have self-care embedding in their curriculum. In a two-part study, part one explored students’ experiences with Breathing RoomTM an on-line self-care tool, and part two allowed students to have autonomy of choice for self-care tool, which included BreathngRoomTM. These courses already had content related to self-care however, adding the tools made the self-care content more comprehensive. In both part one and two of this study those students who agreed to be involved in the research provided reflective journals and participated in a semi-structured interview. Using an interpretive inquiry approach we gained an understanding of the impact of and student experiences with the Breathing RoomTM as well as self-identified tools and activities. Within interpretive inquiry, experiences are explored with an attempt interpret phenomena and the meanings made form participants (Cohen, Kahn, & Steees, 2000). These meanings are interpreted to understand our worlds and their realities. This is an important methodology for this study as description of student experiences with the self-care tools as part of their curriculum is highlighted.

Development of Objective Structured Clinical Exams (OSCEs) for Assessment of Clinical Competence

Nancy Krusen, Debra Rollins

The presentation reports development of objective structured clinical examinations (OSCEs) as a strategy to assess clinical competence, supporting a culture of learning within a health science program. OSCEs are brief, multiple stations assessing a variety of essential clinical practice skills. The presentation illuminates assessment of learner competencies through creation of a performance-based tool. We will describe scenario development, areas assessed, rating development, and the messy, iterative process of OSCE creation. Through formal presentation, small group discussion, and large group sharing, learners will differentiate formative and summative use of OSCEs in OT education, create a preliminary OSCE blueprint, and seek additional resources for OSCE implementation.

Harden and Gleeson (1975) first described OSCEs in medical practice as an alternative to traditional multiple-choice didactic tests or conventional clinical examination. OSCEs are now commonly used within schools of medicine, nursing, dentistry, pharmacy, physical education, speech-language pathology, physical therapy (PT), and social work. Miller (1990) described a model of performance assessment recognizing sequential acquisition of clinical competence – knows, knows how, shows how, does. Performance assessment is used across health professions to demonstrate competence, conduct program evaluation, and indicate compliance with educational Standards. OSCEs support a culture of learning across a curriculum with long-term impact assuring quality for the public.

Faculty from a School of Occupational Therapy unanimously identified the need for a performance-based measure of clinical competence (other than traditional didactic or clinical examination) prior to clinical placement. We founded the OSCE in transformative learning (Mezirow, 1981), through which
students transform old knowledge by reflecting on new experiences, and in situated learning (Lave & Wenger, 1991), through which faculty design the just-right challenge at the just-right time. Faculty members identified a preference for the measure to be formative for student learning and summative for program evaluation. Twelve OT practitioners participated in a modified-Delphi method to identify possible OSCE scenarios. Practitioner consensus recommended competence areas match those of the national Fieldwork Performance Evaluation. The authors developed a blueprint of seventeen OSCE stations inclusive of practice setting, client age, focus of OT intervention, competence area, and materials needed. Authors solicited and refined scenarios from the practitioners, designing specific checklists to rate each. Finally, authors created data collection methods for assessment of the OSCE, student performance, and student perception. The data are analyzed and reported in a separate work.

**Design for Engagement: How Faculty Structure and Assess Participation in Global Education Courses**

*Derek Lackaff, Matthew Buckmaster*

Short-term global education (STGE) courses have students travelling with an instructor for a period of weeks, and attempt to extend the learning culture of a campus into the wider world. The STGE learning environment typically foregrounds distinctive learner goals, expectations and relationships. “Student engagement” in such a context differs greatly from an on-campus course. Drawing on a content analysis of syllabi and interviews with faculty from a mid-sized, private American university, we explore motivations, goals, and impacts of assessing participation in STGE courses. Although the learning goals of STGE courses may be similar to those of campus-based courses, we find that faculty conceptualize and assess participation in STGE courses in distinctive ways.

Although assessment of “class participation” is often seen as a way to incentivize performance (e.g., Merva, 2003; Trooboff, Cressev, & Monty, 2004), assessment scholars “almost universally advise against” the practice (Bean & Peterson, 1998, p. 33). The main problem is that participation is typically graded “impressionistically,” which disadvantages certain types of students (e.g., the introverted) and is difficult to justify or defend.

Faculty draw upon diverse experiences and beliefs about student learning when they develop their courses. In a regular course context, “participation” may be conceptualized as “coming prepared to class” or “making meaningful contributions to class discussions” or “collaborating usefully on team projects.” In the STGE context, “participation” often takes on a broader definition, encompassing behavior such as “taking advantage of opportunities for cultural exchange.” Engles and Engles (2015) argue the primary goal of study abroad is to present the “emotional and intellectual challenge of direct, authentic cultural encounters and guided reflection upon those encounters” (pp. 6-7). Faculty often encourage these encounters though an operationalization and assessment of “participation” that is unique to their STGE courses.

In this session, we will present multiple learning scenarios to help attendees understand: 1) how participation is conceptualized in STGE courses and 2) how participation is operationalized and assessed in STGE courses. Faculty conceptualize the academic goals and content of STGE differently from those of their campus-based courses, with important implications for student learning, course design, and faculty development. This paper session will provide an overview of our findings, suggest themes for discussion and future investigation, and provide opportunities for the audience to share perspectives from their own campus contexts.
Making the Implicit Explicit: What SoTL Can Learn from Institutional Ethnography (IE)

Swantje Lahm

Innovative approaches like “Decoding the Disciplines” (Pace, 2017; Middendorf and Shopkow, 2017) have produced significant advances in SoTL, because they help faculty to explicate the implicit knowledge that is always part of disciplinary ways of knowing, thinking and doing. Institutional ethnography (IE) has been developed by the sociologist Dorothy Smith (2005, 2006) and shares basic assumptions and goals with the Decoding approach in the sense that it aims to research and explicate everyday practices as they are realized – as opposed to established ways of talking and thinking about these practices. This discrepancy between “talk” and “action” can, for example, be observed in the ways grading is talked about in official assessment discourses and the actual grading practices of faculty, which happen in specific times and places as well as disciplinary contexts.

In contrast to the Decoding approach, IE does not stop at explicating individual practice but investigates how work practices are coordinated by so-called “extra-local” forces. This is done by analyzing documents which encapsulate the official discourse, for example plagiarism policy, course requirements, feedback recommendations, grade appeal procedures, and measures against grade inflation. The recursive research into “two modes of knowledge” – discourse and praxis – shows how local practice is informed by a larger institutional framework, which is usually hidden and sometimes works against the best interests of the actors involved.

My presentation will explore how IE can be used fruitfully to contribute to SoTL’s sensitivity for actual workings of institutional context. In order to illustrate IE’s use I will present empirical findings from an ongoing study about evaluation and grading practices in sociology and philosophy. Participants are invited to discuss IE’s contribution to an deeper understanding of how practices of teaching an learning are embedded in institutional context and how research strategies from IE can complement the Decoding approach.

The Teaching Portfolio – A Way to Advance Towards SoTL

Maria Larsson, Susanne Pelger

In the literature on teaching and learning many examples are found of how reflection can be used for learning and development. Some of them deal with how teachers can gain insights about teaching and learning through the writing of a teaching portfolio (e.g., FitzPatrick & Spiller, 2010; Jones, 2011; Trautwein et al., 2015). However, studies on what such insights may actually bring into teaching practice are scarce. Our intention was therefore to explore what impact teachers’ writing of a teaching portfolio can have on their practice and professional learning (Pelger & Larsson, 2017; Pelger & Larsson, 2018).

The study was conducted through a questionnaire, where 26 academic teachers answered open-ended questions about the possible insights, effects on teaching practice, and effects on collegial exchange that the portfolio writing entailed. The teachers came from three faculties at Lund University – Engineering, Science and Social Science – and, as a preparation, all of them had attended a workshop on portfolio writing. In their responses, a majority of the teachers reported on insights they gained through the writing of a teaching portfolio, and how these insights contributed to changes in teaching practice. Some of them also described changes in their collegial exchange and the way they talk about educational issues with colleagues.

In our presentation we will show examples of the impact that the teachers experienced that the writing of a teaching portfolio had. Based on Kreber’s (2002) three competence levels – excellence,
expertise and scholarship of teaching and learning – we will discuss how the impacts reflect academic teachers’ professional learning and development. We will also discuss the potential of using reflective portfolio writing as a tool for change in an emerging academic community of practice characterised by a scholarly approach to teaching and learning.

Establishing a Culture for Learning through Teacher Training

Karen M. Lauridsen

If higher education teachers are expected to promote a culture for learning in their classrooms, they will benefit from appropriate professional development in which they experience a culture for learning themselves. An obvious place to do that is in the mandatory courses in university teaching for young researchers (PhD students, assistant professors, etc.).

This paper has a double purpose: First, it briefly outlines the recently revised teacher training programme for assistant professors at Aarhus University. The programme comprises four modules in the course of one semester (5 ECTS credits) and has been developed on the SoTL principles of analyzing the current state-of-affairs, proposing and trial-running changes to current practices, systematically evaluating the outcomes of the changes, and reporting on these outcomes to a wider circle of stakeholders in relevant local micro-cultures (Roxå & Mårtensson, 2015). Second, and most importantly, the paper reports on a study conducted among the first cohort of participants in this programme in the spring of 2018. The purpose of the study is to evidence the value of the changes that take place in participants’ teaching practice and – to the extent possible – in their students’ learning as a result of such professional development (Bamber & Stefani, 2016; Lauridsen & Lauridsen, 2018). Three datasets will be combined: (i) written reports on the individual teaching or supervision projects conducted as part of the training programme; (ii) the individual participants’ teaching portfolios, including student evaluations, developed by all participants as an integrated part of the programme; and (iii) a short survey with quantitative as well as qualitative data (text comments), conducted at the end of the final module. Triangulating the outcomes in these three sources will allow us to evidence the value of the training programme based on SoTL principles, and to evaluate the extent to which participants have adopted a culture for learning in their own teaching practice. A subsequent follow-up study will be needed to assess how pervasive the changes are in a long-term perspective.

Transforming Early Career Academic Development at NUS Using a Community of Practice Model

Adrian Lee, Jeanette Choy

In re-evaluating professional development for early-career academics (ECAs) at the National University of Singapore (NUS), we noted three major concerns with its then current status. First, a lack of evaluation in terms of its effectiveness and its impact on student learning. Second, that it did not capitalise on the collegiality established within the cohort and that the elective workshops did not necessarily meet the strategic needs of the participants. Third, the programme in recognising the many priorities that compete for time and attention (Rust, 2000) avoided assignments that would require participants to reflect on their teaching.

With these concerns in mind, we developed a new programme based on mentoring within a Community of Practice model (Smith et al., 2013). This new programme embraces collaborative effort and encourages dialogue within local contexts to develop teaching practice (Knight and Cornett, 2009; Hobson et al., 2009). The new programme recognises that “teachers need
opportunities to practice ... in the classroom, to observe student outcomes and to discuss changes and make adjustments with the help of their peers” (Sturko and Holyoke, 2009). This new programme runs concurrently alongside the existing programme and thus evaluation allows for inter-comparison.

In this presentation, we will discuss how we implemented mentoring based on shared engagement on practice. We will show how we support a collegial climate to generate and sustain “inquiry, collaboration, reflection and action in the service of ongoing improvement” (Hutchings et al., 2011). Using both quantitative and qualitative data obtained from participants in the pilot implementation (including reflective artefacts, survey data, and perspectives gathered from focus group interviews), we will report on the integration of concepts and ideas into teaching practice, and changes in attitudes and beliefs about teaching (Guskey, 2002). In addition, we will compare the perceptions of ECAs with those who did not participate in the new programme to identify similarities or differences in their teaching perspectives and practices. Among the significant results gathered so far, we have noted the inappropriateness of the original teaching practicum component, that the requirement to maintain a blog makes participants’ reflections visible, and how the peer classroom observation makes teaching public and elevates the conversation about teaching practice.

Relationship between Course Clarity and Teaching Methods to Learning Approaches

Jason Lee, Fun Siong Lim, Sophia Tan, Shen Yong Ho

This study investigates the relationships between the clarity of the course, approaches to learning, and the tools used for learning. We based this study on Ramsden’s (1988) premise that learning is influenced by the context, and consists of three domains which are assessment (evaluation of what is learnt), curriculum (content and structure of what is learnt) and teaching (method of transmission of what is learnt). We focus the discussion of this paper on the curriculum and teaching.

When students learn, they can take a surface or deep level approach (Biggs, 1999) but students are also likely to adopt a combination of both approaches depending on the circumstances where the learning is happening. Previous studies have found that students who understand the purpose and value (Hulleman, 2007) of what they are studying will be more engaged and have shown to adopt a deep approach to learning (Floyd, Harrington & Santiago, 2009). Therefore, we believe that the clarity of the curriculum will affect the students’ approach to learning.

With the availability of online tools (e.g., video lectures, Learning Catalytics) and traditional learning approaches (e.g., lectures, tutorials, study groups), teachers can use these tools to aid their teaching and further engage their students in deeper learning. One of the gaps in the literature is the understanding of the relationship between the students’ learning approaches to the various teaching tools that are used in teaching.

Two questions that will be addressed in this study are:

1. What is the relationship between the clarity of a course outline (curriculum) and the approach student take in learning (deep vs. surface)?

2. How useful are the different types of teaching activities perceived for learning by deep and surface learners?

The background of this study are Year 1 students undertaking a foundational physics course in a public university in Singapore. A total of 151 responses were received but only 91 responses were usable after post processing. The revised two-factor study process questionnaire (SPQ-2F) (Biggs,
Kember & Leong, 2001) was used to measure students’ learning approaches while the Learning Experience Inventory in Courses (LEI-C) (Wong & Thadani, 2014) was used to measure the clarity of students’ perception of the course. Respondents also rated using a Likert scale on the various learning and teaching approaches that the instructor used in the course how these tools helped them with their learning.

Exploring the Nature and Effects of Dialogic Feedback in Professional Learning Conversations

Shin Dee Liew, Gan Joo Seng

The potential of professional learning conversations (PLCs) for faculty development is well-recognised. Understanding the nature of feedback, as embedded in PLCs, is significant not only to identify what feedback moves allow for open and sustained dialogue, but also to examine how feedback dialogue can have a positive influence on what faculty members do in their teaching practice. The aim of this paper is to contribute to our understanding of the nature of feedback, as seen from a dialogic perspective, and grounded in the notions of collegial discourse. We believe that PLCs involving feedback dialogue opens a discursive space for more in-depth and collegial discussions about teaching and learning.

The study attempts to address the question of how we might examine feedback processes during PLCs as part of a larger study that investigates the use of PLCs in mentoring early career academics in a research-intensive university. This study is situated within the view of feedback as a social act — a progressive process of scaffolding learning that is more reciprocal than unilateral, more cyclical than terminal, more responsive than transmissive, and more collegial than congenial. In short, we intend to show that feedback dialogue can be understood through an analysis of dialogic moves that takes into consideration feedback information which focuses the learners’ attention on the task, the processes required to complete the task, and self-regulation of one’s learning.

Three case studies of PLCs were analysed and compared, in which two cases were seen as successful in leading to an inquiry study by the participants, while one case did not. There were five sessions for each case study, and the recordings for each session were transcribed and analysed using a coding scheme which characterise dialogic feedback as interactions at task, process, and self-regulation levels. This coding scheme was chosen because it is underpinned by a view that process and self-regulation feedback are powerful for promoting deep learning and effective engagement with the feedback information.

The findings suggest that a systematic approach to analysing dialogic feedback has the potential to develop insights into ways of supporting faculty members in productive PLCs, which promote and sustain the learning conversations. Feedback dialogue that focused participants’ attention at the levels of process and self-regulation seemed to create a discursive space for elaborative discussion. We also discuss how incorporating dialogic feedback into PLCs can help academic developers more effectively support faculty in their teaching.

Examining Team Learning through Discussions in Team-Based Learning Using Structured Interviews

Fun Siong Lim, Stefanie Yen Leng Chye, Anders Gustafsson

Team-Based Learning (TBL) (Michaelsen, Knight, & Fink, 2004) is a structured small group learning approach that has gained considerable popularity in higher education (Burgess, McGregor, & Mellis, 2014; Sisk, 2011). Michaelsen and Sweet (2008) argue that TBL encourages a culture of peer learning
where heterogeneous group of students with mixed abilities would develop into self-managing high performance teams.

While there is much research that investigates how students are learning as a team in TBL, the methodologies tend to be limited to the use of surveys (Burgess, et al., 2017; Fatmi, et al., 2013; Sisk, 2011) or observation lists (Kelly, et al., 2005; Ozugon & Alimoglu, 2017). There has not been (to the best of my knowledge) any qualitative studies that examine team learning within TBL. This paper intends to narrow the gap by sharing the findings of a series of structured one-on-one interviews with 25 first year students from an elite science programme at a top university in Singapore.

These students were divided into 5 teams and taught using TBL for their first semester Mathematics and Chemistry courses. In both courses, they work together with their teammates over at least eight TBL sessions spanning almost three months to respond to a series of questions and problems as a team.

At the end of the semester, the students were interviewed about their interest and confidence level in the courses; how they feel about learning through discussions; their team decision making process; their roles within the teams and how these aspects had evolved over time.

Analysis of the interview transcripts suggests that few students identified changes with their team decision-making process over time. They also tended to stick to the same team role and saw little need to change the way their teams were working together. This is somewhat surprising as there were different decision-making strategies across the teams. It appears that when students are satisfied with their learning or scores, they are not concerned about their team processes. Finally, while students predominantly felt that discussion helped them learn, the degree to which it was helpful appears to be more related to their team composition, the question format and the extent to which they felt they are able to participate rather than the subject matter.

Implications, limitations and future qualitative research on developing a culture of peer learning within TBL and other similar approaches shall be discussed.

Teaching Academies in Research Universities: How Are Learning Cultures and SoTL Strengthened?

Åsa Lindberg-Sand, Johan Geertsema, Maria Larsson

In this presentation we investigate the development of teaching academies (TAs) in research-intensive universities. We consider variations in the approach to TAs in a group of thirteen research-intensive universities, focusing on TAs in the six that have set up one of their own. We seek to understand how these TAs may underpin the development of learning cultures through SoTL. Our project is part of a larger endeavour in a global network of research-intensive universities to understand how teaching and learning are strengthened at these institutions.

To obtain an overview of existing TAs, a questionnaire was issued via email to the centres for academic development at thirteen research-intensive universities. The questionnaire consisted of open-ended questions relating to the motivations for establishing/not establishing a TA, their funding source, selection criteria, and expectations. A deeper analysis from a social-cultural perspective (Wenger, 1998) of two of the academies presented earlier (Geertsema et al, 2017) showed that neither of them could be described as a community of practice. However, both supported the teaching aspect of the academic identity at each university, though in very different ways.

The aim of this presentation is to describe the variation covered under the umbrella of “teaching academy”, and to specify different approaches to strengthen learning cultures through SOTL. Our
results show that most of the research universities took such initiatives, but not all of them labelled their approaches as a TA. The initiatives covered by the label displayed different meanings of “academy”, and moreover constituted a broad array of activities. At a policy level, the choice of the label “teaching academy” for very different activities, shows the intention both to prioritize and increase the visibility of the complex efforts needed to support the further development of teaching in research-intensive environments, where learning cultures include both teaching and research.

Teaching academies (TAs) started to develop a couple of decades before the birth of the SoTL movement (Chism et al. 1996, Shulman 2004). Centers for academic development may be engaged in the development of any of these activities at research-intensive universities.

We hope that our presentation will promote: 1) a richer perception of the concept of “teaching academy” in relation to SoTL, and 2) an informed analysis of the relationships between TAs, SoTL and centers of academic development, in the efforts to further develop learning cultures at research-intensive universities.

**Sustaining a Culture of Learners: A Framework for Educational Developers**

*Deandra Little, David Green*

The role of educational developers has been described as “helping colleges and universities function effectively as teaching and learning communities” (Felten, Kalish, Pingree, & Plank, 2007, p. 93) – a task that requires developers to navigate often difficult situations and issues that may be played out at various levels, from the global to the personal. Yet how exactly do we facilitate those conversations on our campuses to contribute to and sustain the culture of learners and of SoTL scholars we all seek in our institutions? A potential answer lies in a range of factors that the literature has yet to coalesce into a usable framework for educational developers themselves – whether as newcomers to the field, or as more seasoned developers facing new challenges and opportunities.

A framework of this sort matters to educational developers because our task is fraught with tensions. Many new developers, like new SoTL scholars, doubt themselves as they find that the “identity scripts” they learned in their prior fields no longer apply in their new interdisciplinary space (Simmons et al., 2013). They also run the risk of coming across as educational evangelists in a way that is experienced as paternalistic and condescending by academics who may be simultaneously teaching novices and research experts in their fields (e.g. Manathunga, 2007).

The framework is predicated on recognizing that “learning is at the center of faculty work” and that all academics are “expected to be master learners” (O’Meara et al., 2008, p. 26), as well as experts, if we espouse a “narrative of growth” rather than one of constraint (O’Meara et al, 2008, p. 19). Taking a “learner-centered” approach to supporting academics (Hutchings, Huber & Ciccone, 2011 p. 64-65) means building trust and sharing expertise in order to enhance a broader teaching and learning community, as well as applying knowledge about learning to work with academics who may be exploring new ideas or methods in their teaching and SoTL projects.

In this session, we share a framework for creating a culture of learners through dialogue between educational developers and academics, drawing on research from information studies (Hilliglos & Rieh, 2008), ethics (Cohen & Dienhart, 2013), and higher education (Whitchurch, 2013). Since developers typically convey “second-hand knowledge” to academics, the framework presents factors that we may wish to authentically emphasize or understate in a given context to support learning and conversation.
Reflecting upon What It Means to Develop a Blended Course: Teachers Describing Their Experiences

Marita Ljungqvist

Today, the use of digital tools and platforms for distribution of study material or facilitation of teaching and learning activities is a more or less taken-for-granted feature of university education. In particular so called “blended” course formats have become more and more prevalent. So far, however, few studies can present unambiguous evidence that there is a cause-effect relationship between the use of digital tools and enhanced learning (Munro, 2017; Selwyn, 2011). Still, in a number of Swedish universities’ policies, guidelines and internal reports on e-learning strategies the use of digital technology in higher education is described as being able to “encourage new ways of understanding and developing learning” (Umeå universitet, 2016), “increase learning, the attainment of outcomes and retention” (Karlstad universitet, 2015) and “facilitate learning” (Kungliga Tekniska högskolan (KTH), 2013) or “development of learning” (Lunds universitetets utbildningsnämnd, 2015). Verb phrases such as facilitate, open up/increase possibilities and free up time are commonly associated with digitalization of education in these documents. The challenges for the individual teachers of actually implementing digital technology in teaching practice are, however, rarely mentioned.

So how do academic teachers themselves reflect around designing for blended learning? What arguments do they use for changing their teaching methods? How do they describe their experiences of planning for teaching with digital tools? What are the challenges they present? What role do their own pedagogical views, their teacher identity and their discussions with peers seem to have in this process? In a small case study, data from teachers’ reflective texts and project reports in a course on blended course design directed towards teacher teams will be qualitatively analyzed and interpreted from different perspectives, including both the identification of common themes in the texts and a subsequent more critically oriented examination of the different discourses present (Alvesson & Sköldberg, 2017; Machin & Mayr, 2012).

The findings from this study might provide a basis for a comparison between on the one hand discourses that are construed by and construct actual pedagogic practice and, on the other, discourses found in policy documents and strategic plans that aim at changing pedagogic practice through digitalization of education. Looking at the teachers’ reflections from another angle, they may also help to inform our understanding of how processes involved in developing a scholarly approach to teaching and learning can be facilitated in a teacher training course where teachers discuss and critically reflect upon their practice together with peers.

The Role of Peer Mentorship in Promoting and Supporting a Culture of Learning in Graduate Education

Diane Lorenzetti, Elizabeth Oddone Paolucci, Lorelli Nowell, Michele Jacobsen, Liza Lorenzetti, Tracey Clancy, Gina Freeman

Background:
Intrinsic and extrinsic factors, including supervision, motivation, and social connectedness, can affect graduate students’ degree completion and time to graduation. Peer mentorship is an experiential learning experience that can promote the development of positive collaborative learning environments that impact on student resiliency and academic outcomes. While many studies have examined peer mentorship in undergraduate education, few have investigated the role of peer mentoring in promoting graduate student learning. The objectives of this study were to explore: 1) the extent to which peer mentorship impacts on graduate students’ social connectedness, learning
experiences, and academic goals; and 2) approaches that academic institutions can adopt to support the development of peer mentoring relationships. This study aligns with ISSOTL’s “culture of learners” conference theme.

Methods:
We adopted a mixed methods design for this study. Data were collected through Likert-style online surveys and individual interviews. Sixty-two Master’s and PhD students were recruited from four professional faculties (Education, Medicine, Nursing, and Social Work) at a large Canadian University. Purposeful maximum variation sampling techniques enabled researchers to explore common and divergent student attitudes and experiences across disciplines. Descriptive statistics were calculated for survey data. A constant comparative method of pattern identification guided the thematic analysis of interview data. Transcripts were coded in duplicate and discrepancies resolved through team consensus.

Findings:
Peer mentorship positively affected students’ developmental outcomes across academic, psychological, and social learning domains. Survey data revealed that peer mentoring reduced student isolation (92.3%), increased understanding of academic cultures, research topics, and methodologies (73.1%), improved critical feedback and other essential skills (73.1%), increased self-confidence (65.4%), and reduced academic stress (53.8%). Interview data highlighted the role of peer mentors in nurturing the development of learning environments that emphasize community, collaboration, and shared purpose. Through engaging in these reciprocal learning experiences, students increased their knowledge and skills, and were motivated to complete their degrees. Students preferred formal peer mentoring initiatives that incorporated early student matching, networking and social events, online forums, collaborative research opportunities, role clarity, mentorship training, and flexibility to meet the needs of both traditional and non-traditional (part-time or distance) learners.

Conclusions:
Graduate students derive a variety of academic and psychosocial benefits from peer mentoring relationships. While structured programs may support the development of these relationships, initiatives should be guided by stakeholder input, and incorporate a high degree of flexibility to address the varying learning needs and preferences of students.

Facilitating a Learning Culture for Both Students and Staff through Co-Creating the Curriculum

*Tanya Lubicz-Nawrocka*

Co-creation of the curriculum is one form of learning and teaching in which students and staff are engaged to work in partnership so that each has a voice and a stake in curriculum development in higher education (Bovill, 2013; Bovill & Bulley, 2011; Cook-Sather, Bovill, & Felten, 2014) and ‘work collaboratively with one another to create components of curricula and/or pedagogical approaches’ (Bovill et al., 2016, p. 196). The massification of higher education is affecting the learning and teaching experience for both students and staff (Merriam & Caffarella, 1991) with class sizes increasing and, in some cases, focusing on teaching content knowledge rather than incorporating the skills and attributes that students need to deal with supercomplexity and an unknown future (Barnett, 2004). However, co-creation of the curriculum can create bridges between traditional ‘student’ and ‘teacher’ roles both within and across disciplines by facilitating open dialogue about best practices in learning and teaching, whilst also redistributing power in the classroom and challenging the status quo so that both students and staff learn from each other (Cook-Sather et al., 2014; Lubicz-Nawrocka, 2017).
Qualitative research has been conducted about co-creation of the curriculum at five Scottish universities, including twenty interviews and five focus group discussions with both students and staff. These participants have been active in student engagement initiatives including co-creation of the curriculum, student representation, and reflection on effective engagement practices in teaching and learning. The qualitative data were analysed using aspects of constructivist grounded theory, using an inductive approach and constant comparison methods.

This paper presents findings of the benefits of co-creation of the curriculum across disciplines in Scottish universities. It explores findings of how students and staff a) facilitate an inclusive learning culture, b) gain confidence with new learning and teaching methods, c) learn from diverse perspectives to improve curricula, and d) develop both personally and professionally. The paper explores theoretical work on the development of ‘critical being’ in higher education to help individuals deal with supercomplexity (Barnett & Coate, 2004) and how co-creation of the curriculum can benefit both students and staff as they learn to deal with risk and uncertainty in learning and teaching. It concludes by discussing with the audience the implications for facilitating student and staff voice, negotiating power dynamics, and challenging the status quo in higher education.

Supporting an Inclusive Learning Culture for Returners to Teaching

Tanya Lubicz-Nawrocka, Rosa Murray

This paper will explore how the Returning to Teaching course offered by the University of Edinburgh Teacher Education Partnership (UoE TEP) represents a culture that learns and promotes an inclusive learning culture. It is essential for universities not to neglect those who – for whatever reason – have previously left the teaching profession and now seek to return (Robinson, 1992). The UoE TEP has offered a Returning to Teaching course on campus for many years. After successfully receiving funding from the Scottish Government in 2017, the UoE TEP initiated a project to develop a blended online learning Returning to Teaching course which was supported by the General Teaching Council for Scotland and Education Scotland. The course not only covers the recent changes in the Scottish curriculum but also equality, diversity and inclusive pedagogies in the classroom (Florian, 2014); learning for sustainability (Ross, Christie, Nicol, & Higgins, 2014); and the national attainment challenge (Mowat, 2017). The first three cohorts of students participated in the new blended online learning course during the 2017-18 academic year.

This paper explores the evaluation of the new blended online learning programme, drawing on participant feedback and course evaluations. Key findings show that the format and structure of the new programme encourage much more diverse participants to enrol, including Scottish individuals who have been working in other sectors or who are parents or carers returning to teaching after a career break, as well as those hoping to teach in Scotland and apply their previous teaching qualifications gained in England or farther afield in countries such as the United States, Australia, India, and the United Arab Emirates. The learning culture draws on the diverse nature of participants’ previous teaching experiences as it supports them to engage and share with peers in a vibrant culture of learners. The blended-learning structure of the part-time programme helps those hoping to return to teaching apply their varied life and work experiences and their diverse perspectives to the course as they debate what effective teaching means in Scotland today. The course team are also learners who continually learn from participants’ diverse experiences and perspectives since the UoE TEP learns and adapts to foster the development of the Returning to Teaching course. This paper will explore with the audience how higher education can draw on mature students’ diverse experiences to create a culture of learner/teacher partnerships.
How Do Digital Tools Influence Geoscience Students’ Learning Experience in the Field?

Anders Lundmark, Lars Augland, Simen Jørgensen

Fieldwork is an integral part of most higher education Earth Science curricula. Field mapping combines many of the field skills taught in various sub-disciplines such as sedimentology, structural geology, petrology etc. That is, identifying, measuring, documenting and interpreting field evidence in the rocks and in the landscape. Field mapping is therefore taught as a capstone course for the bachelor program in geology and physical geography at Oslo University, Norway. Until now, we have regarded it as a given that field skills such as measuring structures, sketching, finding geographical locations on maps, and recording data are best learnt using traditional analogue field methods, even though digital tools are becoming more and more prevalent in professional Earth Science fieldwork. In the spring of 2018 we implemented field teaching using the program Fieldmove run on Ipad pros in our capstone field mapping course. In this study we report the students’ experiences of this trial. The students were observed in the field, and answered questionnaires during and after the course. Using this data, along with the maps the students produced as part of the course, we examine how the students use their limited time in the field on different tasks as they work with or without digital tools, how they perceive the digital tools to affect their learning, the relevance of the field course and their overall experience of the field work, and the effect the digital tools had on the final products of the mapping projects.

Co-Creation of Marking Criteria: Students as Partners in Digital Assessment

Vivian Luth-Hanssen, Arild Raabeim, Elsebeth K. Sorensen, Kari Olstad

The paper adheres to the conference theme “A culture for learning.” We present a model of digital assessment in fully online study programs at Vestfold Higher Vocational College (VHVC). The goal is to design online electro programs that are in alignment with White paper 16, 2016-2017 “Quality Culture in Higher Education”. Our long-term goal is to contribute to a culture of quality in assessment in vocational colleges in Norway. These students are motivated adults with a professional certificate, who work full time, have a family life and study part time. They expect a flexible education, which strengthens them in their daily work. They participate in discussions of assessment criteria before each assignment, which then is subject to formative assessment from both peers and teacher. While writing they are supported by an automatic feedback function. They collect their work in an e-portfolio, which is finally subject to summative assessment (Meer & Chapman, 2015). The model makes use of student active learning, such as student blog, learning groups and peer assessment, thus promoting self-regulated learning (Steiner, 2016; Hyun, Ediger & Lee, 2017). It includes use of learning analytics to boost the students and provide data for quality improvement for teacher and school leaders. Changing the way we assess students will also have consequences for the way we organize our studies. According to Baillie, Bowden & Meyer (2013) we need to move from a content focused towards a capability focused curriculum in order for students to develop a critically, problem solving ability (knowledge capability). One strategy is to involve students in authentic tasks and to let them assess themselves in addition to being assessed by others. Such learning oriented assessment is at the core of what has been referred to as sustainable assessment in some recent studies (Beck, Skinner & Schwabrow, 2013; Adesemowo, Oyedele, & Oyedele, 2017). Creating a culture for learning requires an active involvement, and informed actions, of both students, teachers, institutional leaders and external partners (Felton, 2015). It also requires that experiences and results be communicated to a wider audience. Quality in learning is both a collaborative and personal endeavor where dialogue, reflection, negotiation of meaning, and collaborative knowledge building are important aspects (Wenger, 1998; Sorensen, & Murchu (2006). So far, the model has been tested at
VHVC, and we present some preliminary findings based on feedback from students, teachers and other stakeholders.

**Exploring Student Reading of Documentary & Fiction Films**

*Elizabeth Marquis*

Research suggests that film and other kinds of popular culture are used frequently to support learning in courses across disciplines (e.g., Andrist et al., 2014; Peacock et al., 2016). Indeed, scholars have argued that film and video can be drawn on to support a wide variety of pedagogical goals, from increasing student motivation and engagement (Swimelar, 2013) to promoting the development of empathy (Happel-Parkins & Esposito, 2015), professional skills (Lumlertgul et al., 2009), and/or deep approaches to learning (Olson et al., 2016). In spite of this burgeoning literature, many questions about the pedagogical potential of film remain unanswered. Perhaps most fundamentally, little research has considered what Hutchings (2000) might call the ‘what is’ questions about student learning with and from film texts; because existing scholarship has focused largely on disseminating approaches to using film for teaching and learning and/or assessing the impact of such approaches, we lack a basic understanding of what students do when they encounter films in academic contexts. The present research thus sought to investigate how students approach and experience the process of viewing films in the classroom. In particular, it considered the elements of films students do (and do not) attend to while viewing, how they make sense of and respond to these factors, and whether they approach documentary and fictional texts differently.

To explore these questions, we invited students from an interdisciplinary program at a Canadian university to participate in individual think aloud and interview sessions. In these sessions, participants watched brief clips from a documentary and a fiction film of relevance to a mandatory course they had taken on global challenges (in which film is used extensively), and were asked to voice their thoughts, observations, and questions as they watched—a modification of the think aloud technique that has been used by SoTL scholars to access students’ thinking as they read written texts (e.g., Bloch-Schulman, 2016). This presentation will share preliminary findings from the study, considering in particular the trends in students’ approaches to reading film and the implications of these findings for instructors using film in courses across disciplines. Attendees will thus be engaged in consideration and discussion of ideas of relevance to the ‘culture for learning’ conference thread, exploring how SoTL projects that attend to students’ interactions with texts can offer insight into student thinking which, in turn, might inform increasingly effective pedagogical practice.

**Identity, Social Location, and Staff Experiences of Pedagogical Partnership**

*Elizabeth Marquis, Rachel Guittman, Cherie Woolmer, Elaina Nguyen*

Student-faculty pedagogical partnerships have been recognized for their potential to contribute to the development of inclusive learning cultures in higher education. Partnership is predicated on, and grounded in, values of respect, responsibility, and reciprocity (Cook-Sather et al., 2014; Healey et al., 2014) and aims to engage students and faculty/staff in processes of ‘radical collegiality’ (Fielding, 1999). As such, it offers spaces in which faculty and students can occupy non-traditional roles and work in more equitable ways. Scholars have also noted that partnership holds particular promise for combating injustices faced by members of marginalized groups on university campuses, demonstrating how it can contribute to the development of more culturally responsive classrooms and/or recognize the knowledge of students from equity-seeking groups (Cook-Sather & Agu, 2013; deBie et al., forthcoming). Given these possibilities, many have suggested that partnership has the
potential to transform universities into more democratic, egalitarian learning communities (Cook-Sather & Luz, 2015; Matthews et al., 2018).

In spite of this potential, some have worried that many partnership opportunities are themselves rather exclusive (Felten et al., 2013; Moore-Cherry et al, 2016). Moreover, much research exploring the radical possibilities of partnership has focused substantially on student experiences, and/or on destabilizing hierarchies that exist between students and staff. Though clearly important, this focus overlooks the fact that different faculty/staff members have different experiences in the academy, and many of these people themselves navigate discrimination, injustice, and precarity (Pittman, 2010; Martinez et al., 2017). Without attending to the diverse experiences of differently-located faculty, then, partnership scholars risk reifying homogenized understandings of faculty/staff experience and overlooking ways in which partnership might reproduce or intersect with marginalizing and oppressive practices even as it counters oppression on other levels.

This session will present preliminary findings from a study that contributes to addressing this gap in the literature. Drawing on a survey of, and follow up interviews with, faculty/staff at institutions with pedagogical partnership schemes, the project explores how faculty occupying different social locations perceive the call to engage in pedagogical partnerships, interpreting these findings through the theoretical lens of intersectionality (Collins & Bilge, 2016). We pay particular attention to the extent to which participants view partnership as contributing to (and/or detractions from) efforts to make campuses more equitable, thus offering further insight into this growing area of partnership scholarship and generating discussion of relevance to the ‘inclusive learning culture’ conference thread.

Teaching at the Intersections: Identity, Social Location, & the Experiences of Teaching Assistants

Elizabeth Marquis, Alan Santinile Martino, Tianna Follwell

Teaching Assistants (TAs) play a significant role within undergraduate education in many international contexts. As such, numerous initiatives have been developed to support TAs in their development as instructors (e.g., Lekhi & Nussbaum, 2015; Meadows et al., 2015). Research examining such initiatives has generated important insights into TA development, demonstrating, for example, how particular programs enhance participants’ motivation for teaching and sense of self-efficacy as educators (Gunersel et al., 2016; Troop et al., 2015). Nevertheless, compelling gaps in the literature remain.

Most notably, comparatively little research has examined the concrete experiences of TAs as they teach, considering factors such as their interactions with students, the experiences they draw on to inform their decision-making, and the affective components of these processes (Marquis et al., forthcoming). Even less attention has been paid to how identity and social location shape the teaching experiences of TAs, even though research demonstrates that such factors influence the experiences of instructors (Davis et al., 2015; Martinez et al., 2017). Factors like race/ethnicity, gender, dis/ability, and sexuality have been shown to substantially impact both faculty and student experiences on university campuses, and yet — with few exceptions (e.g., Waring & Dipon Bordoloi, 2013; Cortes Santiago et al., 2017) — little research has explored these issues in relation to the teaching experiences of TAs. In line with the conference thread focused on inclusive learning cultures, this session will present the results of exploratory research aimed at filling this gap.

Drawing on semi-structured interviews with current and recent TAs at one Canadian university, we will share findings that speak to how social location affects TAs’ interactions with students, the networks and resources they draw on, and their emotional experiences as educators. In line with the tenets of critical race theory (Yosso et al., 2004), we foreground the experiences of TAs who identify
as members of one or more equity-seeking groups; however, to avoid reproducing dominant social locations (e.g., whiteness, heterosexuality) as unquestioned norms, we also include the perspectives of participants who occupy more privileged social locations. Interpreting the experiences of our participants through the theoretical lens of intersectionality (Collins & Bilge, 2016), we will offer preliminary evidence underlining the need to consider TA identity/ies when developing initiatives to support or study TA development, and will encourage attendees to consider the applicability of our findings in their own cases and contexts.

**SoTL in the Polytechnic Sector, Part 2: Creating a Culture That Is Realistic and Sustainable**

*Heidi Marsh, Eileen De Courcy*

Even with strong institutional infrastructure and support in place, developing, supporting, and sustaining faculty engagement with SoTL can be challenging. This is, perhaps, most evident within the community college and polytechnic sector, given the teaching schedules and varied levels of research experience among faculty (Morest, 2015). In this session, we will describe a recently piloted SoTL development framework, adapted from models in the university sector (e.g., Hamilton, 2014; Hum et al., 2015) to align with the affordances and limitations of a polytechnic context.

Our framework includes initiatives to support the most commonly cited components of scholarly teaching (consumption of the SoTL literature and integration into practice, Trigwell et al., 2000), and SoTL: a) systematic investigation of teaching and learning, and b) subsequent dissemination of the findings (Potter & Kustra, 2011; Trigwell et al., 2000). We will trace the implementation of this framework through Hamilton’s (2014) three SoTL support typologies: Developing institutional expertise, supporting research in action, and sustaining collective engagement.

Throughout, one theme will be apparent: the need to foster a SoTL culture that fits the realities of the institution, so that faculty members can find – and make – time for scholarship. We will share innovative solutions we have developed or adapted, in order to make scholarship a possibility for faculty. These include our developmental funding model, scholarly cafes and clubs, writing retreats, podcasts, and 'micro-publications' in our scholarly teaching and learning journal.

For each, we will provide qualitative and quantitative markers of success (and lack thereof), based on survey data, relevant metrics, and faculty reflections collected over the past three years since the framework was implemented. We will also share lessons learned, changes made, and aspirational next steps, such as a scholarly mentorship network. These will serve as a launching point for discussion about the ways in which educational developers and institutions can support scholarly cultures that are realistic and sustainable in today's college and polytechnic context.

**Doing ‘Students as Partners’ Is Not Enough: The Role of Theory in our Partnership Practices**

*Kelly Matthews*

Engaging university students as partners (SaP) in learning and teaching is gaining momentum across the higher education sector (Matthews, Cook-Sather, & Healey, 2018) and is considered good practice in SoTL (Felten, 2013). While contested, SaP creates space for us to imagine students and staff (includes academics/faculty and administrative staff) working together in egalitarian learning communities to realise the goals of higher education contributing to a more caring and just world (Cook-Sather & Felten, 2017; Kreber, 2013; Matthews et al, 2018). As enthusiasm grows along with concerns, there are increasing calls for theory to guide SaP practices (Peters, 2016; Seale, Gibson,
A recent student-staff collaborative project researched the theories evoked in SaP scholarship (Matthews, Cook-Sather, Acai, Dvorakova, Felten, Marquis, & Mercer-Mapstone, in press). Elaborating on that research and the growing literature on SaP, I ponder ‘a theory of SaP’ by drawing on Hammersley’s (2012) classifications on the meaning of theory and expanding Trowler’s (2012) notion of theory ‘in the imaginarius’. Ultimately, I argue that SaP should be considered a theory in relation to practice—theory that is comprised of principles and values to guide the relational praxis of partnership that is always shaped by power dynamics, and with historical commitments to social justice and democratic ideals. Thinking about SaP as a theory of partnership praxis offers greater agency for practitioners and advocates that moves us collectively toward genuine praxis — practice and reflection in constant dialogue that transforms the realities of those involved (Freire, 1996) — where students and staff work together for a more just and caring world. If you are working in partnership, researching SaP, or interested in the literature, come along and join the conversation to further our practices and deepen our thinking about learning and teaching partnership.

Universal Design for Learning: A Catalyst for Embedding an Inclusive Learning Culture

*Marian McCarthy, Brian Butler*

Universal Design for Learning (UDL) draws on neuroscience findings (Meyer and Rose, 2000) and provides a roadmap for inclusive pedagogy which provides clear signposts for embedding an inclusive learning culture in higher education. UDL can be a powerful SoTL lever since it makes clear how faculty can prioritise student learning and what evidence counts to show students’ engagement in their learning.

At our university we provide a suite of accredited programmes for faculty in teaching and learning in higher education. A key aspect of each course is the prioritisation of an inclusive curriculum that celebrates diversity. We embed UDL principles by aligning them with a SoTL philosophy of making teaching and learning visible. We focus on the following types of questions:

- How can we engage all students in their learning?
- What does an inclusive curriculum look like?
- What counts as evidence in developing student engagement, performance and understanding?
- How can we embed an inclusive learning culture at our institution?

UDL draws on the evidence provided by the brain’s neural networks to guide our pedagogical decisions: We need to acknowledge the role of the Recognition Networks (the ‘what’ of learning); the Strategic Networks (the ‘how’ of learning); and the Affective Networks (the ‘why’ of learning) if we are to embrace diversity and maximise student learning opportunities. UDL deduces three pedagogical principles based on the evidence of these neural networks that will help faculty to include all learners and harness learning opportunity and performance. As faculty we need to answer the UDL call and to design curricula with the following student-centred principles in mind:

- Provide multiple means of Representation (the ‘what’ of learning) so that we can encourage purposeful and resourceful learners;
- Provide multiple means of Action and Expression (the ‘how’ of learning) so that we encourage strategic, goal-directed learners;
- Provide multiple means of Engagement (the ‘why’ of learning) so that we develop purposeful, motivated learners.

Such a journey provides a SoTL pathway where faculty can critique and peer review their practice and assessment approaches for the benefit of student learning. This paper will chart the case studies of a number of faculty from a variety of disciplines to show how we have developed an inclusive curriculum and its implications for teaching, learning and assessment. Our findings indicate that UDL begets good curriculum design and advances innovative assessment and student learning and performance.

**Enablers and Barriers to Developing a Culture for and of Learning**

*Cathryn McCormack, Thi Kim Anh Dang, Angela Carbone*

This paper presents findings from the lead author’s PhD research, an investigation into how academics learn effective teaching, that relate to the impact of the workplace culture on their own learning. In line with Roxå & Mårtensson, culture refers to the everyday practices that develop habits and traditions, that will, over time, influence them towards certain behaviours. This ethnographic study focussed on nine academics, five from the sciences and four from health, at a regional Australian university. Data was collected over 18 months through multiple interviews and observation of a teaching instance with the academics, observing meetings at the School and institutional level, reviewing institutional policies, and interviewing Heads of School and learning leaders. A grounded theory approach was taken to data analysis.

The nine academics (levels A to D with between 8 and 35 years’ teaching experience) shared an intrinsic enjoyment of teaching, a commitment to student learning, and an approach that matched Åkerlind’s highest category of growing and developing as a university teacher. Their largely experiential learning of teaching was enriched with formal and informal learning from workshops or discussion groups organised by the school or university, discussions with colleagues, and to a lesser extent informal mentoring, reading about teaching, or participating in teaching-related conferences.

Workplace related factors reported included poor recognition of good teaching, unsupportive administrative processes such as timetabling and tutor hiring that impeded teaching initiatives, and quality assurance processes that could limit innovation by heightening fear of failure. Some of the academics viewed these impediments as a challenge that could be overcome with time, acting as Bereiter and Scardamalia’s ‘heroic’ teachers. These academics shared high levels of self-belief, self-efficacy in teaching, and connection with disciplinary experts. The less confident academics felt more constrained in their approach to teaching and reported a stronger impact on their development as teachers from support provided by their peers. Of these academics, the largest learning gains reported resulted from a change to practice, such as that required by a program restructure. Based on these findings we believe that building a culture for and of learning needs to incorporate strong recognition of good teaching practice, programs centred on changing practice, and promoting and enabling discussion of teaching practice.

**Engineering a New Culture: Initiatives to Advance Student and Faculty Engagement**

*Molly McVey, Caroline Bennett*

For many years, teaching and learning climates have evolved primarily through faculty- and administration-driven efforts. More recently, a model of engaging students as partners in all aspects
of higher education has emerged, with great potential to transform higher education (Healey, Flint et al., 2016). This idea is not a familiar one at our institution, but leadership in the School of Engineering has been working to change the culture of teaching towards evidence-based practices. This presentation describes the impact of two student-driven initiatives that have introduced the idea of student partnerships to our faculty and leadership.

The first initiative is our Undergraduate Teaching Fellows (UGTF) program, modeled after Peer Led Team Learning (Gafney and Varma-Nelson, 2007) and Learning Assistant programs (Otero, Pollack, et al., 2010). The program involves undergraduates as peer mentors in active learning courses. This program supports the adoption of active learning pedagogies and helps faculty incorporate the mentors as part of the instructional team.

The second initiative is our “Tiered Mentoring Project.” Given the broad positive impact of the UGTF program, and the body of research on benefits of mentoring, we aimed to engage more undergraduates in mentoring activities, particularly those who may not be eligible for UGTF roles. All students in two course sequences engaged in a mentoring activity for the pre-requisite course. Mentoring activities included acting as consultants on course projects and creating videos on important course concepts or student success topics. This approach is notable because it expanded some of the benefits of mentoring to a wider body of students.

We use the Classroom Observation Protocol for Undergraduate STEM to understand how the UGTF initiative has changed the utilization of class time, and we examine the number of students involved in peer mentoring over time. We use faculty and student feedback to understand the qualitative impact of these initiatives and examine the impact of these initiatives on student learning in key courses.

This work is aimed at establishing A Culture for Learning by developing sustainable changes in the culture of teaching in the School. Additionally, this work speaks to developing A Culture of Learners, wherein the frameworks are aimed at supporting students by developing them to be “expert learners” as they participate in the UGTF and Tiered Mentoring programs. Session participants will discuss ways to leverage the existing programs to encourage a partnership mindset, and ideas for growth and sustainability of the initiatives.

**Using the Threshold Concept Framework to Explore Student Learning by PBL in Two UK Medical Schools**

Sarah Meek, Kerry Gilbert, Hilary Neve

Problem-based learning (PBL) is resource-intensive, but promotes skills like uncertainty tolerance, and knowledge application. During curriculum review at two UK Medical Schools, we explored Year 1 medical undergraduates’ learning in PBL.

Threshold Concepts (TCs) are widely-studied across disciplines, less so in Medicine. TCs are integrative, irreversible, and troublesome. They differ from ‘core concepts’ in being crucial for subject mastery, and transformative (“change in knowing, doing, being, and future learning”). Without them, students can get stuck in a ‘liminal’ state of oscillating or incomplete understanding, experiencing uncertainty and discomfort, mimicking understanding.

PBL may enable students to learn Troublesome Knowledge (TK) and TCs, in several ways. PBL itself may constitute a ‘Threshold Capability’. We therefore explored PBL learning in relation to the TC and TK models, and asked what promotes or hinders learning. We compared results between two
Schools, to identify commonalities, and explore differences that may arise from variations how PBL is enacted.

Students recorded instances during PBL that meet criteria based on the TC definition (e.g. struggles, frustration, coming together, seeing things differently, aha moments) To avoid bias, TCs were not mentioned. Tutors also recorded any such instances. ‘Straight-after-the-moment’ audio-diaries minimised hindsight bias. Data analysis focused on the TC Framework, but allowed for emergent coding categories and alternative theories. A priori codes included each TC criterion, enablers and barriers to learning; emergent codes included aspects of PBL and subject areas. Codes and themes were compared between Schools.

At both sites, students identified learning instances that involved characteristics of TCs and/or TKs, at multiple stages of PBL. Both content knowledge and PBL skills were identified. Tutor accounts provided confirmation and additional insights. However, the number of areas identified and extent to which they met the TC definition, differed between Schools.

This paper is presented in two parts. First, an interactive presentation demonstrates how to identify Troublesome and Threshold learning areas. Second, we describe the learning areas we identified; and discuss the implications for SoTL in three areas: Medical Education, Threshold Concepts, and PBL.

We give evidence of how PBL can help students learn troublesome and threshold concepts, and of methods can enable and hinder this; and discuss methodological limitations of our study. We consider the role of PBL in undergraduate medical curricula at both Schools, and beyond. Finally, we demonstrate the utility and limitations of the TC framework, adding to critical debate about the definition and identification of TCs.

Reconceptualizing Faculty Development in Community Engagement: SoTL-Informed Strategies

Cara Meixner, Becca Berkey, Patrick Green

A distinctive, inclusive pedagogy with roots in the SoTL and Scholarship of Engagement (SOE) literatures, service-learning and community engagement (S-LCE) has been seminally described by Bringle and Hatcher (1995) as “a course-based, credit bearing educational experience in which students (1) participate in an organized service activity that meets identified community needs, and (b) reflect...to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (p. 112). Numerous studies document student gains, with research focusing on why service-learning works (e.g., Ehrlich, 1995; Giles & Eyler, 1994; Harkavy, 1992; Morse, 1989), how S-LCE can be implemented (e.g., Bringle & Hatcher, 1996), and what students gain (e.g., Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Markus, Howard, & King, 1993; Myers-Lipton, 1998).

For both faculty and students, Meixner (2013) observed S-LCE as “the confluence zone between engagement and teaching” (p. 320); Howard (1998) famously contended that S-LCE “clearly ‘raises the pedagogical bar’” (p. 23) for all learners, faculty included. Indeed, S-LCE enriches, enlivens, and invigorates both the culture of learning and the learning culture. Despite recent contributions to the literature (e.g., Darby & Knight-McKenna, 2016; Harrison, Clayton, & Tilley-Lubbs, 2014; Meixner, 2013; O’Meara & Niehaus, 2009), comparatively little has been known about the faculty experience of S-LCE and, critically, how the field of educational development can foster and advance research-informed practices that serve broader social justice aims.

The authors’ newly released volume (Stylus, 2018) seizes this gap, drawing from a diverse pool of authors to (1) situate educational development in S-LCE within both higher education and community-based contexts, and (2) provide readers with an array of SoTL-rich examples and models,
as well as realistic strategies, to evolve their own educational development efforts, foster further scholarship on teaching and learning, and champion inclusive cultures of learning across academe.

The overarching goal of this paper session is for participants to consider their own work in the context of best practices, emerging with ideas, resources, and support structures that advance research-informed S-LCE and faculty development on their campuses. Specifically, the authors will discuss genres, models, and case studies, all drawn from various chapters in the edited volume. Participants will also be invited to consider methods of advancing SoTL inquiries into S-LCE and more broadly, the field of educational development.

A Learning Culture through Learning Culture: Campus-Wide Outcomes of Participating in Study Abroad

Erin Mikulec, Katie Jasper, Lea Cline

Participating in a study abroad program can be a transformative experience for students as they explore new cultures and ways of life. There is considerable research that indicates numerous benefits of participation in study abroad programs, such as the development of interpersonal and intrapersonal skills, mental flexibility, tolerance of ambiguity, and skill sets that contribute to career readiness to function in an increasingly global society (Braskamp, Braskamp, & Merrill, 2009; Cai & Sankaran, 2015; Costello, 2015; Salyers, Carston, Dean, & London, 2015). Another outcome of studying abroad is an increase in intercultural competence. Deardorff (2015) defines intercultural competence as “communication and behavior that are both effective and appropriate cultural interactions” (p.218). Intercultural competence is considered a requisite skill in the 21st-century global workforce, and therefore many universities have developed initiatives to increase the number of students who participate in education abroad programs. However, to date there has been no study that describes the changes that take places amongst students from one such university and how this contributes to the development of a learning culture. This session presents the findings of a campus-wide research project on the learning outcomes of undergraduates participating in study abroad programs.

Walls (2016) presents a theoretical framework for SoTL that lends itself well to a study on education abroad. This framework, based on ecological theory, is comprised of four dimensions: process, person, context, and time. These processes can be applied to study abroad in terms of student experiences while abroad, the motivation for studying abroad, the context in which the program took place, and the learning that takes place over time.

In the first phase of the study, 1,500 students who had participated in a study abroad program in the last two years were invited to complete and online survey about their experience. 150 students completed the survey, and 23 participated in focus group sessions to delve deeper into their experiences and their perceived learning outcomes as a result. The data were analyzed using the constant comparative method (Glaser & Strauss, 1967) to identify common themes. Results indicate that participants had increased levels of confidence, autonomy, and self-efficacy, the ability to connect with others, and identify aspects of U.S. culture. The researchers conclude that the education abroad experience influenced both the personal and professional development of the participants and will make several recommendations for how this work might be carried out on other campuses.
Publishing or Perishing? Contemplating the Purpose and Role of In-House Higher Education Journals

Virendra Mistry

The compulsion to publish and to engage in scholarly communication is a ritualised process. Drawing on Hagstrom’s (1965) anthropological perspective, Chandler (1995) advised that publishing is primarily a gift exchange system rather than a contractual or bartering one, where the “gift of papers” is reciprocated with the “gift of recognition” (p. 212). In addition to achieving recognition of teaching practice or research, as scholars we publish to stake a claim on an idea or discovery, or use publication as a means of shifting/reinforcing the focus of SoTL. At a personal level, writing and publication is a form of ‘academic rite of passage’ since, as argued by Wisker (2013), “acceptance into the published community signifies and enables wider acceptance into the communities of those who create, articulate and share knowledge” (p. 345).

This paper will provide an update to an investigation that examined the scale and state of institutional higher education (IHE) journals. IHE journals are ‘in-house’ pedagogic/higher education research publications, comprising an editorial board and reviewers from that institution. Using the UK as the focus of study, Mistry (2017) found that about 25 open access versions of these journals were produced this decade. Some of the journals are long-standing ones, such as Manchester Metropolitan University’s ‘Learning and Teaching in Action’ (established 2002), while others are just emerging, for example ‘IMPact: University of Lincoln Journal of Higher Education Research’ (2018). IHE journals occupy a distinct space in the continuum of SoTL scholarly communications. They are not aiming to compete with other pedagogic or higher education research journals but, as observed, many have been fashioned to support the development of staff and students. The potential value of the IHE journal can be understood when illuminated against Nygaard’s (2017) academic literacies perspective: academics’ affiliation to more than one community (e.g. subject/discipline affiliation versus a teaching one) may bring to the surface conflicting expectations, as writing about teaching practice will sometimes require different scholarly conventions to those required in other academic disciplines.

This session will question how IHE journals might be deployed to embed a ‘culture that learns’. Reflecting on, and then moving on from the perspective of the individual, how might the journal be repurposed in institutional terms, or facilitate SoTL to ‘go meta’ (Hutchings & Shulman, 1999)? Might IHE journals be the connective tissue that bridges the chasm between individual research and institutional decision-making?

Beyond the Pitch: Innovative Approaches to Entrepreneurial Learning

Cheryl Mitchell

In Canada, higher education institutions have become more engaged in entrepreneurial activities, as evidenced by the number of courses and programs available. Among the province of Ontario’s 24 publicly supported colleges, 174 entrepreneurship education courses have been identified. Of these, 163 were program requirements, while 11 were optional (Sa, Kretz, Sigurjonsdottir, 2014). According to a survey conducted by Industry Canada, Canadian higher education institutions are increasingly providing the necessary support and facilities for students who are interested in entrepreneurship (Parsley, 2010).

Entrepreneurial learning occurs “when entrepreneurs learn from experience and accumulate newly formed knowledge (Kolb, 1984). It consists of two elements: prior knowledge and the processes people employ to acquire, assimilate, and organize new knowledge (Holcomb, Ireland, Holmes, &
Hitt, 2009). This session will provide a portrait of a SoTL project that investigated entrepreneurial education and the engagement of entrepreneurial activities throughout a semester of experiential learning activities. The research focused on piloting less traditional entrepreneurial pedagogical strategies in a post-graduate Entrepreneurial Enterprise program at a large Ontario College.

The participants within the study had an opportunity to engage in six experiential entrepreneurial activities to teach, reinforce and provide experiences that support entrepreneurial learning. The activities included creating a lean canvas model, conducting a focus group, delivering a pitch, developing a funding campaign, creating a pop-up shop, and producing a business plan. Student engagement for each activity was captured through a pre-survey, post-survey, and students’ written reflections for each of the activities. This session will present feedback over a two-year period with two different groups of students. The findings suggest that the three most engaging activities identified by students included the completion of a focus group, a lean canvas model, and a business plan. In addition to the engagement levels, students also identified a number of skills, knowledge gained and lessons learned throughout the semester. The findings from this research not only identify the learning activities that best engage entrepreneurial students, they highlight recommendations for changes to the educational curriculum and culture for learning to better support potential entrepreneurs and further foster the development in entrepreneurial education.

Towards a Professional Development Framework for Leaders of Degree Programmes

Susan Morón-García, Petia Petrova, Elizabeth Staddon

This study investigates the experiences and development of a key academic role: the course leader (CL). By this we mean academics who are responsible for running whole degree programmes; our focus is undergraduate level.

The limited number of studies to date (Clark et al, 2011; Krause et al, 2010; Murphy and Curtis, 2013) emphasize the complexities of the course leader (CL) role, particularly in terms of workload and agency. CLs themselves report, with some consistency, that they were unaware of the remit when they took up post, that their role lacks clarity, status and authority to effect change, and that there are inequalities between workloads even within the same institution. The administrative burdens of the job tend to overshadow the academic leadership aspect of the role, on which there is very little specific research (Milburn, 2010). It is recognised by many universities that they make a pivotal contribution in running degree programmes and therefore influencing the ‘student experience’. There is a sector wide desire to review and develop the role (Murphy and Curtis, 2013).

Our study

- Investigates how course leader (CL) roles are allocated and defined by higher education institutions (HEIs);
- Explores the professional development needs of course leaders; and
- Proposes a professional development framework for CLs.

Following recommendations made by McAlpine and Amundsen (2015), we combine a variety of methods longitudinally to capture a range of course leader experiences. A pilot study highlighted course leader desire for support and our conceptual framework, based on Winch’s (2015) framework for professional curriculum design, is in development.

Four data collection points, across three different types of HEIs in the UK, are:

1. Scrutiny of existing course leader job descriptions;
2. Group interviews mapping out the CL role as experienced and understood by CLs;
3. Narrative accounts of role-related activities (online diaries collected monthly from CLs). We will provide focused questions to guide participants;
4. Second round of group interviews reflecting on and seeking comments on the key findings with respect to developmental and support needs.

We will:

- Set the scene: identifying this as an area of need and brief overview of pilot study outcomes and tools used to investigate their experiences of course leadership;
- Explain the conceptual framework used – why and how, relationship to other professional development theories (e.g. Eraut 1994, Scôn 1983, 1991);
- Discuss emerging findings.

**University Teachers’ Conceptions of Scientific Thinking in Relation to Teaching and Learning**

*Mari Murtonen, Heidi Salmento, Henna Vilppu*

Learning the scientific way of thinking and understanding the nature of scientific knowledge are among the main aims of university education. It is known, however, that these skills are not easy for students to learn. For example the concepts used in scientific research have found to be problematic for students (Author 2015) and understanding the concept of theory has shown to be difficult even for postgraduate students (Kiley, 2015). According to previous research pedagogical training has an impact on teachers’ conceptions of teaching (Postareff, Lindblom-Yläne & Nevgi, 2008) and teachers’ conceptions of teaching are further connected to their reported teaching practices (Gibbs & Coffey, 2004; Prosser & Trigwell, 2014). The aim of the current study was to examine what kind of conceptions university teachers and doctoral students have about the development of scientific thinking of university students and how these conceptions are connected to other conceptions of teaching and learning. The data (N = 76) was collected during online university pedagogy courses organized for university teachers and doctoral candidates. The participants answered a questionnaire consisting of background information and questions about conceptions of teaching and learning and the development of students’ scientific thinking.

The analyses revealed many interesting connections between teachers’ conceptions of teaching and learning and the development of students’ scientific thinking. For example, the way teachers see the role of preconceptions in learning is connected to their conceptions of students epistemological beliefs (r=0.68, p=0.00) and the way they activate students (r=0.39, p=0.00). Teachers’ conceptions of activating students were connected also to student-focused approach to teaching (r=0.68, p=0.00). According to the findings research skills are connected to epistemological beliefs (r=0.30, p=0.09), the role of preconceptions in learning (r=0.28, p=0.16) and the way they activate students (r=0.30, p=0.09). Teachers also saw research skills as a part of scientific thinking regardless of their conceptions about approach to teaching.

**Working with Public Health Students to Generate Meaningful, Living Curricula on Health Inequalities**

*Allyson Mutch, Lisa Fitzgerald, Charlotte Young*

Engaging public health students to connect with health inequalities and the social determinants of health (SDH), can be difficult, and in an era of political uncertainty and rising inequalities the need to
facilitate a culture of learning that prepares future public health leaders has never been greater. Yet, we continue to witness student liminality (Land et al., 2005), linked to individualised understandings of health and tensions embedded within students’ socio-cultural and professional contexts.

Addressing these challenges, we investigated the SDH as a threshold concept. Threshold concepts are embedded within a transformed understanding of a discipline, where learning involves traversing a conceptual gateway (Land et al., 2005). Through this learning journey students may encounter ‘troublesome knowledge’. Felten (2016) suggests the emotional terrain is the most challenging, but ultimately transformation is linked to changes in ways of knowing. Yet despite the centrality of students’ in this learning journey, their voices are a notable omission from research informing teaching (Felten, 2016).

Methods
Across one semester we worked with ten student partners in two public health courses (undergraduate and postgraduate) to map their learning journey in relation to the SDH. Our project integrated multiple methods including: baseline and end of semester class surveys, fortnightly meetings with student partners, and weekly student journals.

Findings
Across the undergraduate and postgraduate cohorts distinct points of progression, recursion and digression demonstrated affective spaces of learning and the importance of understanding preliminal variation within and across cohorts. Observation of these distinct points and affective spaces lead to the establishment of an open dialogue with students that encouraged us to move to a living curricula, which transformed as the semester progressed. Through this dialogue students pinpointed the places they became ‘stuck’ - where learning was troublesome, and where they became unstuck. This provided opportunities to collectively explore the emotional terrain of learning, along with discomfort and uncertainty. Traversing uncertainty was most evident for some postgraduate students, who began to question: ‘how do I use and apply this learning?’

Outcomes
Through the project students saw into the teaching ‘black box’ and were keen to work with us to change teaching practices. For us, the opportunity to work with students to establish safe and transparent channels of communication and invigorate a living curriculum was transformative. Collectively we redesigned curricula around the SDH and embarked on a more democratic culture of learning and teaching with students and colleagues.

What Is Evaluated in Formal Reviews of Professors’ Teaching Qualifications?

Katarina Mårtensson, Maria Larsson, Anders Ahlberg, Olle Holst

In this study, we analyse 94 reviews of teaching qualifications in 45 recent full professorship appointment and promotion assessments within a Scandinavian research-intensive university. The reviews are done by institutionally external reviewers, usually experts in the disciplinary field. National legislation requires research and teaching qualifications respectively to be assessed with equal thoroughness. Consequently, there is increased attention to the documentation and assessment of teaching qualifications and pedagogical competence, nationally (Ryegård et al., 2010) and institutionally (Olsson et al, 2012). However, it is unclear how this has influenced the actual review practices. In fact, Fanghanel et al. (2016) in a sector-wide study point out that “the recognition and reward of teaching excellence is a significant and yet under-utilized tool for institutions” (p. 16) and that “[G]aining a clear picture of progress in this area is difficult due to the variation in implementation of policies and difficulty in gaining data from institutions about promotions.” (p. 19).
The purpose of our study is to provide empirical data as a basis for the work of academic appointment and promotion committees. The study is made in collaboration with a research group investigating external reviews at another similar university (Elmgren & Forsberg, 2017; Levander, 2017). The questions discussed and explicitly answered in our presentation at the conference are:

- How are teaching qualifications reflected in the reviews?
- Which educational themes are visible, and which are potentially missing in the reviews?
- How do reviewers justify candidates’ teaching qualifications?

Overall, reviewers use much less text space on commenting teaching qualifications, 25% of the review at the most, compared to comments about scientific qualifications. The reviews are mainly focused on what is easily quantifiable, such as years of teaching experience, or on personal characteristics that supposedly lead to good teaching and student learning, such as enthusiasm or engagement. Acknowledgement and recognition of SoTL-work is largely missing, along with qualitative assessments of the teaching practice, student learning outcomes and educational development. We therefore see ample opportunities to raise the demands of the qualities of external reviews with regard to teaching qualifications. One way to achieve this is to clarify the instructions to external reviewers, thus facilitating the work of appointment committees. In the long-term perspective, the results of this study might potentially contribute to an academic culture that learns how to pay thorough attention to important aspects of teaching qualifications, including engagement with SoTL.

**Collegiality as a Foundation for a Learning Culture?**

*Katarina Mårtensson, Torgny Roxå*

This study focuses on how academics interact in a disciplinary, education focused formal workgroup. The purpose is to longitudinally explore the every-day lived experience of collegiality and its role in shaping and sustaining an academic culture that learns.

Three workgroups of 7-12 members within a research-intensive department were studied over more than one year through participatory observation (Bergold & Thomas, 2012). Each group dealt with issues of education in relation to their subjects in a context where their everyday practices and routines were disrupted (Vollmer, 2013), due to financial constraints and departmental educational re-structuring.

Traditionally, higher education is governed through collegiality, signified ideally by a high degree of expertise, specialisation, equality, and consensus-based decisions (Sahlin & Eriksson-Zetterquist, 2016). This style of governance is commonly viewed as slow and conservative. What happens, then, with collegiality when the context demands change?

Previous research has established the importance of local workgroups in influencing academics’ ways of thinking and practising teaching and learning (Hounsell & Anderson, 2009; Jawitz, 2009; Roxå & Mårtensson, 2015; Trowler, 2009; Trowler & Cooper, 2002). This study adds to that literature by exploring how workgroups deal with disruptions in authentic situations. Thereby we can deepen our understanding of collegiality as a foundation for a learning culture, and ultimately as a basis for scholarship of teaching and learning.

The researchers over two semesters observed and made notes of regular work-group meetings around educational issues, always chaired by one member, with a formal agenda and minutes. Over time participants in each workgroup were invited to react to and help interpret the observed episodes. Results reveal an intricate interplay between change and stability as the workgroups deal...
both with the disruptive reform and with everyday educational matters. Collegiality unfolds as a lived experience in a dynamic dual gestalt with similarities and differences across the groups. We assume that this dynamic is recognisable in other disciplinary contexts as well. The results together illuminate potentially critical and easily overlooked aspects of collegiality, and therefore potential for SoTL-embedment. At the conference colleagues are invited to discuss these results and their generalisability.

What Does SoTL Look Like? Using Evidence Synthesis to Map the State of the Field

Lorelli Nowell, Nancy Chick, Bartłomiej Lenart

SoTL is a young and dynamic field that invites diverse disciplines to foster development and growth in higher education (Poole, 2013). The diversity of its practitioners makes SoTL a complex field to understand and navigate. As SoTL continues to grow, the meta work of synthesizing SoTL literature can help us map the state of the field. We took a deep dive into the practices and products of SoTL through a rigorous, systematic, and thorough scoping review of SoTL studies to more fully and accurately represent how SoTL is practiced. We used a comprehensive strategy to search relevant databases, journals, grey literature sources, and key conference proceedings to identify SoTL literature reporting on SoTL studies. Teams of two reviewers independently screened all identified titles and abstracts for inclusion, followed by screening of full texts of potential literature to determine final inclusion in our review. We developed a data collection tool to examine, record, and catalog the literature according to key findings and themes, which provide clear evidence about what the work of SoTL looks like, who its practitioners are, what kinds of questions they ask and about what, how they go about answering them and with what evidence, and what the published products of SoTL projects look like. The patterns documented in our scoping review will help early practitioners and those advising them to more easily identify existing projects that address similar topics. It will also help identify gaps and make visible underexplored areas, inviting new voices to the field and aligning SoTL with the broader goals of higher education. It is our hope that our scoping review will help ground future work in the scholarly context of existing SoTL literature (Felten, 2013), strengthen literature reviews (MacMillan, 2018) and prevent some of what critics have called “wheel reinvention” (Tight, 2017). In this presentation we aim to share the knowledge generated through our review and encourage critical dialogue among conference participants to identify how it can be used to lay the groundwork for future SoTL studies.

Auditorium Activities in Biology Education

Jorun Nylehn, Kjersti Lea

The aim of the project “Auditorium activities in biology education” is to enhance active learning in traditional auditorium teaching in biology. The aim is to improve the education and to raise the teachers’ awareness of their role in the discipline’s learning culture, and thus to promote students’ learning. Varied teaching activities will engage both students and teachers and sustain meaningful learning. Furthermore, a belief in education as a learning community, where participants work together and share experiences, underlies the project and its design. In this perspective, both teachers and students are seen as learners and thus as being in development.

The project “Auditorium activities in biology education” is interdisciplinary, with participants from the departments of biology and pedagogy. The project will run a blog, biologididaktikk.w.uib.no, where participants can find descriptions of the activities and useful literature and web resources.
The project offers biology teachers a range of activities that they may try in their auditoriums, all easy to implement in teaching at undergraduate level. Some activities are suitable as “breaks” during lectures, while others may serve as a surprising start, repetition, or as stimulating thought-provokers. All are meant to activate students and enhance their learning of the subject matter. The activities are research based, chosen and developed on the grounds of research of learning activities that have been proven likely to result in more efficient learning in both a short term and a long term perspective.

It is important that the range of activities is sufficiently broad so that all participants may find something that suits their particular courses. It is also crucial that the “activity experiment” causes no more than a minimum increase in their workload. Often, no special equipment and hardly any extra preparations are required.

The next step will be focus group interviews with particular emphasis on the participants’ experiences and what impact these are likely to have on their future practice. The subsequent analysis of the data will look into practicalities, e.g., what seemed to work, what did not work so well, and which factors seem to be of importance to the result? The blog biologididaktikk.w.uib.no will be evaluated and developed accordingly. We will also explore the participants’ attitudes, convictions and (educational) beliefs, and to what extent these seem to influence the outcome of the changes.

**Developing a Curriculum of Place: Integrating Indigenous Knowledge Systems and STEAM Field Studies**

*Kevin O’Connor, Gladys Sterenberg, Tanya Stogre*

The purpose of our SOTL research is to investigate how teacher candidates’ experiences in field studies with community partners can inform an interdisciplinary STEAM practicum semester based on a curriculum of place (Chambers, 2008). Many contributions to education have been made through non-Indigenous perspectives of place (Greunewald, 2003; Sobel, 2004). Emerging research suggests that place-based education is limited because it does not critique colonial legacies in theoretical frameworks of place (Calderon, 2014). Indeed, many Indigenous scholars are replacing the term ‘place’ with ‘land’ and argue that land-based pedagogies promote the decolonization of education (Ballantyne, 2014; Wildcat et al., 2014) by recognizing the intimate relationship that Indigenous peoples have with the land. One challenge with land-based pedagogies is the role non-Indigenous peoples have in this approach to the decolonization of education. Our interdisciplinary SOTL research, in a western Canadian context, explored this tension as we come to a deeper and shared understanding of our co-responsibility within Treaty 7 relationships. Learning from place emphasizes a relationship with the land (Blood & Chambers, 2006; Penetito, 2009), something deeply respected in Indigenous communities and something absent from much of place-based education. Our project seeks to close this gap by considering varying perspectives of place as it informs STEAM educational pedagogy.

The participants of our partnership learning community PLC (Healey, Flint & Harrington, 2014a, 2014b) included the two authors, a Blackfoot Elder, 5 community educators, three student research assistants and sixty-three teacher candidates. Together, we piloted integrated 7-week intensive STEAM courses in coordination with candidates’ practicum experiences, field studies and inquiry projects. Data was first coded individually across these sites according to emerging themes that related to our research focus on the process of designing and implementing of a curriculum of place (Strauss & Corbin, 1998).

The results show that our attempts to enact a curriculum of place that recognizes the intimate relationship that Indigenous people have with the land and emphasizes relational ways of knowing
were impactful. However, we were disappointed that many of our students seemed to experience a place-based curriculum that was not linked explicitly to Indigenous ways of knowing. Moving forward, we will begin the STEAM semester in ceremony, learning closely with our Indigenous school partners in designing field studies that will invite students to experience all dimensions of the place, as we look to shifts in identity needed to authentically experience a curriculum of place.

Academics and Students Making Sense of Authentic Teaching and Learning via Collaborative Observation

Matt O’Leary, Vanessa Cui

The quality of teaching in higher education (HE) has attracted a lot of attention from governments worldwide in recent years. In the UK, for example, the introduction of the Teaching Excellence Framework (TEF) (BIS, 2016) was a watershed moment for HE, with the quality of teaching finding itself thrust into the political spotlight. Yet, as we argue in this paper, the TEF promotes an instrumentalist model of teaching and learning. It continues the focus on monitoring and measuring the quality of teaching as a product rather than seeking to gather data that captures situated examples of authentic practice, ultimately failing to move forward our understanding of what excellent teaching might be and how best we might achieve it.

As a counter-narrative, we reconceptualise the relationship between students and teachers as collaborators in making sense of authentic teaching and learning. We argue that improvement of learning and teaching builds on meaningful understandings which requires students and teachers to develop situated knowledge of their own and each other’s views, values and practices. In a recent 2-year project funded by the Higher Education Funding Council for England, we developed a cycle of collaborative observation (CoCO) that repositions observation from its traditional application as an assessment tool to a collaborative method of inquiry between students and staff. Building on Brookfield’s work on critically reflective practice (1995), in our model, students and staff all take an active role in reflecting on their practices through the lens of observing the ‘same’ classroom experience from their individual perspectives while also exchanging their observations and reflections with each other.

The paper explores the conceptual and theoretical framework of CoCO, explaining its rationale, how it differs from conventional approaches to observation, along with the methodology devised to prepare the academic staff and students for working with this approach to observation. Drawing on data from five case studies across different undergraduate programmes in a modern English university, this paper shares some of the project’s key findings. Evidence from each of the case studies reinforces the work of Bowden and Marton (2004) who argued that an understanding between students and staff based on a common frame of reference of teaching and learning is fundamental to building a collective consciousness of learning in the context of their programme. Here we seek to further develop Bowden and Marton’s work and explore how collective consciousness is created and developed during the CoCO.

Creating a Culture of Educator Scholars: Implementation of the Anatomy Education Research Institute

Valerie O’Loughlin, Polly Husmann, James Brokaw

While some medical schools and some professional organizations have developed medical education scholar programs to train their faculty, many medical education faculty have neither these resources
nor mentors on their campus. The co-authors recognized a need for the training and mentorship of anatomy faculty interested in education research, and have them be a part of an inclusive learning culture regarding anatomy education. Inspired by the American Physiological Society’s Institute for Teaching and Learning (APS-ITL), the co-authors developed the inaugural Anatomy Education Research Institute (AERI). Funded by an American Association of Anatomists Innovations grant and held over 5 days in July 2017, AERI partnered participants with mentors who were experts in one or more areas of education research. The intensive face-to-face format of AERI allowed the 62 participants and invited speakers to immerse themselves in teaching assessments, educational research, and SoTL.

Multiple IRB-approved assessment instruments were developed by the co-authors, and included a pre-conference survey, end of conference survey, and a 6 month follow up survey. These assessment instruments allowed us to determine immediate and lasting impacts of AERI2017, by measuring knowledge gains and potential attitudinal shifts regarding educational research. The success and projected impact of AERI was and continues to be measured according to Donald L. Kirkpatrick’s (2006, 2007) Four Levels of Evaluation Model (reaction, learning, behavior and results). Respondents overwhelmingly found AERI informative and useful, and felt the face to face mentorship was the most important aspect of the conference (reaction). Comparison of pre- and post-conference survey results indicated participants increased their knowledge of education research methodologies, learning theories, and project design (learning). Participants developed action plans for an education research project and reported meeting several of those action plans on the 6-month follow up survey (behavior). Follow up survey results indicate many AERI participants/mentees are presenting and publishing educational research as a result of attending the conference (results). Specifically: 35% presented a poster (or submitted an abstract to present) on educational research findings at a professional meeting, 26% gave a platform presentation (or submitted an abstract to present) on educational research findings at a professional meeting, 35% submitted (but not yet published) educational research findings in a journal, and 36% published educational research findings in a journal. Thus, evidence suggests a discipline-specific education research institute, such as AERI, has the power to create a culture that learns about SoTL and how it may inform one’s discipline.

How Can We Improve Assessment of Pedagogical Competence? Experiences from a National Swedish Course

Thomas Olsson, Fredrik Oldsjö, Katarina Winka, Maja Elmgren, Åsa Ryegård

Assessment of pedagogical competence is often considered difficult and challenging, but during the last 10-15 years a more reflected and scholarly practice has developed (Ryegård et al., 2010; Olsson & Roxå, 2013). In Sweden, this development has been supported on a national level by offering a course for prospective assessors organized through a cooperation between several universities. The course has been given on six occasions since 2010 and academics from different disciplines, faculties and universities meet (on campus and online) to develop their assessment skills and exchange experiences about peer-review based assessment of pedagogical competence. The overall aim of the course is to strengthen the assessment of pedagogical competence by promoting professional assessment processes and expert assessments of high quality. The course is aimed for academics who want to develop their ability to assess pedagogical competence as part of assessments of applications for appointment, promotion or teaching awards. Among the participants we find teachers who act as pedagogical experts, chairpersons and members of teacher appointment committees, as well as university teachers who develop or coordinate local pedagogical reward systems. So far, 125 participants from 24 universities have completed the course.
The presentation will address the following issues: The course could contribute to the development of a national consensus in the assessment of pedagogical competence. Which are the advantages and disadvantages of this development? How is the assessment of teaching and learning in the disciplines (subject didactics) and connections to research affected by the fact that the participants in the course are from different disciplines? What does it mean to discuss assessment of pedagogical competence without discussing assessment of scientific competence at the same time? Which are the shortcomings in the documentation and how can the expert assessment and feedback stimulate further development of the portfolio and an increased understanding of how an authentic documentation could be presented? How should a clear assessment of high quality be formulated to give feedback to universities as well as applicants (Meizlish & Kaplan, 2008; Trevitt & Stocks, 2012)? These questions are discussed based on evaluations of completed courses that illustrate participants’ views on the course and how they afterwards reflect on the value of the course.

Course leaders and mentors are academics with extensive experience in assessing pedagogical competence. The course leaders have given the course with the support of their respective universities and the national educational network Swednet (a member of ICED).

I Went Public, and No One Showed Up: What Gives? Making Your Writing Sing!

Chris Ostrowski, Nancy Chick, Lorelli Nowell, Kiara Mikita, Kim Grant

In SoTL we often talk about “the big tent” metaphor, but sometimes being heard from one side of the tent to the other is a challenge. Like other disciplines, SoTL requires us to “go public” by sharing our work (Shulman, 1998; Felten, 2013). Unlike other disciplines, however, going public in SoTL is a cross-disciplinary conversation (Huber & Morreale, 2002), and navigating this polyglot conversation with clear and engaging writing is a tall order. In her ISSOTL17 plenary, Helen Sword challenged SoTL practitioners to write “to the heights and from the heart,” to write with the same energy we bring to our work and the same animation we bring to our conferences.

Unfortunately, reading academic writing is often like eating stale bread: dry, tough, and bland. Sword argues “stylish” academic writing is essential and helps our work “have the greatest possible reach and impact.” Given SoTL’s goal to effect change, we publish to be read. But most academic writing, according to Sword (2012), drains, overtaxes, and often bores readers. Decades of scholarship have baked dense meanings, ideas, and abstraction into carefully sculpted disciplinary writing repertoires. At best, readers outside a discipline must perform mental gymnastics to read, re-read, and make sense of such writing, while more commonly, they are left confused, tired, disinterested, and even resentful. Even disciplinary insiders can flounder reading poorly written text. Making readers work harder than necessary—or worse, making them stop reading altogether—decreases SoTL’s reach and impact.

We are five scholars from different disciplinary backgrounds (education, literature, nursing, sociology) who come together to support each other’s writing. Like other writing groups, we provide each other structure, accountability, and support (Grant, 2006), but more specifically, we see ourselves as a (micro)culture that learns (Mårtensson, Roxå, & Stensaker, 2012), and we crave growth as writers within a cross-disciplinary conversation that deserves to be read. Adapting the “teaching squares” (Berenson, 2017) structure for peer observation of teaching, we have formed a “writing square.” Its framework includes four components: 1) a writing think-aloud, 2) a reflection, 3) a mini-workshop, and 4) a follow-up. Unlike traditional writing groups, our writing square shifts the focus from critiquing others’ work to reflecting on our own work. We aim to make writing “community property” (Shulman, 1993) where how we communicate about teaching and learning is woven in the fabric of SoTL. Join us to discuss writing in SoTL and writing squares!
“What's a Teaching Philosophy?”: How Teachers Articulate Why They Do What They Do

Chris Ostrowski, Mike Holden, Dianne Gereluk, Amy Burns, Lena Shulyakovskaya, Devika Pandey, Kirsten Varsek-Ison

Teaching philosophies are both inherent yet elusive aspects of teaching practices. They dictate how people teach, what people believe teaching and learning to be, and what it means to be an educator. At the same time, when pressed, many educators struggle to articulate their teaching philosophies or how they influence teaching practices. Our local teacher education program strives to foster a culture of learners where preservice teachers recursively contemplate their philosophies. To engender high quality teaching, preservice teachers need to articulate their emerging philosophies, discuss challenges and insights, and weave connections between teaching, learning, and their experiences (Zeichner & Liston, 2014). Yet, we have observed many preservice teachers struggle to be aware of, and articulate, their teaching philosophies.

Many teacher education programs aim to “create environments and experiences that bring students to discover and construct knowledge for themselves” (Barr & Tagg, 1995, p. 15). To better understand if our local program meets this goal, we ask: how does a Bachelor of Education (BEd) program shape the way preservice teachers (students) develop, articulate, and reflect on their teaching philosophies over time?

As part of a two-year, SoTL study, we investigate how students’ teaching philosophies evolve while completing a BEd program at a Western Canada university. Our data sources include four student interviews across two years in courses and practicums, students’ reflective statements about teaching, and a document analysis of program syllabi.

Preliminary data suggests many preservice teachers do not actively consider their teaching philosophies when entering a BEd program. Several participants seemed confused when asked “what is your teaching philosophy?”. When asked about values or beliefs toward teaching, most participants referenced specific experiences (e.g., piano teacher) to construct a shaky articulation of their philosophies. Interestingly, some participants described their beliefs and values in terms of a hypothetical ideal teacher rather than themselves, suggesting they had not yet internalized their own ideas. Several participants also admitted uncertainty in how to tie their teaching philosophies to the curriculum and teaching practices.

As we explore the data, we aim to “describe and systematically analyze the student experience” (Hutchings, 2000, p. 4). This study uniquely showcases how well a BEd program does – or does not – actually foster a culture of learners and a culture that learns.

Enabling an Ethos and Culture of Partnership: Co-Creating Orientation with Student Peer Mentors

Sara O’Sullivan

Informed by a range of SoTL research on student engagement and pedagogical partnerships (see for example Kuh et al., 2008, Cook-Sather., 2014), a new Social Sciences programme introduced at University College Dublin aspired to embedding partnership as an ethos and part of its culture from the start of first year (Moore-Cherry et. al., 2016). The key rationale was to mainstream the opportunities of partnership working to enhance student engagement throughout the entire cohort (Moore-Cherry et al., 2016).

This paper reports on one initiative, a partnership approach to the design of orientation. Orientation was targeted as a a useful space to begin to create engaging, interactive and student friendly
partnerships that would allow stronger relationships with faculty and peers to be created (Bozick, 2007). International research on student transitions to university highlights the importance of this key period, as those who have difficulties with the transition may perform poorly and/or disengage at an early stage from university life (Lowe and Cook, 2003; Pitkethly and Prosser, 2001).

We explore the role of current students (as orientation consultants and peer mentors) in enabling a culture of learning with incoming students. McKinney (2007: 120) argues that the ‘applications of SoTL results... [are] most often, at the course, or classroom level’. In this paper, we explore the adoption of a ‘students as partners’ approach to orientation planning and delivery encompassing academics, professional services staff, peer mentors, and incoming students to demonstrate that the outcome of complex engagements such as this can be transformational at the programme level.

The existing peer mentor scheme where second and third year students are trained to deliver a set of activities designed by staff was reviewed and Marcia Ody (University of Manchester) was invited to UCD with the explicit aim of providing students with the skills and structure to co-design the new orientation programme. This enabled peer mentors to become pioneers and draw on their first hand experiences as mentees to become co-designers of the peer mentor programme.

The paper draws on qualitative data gathered as part of a reflective practice approach, by staff and students, to report on the challenges and opportunities of mainstreaming partnership working through the orientation process. The extent to which this programme level change can be seen as an example of what Roxå et al. (2008) have termed cultural changes, to facilitate a more inclusive culture of learning, will be considered.

**Measuring Interiority: Contemplative Systems of Inquiry**

*Patricia Owen-Smith*

A variety of contemplative practices are being integrated in college classrooms across the country. While it appears clear that contemplative methods have the potential to address many of the most pressing questions in higher education, there is a dearth of evidence in support for these practices. The assessment of attention and awareness in the college classroom, dimensions that undergird all contemplative practices and fundamentally differentiate them from all other transformative approaches, has little precedence in research on teaching and learning. There is an irony in this deficiency. Zajonc (2008) points out that attention is fundamental to learning and “… while few would deny this, conventional pedagogy makes little effort to develop the student’s native capacity for attention directly” (p. 9). Perhaps the most salient explanation for this lack is that such dimensions are located in the present moment and first person experience seldom emphasized in the classroom and involving more subtle changes that are difficult to quantify. An understanding of these subtle changes entails a radically different approach to assessment and one that might better capture the transformative nature of learning offered by such practices.

The purpose of the proposed paper is to examine and critique current research on contemplative practices as it intersects with teaching and learning. SoTL and contemplative researchers share many of the same methodological approaches. Qualitative approaches such as phenomenology, ethnography, and grounded theory are such examples as well as the more traditional methods of self-report, cognitive and attentional tasks, and mixed methods. However, the measurement of such dimensions as awareness, consciousness, and internality creates the need for additional approaches that are beginning to make their appearance in methods such as intuitive and narrative inquiry. Still, there are others who are creating a bridge between the traditional methods of research and transpersonal and heuristic approaches in the assessment of contemplative modes. Laura Rendon (2009) articulates this method as working “at the center and at the edge... blending methods,
Building Excellence in Scientific Teaching: Training Teaching Assistants to Use Active Learning

Lorelei Patrick, Hillary Barron, Julie Brown, Sehoya Cotner

Active learning (AL) teaching techniques benefit all students and can close the achievement gap for under-represented minority, first-generation, and female students in STEM disciplines. However, there has been relatively little emphasis on training teaching assistants (TAs) in the use of AL. Specifically, will TAs feel more knowledgeable about AL, find AL more useful, and use AL more often if they are presented with evidence for AL’s effectiveness or if they are able to facilitate AL themselves? To investigate this question, we offered an AL workshop and split participants into an Activity (A) group and an Evidence (E) group. The A group worked in teams to learn an AL technique in depth with a workshop facilitator, then these teams modeled the activity with their peers acting as students; only a small portion of time was devoted to presenting or discussing the evidence of AL effectiveness. In the E group, facilitators modeled the activities with all TAs acting as students and spent significant time presenting evidence of AL’s effectiveness. Pre- and post-workshop data were analyzed to assess TA perceptions of AL and the usefulness of the demonstrated techniques in their labs. Post-semester survey data will be collected and lab observations are in progress. Based on our preliminary survey data, E group participants reported greater knowledge of AL after the workshop than A group participants. However, A group participants found all of the active learning techniques more useful than E group participants. Both groups reported that the most useful active learning topics were Easy Assessment Techniques and Sequence Strips, which can be easily integrated into lab settings. There was little agreement on the least valuable techniques but TAs from both groups reported techniques requiring more time, materials, and planning as among the least useful aspects of the workshop. This is somewhat surprising given that some of these techniques were already commonly used in several of the lab courses taught by participating TAs. These results suggest that actually modeling AL techniques made them more useful to TAs than simply experiencing the same techniques as students—even with the accompanying evidence. Furthermore, assembling an easily implemented toolkit of strategies transferable to any course will facilitate TA adoption of AL. These lessons will be especially important for STEM TAs who are called upon to facilitate different types of inquiry as they assist with the development of the next generation of scientists.

Undergraduate Critical Thinking in Industry: From Conceptualisation to a Near-Authentic Assessment

Alastair Pearl, Laurence Orlando, Gerry Rayner, Ian Larson

This presentation will introduce our learnings and preliminary findings around the creation and administration of an online test of industry-aligned critical thinking (CT) skills. Since the late 20th century, there has been a proliferation of publication around the nature and praxis of CT at the post-secondary level. The explicit goal of developing student CT skills is captured in many higher-education courses. Knowing that SoTL endeavours to demonstrate student learning, we were driven to investigate the extent to which students develop sufficient CT skills before entering the workforce in light of previous reviews of the state of CT skills development in higher-education (e.g. Arum & Roska, 2011; Huber & Kuncel, 2016).
In Australia, companies hiring STEM graduates have had increased desire for applicants with demonstrable CT skills (Prinsley & Baranyai, 2015; Desai, Berger, & Higgs, 2016). Published works have focused on student conceptualisation of CT with only limited research of industry conceptualisation.

This work starts to bridge the gap between employer expectations around CT and undergraduate student experience. We demonstrate an approach for an inclusive learning culture between employers and students that benefits the latter through increased CT skills. It also builds on the discussions generated at ISSOTL Conference 2017 by Lewis and Stam’s paper on student conceptualisation of CT (Lewis & Stam, 2017), as well as Kapoor’s presentation on practices for the teaching of CT (Kapoor, 2017).

Adopting a generalist approach to CT, companies hiring graduates from an Australian pharmaceutical sciences course were surveyed to determine their conceptualisation, and expectations of CT at work. Subsequently, an assessment tool utilising these companies’ understanding of CT was developed.

We developed this tool through consultation with company partners, culminating in a series of CT vignettes that reflect the workplace reality our graduates will be entering into. Accordingly, this assessment tool differs substantially from most commercially available CT tests in that it exhibits enhanced ecological validity leading to greater student engagement. An online version was administered to our cohorts of pharmaceutical science students over 3 year-levels (n = 98) during early 2018.

Preliminary results show that this tool exhibits a good degree of statistical validity and assessment reliability within our context. Additionally, early extension results indicate that this tool may be useful in the allied field of pharmacy. This prompts us to ask: what other fields could benefit from this approach to assessing CT?

**Reflective Writing in the Curriculum – Opportunities and Pedagogical Challenges**

*Susanne Pelger, Sara Santesson*

Learning how to learn is one of the most important tasks for students in higher education. If students understand their own learning processes, it will have a lasting impact on their ability to learn – even outside university. Therefore, students’ ability to reflect on their knowledge and learning is one of the overall requirements for a degree in Swedish higher education. Consequently, this ability needs to be taught and trained throughout the education.

In a recent study, we explore how reflective writing can be integrated in content studies as a means of stimulating and improving learning. The study comprises three case studies, where academic teachers from different disciplines introduced and analysed the outcomes of reflective assignments in their content courses. The analyses of students’ reflective texts were conducted by the teachers using qualitative content analysis. Throughout the process of data collection and analysis, the teachers met (on three occasions) for the purpose of discussing their findings and giving peer-feedback. Hence, the overall results of the current study emerged from the three case studies through a research process that was characterised by collegial exchange and support. As such, the study could thus be seen as an example of how the scholarship of teaching and learning can be carried out in practice.

The results show that integration of reflective writing in the curriculum can support subject learning as well as the development of generic skills, but that not all students manage to write academic reflections. The results also suggest that reflective writing promotes students’ metacognitive skills.
and development towards a reflective professional practice. In addition, reflective writing can support other generic skills, such as the ability to establish long term goals, plan and take responsibility, and support fellow students’ learning through peer-feedback. An overall conclusion is that reflective writing has impact not only on the individual student’s learning, but on the whole learning environment.

In our presentation, we will summarise our findings and suggest how students can learn to master the genre of academic reflection. We will also show examples of how academic reflections can be used for promoting progression, helping students fulfil their requirements, and bridging the gap between higher education and professional practice. Finally, we will discuss the opportunities and pedagogical challenges with integrating reflective writing in content courses, and share the teachers’ experiences and recommendations from the study.

**Turning up the Volume: Developing a Mandatory Course in Entrepreneurial Thinking Skills Development**

_Houston Peschl, Connie Deng, Thomas O’Neil, Nicole Larson_

From Intelligence Quotient (IQ) to Emotional Quotient (EQ) to Adaptability Quotient (AQ), business undergraduate students are required to develop skills that can handle the uncertain and rapidly changing economic environment. There has been a great deal of focus and research on how to develop an entrepreneurial mindset (Davis, 2015), or the entrepreneurial thinking skills in students who self-select into elective courses (Dickson, Solomon, & Weaver, 2008). The determiner for success in these elective courses has generally been based on the students success in starting a new venture.

Our paper presents the results of a mandatory undergraduate business course to develop seven entrepreneurial thinking skills: 1 Problem Solving, 2 Failing Forward, 3 Perspective Taking, 4 Comfort with Uncertainty, 5 Creativity, 6 Responding to Feedback, and 7 Team Development. These seven tacit skills are considered valuable for all undergraduate students to help them navigate the complex and exponentially changing world, regardless of their desire to start a new venture.

To teach these seven skills, traditional pedagogy had to be abandoned. Over the past 4 years, we have developed three powerful teaching resources: 1 our Open Educational Resource (OER), that is free to all students and uses our students as creators and collaborators for content, 2 our 22 worksheets that force the students to get out of the classroom and experience the challenges of entrepreneurial thinking, and 3 our flipped classroom that has 18 custom exercises for students to report back and learn from their peers and community (Nabi et al., 2017). There are 75 students per class, and 12 classes per year (3500 students to date).

These three approaches address the complex nature of entrepreneurship and have been associated with active learning in which students experiment with the course content and activities, rather than passively memorizing course content (Phillips & Trainor, 2014).

The goal of this paper is to examine the degree to which the course content and teaching approaches in the mandatory course impact the seven tacit competencies.

Through this project, we evaluated the effectiveness of our innovative teaching and learning resources to determine if they are meeting the desired learning outcomes. Data was collected from a large mandatory undergraduate business course at a Canadian University (from approximately 385 students).
Our results were significant on 6 of 7 entrepreneurial thinking skills, and have resulted in further improvement to the course as well as the methodology of measuring these seven tacit skills.

**Competency as Outcome and Process: Student Engagement through Teaching and Research Strategies**

*Lance Peterson, Melissa Lundquist*

Across many disciplines, competency is considered foundational to ethical practice. How educators and scholars conceptualize and measure competence shapes the culture of learning (Kahn et al., 2015). Competency is commonly used synonymously with learning outcome (Gehart, 2011; Gruppen et al., 2016; Tekian et al., 2015), thus minimizing the learning process. However, several considerations suggest that conceptualizing it solely as outcome is problematic for both learners and educators (Hussey & Smith, 2008). Students want to know about the process toward learning (Liu, 2016), or the application of their learning to a specific context (Keng et al., 2017); both student abilities and supportive work environments are necessary for transferring competencies to practice (Snoek & Volman, 2014); and practice-based training may play a big role in competency development (Renting et al., 2017). Consistent with this latter point, some educators maintain that outcome is unpredictable and that process is equally important to student development (Benade, 2014).

Creating and supporting a learning culture that is inclusive and student-centered demands a critical examination about how we conceptualize competence. We suggest that by expanding competency as outcome and process, scholarly avenues will emerge for better understanding the nature of student development, thereby making competency more relevant and inclusive for education and future workforce considerations.

Given this premise, it is crucial to identify and utilize research and teaching strategies that support process-oriented phenomena related to competency. Our twofold aim in this presentation is: (1) to expound on critical and constructivist pedagogies, both of which emphasize three characteristics that speak to process and outcome-oriented competency development: student-centered, experiential learning, and critical reflection; (2) to present two case studies from Social Work that illustrate how teaching and research strategies can be used hand in hand to exemplify inclusive, student-centered, experiential learning that inspires critical thinking. The first case study, informed by critical pedagogy, describes the use of a photovoice assignment on the development of undergraduate students’ professional identity and perceived competence in macro practice social work. The second case study undergirded by constructivist pedagogy describes the use of Interpersonal Process Recall and dialogical analysis to identify graduate student discourses that shape the learning process involved in simulated family social work role-play. These two case studies exemplify the role of process as an integral part of competency and promote an inclusive learning environment where diverse perspectives are central, thereby demonstrating widespread applicability across disciplines.

**Principles and Principals: Using Reflective Narratives to Inform Curriculum and Recruit Majors**

*Mari Plikuhn, M. Kevin Gray*

The senior seminar, or capstone course, has become a staple of a strong student-driven curriculum at many institutions. Though there are a variety of projects currently used to meet desired outcomes for this type of course, a high degree of interest exists for innovation in this core course. This paper examines the creation, use, and findings of a project to assess student perceptions of sociology in a senior capstone course for majors. The purpose of this project was twofold: 1) to determine student perceptions of what and who are the core ideas and people in a broad sense to the discipline and
specifically to themselves; and 2) to examine what the students believe it means to be in the major, who is best suited to the major, and why they chose it. The first section, which asks students about core concepts, allows programs to assess student comprehension and serves as a qualitative companion to standardized, quantitative tests. These quantitative exams can provide a comparison for students’ learning on a national level and allow programs to determine where gaps in their curriculum may exist, but often are unable to provide a nuanced picture of what students perceive to be important to their discipline and to themselves. The second section, which asks for the students’ thoughts on the major, can be used to understand what draws students to the major and help programs determine ways to attract more students. It can aid programs in targeting specific courses or topics that have resonated with students or piqued interest in the major. Having students reflect on what they have learned can provide valuable feedback on the content of a course or entire program and allow those areas to be strengthened or adjusted to ensure that learning outcomes are being met. Findings from this project confirm that students are able to identify core theories, people, and ideas in the discipline and explain what makes those the principles and principals of the discipline. Further, students shared what made them interested in the major and what qualities they believe they will take from having participated in the coursework and experiences of the major. Additional applications are discussed on the ways this type of project can provide insight and assist a range of disciplines and majors in their decisions on curriculum, assessment of learning outcomes, and promotion of their major to the campus community and potential students.

A Soft Systems Approach (SSM) for Institution-Wide Culture Change in Personal Tutoring

*Alicia Prowse, Stephen Powell, Elizabeth Walshaw*

To generate a culture of learners and learning, many have argued for a more personalised approach to learning, teaching and assessment in HE (eg Popovic and Baume, 2016). A central contradiction in many UK HEIs is the expectation created around personal academic development in a mass higher education system. Personal tutoring (academic advising) is often seen as a ‘cure-all’ to help learners focus on their own pathways to ‘success’. However, staff and students often report an imperfect situation, arguably borne from a mismatch of expectations generated. Mixed messages reach students: ‘You will be looked after at every step in a personalised way’ vs. ‘You are on your own and need to be autonomous’. What should students make of this? Is the culture they are entering all about their vision of learning, or someone else’s? What are the actions needed to improve this? In addition, institutions communicate poorly to staff about the intended purpose of personal tutoring (PT).

Soft Systems Methodology (SSM) has been used in education as an action research-based model of change and here we apply it to personal tutoring. The methodology considers the whole system (the institution, including its students and staff) as a ‘learning system’ that can explore, examine and problematize itself and generate its own solutions. This articulates well with the thread for the ISSOTL conference on ourselves as learners within a learning culture. In this research we learned about personal tutoring, alongside academic and support staff at all levels, students and their representatives.

Using SSM we derived a purpose statement, activity model and statements of efficacy, efficiency and effectiveness of personal tutoring as a series of activities. We had conversations with personal tutors and other stakeholders, including students, around these, recording social and political implications as we progressed. We gathered models of PT and categorised these on emerging dimensions and present this as a case study using SSM for action to improve personal tutoring. Our findings include our documented process of learning, our students contributions, our models of personal tutoring
Learning Analytics and the Scholarship of Student Success: Thoughtful Management of Cultural Change

George Rehrey, Dennis Groth, Linda Shepard, Carol Hostetter

Learning Analytics (LA), along with big data that is at its core, can provide scholars with new forms of evidence of student learning for SoTL studies. Many colleges and universities are already in the midst of determining how to make the best use of this new evidence, which can range from individual student “clicks” collected in learning management systems to very large and complex data sets typically handled by data stewards and institutional research offices.

However, as social marketing theorists (Kotler & Zaltman, 1997) and change management experts have pointed out in the past (Kavanagh & Ashkanasy, 2006; Kotter, 1996), adoptions of new practices will not be brought about by simply giving people large volumes of logical data (Kotter & Cohen, 2002). Instead we need to create conditions that appeal to both the heart and the head (Macfadyen, Groth, Rehrey et al., 2017). Incorporating LA in SoTL research is certainly one possibility for creating those conditions.

As this new LA terrain unfolds, it appears likely that the SoTL community can play a vital role in how this new evidence of student learning will be shaped and used by institutions of higher learning (Rehrey, Groth, Shepard & Hostetter, 2019; Siering & Shepard, 2017). This will especially be the case as LA, big data and predictive modeling influence important resource allocations, along with programing and institutional decisions.

This session will explore how LA can play an active and collaborative role in supporting student success initiatives at institutions of higher learning, while simultaneously integrating and advancing the SoTL in new, and as of yet, unanticipated directions. This includes the management of cultural change, which will accompany any role that LA might play in conducting future SoTL research.

Noteworthy in this regard is the fostering of collaborations and new communities that will inescapably include programs and support units that are usually not considered typical partnerships for SoTL research (Rehrey, Siering and Hostetter, 2015), but remain a necessity when using big data.

Participants will also be given an opportunity to reflect upon the ways that LA might be used in their own SoTL studies, while creating new research collaborations that include academic support units, deans, chairs and program directors. Involvement in these intersecting collaborations can provide the for opportunity for SoTL practitioners to have a voice in the shaping of this rapidly unfolding landscape (Rehrey, Groth, Shepard, Hostetter & Fiorini, 2018).

New Lenses, New Perspectives: Using Reflective Practice to Develop Meaningful Research Assignments

Hannah Rempel, Anne-Marie Deitering, Tim Jensen

Teaching faculty and librarians alike struggle to help students see academic research as an interesting, even empowering, opportunity for discovery and exploration. We design creative and challenging assignments, introduce students to complex ideas and rich sources, and still end up disappointed when our students return again and again to the same topics, arguments, and
resources. The research in this area is clear: in the high-pressure world of college, many students are afraid to try new things. Traditional research paper assignments carry high stakes for students. They require several weeks of time and effort, and they usually represent a significant part of a student’s course grade. Failure to meet expectations has consequences.

In this context it’s a logical choice for students to cling to topics, tools, and resources they’ve used before, and that they know will work. Drawing on insights from a variety of qualitative studies and classroom assessments, a team of librarians and writing program faculty will illustrate how the use of reflective frameworks, including curiosity, assumption hunting, and authentic evaluation can help teachers help students manage the uncertainty and risk that is an inherent part of research.

The presenters bring several years of experience training new university teachers to deliver a required course in academic research writing. Research with students in this course suggests that direct feedback, delivered in the moment, is the most important thing that teachers can do to help students engage in a curiosity-driven research process. Working intentionally and collaboratively with students, we have developed a variety of activities that help teachers:

*Identify and understand the challenges students face in the research process;

*Critically examine assumptions to understand how their teaching is shaped by their personal experience with research and learning;

*Demonstrate how “hunting assumptions” can be used to draw useful connections between critical thinking, reflective practice, and student research assignments;

*Use insights about curiosity and critical thinking, drawn from several disciplines, to develop engaging learning activities;

*Engage in reflective practice, and model authentic, curiosity-driven inquiry in their classrooms.

Attendees will understand how using a variety of playful and engaging activities can intentionally reward curiosity-driven research behaviors. Attendees will be encouraged to assess their own teaching practices to determine how using reflective frameworks like curiosity or examining assumptions can encourage learners to adopt new research practices.

**Building a Learning Culture from a Learner’s Perspective**

*Britta Ricken, Niclas Schaper, Andreas Seifert*

In times of insecurity and constant change, the learning culture, as an important predictor of learning, is influenced by various motivational and organizational factors (Sonntag et al., 2004, p. 107).

A learning culture, as part of the organizational culture, can create a framework for beneficial learning conditions and promote competence development (Tracey et al., 1995, p. 241-242). A learning culture also implies values, rules, attitudes and expectations according to learning. Regarding the organizational conditions, a learning culture exists when the organizational conditions are arranged to foster learning and when favorable learning and training possibilities are available to learners (Schaper et al., 2006, p. 177). The work of Hilkenmeier and Schaper (2015) shows important factors of a beneficial learning culture like encouraged proactivity and coworker support. They developed a Learning Culture Inventory (LCI) as a measure of an organization’s learning culture that could also predict the participation and performance in formal and informal learning activities (p. 307-317).
For capturing the different elements of a learning culture and its influences on the learning and training behavior, a multifaceted construct was built including the Learning Culture Inventory (LCI) with a focus on perceived organizational values and beliefs about the importance of learning. A survey was conducted with registered nurses (N = 307), because of the distinct clinical context, that is mainly characterized by constant changes. Construct validity was tested and confirmed with an exploratory data technique and multiple regression analysis tested different relations between the constructs. The findings show that the support of the colleagues and the supervisor as well as the arrangement of learning possibilities act as main operators of the learning culture. Moreover, supervisor support and learning offerings have a strong effect on the transfer behavior and encouraged proactivity is a significant predictor of the formal learning.

The work tries to create a deeper insight into the possibilities of supporting learning by building a beneficial learning culture. The findings can also be transferred to the field of higher education related to the arrangement of internships and courses with a high practical relevance. Within the collaboration between the different players in higher and professional education, the fostering of the different elements of the learning culture can help to improve student learning.

Concluding, the work invites critical dialogue and evaluation from conference participants in order to discuss the requirements for and outcomes of connecting student learning to work experiences.

**Building Souls and CVs with a Student-Run Podcasting Course**

*Jessica Riddell, Emily Liastis, Ethan Pohl*

This case study will discuss a student-led experiential learning course that focussed on producing a podcast series dedicated to transformative learning in higher education. The three-credit course was initiated by two student leaders (station managers at the university Radio Station) in collaboration with a faculty advisor/collaborator in the English Department. We used the ten design principles of authentic learning (cf. Herrington, Oliver, and Reeves, 2003) in order to build a podcast series that took as its central premise the following questions: where are there moments in the teaching and learning experience where students build their souls as they build their CVs? In other words, what are the conditions for transformative learning where students cross important thresholds (cf. Meyer & Land, 2003) to reflect on their learning experience as collaborators with their professors and with one another? And finally, how do we create conditions for students to team-teach courses with professors in order to enhance self regulation in undergraduate learning (cf. Heikkilä & Lonka, 2007)? This case study demonstrates how combining curricular and co-curricular design through a scholarly and theoretical approach to podcast production created innovative pedagogies. The three co-instructors (two undergraduate students and one faculty member) researched assessment and alignment, built the course as a competency-driven experience, and took an interdisciplinary and experiential-learning approach to a field uniquely suited to this model of learning. The case study will discuss the context and rationale for the work, situate the course within the wider framework of students as partners in undergraduate education as well as self-assessment and self regulation students as partners. We will reflect on the barriers, challenges, and the potentially transformative effect of authentic learning environments on students and educators. Finally, we will offer recommendations to students, faculty, and educational developers who might be interested in integrating this model into their own practices.
Spatial Aspects of Learning Culture: Co-Teaching with the Classroom as a Third Educator

Peter Riegler

Cultures shape spatial environments and get shaped by them. The lecture hall can be viewed as being shaped by an educational culture of considering information transfer as paramount while at the same time fostering this culture. The spatial environment has been termed the third educator, with the instructor and the fellow students being the other two educators.

The supportive role of the spatial environment and, hence, the third educator, receives special attention in Student Centered Activating Learning Environment with Upside-down Pedagogies (SCALE-UP) where students are seated at group tables. This arrangement removes spatial barriers to students' interaction and collaboration which are typical for traditional classrooms. Moreover the spatial arrangement signals to the students that cooperation and co-construction of knowledge is essential in this class. It also signals that the instructor is not the central resource for learning since in a SCALE-UP room there is no front anymore.

The spatial environment also signals messages to the instructor. Taking the proverb of the third educator literally, teaching in such an environment will be conceptualized as co-teaching with this third educator (as well as with the second – the students) in this contribution. This notion also best describes the instructor’s experience. This contribution reports on the shifts observed and experienced in an automata theory class which moved to a SCALE-UP environment after having been taught in a traditional lecture hall for years. The implementation of SCALE-UP could be characterized as mild. It basically added the spatial arrangement characteristic for SCALE-UP to a class regularly being taught in a Just-in-Time-Teaching setting. Other features characteristic for SCALE-UP such as arranging fixed group membership and supporting group reflection have not been implemented.

SCALE-UP has recently gained considerable popularity and has proven to be effective for student learning. This contribution will add another data point to these findings. It draws on available data such as class attendance, performance on formative assessment tasks and exams, and student feedback to the instructor as well as the instructors’ experiences. These data consistently show an increase in student learning with the strongest effect being a considerable decrease of the failure rate and a statistically significant increase of the attendance rate. Given the rather mild implementation of SCALE-UP in this class it can be concluded that a mere (but deliberate) change of the spatial setting can contribute noticeably to the learning of both students and instructors.

Understanding Grade Surprise: SoTL and Possibilities for Using Big Data in Three First-Year Courses

Jennifer Robinson, Jill Robinson, John Arthos, Logan Paul, Chung-Chieh Shan

The age of “big data” offers tantalizing possibilities for working at intersections of learning, faculty knowledge, and teaching – what we know as SOTL. Although such an approach has been proposed (Baepler and Murdoch 2010), faculty are just beginning to explore its potential. Bringing SOTL and faculty perspectives to learning analytics offers important insight on how to use the digital trail students leave today. Most importantly, SOTL and faculty perspectives keep focus on the people, roles, goals, knowledge domains, and contexts of these analytics. This project explores the possibilities of using learning analytics to inform disciplinary instructors about movement of student aggregate groups through their courses. Our team of six faculty members from the physical sciences, information sciences, social sciences, and humanities teaching 5 courses and 7000 students per year at a research university in the US – has been collaborating to use big data to illuminate student learning in our large introductory courses, courses that set the stage for success in students’ college experience. Specifically, we define and track the phenomenon of grade surprise in our courses. We
ask students to comment on their grade expectations for a specific assignment (first high stakes assignment of the semester) and probe their reasoning and their responses to actual grades. This moment of intervention is important because most of our students, ranked in the top 10% of their high school classes, are used to getting A grades. However, in college they often must cope with a reordering of their success relative to peers. The goals of the study are to understand grade surprise and students’ experiences of it, prepare them to evaluate their preparation accurately, equip them to recover from surprise when necessary, and share resources and strategies with the widest range of students possible. Overall, the study models how to close the gap between institutional data and classroom teaching and learning. Initial findings indicate a diversity of ways in which students enter particular general education courses, the purposeful and labor-intensive teaching designs that faculty teach for a particular knowledge base, and “sticky” differentials in student success. The conclusions include that the grade surprise questionnaire itself prompts reflection; instructors can learn to build on this reflective awareness; and instruction before the first assignment may mitigate the negative effects of surprise. Audience members review the ethics, possibilities, and specific applications for these ideas in their own educational environments. They will also be invited to join the study.

Growing a Culture of SoTL in a Research Intensive University

Ido Roll, Adriana Briseño-Garzón

How can a culture of SoTL become better appreciated and supported in research intensive universities?

The wealth of required expertise, the challenges of engaging in high-quality SoTL, and its potential to transform learning, are often underappreciated. One key challenge is that much of the disciplinary expertise of faculty members does not transfer well to their SoTL work, as most academic fields are not concerned with evaluating human behaviour and learning. At the same time, SoTL should build off disciplinary methodologies and epistemologies. In order to overcome this tension and with the goal of making SoTL accessible to a wider audience, institutions are continuously developing programs that aim at scaffolding and sustaining faculty engagement with SoTL within and across disciplines (Dobbins, 2008; Webb, Wong, Hubball, 2013). Research-intensive institutions in particular, have incorporated SoTL in ways that have have been categorized as 1) broad national initiatives, 2) institutional supports, including centres for teaching and learning and, 3) strategic, institutionally supported SoTL Leadership programs (Hubball, Clarke, Webb, & Johnson, 2015; Wieman, 2017).

In this session we present a successful institutional model that supports faculty members in learning to SoTL within disciplinary norms and produce high-quality research on teaching and learning. The SoTL Seed program has several pillars: (i) partnership with expert students who contribute from their knowledge of learning theories and methodologies; (ii) a set of workshops and resources that facilitate professional development; (iii) door-to-door support from project inception to publication; (iv) a community that encourages reflection and sharing of challenges; and (v) synergistic support with other teaching and learning innovation programs on campus. The program balances projects in terms of focus, discipline, and rigour. It uses these as opportunities for grounded, contextual professional-development for faculty members, in order to increase their agency and capacity as SoTL researchers and hubs.

The program was well received by faculty members. Evidence for its success comes from the number of applications (from 15 in 2015 to 51 in 2017), from program evaluation, and from invitations to collaborate with other strategic initiatives. This success makes an impact on the value and culture of SoTL within our institution, extending beyond the participating projects.
During the session we will share the program structure, evidence for its success, and current dilemmas. We will then work in small groups to abstract key principles of the program and the way to transfer these across contexts to a variety of institutions.

Re-Conceptualizing Faculty Development to Promote a Culture for Learning

Diane Salter, Glen Jacobs, Shannon Rushe, Paul Fields

This paper explores how the implementation of an innovative certificate program impacted approaches to teaching of multi-disciplinary faculty and generated interest in faculty professional development across the university community. Most university faculty have subject expertise but little prior training about different approaches to teaching or how to design a learning experience that promotes student engagement and deep learning. The primary goal of the certificate program was to enhance the student learning experience by providing professional development for faculty around teaching and learning. A secondary goal of the program was to promote a learning culture among faculty across the institution.

Evidence supports the notion that teachers’ approaches to teaching impact student approaches to learning; this, in turn, influences student achievement of learning outcomes. In this session we discuss the results of data collected between Aug. 2017 – June 2018 from cross-disciplinary faculty (Schools of Medicine, Veterinary Medicine, Arts and Sciences) who participated in a professional development program. Attitudinal change in approaches to teaching was measured by pre and post completion of the Approaches to Teaching Inventory (ATI) (Trigwell and Prosser, 2004). Behavioural change was measured by a qualitative analysis of the post session tasks.

Historically, many professional development programs for faculty have focused on ‘instructional skills’ in content delivery vs guiding faculty to fundamentally ‘rethink’ their approaches to teaching. In the design and implementation of this program, active, task-based, face to face sessions, combined with post-workshop activities provided a concrete way for faculty to ‘re-think’ their approaches to teaching and incorporate changes to their course design and delivery that would promote ‘deep’ vs ‘surface’ learning. Two frameworks were used in the design and delivery of the program: an ‘Outcomes Based Approach to Student Learning’ (OBASL) combined with ‘T-S’, a Task-Based model of course design (Salter et al, 2004). The data analysis for the research project combined quantitative and qualitative approaches to investigate ATI scores that measured attitudinal change and narrative data collected through the task analysis to assess behavioural change.

Our session will incorporate time for reflection and discussion by the participants as we collaboratively: a) consider how this program differs from typical faculty development programs b) discuss our research findings that showed a shift in approaches to teaching c) describe how the program generated interest across this institution and d) discuss how the concepts might be applied at their own institution.

Closing the Loop: Using Faculty-Generated Material in Online Educational Development Formats

Pia Scherrer, Karin Brown

A growing number of educational offers are becoming available online. This development is also apparent in the field of educational development, where the provision of online and blended learning formats is increasing. However, while technology may make learning independent of time
and space, it also challenges the view of educational development as cultural work occurring at a particular institution (see Stensaker, 2017; Mårtensson, Roxå, & Olsson, 2011).

Our presentation focuses on emerging work at one higher education institution. We are currently developing introductory teaching and learning courses for doctoral teaching assistants as blended learning offers. We seek to design these courses with the goal of contributing to the professional development of individuals while simultaneously considering how we can deliberately build collective teaching expertise (see Geertsema, 2015) at our local institutional level. We illustrate how we systematically capture the teaching and learning expertise which is developed among this target group in the form of SoTL-inspired artefacts and how we approach curating the reintroduction of participants’ individual expertise at a collective level in our blended learning course formats.

Using a Student-Centered Teaching Strategy to Support Learning in Online Graduate Programs

*Meadow Schroeder, Erica Makarenko, Karly Warren*

Over the last decade, online education has risen in popularity and demand (Allen & Seaman, 2017). Students have been attracted to online learning for its flexibility and accessibility and many return to graduate studies after establishing careers in the workforce. Professional students bring a wealth of experience and knowledge to the academic environment; however, these students can also have trouble balancing the academic demands with their other roles as employee, parent, spouse, etc. (Bedewy & Gabriel, 2015). Informal feedback from students in two graduate educational psychology programs has suggested that unexpected events often hinder academic engagement and interfere with task completion and depth of inquiry, which have led to poorer quality of work when faced with a deadline that is inflexible. To address this problem, this study examined the effect of a late bank strategy in four online educational psychology courses. During the term, master’s students could hand in one of two major assignments up to 5 days late without penalty. This late bank was an opportunity for students who needed extra time to delve deeper into the material, to engage more thoroughly in the task, and to ultimately feel more confident in their mastery of the course material.

The goal of the study was to examine (a) if the implementation of the late bank reduced students’ stress and improved self-efficacy regarding assignment completion, and (b) how the late bank affected the student-instructor relationship. Results found the late bank reduced student stress, improved self-efficacy and positively affected their relationship with their instructor. Students reported that their assignments were of better quality and requested the late bank be used in future courses. We view the late bank as one strategy instructors can easily incorporate into their teaching to promote a culture of learners. In addition to reducing stress and improving relationships between students and the instructor, it requires no training to implement and places few time demands on instructors.

How to Have Your Cake and Eat It: Encouraging Dialogue about Learning between Students and Staff

*Jennifer Scoles, Catherine Bovill*

One of the most important, yet often fragile, relationship dynamics in a learning environment is that between students and staff. Research suggests that a strong positive relationship between students and staff, both inside and outside of formal teaching, enhances academic outcomes and increases student engagement (Lampert, 1993). Furthermore, many years ago, Rogers (1962) argued that the quality of the relationship between the teacher and students is the strongest predictor of teacher effectiveness. A key dimension to any relationship is genuine dialogue, which in turn, incites trust,
respect, and an emotional capacity to connect. For example, Weder and Skogsberg (2013, p. 143), recommend that staff should ‘enter into dialogue with students as a relational dynamic, not simply as a way of talking and listening, but as a way of building human connections with each other and with knowledge itself’. This invites researchers to consider the emotional dimensions of students and staff relationships; a characteristic of student and staff partnership work that is often marginalised in scholarship (e.g., Felten, 2017).

This paper explores how a culture of learners can be fostered through promoting and supporting genuine dialogue, particularly in relationships that have a strong asymmetrical power dynamic, such as that between students and staff. Two innovative initiatives are presented. Firstly, ‘Coffee and Cake Conversations’ at the University of Edinburgh, which aims to promote the benefits of informal dialogue about learning and teaching between students and staff (Woolmer, Marquis and Bovill, 2017). Paired students and staff from the same School/Subject discuss learning and teaching in an informal capacity over coffee and cake, paid for with vouchers provided through an internal University Action Fund. The second project, ‘Students as Colleagues in the Review of Teaching Practices’, at Edinburgh Napier University, considers a more formal dialogic initiative. Students were invited to develop collegial relationships with a member of staff out with their School/Subject in order to act as constructive evaluators in a peer review process (see Huxham et al, 2017). These initiatives not only have the potential to contribute towards a more humanised view of the ‘other’, but they also invite discussion of teaching and learning issues between students and staff in more collegial environments.

Using a Model of SoTL to Support the Development of an Inter-Disciplinary Community of Academics

Graham Scott, Peter Draper

The Teaching Excellence Framework (TEF) and national league tables that include teaching metrics are raising the profile of scholarly teaching in the United Kingdom. This is coincident with a shift towards the employment of academics on teaching and scholarship (rather than traditional teaching and research) contracts. As a result, for a growing number of teaching faculty in the UK, the development and evidencing of excellent teaching has moved from a personal desire to a contractual requirement. Although perhaps problematic, the institutional definition and measurement of excellence in this context often involves innovative educational enquiry, enhanced student outcomes and crucially the dissemination of practice. In effect faculty are asked to undertake SoTL at some level and as a result awareness of SoTL, and therefore the significance of SoTL, is increasing. However, in many institutions structures to support the development of SoTL are not well developed and so for many academics the journey from disciplinary researcher to educational enquiry and SoTL is a lonely and arduous one; and in some cases not knowing where to begin may be a barrier that prevents starting at all. As two National Teaching Fellows who understand first hand the difficulties that our colleagues face we have developed an interdisciplinary programme of workshops grounded in SoTL theory to support their first forays into SoTL. Significantly these workshops are not delivered within a formal institutional framework.

Our initiative is based on a model of SoTL outlined by Kern et al (2015) and draws upon seminal work by Boyer (1990). Our objectives were (i) to introduce colleagues to a practical, theoretically based model of SoTL; (ii) to use the model as a framework for team-based, interdisciplinary SoTL projects producing tangible outputs; and (iii) to create interdisciplinary communities of scholars committed to enhancing the quality of learning and teaching through peer review and the dissemination of good practice. Participants used Kern’s model and peer-to-peer discussion to position their current practice and to set individual goals. They then worked towards those individual goals individually or
collaboratively with the support of the group. Interviews with participants revealed that the initiative was a success in the short term (long term evaluation is pending) and through our presentation will highlight the successes and surprises of the project, and in doing so we will share the lessons that we have learned along the way.

Can the Experiences and Motivations of Our Students Inform Residential Field Course Design?

Graham Scott, Dominic Henri, Stuart Humphries

Residential field courses are a signature pedagogy of the environmental sciences and as such are relatively well researched. The benefits of field courses to students include the development of disciplinary and transferable skills, and the immersive environment of the field course enables deeper learning (e.g., Scott et al, 2012). They are however, costly to students, faculty and institutions and it is important therefore that field courses are designed to be effective and efficient. Much of the research on field courses adopts a pre/post trip evaluation methodology (where students are asked to express opinions prior to and after participation). In the project I will present we have adopted a different approach based upon Blair’s model of Vitruvian Reflection (Blair, 2011; Blair and Deacon, 2015). Through an analysis of the structured in-situ active reflections of our students in the relatively under-researched affective and conative domains we have developed a more nuanced understanding of the factors underlying student engagement with learning opportunities afforded by the field course experience. These new insights provide an opportunity to make our field courses even better. In presenting this work I will focus particularly on the importance of adequate student preparation, the management of student expectations, the value of student independence and ownership of learning and the willingness of staff members to re-conceptualize their practice.

Network Approaches to Assessment Redesign

Jill Scott, Natalie Simper, Brian Frank

This presentation describes approaches to building an institution-wide assessment network aimed at developing and assessing cognitive skills in undergraduate education with particular emphasis on the role of discipline-specific “assessment facilitators”. In the Cognitive Assessment Redesign (CAR) project, assessment facilitators supported five disciplinary clusters: humanities, social sciences, sciences, health sciences, and engineering. The twenty-five instructors in the project identified an assessment initiative based on their goals for the course and student need. The research design was informed by research showing that assignment tasks need to align with intended outcomes ("On Solid Ground,” 2017), and that instructors need to be involved in assessing student learning (Rhodes, 2011). The assessment facilitators supported the development of authentic, problem-based tasks (Ashford-Rowe, Herrington, & Brown, 2014).

Supported by the Higher Education Quality Council of Ontario, a central goal of the CAR research is to align course-based assessment materials with the dimensions and criteria from the “Valid Assessment of Learning in Undergraduate Education Rubrics” (VALUE rubrics) (Rhodes & Finley, 2013), to validate the course assessment and to aggregate data across the institution. Results demonstrate that the network approach was instrumental in building capacity towards long-term institutional culture change and the development of sustainable assessment of cognitive skills. Assessment results have been further validated through rank-order comparison with a standardized test called HEILghten (Liu, 2011). Instructors have strongly stated the benefits of support from assessment facilitators, change has been evidenced through pre and post instructor surveys.
Presenters will engage session participants in a discussion around the feasibility of this type of initiative at their institutions.

**Historicizing the Library: SoTL in the Library Classroom**

*Maura Seale*

Although many academic librarians teach regularly – in classrooms, in consultations, at the reference desk – library scholarship and practice has only recently begun to meaningfully engage with SoTL. This paper will bring together scholarship on library pedagogy (specifically, critical information literacy) and SoTL by outlining and reflecting on the role of library instruction in general education history courses at a mid-size private university in the United States.

The history librarian worked with teaching faculty to revise the structure of the general education history courses using the Decoding the Disciplines framework. In considering how to revise the library instruction within these courses, the librarian turned to the SoTL in history – specifically Stephane Levesque’s work on procedural knowledge, Sam Wineburg’s notion of historical thinking, and Lendol Calder’s method of uncoverage – in conjunction with scholarship around critical information literacy. The library instruction that emerged from the confluence of these myriad strands of thought focuses on helping students think historically about the library; this approach not only reinforces what students are learning to do in these general education history courses – namely, the development of a critical, empathetic approach to the past – but also helps them become more savvy and effective researchers.

Both of these goals, which undoubtedly have to be developed over the course of more than just a semester, can ultimately have lasting impact, as students will be called on to evaluate uses of the past in popular discourse (as in, for example, the debate around Civil War monuments in the United States) and will need to conduct different forms of research and critically assess sources throughout their lives. Moreover, thinking historically about the library locates the library within broader social formations and power relations, and in so doing, promotes inclusivity in library research. This project exists at the intersection of "What is?" and "Visions of the possible" in Pat Hutchings's taxonomy of SoTL research, given the newness of critical information literacy and librarianship's engagement with SoTL.

SoTL can create an interprofessional space in which librarians and teaching faculty can collaborate and rethink how library research can be taught to foster historical thinking and a critical sense of the information ecosystem. The primary outcome of this presentation is to spark conversation between teaching faculty and librarians, both at the conference and once participants return to their home institutions.

**Promoting a Campus-Wide Culture of Learners through SoTL**

*Janel Seeley, Monia Haselhorst*

Universities can certainly be considered learning cultures, however engaging in all aspects of learning, particularly engaging in the scholarship of teaching and learning as a university-wide practice, is not always recognized. Institutional change towards a culture of learners through SoTL can be slow. However, with an integrated vision, a wide range of opportunities, shared agendas, rewards, international connections and a well-planned timeline, SoTL can be integrated into a university wide initiative (Hutchings, Huber, Ciccone, 2011). With this in mind, our institution is
currently working on a cultural change that values SoTL across campus. In this presentation, we will share our model for creating a culture of learners within our university.

Our university is implementing three projects using a model to support faculty and graduate assistants in the design, implementation, analyzing and dissemination of research that assesses teaching and the resulting impact on student learning. The first project includes a summer institute for teams from within departments or interdisciplinary teams in which faculty and graduate students learn from experts in SoTL about how to design a research project. The second project involves an international faculty learning community partnership between our university and Tashkent State University of Economics in Uzbekistan, in which faculty partners from both universities will design and implement SoTL projects. Finally, a group of STEM faculty who are part of the summer institute on teaching and learning will work in teams to develop SoTL projects in their disciplines within the university and in partnership with our state community colleges. All these projects will then simultaneously engage in designing, implementing, analyzing and disseminating a SoTL project over a two-year period. The projects will end with a campus wide symposium and competition for funding to disseminate results at additional conferences.

In this presentation we will share the lessons we learned with our pilot project, and solicit feedback from workshop participants for further project development.

“I Didn’t Think Students Like Me Got Opportunities Like This”: Equity in High-Impact Practices

Jenny Shanahan

The well established benefits of student participation in the teaching and learning praxes known as high-impact practices (HIPs) – especially undergraduate research, internships, global engagement, learning communities, and community–based learning – include significantly higher rates of persistence and graduation, self-efficacy, analytical and problem-solving skills, and oral and written communication. These gains are most pronounced for students who have been underserved in higher education: those from indigenous and other underrepresented minority groups and/or who are low-income or first-generation (Brownell & Swaner, 2010; Hernandez, Schultz, Estrada, Woodcock & Chance, 2013; Kinzie, Gonyea, Shoup, & Kuh, 2008; Kuh, 2008; Kuh & O’Donnell, 2013; McNair, Albertine, Cooper, McDonald & Major, 2016). Students from underserved groups often attended under-resourced secondary schools and may not have family members who can guide them in achieving academic and career goals. Developing valuable competencies in the context of supportive relationships with mentors and peers is therefore particularly efficacious for underserved students (Shanahan, 2018). However, data from multiple institutions indicate persistent inequality, as access to the most valuable learning opportunities still disproportionately favors economically advantaged students with family legacies of higher education (Carpi, Ronan, Falconer & Lents, 2016; Finley & McNair, 2013; McNair et al., 2016; Osborn & Karukstis, 2009).

This practice-oriented research addresses that disparity and brings to light strategies that ensure an inclusive learning culture and equitable access to HIPs. Methods were composed of (a) a narrative review of the literature of the last 10 years on diversity, inclusion, and equity in high-impact practices, especially undergraduate research, internships, global engagement, and community-based learning; (b) open-ended surveys of over 300 students from underserved groups participating in faculty-mentored research at a diverse, comprehensive university of 9,000 undergraduates in the United States; and (c) focus groups of students who participated, and those who did not, in honors research, study abroad, and residential learning communities at that same university. Findings show that particular recruitment efforts and forms of social-emotional support from faculty/staff increased rates of participation and persistence of students from underserved groups. This presentation will
share recent SoTL research on the myriad benefits of more diverse and inclusive participation in high-impact practices; explain the barriers to equitable access identified by students; and describe successful approaches for welcoming and supporting students from underserved groups in excellent learning opportunities. It illustrates how heightened attentiveness to equity can ensure that inclusion is core to our most consequential programs.

**Students Create Video Tutorials for their Peers in Discipline-Oriented Classes: Implementation Guide**

Anne-Laure Simonelli, Jonathan Soulé, Gaute Velle, Sigrunn Eliassen, Vigdis Vandvik

Biology education aims to teach students key concepts about living organisms, as well as cross-disciplinary transferable competences, skills and practice. The learning that takes place during lab- and field courses allows students to develop and refine key practical skills (Hofstein and Lunetta, 2003; Rahman and Spafford, 2009; Smith, 2004). Learning through practice is important in terms of student experience (Orion and Hofstein, 1991) and in fostering professional and collaborative relationships between students and instructors (Hart et al., 2011). Lab- and field courses are intensive and costly. Underprepared students do not learn as much as they could from lab- and field courses (e.g., Hill and Woodland, 2002). Students’ preparedness to practical courses is thus of the highest importance so that instructors do not spend time on undue explanations.

Videos are central to the student learning experience in the current generation of Massive Open Online Courses, MOOCs. Goodenough et al. (2013) found that making high-quality videos, both conceptual and instructional, through student–educator collaboration, was not only possible, but also benefitted students making the videos and subsequent cohorts who use them. Since 2016, we have implemented an innovative pedagogical activity, Teach2Learn (TE2LE) within various courses at the Department of Biological Sciences, University of Bergen and at the University Centre in Svalbard, UNIS (Norway). Students create video tutorials for their peers on various topics, such as lab-, field- and numerical methods, to foster learning within that specific topic and strengthen transferable skills, such as communication, cooperation, time management, creativity and didactics. The instructional video tutorials, which are made publically available (https://teach2learn.w.uib.no/), represent a digital resource for educators to prepare subsequent students to key lab- and fieldwork techniques.

This teaching and learning strategy is multidisciplinary with relevance for a range of subjects (e.g. toxicology, organismal biology, genetics, statistics, ecology and ocean science).

We present and discuss the development and implementation of TE2LE at the bachelor and master level in biology education. We also provide guidance for implementing such activities in different classes in higher education’s discipline programs.

**Learning Outcomes Assessment: Informing Course Improvements**

Natalie Simper, Brian Frank, Jill Scott

Authors will summarize results from their four-year longitudinal study (Simper, Frank, Scott & Kaupp, 2018) that investigated a range of assessment methods for evaluating critical thinking, problem-solving, written communication. These skills are considered fundamental elements of an undergraduate education (Johnson, 2009), and some of “the most difficult outcomes to define, teach and assess” (Deller, Brumwell, & MacFarlane, 2015, p. 13). The research, supported by the Higher
Education Quality Council of Ontario, tracked skill development in disciplines spanning engineering, science, social science and humanities. There was a consenting sample of n=2697 in first-year, n=785 in second-year, n=599 in third-year, and n=419 in fourth-year who participated in testing on the Collegiate Learning Assessment (CLA+) or the Critical Thinking Assessment Test (CAT), or had their course work scored using the Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics.

The results of the study quantified longitudinal growth, but student motivation was a significant concern for standardized tests. The effect size for learning gains between first and fourth-year on the standardized tests were CLA+ d=.44, and CAT d=.65, and sizable growth detected using the VALUE rubrics. The relative cost of implementing the VALUE rubrics was approximately $20 less per student than implementing the tests. Feedback facilitated through the research-based departmental reports and debriefs prompted improvements to courses. Instructors in our longitudinal study found the evidence from the VALUE rubrics being most illustrative and compelling. A web app was developed as part of the project to help instructors to identify and define student outcomes (Simper, 2018). Presenters will facilitate participant engagement with protocols for evaluating a work sample using the VALUE rubrics, with discussion following centered around assessment challenges and strategies for overcoming them.

The Role of Social Interactions on Changes in Assessment Practices

*Natalie Simper, Nicoleta Maynard, Katarina Mårtensson*

The goal of this session is to elicit feedback on social interactions and their perceived relationship to changes in assessment practices. Despite a myriad of reports recommending change to assessment practices (Beneitone et al., 2007; González, Wagenaar, & others, 2003; Jankowski, Hutchings, Ewell, Kinzie, & Kuh, 2013; Tremblay, 2013), there has been resistance to change (Deneen & Boud, 2014). The need for consistency is one of the recommendations, but variability between assessment methods presents a challenge (Hathcoat, Penn, Barnes, & Comer, 2016), and instructors generally lack specific training in assessment (Hutchings, 2010). Research conducted by Kuh, Jankowski, Ikenberry, & Kinzie (2014), suggests that instructor interest in improving student learning is the fourth most important trigger for improvement in assessment.

Episodic narrative interviews were conducted, with a purposeful sample of instructors from a range of disciplines at one institution (phase 1), to investigate the phenomenon of change in approaches to assessment. Participants were prompted to describe changes to assessment, and then reflected on the role that significant social conversations (Roxa & Martensson, 2009) played in that experience. The rationale for this approach was to navigate the meta-awareness of social relationships as participants reflected on their assessment practices and considered potential thresholds for change. In addition to the interviews, participants graphically represented their network groups, to help substantiate the significance of relationships within professional networks. Interim findings from the first phase of data collection will be presented, and approach tendencies to new assessment practices investigated. Session attendees will be invited to provide critical feedback on the methods. They will also engage in reflective discussion on the similarities and differences between institutional and national contexts.

The authors would like to acknowledge the contribution of an Australian Government Research Training Program Scholarship in supporting this research.
Teaching Awards across Canada - What’s Happening?

Melina Sinclair, Janice Miller-Young, Sarah Forgie

Through teaching awards, institutions aim to both generate and sustain a culture that supports teachers, recognizes the accomplishments of excellent teachers, and encourages other faculty to strive for excellence. Through their stated criteria, awards also help to communicate the institution’s conception of teaching excellence (Little & Locke, 2011).

However, Chism’s (2006) survey of teaching award programs in the United States found that the award programs rarely used specific criteria, required minimal evidence to support the criteria, and none of the institutions defined what excellent teaching looks like. A similar study has not been completed in Canada. This study sought to investigate what are the criteria, evidence, and standards currently used to award teaching in higher education institutions across Canada; what are the differences between institution types; and how does the Scholarship of Teaching and Learning feature in these awards?

We collected information from 89 post-secondary institutions across Canada in 2017, including community colleges, polytechnic institutions, undergraduate, master’s, and comprehensive universities, as well as U15s (research-intensive). Data included the evidence, criteria, award themes, and standards and definitions of excellent teaching for their teaching awards. All information was gathered and coded in NVivo by one author and checked for consistency and reliability with the other two who each coded awards from one province. Differences were discussed until agreement was reached and subsequently the entire data set was coded.

We started by using the codes from Chism (2006) and found that we needed to add two more codes for curriculum and program development, and research (which meant keeping knowledge up to date and integrating new research into a course, distinct from SoTL which was a separate code). SoTL was explicitly listed in 24% of the awards, compared to 8% in Chism (2006). Only 4 of the 89 Canadian institutions provided standards for their awards programs. Additional findings, such as the most common criteria and forms of evidence, and differences between institution types will be presented. We will also discuss how this study informed revisions to our own Faculty Excellence awards program.

Our study contributes to the literature about the nature of teaching awards in higher education and the prevalence of SoTL. Audience members will have an opportunity to compare our findings to their own institutions’ awards programs and based on their experiences, to share, discuss, and reflect on the benefits and drawbacks of different models and criteria for institutional teaching awards.

This Is Us: Twenty Years of Building SoTL Communities

Brian Smentkowski, Mary Huber, Pat Hutchings, Teresa Johnson, Balbir Gurm, Laura Cruz

Consistent with the theme of this year’s conference, we present the results of a pilot study of SoTL Communities in the context of learning cultures twenty years after CASTL was formed and ten years after its formal conclusion. Our analysis incorporates survey results from CASTL members in an effort to better understand and inform the transition from building SoTL communities to maintaining, sustaining, and growing them. Our research is guided by social network analysis and systems thinking, which enables us to visualize and represent the complex networks built from the CASTL foundation, and improvement science, which permits us to identify and share the process tools necessary to build generative learning cultures within SoTL communities. Through this process we assess the impact of SoTL programs – first, in Building SoTL Communities, then among all CASTL
clusters – in the 20 years since CASTL’s inception and the 10 years since its conclusion. We further provide a framework for scholars to analyze the cultures of learning and learners that have evolved within SoTL and the capacity for an inclusive culture that learns.

Embracing the Disciplines: Creative Arts Pedagogy at the University of the Arts London

Catherine Smith

A growing body of research into the signature characteristics of arts higher education indicates the prevalence of project work, student-driven active learning and research-based approaches to investigations and processes (Orr and Shreeve, 2018; Shreeve, Sims and Trowler, 2010; Shreeve, Wareing and Drew, 2008). The specificity of arts learning and teaching cultures, rich in experimentation, materiality and practice-based knowledges, can be hard to express, ‘like capturing phosphorus shining on the water at night – you can see it from afar but when you get up close it disappears again’ (Orr, 2016).

This paper asks, what are the ways in which creative practitioners share the detail of their pedagogies? How might they borrow from the creative disciplines when articulating their teaching practice? It proposes a new culture for pedagogy in the 21st century art school.

At the University of the Arts London (UAL), the last two years have witnessed the quiet rise of specific arts practice-based articulations of pedagogy. Educators across the university are starting to harness their creative practice in the design, delivery and presentation of pedagogic enquiry. Examples of work include shoe designs for teaching criticality around issues of gait to footwear designers; a photo essay exploring the fictional concept of arboreal pedagogy; a speculative design workshop to conceptualise studio culture; a series of short narrative films exploring relationships between academics and technicians; a sound art installation documenting student journeys; auto-ethnographic data poems investigating bias in the author’s own academic practice.

This is the result of three strands of work stemming from the university’s central ‘Teaching and Learning Exchange’. This paper will outline the projects: a multi-media, open access teaching and learning journal (Spark); a student-staff co-produced exhibition of artwork made to celebrate enquiry-based learning (Practices of Enquiry); finally outlining the redesign of the postgraduate provision (PgCert and MA Academic Practice in Art, Design and Communication) to foreground arts practice-based research methodologies (Barrett and Bolt, 2010; Gray and Malins, 2010; Nelson, 2013).

Taken together, this work is shifting UAL pedagogic practice towards a visual culture, more aligned to the students’ vibrant and diverse creative output.

Enhancing Our Culture of Learners through Reflections on Power in Students as Partners Practices

Heather Smith, Roselynn Verwoord, Yahlnaow (Aaron) Grant, Conan Veitch

The students as partners model (Healey et al., 2014; 2016) can challenge us to reflect on how we work with students in a variety of areas including scholarship of teaching and learning, curriculum design, open educational resource development and open pedagogy. “Partnership is a specific form of student engagement, with very high levels of active student participation. Partnership is a way of doing things, rather than an outcome in itself” (Healey et al., 2016: 2). In spite of the emphasis on process, the students as partners literature also highlights a host of impacts on both student and faculty. Roisin Curran (2017: 2-3) for example, draws from the wide body of students as partners
literature and highlights the following student outcomes: “development of the learner leading to better citizens, ...enhances motivation and learning, ...improves teaching and classroom experience ...improves learning in terms of employability skills”. We believe that both process and outcomes matter but if we want to foster a culture of learners, we must pay more attention to the embedded power hierarchies in the students as partners relationships because hierarchies of power and privilege can impede our partnerships and the learning of both faculty and students. Exposing the hierarchies of power means we can work towards the kinds of learning outcomes identified in the students as partners literature but with a more nuanced, equitable, and culturally appropriate approach.

Working as a team of four, including students, faculty and staff, and building on existing work by critical educational theorists (see Andreotti, 2012; Freire, 2005) and feminist scholars (see hooks, 1994; Lather, 2007) we present an educational framework using the word ‘POWER’ that examines the dimensions shaping power relations in partnership. We describe the framework and provide questions for each aspect of the framework to prompt an enhanced awareness of the dimensions shaping power relations in partnership. Lastly, we engage in a dialogue about the framework by drawing on our experiences navigating power in partnership and include parts of that dialogue in our paper presentation.

**Storytelling as SoTL**

*Alison Staudinger*

This paper explores a variety of methods rooted in narrative inquiry for understanding and improving student learning. I also also argue for storytelling in the social-justice classroom. First, I will trace how storytelling, including personal narrative, ethnography, podcasting and oral histories, has been an important cross-disciplinary methodology and is becoming more important in the SoTL world, as indicated by the 2016 ISSOTL Conference theme. After analyzing common features of rich narrative inquiry in SoTL, I argue for its broader importance for the field and offer some suggestions for the sorts of questions about student learning that lend themselves well to these methods. I'll also wade into some of the limitations of narrative method, problematizing some of the cultural assumptions built into how narrative has been theorized in academia. Finally, I'll share an ongoing SoTL project working with student co-collaborators to understand student self-narratives of learning and identity in an interdisciplinary program as an example of storytelling as SoTL.

**Promoting Self-Regulated Learning in the First-Year Seminar: Evidence and Future Directions**

*Hillary Steiner, Nirmal Trivedi, Diana Sturges, Jody Langdon*

At many institutions, the first-year seminar serves as an introduction to the learning culture of higher education. As such, first-year seminars have an important role to play in helping students understand college expectations and demands. To be successful in college, students must go beyond surface-level learning, taking ownership of learning by choosing and using the best resources and strategies for the task, as well as reflecting upon and monitoring their progress toward learning goals (Kitsantas, 2002), skills often grouped under the umbrella term “self-regulated learning” (e.g., Zimmerman, 2008).

The research discussed in this panel is grounded in the literature on self-regulation strategies and college success, and seeks to answer the question of whether metacognitive and self-regulation skills can be taught effectively through an assignment which requires deliberate practice of the strategies
in an authentic context – another course in which the student is currently enrolled. In the Strategy Project assignment, students learn time management, communication, and study strategies in the process of preparing for an actual test, then demonstrate that learning by submitting their test preparation activities as part of a graded project in a first-year seminar course. By encouraging and providing feedback on reflective thinking and goal-directed interaction with faculty and peers, instructors model the process of self-regulation.

In this paper, we will report briefly on four completed studies of the efficacy of the strategy project. Results from the first three studies indicate that at specific institutions, the strategy project was successful in improving students’ metacognition and self-regulation, management of time and study environment, and peer learning over the course of a semester. In study 4, which involved the use of the project at another institution, no significant changes in motivation, cognitive and metacognitive strategies, or resource management strategies were observed. However, it appears that regardless of institution, students who completed the strategy project increased their use of deeper level learning strategies, including concept maps, practice problems, and self-quizzing, as well as some surface level strategies such as making flashcards, and working with a group. Given this information, students in a first-year seminar tend to use more effective learning strategies as a result of the project, but further work is needed in varied learning environments. Participants who attend this session may generate ways they can modify the strategy project for their own use in order to create a lasting impact on how their students approach learning.

Reconsidering Communities of Practice as Hybrid Spaces for Learning

Gladys Sterenberg, Kevin O’Connor

Scholarship of Teaching and Learning proposes that meaningful teaching and learning can be generated and sustained through engagement in communities of practice. In teacher education, communities of practice have been implemented to address the gap between practitioner and academic knowledge. However, research suggests that within communities of practice the dualism of theory and practice is maintained, power relationships contribute to defined roles as experts and novices, and learning is limited to enculturation into existing practices.

These concerns have led researchers to reconsider ways in which such communities can integrate the traditional binary opposites of academic and practitioner knowledge by fostering democratic ways of knowing through overlapping communities of practice, communities of praxis, communities of inquiry that focus on knowledge of practice, and hybrid spaces resulting in “a shift where academic knowledge is seen as the authoritative source of knowledge about teaching to one where different aspects of expertise that exist in schools and communities are brought into teacher education and coexists on a more equal plane with academic knowledge” (Zeichner, 2010, p. 95).

Our qualitative study investigates how teacher candidates connect theory and practice through school-based seminars designed to facilitate hybrid spaces. We envision that holding seminars in school settings provides a context that reflects the socio/political/economic complexities of the classroom and heightens our students’ abilities to unpack both the theoretical and practical aspects of teaching and learning.

The participants were fourth-year teacher candidates enrolled in an integrated practicum semester. Evidence of 32 participants’ experiences was gathered from class assignments (reflective journal entries, responses to discussion prompts, and a portfolio) and 11 interviews. This data was analyzed using Gutiérrez’s (2008) framework of characteristics of hybrid spaces. The results show that most teacher candidates co-created and applied new knowledge to their practice and were able to grapple with theoretical ideals by interrogating their own experiences. Most teacher candidates were able to
Critical Incidents and the Development of Lifelong Learning Attributes in Group Study Programs

Lisa Stowe

This presentation will present the results of the final stage of data collection in a qualitative study exploring the notions of culture shock and critical incidents (Pedersen, 1995) in Group Study Programs (GSPs). GSPs are short term travel study programs of one to six weeks, and are unique learning environments because students and instructors live, study and socialize together for the duration of time these programs are in the field. The compression of time and expansion of space in these programs challenge students to interact with their instructors and classmates in a more intensely charged way than they would interact with them in their home institutions. The intensity lays the foundation for multiple critical incidents to take place resulting in a learning environment that is complex and challenging but one that, if intentionally guided and facilitated by the instructor (Dwyer, 2004), can become more learner-centred (Coryell, 2011; Gmelch, 1997) and can deepen learning objectives and help develop lifelong learners (Jarvis, 2004).

Past results in this qualitative study showed that critical incidents are key in helping students understand the unique learning environments in GSPs. This presentation will share the results of the final part of this study which more fully explores and unpacks the notion of a critical incident from a student perspective. Prior to students leaving for their GSPs, researchers conducted focus groups where participants discussed the notions of critical incidents and fully explored their assumptions around this term. Researchers followed up with participants with a mid-program survey and then completed one to one interviews once participants returned to their home institution. The results will show a deep and complicated definition of critical incidents and culture shock, that, if effectively and intentionally utilized by instructors, can deepen learning objectives and help precipitate what Jarvis (2004) terms disjunctural moments that are key to fostering lifelong learning attributes. Connections between critical incidents, culture shock and disjuncture are currently lacking in the GSP research. This research will help show how these powerful learning environments offer students an opportunity to learn deeply and collaboratively.

Exploring ‘Classification’ and ‘Framing’ of Quality in a Marketised and Globalised Sector

Katrina Strampel, Angela Hill

The quality of learning and teaching is under increasing government scrutiny, with ranking and performance funding growing in Australia and internationally (Marginson & van der Wende, 2007). Codified as teaching quality indicators, rankings in Australia are based on quantified outcomes from student experience and graduate outcomes surveys, such as those reported through the Quality Indicators for Learning and Teaching website. The Teaching Excellence Framework in the UK is a poignant example of future directions for the Australian higher education sector with the Australian government demanding accountability for student outcomes and aligning funding to demonstrations of outstanding teaching (Birmingham, 2017).

As part of this performance funding, the professionalization of university teaching is also in focus, with many Australian universities revising their academic promotions frameworks to displace the
normed ‘teaching-research’ dichotomy with teaching-focused roles (Papadopoulos, 2017). Simultaneously, a growing number of universities in Australia and internationally are looking for formal accreditation and recognition of teaching through such organisations as the Higher Education Academy (O’Keeffe, 2017).

Using discourse analysis, Bernstein’s theory of classification and framing of educational knowledge is applied to the shifting rhetoric of an Australian University’s strategic plans and goals, academic performance frameworks, and policy documentation since the University was founded in 1991. The findings are used to conceptualise the classification and framing of teaching quality within institutional culture. The findings are juxtaposed against the student experience data reported for the University on the QILT website to explore the impact on innovation and identity at the individual academic level.

The evidence from this research will provide substance for considerations of reclassifying and reframing teaching quality in planning and policy documentation in the University setting. Understanding the classification and framing of teaching quality in one case will provide a means to investigate the widespread use of similar classification and framing across the sector. This will provide a critical lens to understand the value of promotions frameworks, standards, and accreditation programs in generating and sustaining innovation and creativity in teaching and learning.

The research reflects a need to understand teaching quality measures of success in a marketised, globalised, and corporatized higher education sector. It is crucial that individual institutions reflect on their purpose and engage in a critical analysis of how they generate and sustain meaningful teaching and learning within the current national and international agendas of teaching excellence and quality.

**Testing the Culture of Completeness: Student Strategies on Note Cards in Exams**

_Amanda Sturgill, David Sturgill_

Permitting limited student-created notes in an examination has been found to reduce student anxiety (Erbe, 2007) and improve student success on the exams themselves (Rice, Vogelweid & Kitchel, 2017; Larwin, Gorman & Larwin, 2013). Less is known about student strategies for creating these notes. In particular, laptops in the classroom have encouraged notes that are transcriptions of the board or slides, creating a culture of completeness in notetaking. This study investigates the differential effect of transcriptive vs. integrated notecards on exam performance. Participants will discuss strategies for guiding students on better practice for learning from the process of creating notes.

"Reacting to the Past”/Qualitative Assessment of History Learning in the Undergraduate Classroom

_Sara Sundberg_

“Reacting to the Past” (RTTP) pedagogy utilizes critical thinking games that immerse students in ideas and characters from the historical past. Students become historical characters from a particular historical episode through reading and analyzing texts from the time period. Afterwards based upon their work, students decide their own character’s words and actions within the historical context and problems of the game. What makes these games different from traditional role-play pedagogy is students’ immersion in character roles through texts from the period. This type of deep immersion
has the potential to create a classroom culture where students may experience the past, not just hear about it. The question is whether this experience results in measurable gains in history learning and historical thinking. Pre and post-game interviews are a useful tool to study RTTP pedagogy because the interviews provide insight into not only what students know about an episode in history, but also whether what they know changes after RTTP. Using RTTP games as the learning culture, this investigation seeks to understand whether history content learning and historical thinking are part of the experience of students who engage in “Reacting to the Past.” The two RTTP games that students played are “New York City in the American Revolution, 1775-1776” and “America’s Founding: The Constitutional Convention.” The Instructor conducted pre and post structured interviews with ten students to elicit responses to three broad questions probing their general knowledge and understanding of the complexity of significant events in the games. The interviews were analyzed for students’ use of common themes or words, and changes in those words or themes between the pre-game interview and post-game interview. The results of the study indicate minimal difference in history content learning and historical thinking with RTTP, even though students evaluated their engagement with the games positively. Most SoTL studies about RTTP pedagogy address issues of student engagement and skills related to historical thinking, not history learning itself. This qualitative study addresses this gap in the research, focusing upon research about history content learning and historical thinking with RTTP pedagogy.

PlantingScience/Digging Deeper: Toward a Culture of Science

Marshall Sundberg, Catrina Adams, Joseph Taylor

PlantingScience is a mentoring program where small teams of secondary school or college students conduct investigations on a variety of plant biology themes while collaborating online with scientist mentors. Established in 2005, PlantingScience was developed by the Botanical Society of America and is supported by partnership with 18 other plant science organizations to form an inclusive culture of learning where scientists can share with students their passion for plants and science, model the way scientists think and solve problems, and break down negative stereotypes about who scientists are and how science is done. Digging Deeper is an extension of PlantingScience that provides collaborative professional development for secondary school teachers and early-career scientist mentor liaisons participating in the “Power of Sunlight” photosynthesis and respiration PlantingScience investigation theme. Digging Deeper is also a research study to determine the efficacy of the Digging Deeper professional development with subsequent participation in PlantingScience.org for improving students’ understanding of photosynthesis and respiration and students’ attitudes about scientists. Digging Deeper employs a cluster randomized trial design with biology teachers randomly assigned to treatment (Digging Deeper plus PlantingScience) and comparison conditions (Business as Usual). A pre-piloted 26-item multiple choice achievement test was administered to students pre- and post-intervention, along with an attitude scale with 10 Likert scale items covering students’ attitudes toward scientists. The analytic sample included 64 teachers (27 treatment; 37 comparison) and 1535 students (514 treatment; 1021 comparison). Demographic and developmental indicators used in analyses were self-reported. Controlling for the effects of student and teacher-level covariates, the Digging Deeper program demonstrates a statistically significant positive impact on both student achievement and attitudes about science and scientists. Qualitative assessments of Digging Deeper include: workshop observations, post-workshop surveys and interviews, online discussion analyses, post-module implementation interviews, and mentor and liaison surveys. Both teachers and liaisons had positive perceptions of the workshops in encouraging discussion and interactions to form collaborative teams which help clarify not only how to teach the concepts, but also overcoming alternative conceptions relating to photosynthesis and respiration, recognized as highly resistant to change. Results suggest that inclusive learning communities connecting teachers, students, and scientists may be effective ways improve student outcomes in
content knowledge and attitudes toward scientists. The model of asynchronous online mentoring and collaborative teacher/scientist professional development provided by PlantingScience could be used in other disciplines as a way to create bridges between existing learning communities.

Your Space or Mine? The Implications for Utilising Real vs Virtual Gallery Spaces to Inform SoTL

Briony Supple, Marian McCarthy

The Glucksman art gallery at University College Cork (UCC) is based on main campus (http://www.glucksman.org/). The exhibitions and gallery space have been used as a way of exploring elements of SoTL through an arts in education lens for participants undertaking Teaching & Learning qualifications.

The UCC teaching and learning qualification is delivered fully online, and the practice of utilising elements of the arts in education are still used and have been adapted for the virtual environment. In collaboration with Glucksman Gallery staff, we were interested in exploring whether a virtual art experience could replicate that of an ‘embodied, real life’ experience of visiting the gallery itself.

Participants in the Certificate in Teaching and Learning in Higher Education completed an online exercise utilising prompts from the Entry Points to Learning as a springboard for discussing a chosen artwork via a virtual gallery experience. The Entry Points approach:

“...is a particularly good way for teachers to stretch beyond the obvious in approaching a new topic or beyond what they have already being doing to teach a concept. Multiple entry points provide not only different ways for students to gain access to a concept or topic, but also ways for learners to develop multiple representations of that concept or a topic, thereby building deeper understanding” (Kornhaber, Fierros, & Veenema, 2004, p. 79).

Participant reflections and responses to the Entry Point questions were collected via Nearpod, an online, interactive platform. We also collected focus group data from the same participants who engaged in a ‘real live’ Glucksman Gallery experience. The results have led to enabling both those involved as students in the course as well as the authors of this paper an opportunity to frame the differences of teaching online and ‘in person’ through the lens of a virtual and live gallery experience. The results are also informing a conceptual framework around the implications for learning and teaching in virtual vs real world settings.

This paper relates to how arts-based approaches to exploring SoTL enable meaningful experiences across disciplines and contexts in bringing people together for a common purpose. Art can be explored through a disciplinary lens and enables teachers to experience conversations as learner. These approaches have been explored elsewhere such as the Project MUSE, but this is primarily aimed at school children rather than third level education contexts. (http://www.pz.harvard.edu/projects/project-muse)

The Educational Inquiry Network: Engendering Change in Future Research-Intensive Teaching Practices

Denise Sweeney, Andrew Townsend

Since the Independent Review of Higher Education Funding and Student Finance (Browne, et al., 2010), student tuition fees in the UK have risen to over £9,000. One of the consequences of the introduction to this policy has meant that UK higher education institutions have begun to focus more
on their teaching practices and seek ways via research to better identify and engender quality teaching practices (Ashwin, 2015).

With the recent introduction of the Teaching Excellence and Student Outcomes Framework (TEF) and its recognition of excellent teaching in higher education by rating institutions as gold, silver or bronze, this focus on teaching has only further intensified.

This paper reports on an initiative, termed the Educational Inquiry Network (EIN), introduced by a School of Education in a UK research-intensive university, in response to the changing policy landscape. We developed the EIN to provide a means by which staff from across the university who share a passion for education, could collaborate in the development of educative practices though research.

Building on this the broader aim of the Educational Inquiry Network is to develop an inclusive learning culture for teaching practitioners regardless of their disciplinary background, contract status or position. It is intended to enrich and inform the Scholarship of Teaching and Learning (SoTL) conversation both within our own research-intensive university as well as to the wider higher education community.

The establishment of the network was by academic teaching staff from within the School of Education with the purpose to establish a learning culture of educational inquiry across the institution. There have been challenges as well as opportunities arise during its establishment and as it grows.

The recent move of the Postgraduate Certificate in Higher Education course (a requirement for all new academic teaching staff) from the Professional Development unit into the School of Education has helped the network grow robust connections with different disciplines across the university. As a result there has been a significant engagement from current PGCHE participants and alumni with the network’s activities has helped shape future developments and initiatives and how the network’s professional practice focus has helped their future teaching practices (Boud & Brew, 2013).

The Educational Inquiry Network has created a culture of learners and research practitioners and provided a firm foundation to this renewed more intense focus on teaching ensuring that this focus is sustained, enduring and highly valued.

**Higher Education Teachers’ Conceptions about the Role of Prior Knowledge in Learning**

*Ilona Södervik, Mari Murtonen, Henna Vilppu*

The purpose of this study is to investigate how students of university pedagogy, most of whom work as teachers in university, understand the role of preconceptions in learning process and how they pay attention to students’ prior knowledge in their own teaching. Prior knowledge, that is necessary prerequisite for all conceptual learning may either ease learning when it is in unison with the new knowledge to be learned or it may hinder or even prevent learning, if there are discrepancies between new knowledge and one’s previous conceptions. Teachers’ conceptions about learning and teaching form the background for teachers’ approaches i.e. practices and strategies which will be implemented in their own teaching. Therefore, it is essential to understand, which kinds of conceptions university teachers have, in order to improve higher education.

A total of 66 participants attended to this study utilizing the pretest-posttest design with a digital university pedagogy course between. The measurements consisted of Likert scale measures about the role of prior knowledge in learning, using of activating methods in one’s own teaching and items
about approaches to teaching. There were video interpretation tasks, in which participants were asked to interpret short teaching and learning situations.

It became evident that higher scores in understanding the role of prior knowledge in learning positively correlated with better scores from video interpretations (p=.012) and with the score about using of activating methods in one’s own teaching (p<.000). In contrast, higher scores in understanding the role of prior knowledge in learning negatively correlated with the content-centered teaching approach (p=.035) and with the sum scores of “no time to activate” (p=.030). In addition, higher amount of misconceptions related to learning and teaching based on the video interpretations positively correlated with the sum score of content-centered teaching approach (p=.013).

Participants’ understanding related to learning and teaching based on the scores of video interpretations increased during the study phase (t(52)=-.2998, p=.004) and participants misconceptions decreased during the study (t(52) =4.069, p<.001). Furthermore, the amount of participants with misconceptions related to learning and teaching based on the video interpretations decreased remarkably from the pretest (n=25) to the posttest (n=9).

The preliminary results of the pretest showed interesting correlations between different aspects of learning and teaching. Based on the results, pedagogical suggestions are discussed.

**Framework for Designing an Online Interactive Learning Environment for Complex Dynamic Systems**

*Aklilu Tilahun Tadesse*

Decision-makers and the public in general face a wide range of increasingly complex, dynamic problems – problems that change their state overtime, in their day-to-day activities. Hence, change is an important topic to teach. However, numerous studies show that the public at large has difficulty understanding complex dynamic systems and on how to manage these systems effectively and efficiently to reduce the severity of or avoid the problems. The difficulty of understanding complex dynamic systems arises from three sources: the structural complexity of the problems, our cognitive limit to understand dynamically complex problems and the effectiveness of the methods, techniques and tools that facilitate our understanding of dynamic systems.

This paper aims to address the following three questions: what are the characteristics of complex dynamic systems? How can we teach systems thinking? What kind of instructional methods, techniques and tools are available to foster systems thinking?

The paper presents the framework underlying the design of an online interactive learning environment for complex dynamic systems, including the rationale for the design and its research underpinnings. The design framework is discussed in detail, as are the three key domain elements of importance for the design: the instructional method, techniques and tool. A fading scaffolding instructional method adopted in the design is discussed together with the instructional techniques used to implement the chosen method – storytelling, repeated trial, intensive feedback & item branching. A web based instructional tool developed to integrate the chosen method and techniques is also presented. The general structure of the learning environment, its online delivery and its assessment strategies are described, including user interface and feedback formats employed. The distributions of tasks and items by problem nature and context, and according to cognitive process are specified. Sample learning tasks and items are presented with commentary, including an illustration of how students’ log on data (captured by the online-delivery system) is used to evaluate their understanding of complex dynamics systems. Results of surveys, which were conducted to assess students’ affective domains, are also included in the paper.
A Study on the Impact of Outcomes-Based Teaching and Learning on Faculty’s Approaches to Teaching

Sophia Tan, Fun Siong Lim, Jason Lee, Melvyn Tan, Peter Looker

Outcomes-Based Teaching and Learning (OBTL) is a policy at a research-intensive university in Singapore, which articulates what teaching and learning should look like by the year 2020. This paper examines the extent to which such a policy has changed teaching and learning mid-way through its implementation.

Based on principles of constructive alignment, OBTL uses “twin principles of constructivism in learning, and alignment both of teaching and assessment tasks to the intended learning outcomes” (Biggs & Tang, 2011, p. 108). The central idea is for faculty to write intended learning outcomes that focus on “what and how students are to learn, rather than on what topics the teacher is to teach” (Biggs and Tang, 2011, p. 97). We believe that this shift may stimulate a change from knowledge transmission to student-centred approaches to teaching.

In this study, we seek to investigate if the OBTL policy can change faculty’s approaches to teaching. This policy requires every faculty to submit their course outline (syllabus) for internal review, using a standardized format designed by the university to reflect principles of constructive alignment. Given that top-down policies sometimes lead to faculty resentment and superficial compliance instead of actual change, our main research question in this study is: What is the impact of the OBTL course design approach on faculty’s approaches to teaching?

Using the Approaches to Teaching Inventory (Trigwell & Prosser, 2004), our survey results (N=90) show that this study affects different disciplines differently. For the science disciplines, there is a statistically significant decrease in knowledge transmission approaches (p < .05), whereas in the humanities and social science disciplines, there is a statistically significant increase in the student-focused approaches (p < .05). These results suggest that faculty who have experienced the OBTL course design process exhibit a change in their approaches to teaching, but the nature of the change is influenced by the courses or disciplines they teach.

In this session, we will share our approach to promoting a culture of teaching and learning through the OBTL initiative, and report our findings on the extent to which a one-size-fits-all standardised course outline can influence faculty’s approaches to teaching across disciplines. During this session, we will balance the presentation of our findings with audience discussions on the broader topic of implementing Outcomes-Based policies in higher education.

Effects of the Teaching Assistants’ Course on Participants’ Perceptions of Teaching and Learning

Melvyn Tan, Redante Mendoza, Fun Siong Lim, Peter Looker

As part of their PhD scholarship, doctoral candidates at Nanyang Technological University are required to successfully complete a 15-hour Teaching Assistants’ Course (TAC) which aims to introduce them to teaching and learning frameworks upon which to anchor their teaching.

Literature suggests that while such courses have an impact on participants’ awareness of their teaching practices, the effects of such courses are often influenced by many factors such as individual and contextual factors.

This study aims to ascertain the effectiveness of the TAC in preparing participants for teaching assistant duties, by answering these questions:
• How have participants’ perceptions of teaching and learning changed as a result of the course?

• Which aspects of the course did the participants find valuable and why?

We employ a mixed-method research design utilising the Revised Approaches to Teaching Inventory (RATI) and Focus Group Interviews (FGIs). It begins with a pre-test/post-test survey administered to 534 PhD students, of which 191 students completed both pre- and post-course surveys. The paired sample t-test for this sample shows no significant decrease in the Information-Transfer Teacher-Focused (ITTF) approaches while showing a significant increase in Conceptual-Change Student-Focused (CCSF) approaches.

While the overall finding is supported by literature which found greater stability in ITTF approaches as compared with CCSF approaches (Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006), two surprising results were found when using Biglan’s (1973) disciplinary categories. First, responses from students of the soft-pure discipline category revealed significant decreases in ITTF approaches with no change in CCSF approaches. Second, only students from the hard-applied discipline category reported concurrent significant decrease in ITTF approaches and significant increase in CCSF approaches. These findings appear inconsistent with existing literature which suggest that instructors from “hard” disciplines tend to adopt more ITTF approaches (Lindblom-Ylänne, et. al., 2006), which as mentioned earlier, tend to be more stable.

While we have yet to ascertain the possible reasons for the limited changes in the soft-pure category, the findings from the FGIs suggest that the changes found amongst students in the hard-applied discipline category might be due to their involvement in course design work while they were undertaking the TAC. This is in line with Mattheoudakis (2007), who suggested that the opportunity to integrate declarative and procedural knowledge may potentially influence mindsets. Follow-up research needs to be conducted on the effect on mindsets when theory is integrated with practice for the duration of the course.

**Changes in Mindset, Grit and Identification of Effective Learning Strategies**

*Julie Tetley, Kerry McCaig, Lauren Scharff*

This presentation addresses the “Culture for Learning” track by presenting results from a three-year study investigating the impact of redesigning the Learning Strategies 101 course on students’ beliefs about the nature of intelligence (Mindset), perseverance and passion for long-term goals (Grit), and identification of the most effective learning strategies. The intervention sections of the course deliberately integrated concepts and strategies from three books: Mindset (Dweck, 2006), Make it Stick (Brown, Roediger, McDaniel, 2014), and GRIT (Duckworth, 2016). The course re-design integrated motivational and instructional videos, written reflections, retrieval and practice testing, and interleaved study techniques. These activities were designed to impact students’ levels of Mindset and Grit and introduce them to the most effective learning strategies. Assessments were collected Lesson 1 and Lesson 40. Expanding on last year’s ISSOTL presentation, we will present third year results and new information gleaned from a factor analysis of the Mindset Quiz instrument.

The following research questions guided our study: RQ1): Do students in the intervention sections of LS 101 show larger gains in Mindset scores compared to the control group? RQ2): Do students in the intervention sections of LS101 show greater awareness of the most effective of learning strategies? RQ3): Is there a relationship between Mindset, Learning Strategies Questionnaire, Grit, and GPA? RQ4): Do students in the intervention section report using increasingly more effective strategies throughout the semester? Is there a significant difference in their use of strategies across time?
Results across the three years indicate that students in the intervention sections showed significant gains in Mindset scores and identification of the most effective learning strategies compared to the control group. In addition, students reported using more effective strategies at the end of the semester. These findings align with previous research – intentional interventions can promote change in one’s mindset leading to changes in a person’s perspective about ability and future success (Blackwell, Trzesniewski, & Dweck, 2007; Good, Aronson, & Inzlicht, 2003).

In addition, we found a positive correlation between Post-Mindset scores and Post-LearnStrat scores. These findings are consistent with Sriram’s (2013) results – students who were taught that intelligence is malleable employed study skills more often. And finally, there was a small, positive relationship between Pre and Post Mindset and GRIT scores indicating that GRIT and Mindset are related but are distinct constructs and require specific interventions in order to impact their development. Surprisingly, there was no correlation with GPA.

**Peer Review of Clinical Teaching in the Workplace: Embedding a Culture of Learning**

*Karen Theobald, Theresa Harvey, Alan Barnard*

**Background and literature**

A supportive and authentic clinical environment is fundamental to enhance undergraduate students’ education. Health facility staff are significant contributors to student nurses’ work integrated learning, taking on the role of clinical facilitator (CF), teacher or mentor (Doyle et al, 2017). The role of the CF is autonomous and they often work in isolation, dealing with competing demands, such as a dynamic clinical environment and complex patient care requirements while simultaneously supporting student learning. This can hinder student clinical support (Lambert & Glacken, 2005) and can add a degree of stress to the CF role. Further, challenges can be attributed to the time and effort involved in dealing with “challenging students” and the assessment and timely decision making about students’ competency (Ford et al., 2016).

**Aim**

Peer Review of teaching is one option that may assist CFs to develop and grow in establishing excellence in teaching and learning in the clinical environment. This presentation reports on cross sectional pilot research that examined the impact of Peer Review of Clinical Teaching (PRoCT) and the impact on teaching efficacy. Methods Teacher efficacy was measured pre and post using a reliable and valid instrument, Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). CFs were allocated to an intervention (30 participants) or non-intervention group (25 participants). A combination of descriptive and inferential data analyses were used to compare the significant differences between the two groups.

**Outcomes**

In comparing total and subscale scores between groups, while no significant differences were identified using ANOVAs, all scores showed higher means (greater sense of efficacy) in the trained CFs versus those not experiencing the peer review intervention. As a pilot the outcomes suggest that participating in PRoCT has the potential to enhance a CFs’ sense of efficacy, especially in relation to their interest and motivation and sense of enhancement and knowledge about learning strategies.

**Conclusions**

Planning support for CFs should incorporate peer review of teaching as part of an overall approach to enhance the quality and culture of SOTL in clinical education.

The aspiration of this presentation is to share our experiences of PRoCT, to open up discussion around this strategy, recognising our shared responsibilities to enhance the quality of teaching and
learning. We hope to gain further insight and feedback from our ISSoTL colleagues to openly affirm this important teaching practice. Throughout the presentation, we will encourage questions and collegial input.

“Being ‗Lazy‘ and Slowing Down” in an Evening Graduate Teacher Education Course

M‘Balia Thomas, Marta Carvajal-Regidor

Curricular and pedagogical practices in higher education are constrained by global and neoliberal definitions of time. These are notion that leave little room for “being ‘lazy’ and slowing down” (Shahjahan, 2014; Walker, 2009) in our pedagogical practices. In an effort to better understand the complexity of incorporating notions of “being ‘lazy’ and slowing down” in pedagogical practices and their impact on student engagement and learning outcomes, a case study was developed around an evening graduate teacher education course to engage with this concept. The concept and impact of “being ‘lazy’ and slowing down” is accessed in the case study through teacher reflection (through notes from throughout the semester), interviews from the students on their engagement and interaction in the various pedagogical activities, and self/instructor evaluation of student learning (via course assignments and student reflections provided through the interviews).

To emphasize the practical pedagogical application of this case study, the presentation will provide participants with an experiential engagement with the “being ‘lazy’ and slowing down” in-class pedagogical activities at the heart of our case study. This joint presentation – led by the professor who taught the seminar and one of the graduate students who was enrolled in the course – will provide first a brief background, rationale, and findings (based on student interviews and results from the course assessments) from our case study. It will then introduce participants to the in-class pedagogical activities in order to assess (through a pre-and post-test given to conference participants over the course of the 20 minute presentation) the ways in which these practices attempt to foster participant engagement and meet participant learning outcomes.

Through this presentation strategy, we aim not only to present the key aspects of our case study, but also to address two strands from the conference theme: a culture for learning (by sharing our findings and engaging participants in our pedagogical practices) and a culture of learners (sharing a key philosophical approach – “being ‘lazy’ and slowing down” – inherently designed to support learners and the learning environment). Moreover, we will share what the study suggests about the impact of mind-body-spirit inspired pedagogical activities to stimulate and engage tired bodies and to lead them toward specific learning outcomes. Our focus is on the implications these findings hold for Graduate Teacher Education and other professional programs which tend to hold classes in the evenings after long workdays.

Examining Attitudes Towards Scientific Teaching Practice across Culture

Seth Thompson, Sehoya Cotner, Tom Nilsen, Munetaka Shimizu, Arimune Munakata, Naoyuki Yamamoto, Ivar Rønnestad

Research over the last decade has indicated that active learning and student-centered instruction lead to better learning outcomes in undergraduate biology courses than traditionally common methods, such as lecturing. This shift in pedagogical approach has been applied to both high-enrollment lecture-based courses as well as smaller enrollment laboratory courses. However, much of the research on evidence based teaching practice has come from a North American perspective, with very little research addressing how faculty members from different parts of the world feel about
these new teaching strategies or how international students experience student-centered teaching. Understanding how students and faculty from different cultures use and/or experience evidence-based teaching strategies is imperative for maximizing the learning opportunities for all students.

We present a paper on a small-scale study conducted in the summer of 2017 that examined the attitudes towards scientific teaching practices among faculty members and students from North America, Norway, and Japan. We measured instructional strategies and student engagement using the Classroom Observation Protocol for Undergraduate STEM (COPUS) and performed focus groups with faculty and students to better understand their experience with different instructional techniques. Overall participation, in the form of student generated questions during lecture, was largely dominated by a group of about 5-6 students (~33% of the class). North American and Norwegian students asked far more questions during lecture than Japanese students. Incoming confidence in doing science related tasks was highest in North American students, intermediate in Norwegian students, and lowest in Japanese students, although these differences were not statistically significant. Additionally, it is unclear if lower confidence scores reported by Japanese students were driven by a true confidence deficit or were related to the language barrier experienced by these students. Overall, opportunities for students to interact with peers during lecture were limited. All lectures did contain several opportunities to interact with the professor; however, only the lectures by Norwegian faculty contained defined opportunities for students to interact with their peers. More defined opportunities for peer interactions may help increase the participation of students that tend not to contribute at the whole-class level. All lectures observed had opportunities where peer interactions could have occurred, so facilitating peer interaction would not require a major pedagogical shift. In summation, there are important cultural factors that shape how student and faculty members engage with student-centered instructional techniques and this should be considered when designing courses that incorporate international instructors and students.

What Could Teachers Learn from Catching Sight of Students Understanding?

Åse Tieva, Bengt Malmros

This presentation addresses the question of the interface between learning spaces and conceptual change in teaching and learning. Academics, educational developers and students were all stakeholders in the process of developing a learning culture that was challenging, forgiving and in the long term also developing. The intention of the project focused on utilizing the advantages provided by a flexible learning environment in order to develop a conscious pedagogical approach that promotes students’ understanding.

The case chosen is a natural science course characterized as teacher-focused with traditional teaching methods in traditional spaces. Often having insufficient prior knowledge, the students found the course content difficult and their studies resulted in many fails and re-examinations. The teachers started questioning their own practice and together with a pedagogical developer they initiated a change towards more student-active methods.

The pedagogical design was inspired by the ‘Teaching for Understanding’ framework and the theory of ‘Threshold concepts’. Initially, the teachers identified basic ‘threshold’ concepts, regarded as particularly important for understanding, and the instruction focused on these concepts in particular. The pedagogical practice supported an approach where learning was made visible facilitating interaction and understanding and promoting student activity and collaborative learning.

Making students’ understanding visible to themselves and to the teacher constitutes a good culture of learners. When students are challenged in their learning and prompted to visualize their
understanding it becomes clear to the teacher what critical aspects of the learning object that students must be able to distinguish in order to proceed in their understanding.

The examination results improved considerably, both as measured by the proportion of students passing the course module, and by the quality of the answers to the examinations questions. Students were very satisfied with the student-active working methods and argued that they contributed to deeper understanding and improved retention of the course contents.

Experiences from participating teachers show that they assume a new teaching role, they adapt their pedagogical practice to a more student-centered one and select the more flexible learning spaces for their teaching.

Our findings might have implications for the SOTL community. We argue that access to spacious, multi-functional rooms with generous opportunities for both teachers and students to present, communicate and utilize digital resources is one crucial aspect for developing student-active working forms. But in order to fully implement a good culture of learning there is a need for a conscious pedagogical design that promotes students' understanding.

When Does a Culture Learn? How to Use Multiple Evaluations to Develop a Programme

Rie Troelsen, Nørgård, O'Neill

Teaching evaluations play a vital part in sustaining and developing a culture of learning. In many cases, however, the use of data from evaluations is not relevant in a development perspective. Learners might not have a full overview of what they have learned neither half-way through nor at the very end of a course (and just before exam as is typical for many course evaluations) (Kember, Leung & Kwan, 2002). This study describes a multiple evaluation approach with the aim of further development of a teacher training programme by nuancing the perceived learning outcome. We have planned and conducted evaluations from participants finishing their programme 1-2 years ago and compared them with evaluations from current participants.

A range of evaluations are conducted as an intrinsic part of the teacher training programme; questionnaires on the outcomes of an initial seminar and a mid-way evaluation of the programme in the form of an open mail question.

To supplement, a semi-structured interview study with 12 participants from former years' programmes was conducted. The informants were randomly selected and interviewed by phone for app. ½ hour.

Data from current participants show that a certain part of the programme (where participants are supervised on their teaching) is evaluated as being most efficient and valuable. Results from the interview study show that participants still evaluate supervision as the most valuable part but also that other parts of the programme (hands-on workshops and a SOTL-project) are recognised as valuable.

At first glance, the evaluations from two different points in time seem alike. However, the variation in evaluation format and informants is wide and so it is not the aim of this study to test whether participants' assessment changes over time. Rather, the multiple evaluation approach can be used in a further investigation of possible ways to measure the effectiveness of professional development activities (Chalmers & Gardiner, 2015).

Audience are asked to engage with the topic in discussing pros and cons of expanding the timeframe for evaluating learning and development activities.
Mapping Understandings of Global Engagement

Maureen Vandermaas-Peeler, Joan Ruelle, Tim Peeples

Increased participation in global educational experiences is an objective of many colleges and universities in the United States, with the goal of producing graduates prepared to enter the global workforce with greater awareness, knowledge, and competencies related to economic, social, and civic engagement (Dolby, 2007; Engberg, 2013; Hovland, 2014; Norris & Gillespie, 2007; Tarrant, 2010). An emphasis on 1) gaining knowledge about diversity; 2) considering issues within local and global communities; and 3) collaborating to solve problems is at the core of many curricular designs for global learning (Hovland, 2014). Educational initiatives that foster global learning include high-impact practices such as study abroad/away, internships, and service learning (Kuh, 2008; Kuh & O’Donnell, 2013).

Although global learning and some associated terms (e.g., intercultural competence, global citizenship) have been defined in research and practice, there is less clarity about an umbrella term that is increasingly utilized to capture the complexity and overlapping nature of global educational processes and outcomes – global engagement. Our preliminary analyses of the scholarly literature yielded no widely accepted definitions of the term. In fact, we find that the term is often used without being defined at all.

In this presentation we will examine the term global engagement within the scholarly literature of global learning and high-impact educational practices and map the use of conceptually related terms into three domains: learning/knowledge; skills/behavior; and attitudes/dispositions. We propose an operational definition that will clarify the term and provide guidance for an emerging Scholarship of Global Engagement (SoGE). We will suggest several promising areas for future, related scholarship.

We aim to engage the audience in conversation that explores this working definition, generates conceptual areas of scholarship, and reflects on the relationship between the scholarship of global engagement, SoTL, and the conference themes of creating a culture for learning and of learners in domestic and international contexts. The foci on cultivating and sustaining engaged learning through complex relationships, and generating meaningful teaching and learning that lasts beyond an immediate course or program, are inextricably linked with the scholarship of global engagement.

Effect of Online Courses on University Teachers’ Interpretations of Teaching-Learning Situations

Henna Vilppu, Mari Murtonen, Ilona Södervik

The first years in academia can be challenging in many ways. While academics are often well prepared for the research role, many of them have little or no formal preparation for the teaching role (Kane, Sandretto, & Heath, 2002; Knight, 2002), and for many, the first teaching tasks may even come as a surprise (Murtonen & Vilppu, under review). University teachers’ teaching skill development has mostly been their own responsibility since participating in university pedagogical courses has been voluntary and many universities have no support systems for university teachers’ professional development (Remmik & Karm, 2012). However, the quality of higher education teaching is currently getting more attention in Europe. For example the European Commission highlights the importance of improving the status and quality of teaching which has traditionally been less valued than research output (COM, 2016). If there is a lack of pedagogical support, new teachers may end up copying their former teachers’ teaching style (Knight, 2002) despite knowing that it might not be the best way to promote student learning.
The aim of this study was to explore the effect of recently developed, online university pedagogy courses (Laato, Salmento & Murtonen, 2018) on university teachers’ and doctoral students’ interpretations of video clips of teaching-learning situations. A pretest-posttest design was utilized, in which the participants (N = 66) answered a questionnaire consisting of background information and open-ended questions of two short videos of imaginary lecture situations both before and after participating in one to three online university pedagogy courses (1 ECTS each). During the course(s), the participants studied self-study materials, wrote an essay and commented on each other’s essays in small groups online. The answers concerning the videos were classified into content-focused and learning-focused (see e.g., Postareff & Lindblom-Ylänne, 2008). The analyses showed that participants’ interpretations of the videos changed to a more learning-focused direction from pretest to posttest (Video 1: Z = -2.33, p < .05; Video 2: Z = -3.74, p < .00). Thus, it seems that even a short intervention might have an effect on interpretations of teaching-learning situations, at least when the participants are relatively novice in their teaching. By offering pedagogical studies already for new or future faculty, the old convention of novice teachers performing their first teaching tasks without any pedagogical support could be changed. This would help in generating a culture for learning and promoting meaningful teaching and learning across departments.

**Contesting the Conception of Workload: How SoTL Projects Can Enhance Cultural Learning**

_Edda Waage, Gudrun Geirsdóttir_

Addressing the reach of SoTL practices and influence, Hutchings, Huber and Ciccone (2011) state that in SoTL “the focus has shifted from the design of individual projects to collaborative work that can influence institutional change” (p. 125).

This paper gives an account of a SoTL project where the collaboration between an academic and an educational developer led to a more developed conception of workload and influenced institutional practices. It exemplifies work that has fostered development within the institutional culture. The intended outcome of the paper is to give an overview of the project’s findings and raise discussion among colleagues on how the knowledge gained could be applied in different higher education setting to enhance the scholarly practices.

As promoted by the Bologna process, academics at the University are encouraged to use various educational tools. The Centre for Teaching and Learning (CTL) adheres to those requirements with various aids on learning outcomes, curriculum alignment, and calculation of student workload. Edda, being a “sincere” teacher (Gurung & Schwartz, 2011), made use of those tools when designing a new course. Despite having followed the recommendations given by the CTL in a scholarly way, students rated the workload in the course much higher than in other courses.

In cooperation with CTL, Edda decided to explore her students’ experiences of the workload. Building on previous research (Kember, 2004; Kyndt, Berghmans, Dochy & Bulckens, 2014) she used mixed methods and exploratory sequential design (Bryman, 2016) for her study.

Students kept an online diary, documenting their time spent on various course-work. This was followed by in-depth interviews with six students. The findings revealed the complexity of the workload concept. While students still experienced heavy workload, it was neither reflected in actual time spent on tasks nor was it necessarily experienced negatively by students. Rather, students’ conceptions of workload were influenced by other factors such as the structure and profile of the course, and their previous experience, expectations and future orientation.
The findings of the study contested the institutional idea of student workload presented in educational development discourse and required the CTL to critically examine the knowledge and skills presented.

The learning goal of the proposal is to raise discussion on student workload to further our understanding of the findings through participants’ collective reflection on the following question: What kind of “tools” could be applied in curriculum design to enhance students learning experience?

Salient Practices of Award-Winning Undergraduate Research Mentors: Excellence, Freedom and Control

Helen Walkington, Eric Hall, Jenny Shanahan, Elizabeth Ackley, Kearsley Stewart

What do successful educators do in order to ensure student engagement, retention, and quality enhancement in relation to undergraduate research as a high-impact educational practice (HIP)? Kuh and O’Donnell (2013) called for the essential features of each HIP to be defined, in order to evaluate the quality of the experience. This paper is set within the twin contexts of Kuh and O’Donnell’s eight quality characteristics, and ten salient practices of faculty mentors / supervisors of undergraduate research, identified through an extensive literature review of the past two decades (Shanahan, et al, 2015). It presents new data from in-depth interviews with 32 international faculty (Australia, Canada, UK, US) who have received excellence awards for undergraduate research mentoring. The data reveal a freedom - control dialectical which illuminates the ways in which expert mentors negotiate the desire to create opportunities for students to experience freedom and creativity in research, yet at the same time maintain control over the topic, outcomes, and quality for novice researchers.

The research reveals that the defining characteristic of award-winning mentors is their ability to establish and sustain challenge, longstanding engagement, and a sense of achievement with students. It provides exemplars of salient practices in the words of the mentors and contributes to the literature on what excellence in teaching means in the context of novice researcher mentoring, including forms of practice not apparent in the literature. There are clear implications for the induction and training of mentors, in particular for identifying inclusive practices, the importance of tailoring practice to the needs of particular groups of students and resource implications for institutions in supporting this work.

In relation to the conference theme, this paper informs a culture of research-based learning by focussing on educators who create a learning culture for students through engagement in research. Sharing the practices of award-winning mentors across international boundaries, disciplines and institution types is a further example of evolving a learning culture.

We share, for the first time, the practices of award-winning undergraduate research mentors. The data come from 32 award winners in four countries and cut across a range of disciplines and institutional types. The paper will promote reflection on the practices of the audience members. It will highlight not only actual behaviours but also underlying value positions, together forming a set of practices that can be meaningfully shared.
Building a Whole-of-Institution Eco-System for SoTL Capability and Practice: A Conceptual Framework

Justin Walls, Andrea Carr, Jo-Anne Kelder

Higher education institutions (HEIs) face complex challenges in discharging their responsibility to assure that external standards for student learning experiences and outcomes are met. An essentially straightforward routine of ‘monitor and report’ activities is rendered complex because curriculum is developed and taught by academics (who have variable capability and motivation and who work in the context of relationships and practices that do not always foster a culture of scholarship). The importance and value of Scholarship of Teaching and Learning (SoTL) is well-established in the literature; however, SoTL practice tends to be limited to individuals or small teams of academics; institutional encouragement or support to engage in planned, coordinated and collegial scholarly practice applied to a substantive body of curriculum is lacking.

We present a conceptual model for a whole-of-institution approach to building an eco-system for SoTL capability and practice that integrates with institutional data collection and reporting for quality assurance (QA) purposes. The model is explicitly collegial and aligned with institutional QA responsibilities to monitor and report against standards for curriculum and teaching. The intended outcome is ‘a culture that learns’ in the context of institutional support, and recognition and reward for academic practices that are grounded in scholarship.

We have identified key areas of activity that comprise such an eco-system that include: an institutional mandate with key experts leading SoTL; a Curriculum Evaluation and Research (CER) framework that enables and socialises SoTL into curriculum and teaching practice (Kelder, Carr, & Walls, 2017); SoTL communities of practice that develop and share expertise; professional development for SoTL capacity building; peer review/support and facilitate opportunities for dissemination of SoTL practices and outcomes.

To stimulate a critical mass of academic engagement, the framework includes institutional levers, signalling through policy and performance review instruments that SoTL research is valued alongside disciplinary research. A key feature of the conceptual framework is high level leadership that is responsible to build SoTL capability in our institution. The CER framework is used by teaching teams to plan routine data collection and analysis for both quality assurance and research. A focus on teaching teams is the mechanism to leverage existing areas of individual, siloed activity and broaden SoTL practice to everyone who contributes to curriculum design and delivery.

The vision is a SoTL eco-system: strategic, coordinated and integrated programs of activities that support, recognise and reward a culture of scholarship and is aligned to institutional quality assurance systems.

How Do We Support Diversity in Higher Education Through Decoding the Disciplines?

Simon Warren, Jolanta Mickute

Decoding the Disciplines (DD) emerged as a pedagogic response to supporting students to overcome bottlenecks in learning. Rather than simply invoke students to ‘try harder’ or give them more content, DD seeks to better understand the nature of the bottlenecks and guide students into and through the disciplinary bottlenecks—through iterations of modelling disciplinary practice, opportunities for students to practice these themselves, and formative feedback. But can DD also be a useful approach for inter-and cross-disciplinary issues?
This paper reflects on how DD can be adapted to respond to issues of diversity and intercultural understanding. This relates to the ERASMUS+ project “Decoding the Disciplines in European Institutions of Higher Education: Interdisciplinary and Intercultural Approach to Teaching and Learning,” involving a partnership of 4 European higher-education institutions: https://www.facebook.com/decodingeducation/

The adaptation of DD to these inter- and cross-disciplinary issues presents a number of conceptual and methodological challenges: How do we define diversity bottlenecks? What kind of mental operations are appropriate? How do we model and practice these? And how do we assess them? Drawing on illustrative examples we discuss how the DD approach can be applied to consider diversity in terms of

- curriculum content (what content is included/excluded, geographical origin of content/concepts, etc.);
- students/faculty (diversity of access and participation, diversity across students and faculty, status and discrimination); and
- community (relationships within institutions, relationships between institutions and wider communities, relationships between research partners including communities).

Illustrative examples include

- supporting the access of economically disadvantaged students (often migrants) to learning;
- structuring students’ analytical reading to think ethnographically through the lens of critical theories of risk, environment and intersectional difference, including gender, colonialism, and race, etc.

We discuss these in terms of translating a methodology designed to enhance disciplinary thinking to the inter- and cross-disciplinary issues of diversity in higher education. We look at how pedagogic strategies, such as using virtual learning environments and reading rubrics, can be used within the DD approach to support inclusion and critical thinking related to diversity.

“This Might Be Uncomfortable”: Learning to Support SoTL Scholars

Andrea Webb, Ashley Welsh

As SoTL scholars, many of us have a fluency with the language and conventions of the field. However, many scholars engaging in SoTL can be confronted with a whole new way of doing research (Miller-Young, Yeo, & Manarin, 2018; Simmons et al., 2013). The epistemological and ontological challenge of becoming a SoTL scholar is both supported and challenged by the SoTL Commons (Huber & Hutchings, 2005; 2006; Manarin & Abrahamson, 2016). In light of this, our research-intensive university offers strategic, institutionally supported SoTL programs to enrich the impact of quality SoTL. As people who support SoTL scholarship, it behooves us to spend some time getting to know and understand the perspective of the people we work with (Hansman, 2001; Merriam, 2001). Through our work, we are involved in coordinating and facilitating a scholarly foundation for systematic approaches to engage SoTL scholars with their movement from scholarly teaching to the rigour of scholarship. This presentation is a product of our reflective and empirical analyses of how we support this transition to scholarship and continue to develop our practices to meet the needs of emergent SoTL scholars.

Our programs for supporting SoTL scholars are not a one size fits all approach. While the programs offer a common framework for participants, they also include individualized mentorship. Our experiences have revealed that in order to best support participants’ needs, we need to 1) acknowledge and support their transition within a new disciplinary field; and 2) provide structured,
individualized feedback to foster specific, personalized development and growth for their transition to methodologically rigorous SoTL. We do this by focusing on the often troublesome shift to research that might not match/mix with disciplinary approaches, through one-on-one meetings with researchers, and building connections and networks that support their teaching and learning goals. In this presentation, we will share our specific strategies and invite participants to discuss what has worked in their contexts.

**Embedding Interactive Simulations to Enhance Active Learning**

*Margaret Wegener, Elise Kenny, Isaac Lenton, Timothy McIntyre*

Student engagement and learning can improve with active learning approaches. We have previously developed an extensive suite of resources to support students in active learning physics courses. The “Five-Minute Physics” online modules (see teaching.smp.uq.edu.au/fiveminutephysics) significantly improved student preparation for classes. The modules contain interactive simulations, designed to aid development of conceptual understanding. However, engagement with these components varied widely. The proven advantages of simulations for learning abstract concepts motivated us to further develop such resources, with particular consideration for the instructional support that guides students to use simulations – through the mental effort to understand.

We have developed, implemented and evaluated a range of original physics simulations, and associated learning activities based on their use, for both introductory and advanced undergraduate levels. The simulations enable students to manipulate variables and observe the effects, in order to build and refine conceptual frameworks. The visual displays include multiple representations, and students can make measurements of relevant parameters.

We have embedded simulations in the routines of learning, with students actively engaged in activities involving simulations before, during and after class. In preparation for class, guided exploration of simulations provides initial exposure to concepts and their interrelationships. During class discussions, students are asked to make predictions, which can be checked with the simulation. In assessment after class, students are prompted to apply, generalise or transfer knowledge gained from using simulation.

Data to evaluate these strategies has been gathered via online access analytics, student responses to assessment tasks, and surveys of student perceptions. Students think that they are learning with the simulation-based activities, and do demonstrate understanding of the relevant concepts. They generally agree that simulation-based activities helped them to understand concepts, and to feel more confident answering questions on the targeted material. Overall, student feedback is positive. Students generally enjoy the experience of using simulations for learning, and recommend further use of simulation activities. Students particularly value visualisation of abstract ideas. This assists development of a ‘mental picture’ of a physical model, which in the past was expected to be developed via diagrams and equations. Students also nominate interactivity as an important aspect of their learning.

Together, the sequence of simulation-based activities enhance the learning experience and contribute to an active learning environment.

This project also illustrates a learning culture in that some development and evaluation was done by advanced undergraduate research students.
One Size Does Not Fit All: Practices for Developing and Assessing Degree Program Learning Outcomes

Ashley Welsh, Eric Jandciu

Internationally within higher education, there has been a recent drive to systematically develop and assess degree program learning outcomes to ensure the quality of an undergraduate education (Barrie, 2004; Matthews & Mercer-Mapstone, 2016). These projects often stem from government and/or institutional mandates that departments and programs adapt for their given disciplinary context and workforce (Al-Mahmood & Gruba, 2007; Bath et al., 2004; Jones, 2013). However, at the University of British Columbia, a Canadian research-intensive university, there is no such systematic provincial or institutional process.

Nevertheless, some departments at our institution have taken the initiative to develop degree outcomes. As such, leadership in the Faculty of Science were keen to develop a BSc degree outcomes framework to help guide and support departments as they plan and re-evaluate their programs. The goals of this framework are to enrich curriculum and pedagogy, support student skill development and learning, enhance the applicability and quality of our undergraduate degree programs, and prepare departments and programs for government-mandated outcomes when they come.

We will share our process for developing the degree outcomes framework and how we are supporting departments and programs. The foundation of this framework was based on the literature (Barrie, 2007; Green et al., 2009; Matthews et al., 2017), specifically that degree program learning outcomes should:

- address key priorities within our Faculty and institution;
- consult with faculty, students, and staff;
- support individual departments and programs;
- acknowledge the holistic student experience; and
- exist as a living, ongoing framework that is used, adapted, and assessed over time.

A systematic review of existing BSc degree outcomes at local, national, and international institutions, and consultations with groups of undergraduate students, staff, faculty, and administration at our institution, guided the framework development, which is organized into four main themes: (1) knowledge; (2) the process of doing science; (3) communication skills; and (4) professional and personal responsibility.

Since one of our main goals is to generate and sustain meaningful teaching and learning that has meaningful and lasting impact, we will highlight how the creation and facilitation of a working group (a community of engaged staff, faculty and post-docs from various departments/programs) helps support the adaptation and implementation of our framework. Throughout our talk, participants will have an opportunity to reflect upon their own context and to share potential challenges with and benefits of learning outcome projects at their own institutions.

Developing a Quality Innovation Culture in Teaching Through Scholarship

Joy Whitton, Graham Parr, Julia Choate

This paper discusses the impact of an 18-month professional learning initiative called the ‘Higher Education Learning and Teaching Research Program’ at an Australian, research-intensive university. The program aimed strategically to improve the quality of education by fostering scholarship of learning and teaching skills and expertise in education focused staff in the period 2014-7 and is based
on a philosophy that developing the quality of teaching at university should involve SoTL (Mårtensson et al., 2011). Participants investigated an aspect of their disciplinary/professional practice. Throughout the program, they were mentored in groups by a senior colleague in the university, and at the end they presented the findings of their research to colleagues, encouraging both sharing and critique of the work – aligning it well with the conference theme ‘A culture that learns’. It builds on Boud’s arguments that approaches to professional learning and development in higher education contexts are more effective when undertaken in sites of academic practice which include supervisory relationships and professional networks (1999; Boud & Hager, 2012).

The program is currently in its third iteration. Qualitative methods (survey questionnaires and focus groups) were used to gather data from two iterations of the program. Themes in the findings included skill and knowledge development (of both mentee participants and mentors), confidence, perception changes of leadership and identity, increases in collaboration, and building networks across faculties.

Analysis of data draws on activity theory (Engeström, 1990), Lave and Wenger’s (1991) concept of learning as gaining expertise through peripheral participation in workplace learning situations, and ‘distributed’ theories of university leadership ‘dispersed throughout organisations’ within multiple layers (Ramsden, 1998; Gronn, 2000).

The findings are of significance to other universities facing the challenges of mass education and the session will encourage discussion from the audience about their experience of similar programs.

**Fostering Belonging to Build Inclusive Learning Cultures**

*Rachel Wilson, Gabrielle Murray, Bronwyn Clarke*

The ISSOTL18 Conference, Towards a learning culture, poses a series of significant questions about what happens when inclusivity and diversity are woven into the fabric of an institution through its approach to learning and teaching, in and beyond the classroom. These propositions have been central to a major project undertaken at RMIT University, a large urban institution located in Melbourne, Australia, where an ethos of belonging has been adopted across all its operations. An institution wide belonging strategy requires economic, political and global considerations; as grass-roots academics, however, our work is guided by the principal that education can affect positive communitarian and individual change, and that meaningful and authentic relations with staff and students enable genuine inclusion, collaboration and growth (Chickering, Dalton, & Stamm, 2006; Kreber, 2013). In this paper, we focus specifically on our work embedding belonging within curriculum design through a discussion of discipline specific activities involving a range of positive interactions amongst student cohorts and between students and staff (Wilson & Clarke, 2016).

Belonging is the sense of mattering and interpersonal connectedness: a basic human need, it enhances motivation and drives behaviour (Baumeister & Leary, 1995; Strayhorn, 2012). Generating a sense of belonging, and therefore inclusivity, for all students has significant positive impact on transition and retention, learning outcomes, engagement, wellbeing and organisational advocacy (Tinto, 1993; Thomas, 2012; Ribera et al. 2015). Most approaches to belonging in higher education have addressed vulnerable student cohorts (Hurtado & Carter, 1997; Strayhorn, 2012 & 2016). By taking a whole of institution approach to belonging, we create cultural change that celebrates diversity and fosters inclusivity.

To embed belonging within curriculum we have utilised SoTL techniques of co-design, evaluation, reflection and iteration (Kemmis, 2007; Greenwood, Whyte, & Harkavy, 1993). In this paper we will demonstrate the framework we used to facilitate workshops with Program Managers and staff. The
workshops allowed us to introduce the importance of disciplinary belonging activities for students and identify best practice amongst current offerings. This in turn led to the development of a web resource housing over 50 best practice case studies on how to activate belonging within disciplines, in interdisciplinary contexts and for employability, several examples of which will be discussed in detail. This paper will be of interest to university administrators with responsibilities for policy development, and for academic developers and teaching practitioners tasked with fostering belonging to promote inclusivity within their classrooms.

**Everyday Ethics in Health and Care: A ‘Ground Up’ Approach to Learning and Teaching**

*Julie Wintrup*

Ethics education is prioritised differently across health, medical and care-related curricula and between professions, specialisms and disciplines, with little agreement on pedagogy (Lawlor, 2007). Consistent over time and across contexts, and well reported in the literature, is the struggle students report in applying classroom-based learning to the situations they encounter in their practice (Beckett and Hager, 2002).

This paper describes a project that brought together people who use health and care services, with students, practitioners and academics from a range of disciplines. Its purpose, as it evolved, was to develop theoretical understanding and practical mechanisms to increase awareness of ethics as encountered in everyday caring practices. It focuses on problems often dismissed as intractable, or described as resource inadequacies or team problems, or the kind of routine dilemma that Lambek (2010:2) describes as ‘happening without calling undue attention to itself’.

Through two national conferences we became a diverse community of learners and we have been writing together for a forthcoming edited text (Wintrup et al, forthcoming). The project, in particular writing together, has challenged the many polarising dichotomies present in the literature, in particular notions of expertise, and the many dominant discourses foregrounding personal qualities such as compassion or developmental notions of resilience (Howe, Smajdor and Stockl, 2012).

I want to discuss in this paper a four-quadrant model that we might use to develop educational resources that are meaningful and accessible to non-ethicists (Pardales and Girod, 2006). It is my contention that, in general terms, ethicists research and publish the public, high stakes events, disproportionately influencing education. At the same time, only a small minority of practitioners will ever encounter such situations, working predominantly in the private/long term, wellbeing arenas with their patients. Yet their education, requiring a basis in research evidence, is likely to draw on the remarkable and unusual. For many non-medical students, such ideas will be covered only under the banner of ‘professionalism’ and hardly debated or scrutinised at all. Not only does this place undue value on the kinds of events they may not experience during brief undergraduate courses (or ever in their careers), it risks devaluing the kind of relationships and dilemmas of their work, and fails to flag such issues as ethically problematic.

I explore why certain situations engage the public imagination while others seem to pass unnoticed, and go on to suggest a re-appraisal of health and care ethics education is timely.

W. Alan Wright, Suzanne Le-May Sheffield, Carol Rolheiser

The history of evaluating centres (also called units) for teaching and learning is uneven and largely unexamined. How and under what circumstances is evidence sought to determine the overall effectiveness and impact of a unit’s policies, programs and practices? In Canada a group of seven educational developers who have been involved in internal and external teaching and learning centre reviews, both as external reviewers and as members of units subject to review, took a closer look at the state-of-play of reviews in their home country and beyond. In June of this year they published, under the auspices of the Educational Developers Caucus (EDC) of the Society for Teaching and Learning in Higher Education (STLHE), a practical, peer-reviewed guide of interest to all stakeholders involved in a review. This session will explain why the authors of this ground breaking initiative felt it was in the interest of those involved in educational development to develop the guide, to enumerate the various contexts leading to centre reviews and to proffer advice to stakeholders in order to ensure a smooth and constructive process. Participants will be invited to discuss the controversial (at times) notion of external reviews, the potential usefulness of such a guide, and the importance of national context when considering a centre review at the institutional level. Participants will be invited to comment on the potential use of this guide in their own national contexts. They will also examine the review process, more specifically, as both an opportunity to review a centre’s efforts at promoting, supporting and engaging in SoTL, as well as opening up new SoTL possibilities focused on the review activity itself.

Student Perceptions of Using Concept Maps over Four Years

Michelle Yeo, Sarah Hewitt, Joanne Bouma, Sarah Webb

For the past four years, we have been conducting a study on the use of an innovative approach to teach the foundational physiological content within a Bachelor of Nursing program, specifically, first-year anatomy and physiology, as well as second year patho-physiology and patho-pharmacology. A variety of active learning techniques were implemented, most significantly, the creation of detailed concept maps by the students for each topic within the course. In the first year, students used skeleton maps created by the instructor. Through interviews we learned that some of these students began creating their own concept maps independently in the second year, similar to the findings of Carr-Lopez et al. (2014). The practice of concept maps has now been adapted and extended formally into the second year patho-physiology and pharmacology courses by some of the instructors to build upon the first year, and some students have continued to create these maps in later years.

Concept maps have been identified by Jaafarpour, Aazami, & Mozafari (2016) as having a positive effect on the academic achievement in nursing students. Schwendimann (2015) after reviewing a range of studies investigating concept maps concludes that, “when used sensibly and skillfully, concept maps can be powerful tools to support knowledge integration processes of complex ideas” (p. 89) and argues that “concept mapping can foster students’ learning for conceptual understanding instead of for memorization of isolated ideas” (p. 87). Gul and Boman (2006) note the potential for concept maps to “transform and externalize critical thinking” (p. 204), which is increasingly emphasized in nursing education. The research conducted by Chen et. al (2011) supports this claim.

In the present study, we have conducted 35 interviews from several cohorts of students. In this presentation, we will report specifically on students’ experience and perception of the concept maps. Students described the importance of their intent to learn, the benefits of continuous exposure to the material, the role of accountability in motivation, the reorganization of their study time and strategies, the retention of their learning with this approach, their ability to make connections to
other contexts. We have been able to follow a small cohort through all four years of their program, to determine the long term impact in terms of student perception of using the maps. Through this study we engage with the theme of creating a learning culture - learning that has a lasting impact, within and across courses and programs.

**Designing a Writing Course for Science PhDs: From Writing Up the Results to Transforming a Culture**

*Tomas Zahora, Cristina Keightley*

For PhD students in the sciences, globalization of tertiary education has brought exciting possibilities. They can study and observe phenomena in their original environments, work with leading experts, and create collaborative networks across the world. All they need—apart from a solid academic record—is a good knowledge of English so that they can “write up” their results in the dominant language of scientific communication.

To be successful, however, students need to learn how to navigate complex genre expectations and write successful grant proposals and articles in high-impact journals. Whether international or local, many PhD science students find themselves stymied by newly identified gaps in their knowledge and by the lack of language and skills to address them constructively.

This challenge is particularly acute in Australian universities where international students can enroll based purely on their previous work and an English-language exam. At the same time, local students are assumed to know how to write, despite a lack of consistent training in scientific writing (Harris, 2016). As a result, growing numbers of PhD students resort to hiring shadow-writers or engaging in plagiarism.

This paper describes and evaluates the design of an intensive PhD writing program in the sciences that addresses these challenges. The program is the result of a collaboration between the Faculty of Medicine, Nursing and the Health Sciences and the research-and-learning arm of the library at Monash University in Melbourne, Australia. Designed in 2017, the program is a ten-session unit offered to international and local PhD students in STEMM disciplines.

Reflecting on student feedback and subsequent assessment of this new approach to teaching writing, we offer a set of strategies for analyzing the needs of a student cohort, and identifying pedagogies and theoretical approaches to encourage the building of a culture of learning in a global science-education context.

**Broaching Threshold Concepts: Student Learning Goals and the Trouble with “Skills”**

*Angela Zito*

When we say that our course, program, or institution helps students develop “skills,” what do we mean? For instance, by “critical thinking skills,” we might mean “the capacity to recognize and question tacit assumptions.” But might we not also expect, in their development of these “critical thinking skills,” that students will develop the inclination and confidence to perform these tasks on their own, that they will become critical thinkers rather than simply acquire a few critical thinking “tools” for their toolbelt?

Throughout this presentation, attendees will be invited to think and talk about the language they use to describe student learning goals in their courses and programs, and to consider specifically what
affects and epistemologies might be revealed and concealed through the language of “skills.” The research presented will suggest that “skills” as a learning goal comprises a conceptual threshold that both separates and connects what have become routinely dichotomized perceptions of student learning: hard/soft, technical/non-technical, cognitive/affective. As much as talking about “skills” can reveal the interconnectedness of these binary pairs (Fink 2013; Hora, Benbow and Oleson 2016), my research suggests that “skills” language does more to conceal that interconnectedness by evoking culturally-informed valuations of one half of the pair over the other (“hard” over “soft,” “cognitive” over “affective,” etc.).

This argument arises from an ongoing, qualitative study on perceptions of assessment among English literature instructors at an American research university. In a series of interviews conducted in 2016, I found that instructors tended to use “skills” language as a means of broaching that which they most wanted students to learn while simultaneously distancing themselves from what felt too “abstract” or “fluffy” about those goals (e.g. the phrase “critical reading skills” used as a more “concrete” stand-in for the ostensibly “soft” skill of empathy). The threshold concepts framework (TCF) helps explain the varying degrees to which these instructors negotiated “skills” language as an entryway and/or barrier to articulating the complex learning that happens in their literature courses. In this regard, we might consider “skills” a threshold concept that faculty across disciplines must wrestle with in developing cultures of learning in their programs. We might also find in TCF an alternative to troublingly binary “skills” language, one that more visibly and purposefully connects student learning goals to transformational rather than consumerist models of learning (Land 2016).
PANEL ABSTRACTS
Abstracts in this category are organized alphabetically by first author

Using a Change Density Index to Understand Unit-Level Transformation of Teaching & Learning Culture

Caroline Bennett, Andrea Follmer-Greenhoot, Mark Mort, Molly McVey

In an effort to cultivate a culture of learning, colleges and universities have developed many initiatives and programs to promote faculty adoption of teaching methods that align with research on how people learn. To better understand the impact these initiatives have on teaching and learning cultures that exist within academic departments or units, we have developed a change density index to represent the depth and breadth of faculty engagement in change programs. We have found that the change density index is a useful way to gauge whether the initiatives are reaching beyond the “usual suspects,” and to characterize shifts over time and variations across departments in faculty engagement with change efforts. The change density index has been shown to be a valuable tool for quantifying levels of faculty engagement with programs and initiatives aimed at producing changes in teaching and learning culture, but important questions remain to be explored:

- What characteristics of a unit are most important when predicting readiness for change?
- What characteristics of a unit most strongly correspond with successful change around adoption of evidence-based teaching practices and improved student learning?
- How can these findings best be generalized to new contexts?

The goal of this session is to explore how different patterns of departmental engagement are linked to actual changes in teaching practices and student learning. To accomplish this, we adopt a case study-based approach, such that the change process in four different units is quantified and tied to faculty engagement using the change density index. We have selected four departments that are similar from a macro viewpoint, in that they are all STEM fields (broadly defined) and share similar expectations for faculty. However, the units have purposefully been selected to be different in terms of departmental culture around teaching and learning. Additionally, the selected units are highly variable with respect to the level of faculty engagement in existing supportive programs and incentives structures. With this approach, we appreciate that the department has been shown to be an important “locus for change”, and work to harness that assertion to accelerate and propagate changes in teaching practices (AAU, 2017; Fairweather, 2008; Tagg, 2012; Wieman, 2017). This approach also respects the networked aspect of higher education, wherein individuals act in the context of socially-linked networks (Williams et al., 2013).

This interactive session will be led by four panelists each representing different roles in the university context: the director of a teaching center overseeing multiple university-wide change initiatives, a faculty member who leads a school-level change initiative in engineering, a faculty member who is a departmental leader in teaching innovation, and a department-embedded pedagogy expert (postdoctoral teaching fellow) whose role is to collaborate with faculty to improve courses. The panelists will briefly describe the change density measure, and then will describe four different department case studies that highlight different trajectories as quantified by the change index over time. Each unit-level case study will enable conference participants to explore the relative utility of different change strategies being implemented in various departmental contexts. The panel session will also focus on harnessing the participants’ experience, knowledge, and insights to further generalize the results. In this way, both the participants and panelists are expected to leave the session with new ideas about how to apply the change density index in such a way that they can
target interventions in unit-specific contexts to positively influence changes in teaching and learning cultures on their own campuses.

At the conclusion of this 90-minute panel session, participants will:

- Be prepared to apply the change density index in their institution- and unit-specific contexts, to quantify the level of faculty engagement with incentives and programs;
- Gain insight into how the change density index measure predicts changes in teaching practices and student learning; and
- Be enabled to translate quantified predictions for change into targeted interventions at the unit-level at participants’ institutions, to spur shifts in pedagogical culture and intentionally grow the institution’s and unit’s culture of learning.

**Building Inclusive Learning Cultures: Critique and Learning Transfer across Studios and Classrooms**

*Brian Brooks, Gaia Hwang, Chris Jensen, Heather Lewis, Camille Martin*

This panel presentation focuses on a two-year SoTL initiative involving 40 faculty in five, cross-disciplinary Faculty Learning Communities (FLCs) who teach studio and non-studio courses in art and design and general education. Through a macro analysis of the FLCs community-building process and a micro analysis of their research approaches, the panel considers the relationship between learning culture and research process. The micro analysis is based on two case studies: Crit the Crit (using studio observations and interviews to explore how critique as a signature pedagogy is practiced across studio disciplines); and The Transfer of Learning (using course assignments from both studio and general education to explore the potential for transfer of learning).

The panel is informed by the recent literature about inclusive learning cultures (Chick, 2018; Poole, 2013) as well as literature about the unique aspects of cross-disciplinarity within SoTL (Boose & Hutchings, 2016; Wilner, 2014). The panel suggests that the ongoing debate over the legitimacy of one form of disciplinary research over the other (Bloch-Shulman, et al., 2016; Chick, 2013) becomes less polarized when cross-disciplinary inquiry opens up possibilities for collaboration. Bloch-Shulman, et al. (2016) argue that “if SoTL is to engage faculty across the disciplinary spectrum, it must embrace all kinds of research, including focused, controlled studies that yield statistical analyses and projects that tell significant stories about student learning and that emphasize interpretation, process, creativity and theory” (p. 6). The panel describes how the FLCs reached a “consensus around research viability and purpose” across disciplines leading to the development of common tools and approaches (Poole, 2012). However, this was not an inevitable outcome.

At first it appeared that the five FLCs were operating on two separate tracks – one focused on community building and the other on cross-disciplinary SoTL research. The FLCs examined the relationship between community-building and SoTL and questioned whether their work constituted valid research (Manarin & Abrahamson, 2016). Ultimately, the FLCs realized that without their commitment to building and sustaining a learning community they could not have developed the tools and processes to investigate their research topic across disciplines. The FLCs commitment to community building reflects the “inclusive learning culture” conference theme and shapes the panel’s framing question. Given the argument that a learning culture is socially constructed in a particular context (Chick, 2018), what is the relationship between the FLC’s inclusive learning culture and their particular research process?
The inclusive culture both contributed to, and was shaped by, collaborative meaning making within and across the FLCs. The FLCs’ organic research approach evolved as faculty wrestled with ways to examine teaching across diverse studio and non-studio disciplines. Faculty first defined, described and categorized particular teaching and learning processes in their disciplines such as transfer and critique and then developed common terminologies, typologies, and visual approaches for documentation and analysis. The following two case studies describe how participants developed research tools and methodologies that best captured the iterative teaching and learning processes—critique and the transfer of learning—they were studying. The case studies will also describe an ongoing project to create, with administrative support, interactive data-bases and catalogues for future public sharing.

The Crit the Crit FLC members sought to understand and rethink how critique, as a signature pedagogy in art and design education (Scagnetti, 2017; Motley, 2017; Sims and Shreve, 2012), is practiced across art and design disciplines within their institution. The research investigated faculty considerations of quality that inform the crit, the pedagogical approach in different fields such as printmaking, sculpture, communications design, interior design and architecture, and the various methods used to perform critiques within these fields. To do this, faculty examined the diversity of pedagogical approaches and methods used in studio-based critique through a non-participatory observational study and a series of semi-structured interviews. This investigation was facilitated by a visual tool purposely created by the group. The tool was designed to translate the critique event into a visual structure in order to portray the DNA of a critique typology and foster comparable classifications. The results of this approach produced an anatomy of critique techniques and methods in the form of an analytical matrix and a planned, illustrated catalogue of practices to be shared across the institution.

The Transfer of Learning FLC explored teaching for the transfer of learning, both horizontally and vertically, across the disciplines of art, design, humanities, and sciences (Robertson, L. & Taczak, 2017). In its first year the FLC turned inward, exploring the potential for transfer of learning through an analysis of the student work and course materials (based on the different disciplinary content, vocabulary, culture, and media used to support the transfer of learning). FLC faculty realized that communicating through the thicket of disciplinary difference required time and an open-ended process.

In its second year the FLC turned outward, organizing a series of ten Transfer Sessions that invited small groups of faculty from across the curriculum required of art and design majors to meet and discuss learning transfer. The sessions combined faculty outreach designed to expand institutional understanding of learning transfer with a process of collecting valuable curricular data from participating faculty. This collegial process not only led to faculty learning but also generated new knowledge in the form of common definitions, ways of seeing, and ways of analyzing teaching for the transfer of learning across disciplines. With these common understandings and tools, the FLC faculty created concentric circles of inquiry as they expanded beyond their own classrooms and studios.

After the panel presentation, participants will form small groups to: 1) provide feedback on the visual methodologies used by panelists and make suggestions for improvement; and 2) participate in one of two exercises: a) Use of the critique typology tool – review the definitions for types of feedback in critique and then categorize frequently used statements in critiques into one of the given typologies and discuss positive and negative feedback models; or b) Investigate transfer of learning in a studio or non-studio area through close examination of an assignment (presented visually) and consider the connections to their teaching.
Changing a Culture: The Use of Course Portfolios to Document Teaching and Learning

Dennis Buckmaster, Melinda Appold, Elizabeth Karcher, Trevor Stamper, Daniel Guberman

Assessment of teaching has become a flashpoint for heated debates and discussions on many campuses. As faculty at a large public research university in the United States, the presenters found themselves in a system that relied almost entirely on student evaluations of teaching, which are fraught with claims of bias (e.g., Boring, 2017). There has been institutional discussion about expanding assessment methods, but little progress, so the presenters took it upon themselves to explore course portfolios in an effort to effect institutional change from the bottom up (Bernstein, Burnett, Goodburn, & Savory, 2006). In this panel we provide an overview of the campus situation and reasoning for creating course portfolios. Then, three faculty members will share their varied approaches to constructing their portfolios, and what they gained from the process. Finally, we share progress toward creating institutional change.

As with most major research institutions in the United States, our university includes teaching in annual evaluations, promotion, and tenure decisions. The extent to which these teaching evaluations are weighted varies widely across departments and colleges, but there is a need and expectation for quality documentation. Historically, student evaluations have focused on two common questions, one about course quality and the other instructor quality. These two questions served as a primary means for evaluating and comparing faculty. That is changing. Because of proven biases (gender, course level, nationality, etc.) and inconsistent assessment, faculty have demanded a move away from these two common summative questions posed to all students, but replacements have struggled to take root. Some departments have adopted peer evaluation systems (Chism, 2007), with varied methods of implementation and levels of success. The large time investment to do this well and consistently seems to hinder wider adoption. Peer review can be for formative and/or summative evaluation, but motivation for formative assessment seems lacking, and quality of the review is critical for equitable summative evaluation. After a workshop by Dr. DeZure of Michigan State University, course portfolios surfaced as a potential alternative for evaluation of instructional packaging and delivery.

In this panel we explore a pilot effort using course portfolios as a framework for faculty to communicate their effectiveness in teaching and learning, frame scholarship of teaching and learning projects, and to provide models for colleagues and administrators. This pilot effort involves five faculty and staff from different departments who had different motivations for creating a course portfolio. Motivation to create a portfolio ranged from its use as an effective evaluation tool to document reflection and teaching scholarship effort to increasing the impact on student learning. In each case, though, a goal was for others to understand the motivation, style, and structure of instruction which reflects the scholarship of the instructor (Bernstein et al., 2006).

The goal of Instructor 1 was to identify whether course portfolios could effectively communicate his teaching scholarship to his peers, provide evidence to his department that course portfolios can be used as an evaluation tool, and to document his teaching scholarship efforts. Instructor 2 had a similar goal of creating a mechanism to document teaching impact, but also wanted to increase her impact on student learning and introduce the course objectives to a larger audience. Documenting the impact of learning strategies in the classroom was the primary objective of Instructor 3. She hoped to utilize her course portfolio to understand how incorporating active learning strategies in her classroom influenced student motivation, interest, and curiosity towards the subject matter. These three faculty members were joined by an administrator, who prepared his course portfolio with the hope of increasing student expectations, and to provide examples of how teaching philosophy can be tied to practice. The final participant, an instructional consultant, sought to explore this process by designing a portfolio to measure the effectiveness of workshops on college teaching. Although each instructor had a targeted goal in mind, each sought a way to reflect on and
document their teaching practices, while also guiding future course revisions, while also guiding future course revisions to enhance and measure student learning.

In conclusion, there is a strong need for documentation of teaching and learning beyond the sole use of student evaluations. Although these evaluations are important, course portfolios offer an opportunity to both reflect on and document teaching practices and development, leading to scholarly production. This panel explores a college-wide effort to expand the documentation of teaching and learning through the use of course portfolios, created through a partnership between faculty, administration, and staff, to promote institutional change from the micro- and meso-levels. Throughout the panel, we will engage attendees in questions to help identify factors regarding the documentation of teaching at their own institutions as well as helping to develop strategies for bottom-up institutional change.

**Helping Students Develop Information Skills Is Everyone’s Business: Examining Information Contexts**

*Erik Christiansen, Claes Dahlqvist, Lauren Hays*

Information literacy (IL) is both a discipline and transdisciplinary skill (ACRL, 2015). Its transdisciplinary and context-dependant application, as well as its theoretical underpinnings, make it a natural fit within the Scholarship of Teaching and Learning (SoTL). IL is broadly defined as the ability to search for, select, critically evaluate and use information for solving problems in various contexts (ACRL Framework, 2015; SCONUL 7 Pillars, 2015). Previous decades of expansion and diversification in higher education - with a growing interest in research on teaching and learning (e.g. SoTL), along with the rapidly changing information landscape – has highlighted IL as an important academic skill. IL is a vital skill for graduates’ employability, lifelong learning, and for being an engaged and informed citizen. Today, this conversation has been reinvigorated due to the rapid misinformation spread via social networks and the Internet.

This panel is comprised of three librarians from three countries who will talk about how IL is viewed in different national contexts in North America and Europe. The panelists will outline how different national and institutional contexts affect how IL is viewed, highlight the importance of disciplinary context and how faculty approach IL, discuss how IL can be embedded into curriculum, and point to the dominant IL frameworks currently being used. The panelists will also summarize some of the common critiques of IL instruction and make an argument for why IL can be enhanced through SoTL research approaches. Time will be set aside, near the start of the panel, for participants to discuss how information works in their discipline (including creation, distribution, and evaluation) and how they teach IL skills in their classroom. Following an overview of the dominant IL frameworks and different national contexts, the panelists will lead a more general discussion about how these frameworks apply or do not apply to the participants’ disciplinary contexts.

Constructivist approaches on learning IL have replaced instrumental pedagogical views inspired by behaviorism and its focus on generic and decontextualized skills. Learning is seen as constructed from learners’ own experiences and understandings of the object of teaching/learning. A social and contextual constructivist pedagogical view is put forward by researchers such as Vygotsky (1962) and Lave and Wenger (1991) who argue that learning is embedded in and part of social, ideological and physical contexts, situations and environments (e.g., academic disciplines). In IL research, such communities of practice are studied in information and learning practices (Limberg, Sundin & Talja, 2013) stressing IL as a context-bound and transdisciplinary skill and not only as a discipline in itself. The specific practices of both information and learning mean that instructors can reinforce the
separateness of information and not support a cohesive understanding of information practices and environments.

Much of the discourse around IL revolves around the situational context in which these skills are taught. There is evidence that curriculum embedded IL instruction is more likely to promote long-term skill development (Rosman, Mayer, & Krampen, 2016). Learning can be maximized when information literacy is underpinned by theory and taught contextually. This means that instruction needs to be tailored to the program, course, and assignments. While there are established threshold concepts (Christensen, 2015; Townsend, Hofer, Hanick, & Brunetti, 2016), a critique of IL scholarship is the overabundance of local, institutionally specific, and practice-based studies not rooted in theoretical literature. Through a SoTL lens, IL and its influence on learning is better understood. Furthermore, IL research can be strengthened by borrowing some of the established methodologies and linking research to theory.

From this panel presentation, audience members will learn about the variance in approaches to IL instruction and why national, institutional, and disciplinary context is so important. Through discussion, participants will connect how SoTL studies can help faculty understand the nature of IL in their context and what IL skills their students possess and still need to learn. Studying IL through a SoTL lens has the potential to greatly aid the higher education learning community in understanding differences in how IL is contextualized, based on the differing international information landscapes.

Panel session learning objectives:

- Define information literacy in the context of their discipline;
- Develop ideas for how information literacy could be integrated into their discipline and taught;
- Identify how approaches and practices in SoTL can support and undergird information literacy theory and skills in various learning cultures.

Finding and evaluating information is a critical skill in higher education, regardless of the disciplinary, institutional, and national learning contexts. This panel session will provide an argument why teaching information literacy skills is everyone's business, and will get participants to think about how how information literacy is relevant to their own disciplinary context.

Throughout the session, participants will have opportunities for dialogue and discussion about information literacy in their discipline and cultural context. Specifically, time will be set aside, near the start of the panel, for participants to discuss how information works in their discipline (including creation, distribution, and evaluation) and how they teach IL skills in their classroom. Following an overview of the dominant IL frameworks and different national contexts, the panelists will lead a more general discussion about how these frameworks apply or do not apply to the participants’ disciplinary contexts. By rooting information literacy skills within SoTL, attendees will develop new ideas for integrating and teaching information literacy skills.

Equitable Teaching and Learning through Group Work in Flipped Classrooms around the Pacific Rim

Alberto Corrias, Zahirudd Fitri, Erin Hill, Adrian Lee, Sean McMinn, Jun Hiraga, Sayaka Sugimoto, Wei Zuo

Since the beginning of 2016, the University of Washington has hosted an online learning community, "Evidence-based teaching: Flipping the Classroom", with participants from seven Association of Pacific Rim Universities (APRU) institutions, including Tsinghua University, Waseda University,
University of Malaya, Hong Kong University of Science and Technology, National University of Singapore, University of Southern California, and the University of Washington. Flipped classrooms provide flexibility in the learning environment for depth of content, focus on critical thinking skills such as problem-solving and critiquing sources, and tackling learning goals related to leadership and communication. Framed within our cultures, our learning community discussions have spanned a multitude of approaches to the implementation of flipped classrooms, which we have found naturally lead to peer learning and the formation of groups. We also found that group work plays an important role in promoting equitable teaching and learning in the class (Wenger et al., 2002), in spite of the different cultural backgrounds of the participants of this learning community about the Pacific Rim.

In this panel, learning community presenters will share a bit of background about our learning community and existing literature on the impacts of group work in culturally diverse classrooms with under-represented minorities. The potential role that group work can play in creating a more equitable classroom will be highlighted through a comparison/contrast of the modes in which group work is implemented within our diverse courses. We will also refer to literature on the subject of virtual environments and how, for example, synchronous and asynchronous classrooms can assist in bridging cultural differences for a more equitable community of practice (LaPointe and Gunawrdena, 2004).

Specifically, presenters will share each of their best practices and examples from their institutions in HK, Singapore, Malaysia, Japan, and U.S. Practices from both face-to-face classrooms and virtual learning settings will be shared. For example, in Singapore, male university students are 2 years older than their female counterparts due to the compulsory 2-year military National Service and they tend to be more likely to assert leadership than females. Based on the acknowledgement of this age diversity with respect to gender, our presenter from the National University of Singapore will showcase how he uses permanent teams for the whole quarter in his class, setting up teamwork agreements and assessments; knowing the diverse background of the class encourages participation from more students.

Similarly, Singapore’s multi-racial and multi-religious society may offer a good example of the potential impacts of group formation on equitable teaching or students’ perception of it. Should students be allowed to form groups by themselves with the risk of culturally homogeneous groups? Or should diversity within the group be enforced? The implications of those circumstances on group dynamics, on group members’ assertiveness and maturity and on group productivity will be discussed.

In addition, following recent existing literature that indicated that Peer Instruction in introductory physics can bring about positive changes in students’ attitudes and beliefs (Zhang, Ding, and Mazur, 2017), our presenter from the University of Washington will showcase the teamwork strategies she employs in her physics class, including practices of grouping and designing roles for each group member, help for students of under-represented minorities to contribute actively in class learning, and facilitation of learning for the class as a whole.

Finally, presenters will facilitate an open discussion around the comparison and contrast among the various adopted models (similarities/differences in issues, methods) and frame the discussion within existing literature. Then presenters will facilitate an interactive Q&A session with audience to exchange insights and learn from each other’s experiences on the topic of equitable teaching and learning through group work in classrooms.
Inclusivity in Academia: Perspectives, Experiences, and Roles of International Faculty

Stacey Cozart, Ketevan Kupatadze, Maja Jankowska

As the internationalization of higher education continues, international faculty are a growing presence on campuses in higher education, yet their personal and professional experiences and impact on their institutions are under-researched if not understated. This panel will address international faculty experiences, focusing on the ways foreign-born academics perceive themselves as contributing to the growing internationalization and diversification agendas of their institutions and/or the extent to which they perceive their voices as being valued by the institutions as they design and implement such agendas. The panel presenters represent three international institutional contexts in the US, Denmark, and the UK, with different cultural, microcultural, and pedagogical perspectives. Drawing from cross-contextual, cross-cultural, and cross-disciplinary experiences, they will share both their own professional and personal perspectives as international faculty/staff and those of other international teaching faculty. The experiences and perspectives presented and discussed by the panel will shed light on our understanding of the increasingly globalized environments for teaching, learning, and advancing knowledge, as well as on international faculty's experiences and role in such environments. The panel participants will encourage the audience to share their personal and institutional experiences with or as international faculty and to engage in a dialogue on how to increase inclusivity in higher education institutions, going beyond the appealing rhetoric about diversity to embrace it as a core of our education system. Together with the audience, the panel participants will consider academia as a space that can model our society's transformative appreciation for inclusivity and diversity.

Higher education is characterized by the increasing presence of international faculty and students. At the same time, universities are increasingly focusing on educating interculturally competent citizens and preparing graduates for careers in a globalized world. While the effects of student diversity and inclusivity of students have received considerable attention from researchers, with the teaching and learning challenges being among the main areas in focus, the experiences and inclusivity of teaching faculty is under-explored. The need to further research the perspectives, experiences, and roles of international faculty, including the extent to which they contribute to the transformation of the educational environment, appears timely in the context in which they are (and we wish them to continue to be) part of our higher education system.

This panel will draw on the relatively recent discussion within the ISSoTL framework on the importance of creating and supporting inclusive teaching and learning communities or cultures. Recognizing the need to engage more deeply with how we conceptualize and practice teaching and learning in the global context, the panel participants will engage the audience in the discussion about the ways inclusion and exclusion of “the other” has been, is and should/will be practiced in Western higher education institutions. Since the focus will be on teaching faculty, it is important to underscore that this subject falls within the parameters of the ISSoTL due to the impact on teaching and learning and on the student body that all teaching faculty have.

The presenters' intention will be to draw from cross-contextual, cross-cultural, and cross-disciplinary experiences in order to:

a) Understand whether, and to what extent, university communities are or can be characterized as inclusive communities of practice from the perspectives of the international faculty interviewed; and

b) Explore ways in which to build civic capacity on university campuses for more inclusive and welcoming environments for everybody.
Some of the specific questions that the presenters will address are:

- How do international faculty members experience and perceive the educational environment at their respective institutions? What challenges and opportunities do they identify in relation to working and teaching in international contexts?
- What role (and voice) do the international faculty have in co-creating and identifying with institutional microcultures?
- Can academia be viewed as a model for our society’s transformative appreciation of inclusiveness and diversity? And, how can academia model these values for students?

Methods and methodology: The presenters will report on the results of interviews conducted with international faculty with teaching responsibilities employed at the presenters’ home institutions. The interviews conducted as part of the study were predominantly oral, semi-structured, and audio recorded, lasting between one and one-and-a-half hours; although some chose to answer the interview questions in writing. Faculty members gave free and informed consent to participate in the interviews and were assured anonymity, in the US following the IRB (Institutional Review Board) requirements of the institution.

The researchers used an inductive approach to analyzing the qualitative data in order to summarize the findings, find major trends in and links between the interviews, and to establish clear connections between our research questions and focus and interview results. In addition, the interviews have been analyzed from the perspectives of hospitality theory and critical cosmopolitan theory within the framework of higher education.

Outcomes and Insights: By increasing and improving our knowledge of international academics’ experiences, values and beliefs, as well as their impact on local and international teaching communities and, specifically, on students, we aim to point towards ways in which institutions will be more inclusive spaces and be better able to improve the international communities of teaching practice. Increased knowledge about international faculty experiences will also contribute to improved academic and intercultural learning in students.

The panel hopes to contribute to the development of higher education institutions as cosmopolitan—transformational and inclusive—spaces where our society’s views about inclusivity, diversity and interdependence are articulated and modeled.

**Constructing a Learners Culture: Merging Student Voice, Studio Pedagogy, Creativity, and SoTL**

*Jonathan Fisher, Diana Gregory, Hayley Leavitt*

This panel discussion on creativity/conceptual inventiveness (C/CI) is based on our continuing SoTL journey that began by asking the following questions: in art courses what is it that students learn about creativity and is this worth learning; what activities enable the learning/growth/development to occur; what helps students be more effective as artists; and how can I support my students (O’Brien, 2008)? These questions served as compass points that emerged following external accreditation review indicating a lack of creativity/conceptual inventiveness in student artwork. This action also fostered an extended faculty examination of implicit/explicit beliefs in creative practice. While case study results of our SoTL journey documented individual faculty and departmental steps toward meaningful change, what was lacking was student engagement in our SoTL process (Feltten, Bagg, Bumbry, Hill, Hornsby, Pratt, Weller, 2013). We – a recently accepted BFA student interested in formulating undergraduate research, a tenure track faculty approaching tenure/promotion who also supervises part-time faculty and coordinates foundation level courses, and an art education professor serving as a “critical friend” – are working together as a/r/tographers (Irwin & Springgay, 2013).
2008). For the first 30 minutes of this panel, we will present three individual process/product accounts of our partnership to meaningfully engage and support each other as we collaboratively investigate creativity while navigating our complex relationships within our learning environment. For us critical questions about creativity/conceptual inventiveness (C/CI) have emerged including: what is the student’s understanding of C/CI and its importance in their artwork; can C/CI be taught; what perceptions or knowledge do students have about person/product/place/process perspectives regarding creativity; in general, what does it mean to be creative in art and design; can creativity be assessed in a way that deepens student’s learning; and finally, if barriers to the creative process exist what can faculty do to support students through learning activities?

Building on current and prior research to account for both the scholarly work accomplished and our local context (Felten, 2013) this presentation also presents results from our mixed methods longitudinal and IRB approved study, “Effective teaching of conceptual inventiveness and creativity in visual arts,” utilizing student focus groups and surveys. Additionally, the results of our process of horizontal but not yet vertical “constructive alignment” (Angelo, 2012) of foundation courses leading to portfolio review will be presented.

In studio pedagogy, focus on “skill and drill” is often juxtaposed against knowledge that students need to develop as creative individuals in their personal as well as professional lives (Sawyer, 2017). Yet as Jackson (2006) noted, summatively driven assessment practices and criteria that only focus on what is known, yet does not recognize learning processes or how people come to know or recognize emergent unanticipated learning outcomes, will smother creativity. In this presentation, our process is focused on student learning in art and design being conducted in partnership with art students who are part of a large, suburban, public university. After our 30-minute collage presentation the panel will invite participants to engage in open verbal/non-verbal discussions and art-based learning activities to build an “influence map” so that participants can a/r/tographically tell more stories that will teach us how to live with more creativity, confidence, flexibility, and imagination (Leggo, 2008); to build a more inclusive SoTL landscape; and to discover “becoming a/r/tography” (Irwin, 2013) specifically “conceptualizing becoming (emphasis ours) within the multiplicities of our work” in those “in-between spaces among the identities, practices, and processes of artists, researchers, and educators, and in the conditions of learning to learn” (p. 24).

Mind the (Gender) Gap! Challenging Gendered Notions of Expertise through Students as Partners

Lucy Mercer-Mapstone, Anita Acai, Rachel Guitman, Catherine Bovill, Peter Felten, Elizabeth Marquis

While universities strive to achieve environments that support and include diverse student and staff cohorts, the reality often falls short. Gender equity in this environment has become critical as, in recent years, the rate of women enrolling in tertiary education has begun to surpass that of men (European Union, 2012). While this has led some to name a current trend of ‘feminisation’ in the sector, “[women] still face horizontal and vertical segregation as well as a severe underrepresentation... in managerial [e.g., professorial] positions” (Klein, 2016, p. 149). This, and our own experiences as practitioners and scholars in student-staff partnership, inspired us to design a panel that explicitly addresses the conference theme ‘inclusive learning cultures’ by exploring the role of gender and gender inclusivity in higher education in and through student-staff partnership.

Engaging students through student-staff partnership in higher education teaching and learning processes, including the scholarship of teaching and learning (SoTL), is an approach that has seen rapid uptake across international contexts. Research exploring such practices increasingly finds that student-staff partnership is one approach to student engagement that makes the inclusion of diverse and often marginalised voices core to high education teaching and learning processes (e.g., Bovill et
al., 2016; Cook-Sather & Agu, 2013). It has been argued that, with widespread uptake, such practices could move universities toward developing inclusive learning cultures both within and among institutions (e.g., Matthews et al., 2018; Healey et al., 2014). This panel will respond to these findings by exploring specifically the role of gender and gender inclusivity in and through student-staff partnership, addressing the conference theme/question: What does teaching and learning look like when (gender) inclusivity is not an add-on but core to our practices?

To kick off this panel, original research will be presented by the panel chairs as a focal point for panel discussions. This research was conducted in transnational student partnership by the three students on the panel. Adopting a feminist lens, it explores the nature of gender in the authorship of partnership scholarship. Data were collected by analysing the gender of authors of partnership research across six higher education journals over the past five years, ultimately analysing 211 articles focussing on student-staff partnership. Across all articles analysed, 70% of all authors (N = 512) were women and 76% of articles had a woman as a first author. Results also showed differences in the ratios of gender authorship by article type. For example, women were more likely to author reflective essays (83%) than research articles (70%).

These percentages are much higher than comparative studies in other fields such as STEM, which suggests that partnership can be seen to create ‘sites of resistance’ within which the patriarchal norms of academic publishing may be countered. Arguably, this has the potential to shift traditionally masculinist notions of knowledge creation and expertise toward a learning culture of greater inclusivity and diversity. This over-representation of women in student-staff partnership scholarship reflects similar findings from previous studies in related fields including SoTL and educational development (e.g., Bernhagen & Gravett, 2016; McKinney & Chick, 2010). These fields, along with partnership, arguably focus on the delivery of a service whose main activities require care and emotional labour. This focus, as Bernhagen & Gravett (2016) argue, has led to the marginalisation of such roles in higher education through the well-documented and common “devaluing of women and their labor” (p. 1). These results are surprising, illuminating, as well as potentially problematic and controversial thus providing a foundation for stimulating discussion.

The panel composition, including chairs and panelists, will enact an ethos of partnership. As such, the panel will be comprised of three students and three faculty from diverse disciplinary backgrounds and different international contexts including Australia, the UK, the USA, and Canada. The session itself will be similarly collaborative. Chairs will adopt a feminist pedagogy to “engage [participants’] subjective experiences, encourage interaction, and treat knowledge as an ever-evolving, mutually developing process” (Bell, 1993, p. 108) among panelists and audience members as we come to interpret and make sense of the research and subsequent implications for higher education together.

Following a brief presentation of the original research, panelists and audience members will be invited to respond to, interpret, and discuss the findings in ways that draw on the diverse expertise in the room. The session will engage panelists and audience members in dialogue to grapple collaboratively with questions of gender diversity, notions of valuing diverse expertise, and integrating inclusivity in teaching and learning in higher education. The session will focus on praxis to build participants agency to connect panel discussions to future action. By the end of the session, participants will have gained an understanding of how feminist pedagogy can be used to frame, inform, and critique partnership in higher education, and through their responses to and interpretations of the panel, reflected on the role that gender may play in their own teaching and learning processes.
The Evolution of Professional Development for University Teachers: Around the World in 90 Minutes

Carol Miles, Abigail Snook, Keith Foggett, Asta Bryndis Schramm

This panel discussion considers a maturity model for professional development for university teachers around the world. Panel members from Europe, North America, and Australia will address the varying levels of professional development currently being provided for university teachers in developed and developing parts of the world.

Over the past 20-30 years, universities have established units responsible for the provision of professional development for their teaching staff. These units have been tasked with ensuring that the staff employed have sufficient teaching skills to support students in their learning. The methods employed by these units have been through a number of phases, as the best methods to enhance teaching quality have been proposed and implemented. Over time, the staff employed in these centres have seen the work of their units move from an initial structured academic approach to a more practical focus on the art of teaching and the integration of teaching methods that have research supported effectiveness. Globally, most teaching development initiatives could now be described as proactively providing development opportunities for university teachers and course improvement, as compared to the initial reactive nature of the pursuit.

The evolving focus of these units and the increasing focus on teaching has led to a greater emphasis on the scholarship of teaching and learning (SOTL), a field of study that reflects the maturity of this area of endeavour. It is useful to reflect on how this SOTL focus has grown, and the steps that have led to this point, as a response to the need to ensure that good teaching is a focus of university teaching and learning centres.
The focus on good teaching and student success continues to be an important element of professional development for teaching staff, and there has been increasing interest in supporting those teachers who work with our students in capacities other than full time academic staff. In recent times, universities have begun to acknowledge the pivotal role that non-tenure-track teaching staff have in the assurance of student success, and have begun to deliver programming targeted at their specific needs. As the pursuit of teaching development matures, along with full-time university teachers, conjoint instructors, casuals, adjunct instructors, sessional staff and clinical supervisors are increasingly being provided with opportunities for growth of their teaching and student supervision skill sets.

This panel will consider three dimensions of faculty development: maturity of the provision of development activities through formalised teaching and learning centres, the increasing focus on the importance of providing these services to sessional and part-time university teachers (and their appetite for such development), and the emerging requirement for formal development programs for teachers and supervisors responsible for students in clinical settings (to date, a cohort that has not been broadly addressed).

The panel will provide a global perspective on the maturity of this pursuit at universities, in Australia, Iceland and Canada, with a particular focus on the broadening of the offer to include all of those who have an impact on university student success – beyond full time university teachers. The panel will focus on the differing needs of university teachers holding varying employment contracts and roles in supervising and training university students.

The Panel will also address initiatives intended to provide initial programs of academic development in developing countries which are at the very early stages of the maturity model, and where there has been little if any professional development for university teachers to date. Two of the panellists have experience in providing this initial teacher training in a number of countries across Asia and Africa.

Individual Panellist Brief Presentations

Professional Development for non-tenure track teaching staff: Addressing a growing need.

A senior administrator of a teaching and learning centre in Australia will address the effectiveness of formal professional certificate programs for full-time and sessional academics and new programming that has been launched for clinical supervisors in the field. He will also discuss the success of two “academies” established at this university to provide a sense of place and support for sessional academics and clinical staff who are from geographically diverse locations with little previous contact with the university despite their pivotal role in student success.

Attitudes and needs of sessional teachers: Are they really that different from tenured faculty?

An Assistant Professor and an advisor for the Development of Teaching and Learning will discuss the maturity and goals of current professional development at the University of Iceland, with a closer look at one of the older schools. She will discuss student evaluation outcomes that have challenged faculty teaching methods, especially in departments with large numbers of sessional teachers. Combining student and teacher outcomes, she will discuss some current initiatives and possible applications for future faculty development.

A former assistant professor and current sessional teacher and doctoral candidate in Iceland (as well as continuing as an online adjunct instructor for an American university) will report on a study conducted to determine sessional instructors’ identification with and motivations to teach as well as their interest and motivations to seek professional teaching development compared to those of
The highly emerging and tenured faculty at a health sciences school. She will also discuss further considerations and applications of the results for future faculty development for sessional teachers.

Taking good teaching practices to the global stage – International Teaching Certificate Programs in Africa and Asia

A Professor and senior administrator of a teaching and learning centre in Australia and previously an Associate Vice-President of Teaching and Learning from a Canadian University will discuss the evolution of professional development for academic staff at all ranks, as well as describe a number of fundamental university teaching programs that have been offered to teaching staff from Singapore, Saudi Arabia, Rwanda, India and China.

Changing the Culture to Recognize and Reward Teaching

Emily Miller, Michael Dennin, Andrea Greenhoot, Ruth Graham

College and university efforts to improve undergraduate teaching and learning require support and reward for faculty use of teaching practices that are known to support student learning. Despite decades of scholarship to re-envision faculty roles and to develop rich, multisource systems for representing teaching, these methods have not been broadly implemented into practice (Bernstein, 2008; Bernstein & Huber, 2006; Glassick, Huber, & Maeroff, 1997; Hutchings, 1996; Hutchings, Huber, & Ciccone, 2011). In recognition of the importance of this lever for change, departments, colleges and institutions are now developing innovative efforts to support the implementation of higher quality approaches to teaching evaluation.

Evidence shows that stated policies alone do not reflect practices, much less evolve culture to more highly value teaching. A richer, more complete assessment of teaching quality and effectiveness for tenure, promotion, and merit is necessary for systemic improvement of undergraduate education (Fairweather, 2002; Huber, 2002).

In this interactive panel moderated by the Association of American Universities, we will explore the various strategies institutions are using to create an environment where the continuous improvement of teaching is valued, assessed, and rewarded at various stages of a faculty member’s career and aligned across the department, college, and university levels. We will showcase an emerging matrix to map the landscape of efforts that are working to improve policy and practices related to the evaluation of faculty work and showcase three illustrative projects in this space. Panelists will identify shared goals being addressed by these new policies and practices. Participants will explore strategies to implement these new tools and address the common barriers to implementation.

The University of Kansas, Center for Teaching Excellence: Benchmarks for Teaching Effectiveness Rubric

The University of Kansas Center for Teaching Excellence (CTE) has developed a framework to provide a more comprehensive view of faculty teaching. It is designed as a rubric to structure department evaluation of faculty members’ teaching, with defined expectations for seven dimensions of teaching practice. CTE is working with departments to adapt and use the rubric as part of a multi-institutional National Science Foundation study.

Royal Academy of Engineering: Career Framework for University Teaching

The Framework is designed for application across all university disciplines for all faculty members whose role involves any teaching. The initial Framework was adopted and piloted by nine universities
across the world and after an implementation evaluation a finalized Framework is being launched in April 2018.

Cottrell Scholars Collaborative: Aligning Practice to Policies – Changing the Culture to Recognize and Reward Teaching at Research Universities

Association of American Universities (AAU) in partnership with Research Corporation for Science Advancement’s Cottrell Scholars has worked on two Cottrell Scholars Collaborative projects focused on understanding more effective ways to evaluate teaching at research universities. Most recently the collaborative published Aligning Practice to Policies. This document provides specific guidance to departments and institutions on how to implement new methods for evaluating, recognizing, and rewarding teaching at research universities, particularly relating to how teaching is judged for purposes of promotion, tenure, and annual reviews.

This panel addresses the central conference theme by highlighting the importance of evaluating and rewarding faculty members’ contributions to fulfilling the educational mission of higher education institutions and creating cultures where continuous improvement to teaching and learning is expected and valued.

What Encourages Academic Staff to Engage in Systematic, Sustained Change in Teaching Practices?

Jessie Moore, Katarina Mårtensson, Torgny Roxå, Deandra Little, Peter Felten, Kathryn Sutherland, David Green, Elizabeth Marquis

Representing an international, multi-institutional research team, the panel presents a theoretical framework for understanding what prompts academic staff/faculty to change towards sustained use of pedagogies that make a meaningful difference in student learning. The theory grows out of a synthesis of literature on: the role of leadership and resources in emerging changes to teaching practices (Gibbs, Knapper, & Piccinin, 2008; Roxå & Mårtensson, 2012), microcultures in the knowledge-centric levels of higher education (Roxå, 2014; Roxå & Mårtensson, 2015), high-impact educational practices (Kuh, 2008), productive disruptions (Glassner and Powers, 2011; Bass, 2012), organizational change (Stensaker 2006; Trowler, 2008), models of change, and roles of faculty beliefs about students and faculty conceptions of teaching (Trigwell & Prosser, 1996).

Building from this extant literature, the research team developed a preliminary theory to address the following questions:

- What causes academic staff to adopt systematic and sustained use of high-impact pedagogies (e.g., evidence-based practices designed intentionally for student learning, with transparent learning goals, meaningful faculty-student interaction, and structured reflection)?
- How can universities foster faculty change towards systematically using pedagogies that make a meaningful difference in student learning? What is the role of academic developers in this work?
- For faculty, what are the implications of adopting high-impact pedagogies?

The team briefly introduces the theoretical framework and visual representations to demonstrate how the relative impact of component parts (e.g., academic identities, conceptions of students, teaching practices) may change over time and in response to micro, meso, and macro contextual factors.

Team members then offer a snapshot of each research project that tests the framework and/or illustrates how it might help scholars examine factors that inform – or inhibit – academic staff change in teaching practices at their universities:
The Swedish project charts the intricately woven fabric of change and stability in academic microcultures. Through ethnographically inspired methods, groups of academic teachers are observed as they deal with educational issues in their everyday life-worlds;

A US-based project examines the factors that enabled or discouraged changes in conceptions of teaching or learning for humanities faculty in a three-year, multi-institutional course redesign program;

A project being conducted at two sites (one in New Zealand and one in the U.S.) that looks at the barriers to and enablers for encouraging more civic engagement initiatives to be embedded within curricula, with one of these taking a students as partners approach to the data collection process;

A US project investigates whether academics in a mission-driven university are more likely to change their teaching practices when educational development programming explicitly aligns with the mission, even if their departments are unsupportive or uninterested;

A Canadian project explores the extent to which participating in a student-faculty partnership program supported by a central teaching and learning unit encourages change in faculty teaching practices and conceptions of students.

The panelists then facilitate a discussion with audience members about a higher education culture that learns, inviting conversation about 1) how other scholars might test the theory in their own institutional contexts; 2) how the theory contributes to work on SoTL’s role in individual and institutional change around teaching, and its limitations; and 3) the research strategies available to investigate academic staff/faculty change.

Audience members will leave the session with an introduction to the theoretical framework and five concrete examples that test or illustrate the framework. Additionally, the presenters will provide a brief inventory of the innovative research methods used across the international and multi-institutional sites of the research collaboration. As a result, audience members will have opportunities to reflect on and discuss the framework, its application to their own contexts, and research strategies they could use to conduct similar SoTL projects at their institutions.

**Resourcing the History Discipline: Learning Cultures in Australian and British Universities**

*Adele Nye, Peter D’Sena, Jennifer Clark*

Panel Abstract

Resourcing a culture of learning in the history discipline is a challenge faced by historians across the globe. It is one that requires an imaginative but also a practical approach. In this panel we offer a comparative perspective on the resourcing of support for teaching history in British and Australian universities. We explore the entanglements of the contemporary higher education sector by drawing attention to the worlds of the undergraduate classroom, the emergent history teacher and the experienced lecturer/academic. Each speaker on the panel has worked in the field for upward of two decades or more. We have researched and observed the multiple shifts in the professional space, the surge in the Scholarship of Teaching and Learning and the expansion of disciplinary and interdisciplinary resources utilised by teachers. We will argue that the disciplinary learning cultures, despite feeling the weight of the sectors’ compliance culture and competitive nature, continue to be enriched. At the same time, such enrichment does not come without effort and does not deliver increasingly positive outcomes without conscious support. Delegates will engage in active discussion about each of these challenges, in order to reconsider the ways resources are marshaled in their own institutional settings.
Adele Nye – Imaginative and Enabling Pedagogies for Undergraduate Students of the History Discipline

In this presentation we ask how do historians best help undergraduate students navigate the complex learning thresholds of the discipline. In this process students are required to participate in higher order thinking of the discipline which means they must take intellectual risks, challenge taken-for-granted assumptions and navigate uncomfortable spaces of contentious histories. To achieve these goals the lecturer/academic needs to provide students with multiple resources that provide enabling and critically reflective encounters within the history university classroom. Drawing from longitudinal qualitative research in Australian universities we offer practical examples of bold resourcing and sound pedagogical intention. We will argue that the lessons learnt in history also have the potential to inform practice in other disciplines.

Peter D’Sena – New to Teaching Workshops as a Resource for early Career Historians

In some countries, a variety of generic, often mandatory validated training is offered to new academics to develop their understanding of and practise in teaching and learning in higher education. A common complaint from participants, however, has been the sense that they are missing the enormous benefits that would accrue from subject-specific provision. Conscious of this, in 2011 the UK’s Higher Education Academy (HEA) created a set of New to Teaching events, as a supplementary resource for conveying an in-depth understanding about critical pedagogy, cultures of teaching and learning and exemplar case studies, each framed within a discipline or discipline cluster. Since that time, there have been ten history events – the first six under the auspices of the HEA and, after 2014 (when the HEA withdrew its funding), four more staged through a collaboration of the subject’s key stakeholders: the Royal Historical Society, History UK and the Institute of Historical Research. Data collected from over 200 participants during that period has presented a picture of their perceptions about future engagement with the emergent scholarship about teaching history in higher education. This session will discuss, using history as its focus, the notion of distinctive cultures of teaching and learning and the need for and efficacy of this discipline-specific training resource.

Jennifer Clark – History Teaching: A Global Exercise

The history discipline in Australian universities is a broad community of scholars that is enhanced by individualised teaching cultures. In our research across this community we have been struck by the unique qualities of particular teachers. We have identified teachers who on the one hand are navigating the multiple demands of an increasingly market-driven sector, yet, on the other hand, establish unique and enabling learning environments. In the final section of our panel we introduce the latest stage of our research collaboration where we aim to showcase outstanding teachers and consider the science of the art of good practice. In particular, we will highlight diverse approaches to scholarship, student engagement, forms of evidence and assessment strategies as well as some of the less tangible elements of the teaching enterprise. Our research seeks to recognise teaching as a highly personalized and therefore uniquely complex undertaking and acknowledge the fruits of dedicated scholarship in teaching and learning in the History discipline.

The ISSoTL Journey: Creating a Culture That Learns

Nicola Simmons, Jen Friberg, Diana Gregory, Virendra Mistry

Notions of the learning organization (Senge, 1990) often apply when we consider institutional cultures around teaching and learning. How often, however, do we apply the lens of learning as a community of scholars to the development we have experienced within the International Society for the Scholarship of Teaching and Learning? We welcome the theme of this year’s conference as an
opportunity to consider what ISSoTL may have learned over the years and how that learning can inform our way forward.

We consider ISSoTL’s development through two lenses: 1) the foci of ISSoTL conferences since inception, including conference themes and the predominant session themes each year; and 2) adult developmental stage literature, to explore whether stages in ISSoTL’s development might mirror phases of human growth and development. For example, in what year did we have our adolescent rebellion, and are we now moving into a time when we are ready to think about what we, from an organizational perspective, give back?

The last is a question that profoundly occupies the thinking of ISSoTL’s Advocacy and Outreach committee, as we consider ways in which we can mentor SoTL newcomers, provide support for those who are finding their way in SoTL, and help others realize what their SoTL legacy will be for future SoTL scholars.

Ultimately, this panel session addresses the ways in which our prevalent themes over the years (from defining SoTL at the Washington conference in 2006 to the importance of small social networks in Hamilton in 2012 to whatever this year’s hot topic turns out to be in Norway in 2018) define ISSoTL’s culture. What do we learn from these themes? How can we apply that learning to where we go next? In true developmental fashion, we draw on the past to anticipate and discuss with you what comes next (Kelly, 1955): the “what?”, “so what?”, and “now what?”.

We look forward to sharing the historical trends of ISSoTL’s themes and then invite you to participate in small group activities and discussion discussing the relevance of the trends and how they might parallel developmental stage theory. Following that, and drawing on these trends, we will ask you to engage in a lively discussion anticipating where ISSoTL could and should go next.

**Cultivating a Culture of Learning: Mentoring Undergraduate Research in Global Contexts**

*Maureen Vandermaas-Peeler, Eric Hall, Amy Allocco, Brian Pennington*

The goal of this panel is to highlight high quality undergraduate research (UR) mentoring practices that contribute to the creation of a culture of learning by generating and sustaining authentic, impactful teaching and learning within and across courses, programs, departments and institutions. Global learning and UR have been identified as high-impact practices (HIPs) that deepen and sustain students’ learning (Kuh, 2008). According to Brew (2013), UR facilitates the intersection of research and teaching by emphasizing student engagement, participation, and inquiry. In high-quality UR experiences, mentors scaffold inquiry-based learning experiences in which students gradually gain research expertise and become members of scholarly, knowledge-building communities of practice (Hunter, Laursen & Seymour, 2007; Vandermaas-Peeler, 2016; Vandermaas-Peeler, Miller & Peeples, 2015). Research on study abroad/away indicates that global learning experiences encourage cultural awareness and appreciation for diversity (Stebleton, Soria & Cherney, 2013). Reported benefits also include the development of intercultural sensitivity and communication skills; a reduction in ethnocentrism; and interest in further contact with diverse cultures and peoples (Bennett, 1993; Norris & Gillespie, 2009).

Although significant research has examined each of these HIPs separately, there has been less focus on the integration of UR with global learning and little attention devoted to the role of faculty mentors and the processes that contribute to high-quality mentoring relationships and experiences in global contexts. We aim to address this gap.
We will offer recommendations for the adaptation of 10 salient mentoring practices to UR in global contexts (Shanahan, Ackley-Holbrook, Hall, Stewart & Walkington, 2015). Presenters will share recent initiatives that leverage salient practices in UR, including a Center for Research on Global Engagement, a Center for the Study of Religion, Culture, and Society and a Multifaith Scholars program, all of which support both the development of faculty mentor and student researcher. Related projects have established a network of research scholars, both students at various levels and faculty, across disciplines and schools, and the enhancement of effective skills and attitudes among faculty mentors. Outcome data as well as interview and focus group transcripts point to the strong contributions that student/faculty research cohorts can provide to a culture of learners. We will conclude by offering suggestions and recommendations for faculty mentors striving to create a culture of learning outside of the context of traditional university classrooms.
WORKSHOP ABSTRACTS
Abstracts in this category are organized alphabetically by first author

Partnering in SoTL to Foster a Culture that Learns
Sophia Abbot, Lucy Mercer-Mapstone, Alison Cook-Sather

Pedagogical partnership has expanded as a field within SoTL in the last decade. Co-Inquiry among students and staff (academic and professional) is increasingly recognized as an effective way to encourage engagement and leadership in higher education (Werder, Thibou, & Kauffer, 2012; Cook-Sather, Bovill, & Felten, 2014; Matthews, 2016), and enhance equitable teaching and learning in universities (Cook-Sather & Agu, 2013; Cook-Sather, Des-Ogugua, & Baht, 2017). Those working in partnership have long acknowledged the diverse expertise students and staff bring to their collaborative efforts, and the value of contributing different perspectives to enhance teaching and learning (Cook-Sather, Bovill, & Felten, 2014; Healey, Flint, & Harrington, 2014). As three scholars and practitioners within this field, we have seen how partnerships across groups in universities can promote learning in ways that catalyze social change.

Many practices in higher education, meanwhile, have remained relatively unchanged for the last hundred years or more (Davidson, 2017). There exists a problematic irony that institutions of learning are often slow to foster cultures that learn; and yet, universities must learn to keep up with rapidly evolving external environments. We argue student-staff partnership can facilitate cultures that learn because of the way partnership redistributes the sources of knowledge and positions learning as a reciprocal and anti-hierarchical effort.

Drawing on Williams et al.’s 2013 research, “The Power of Social Networks: A Model for Weaving the Scholarship of Teaching and Learning into Institutional Culture,” we pose partnerships in SoTL as ways of creating university cultures that learn through partnerships that connect across micro-, meso-, and macro-social levels of the university (Williams et al.’s adaptation of Poole & Simmons, 2013). Williams et al. suggest this is the most effective way of creating cultural change, and we add that cross-role collaboration makes more space for micro-cultures that learn. As these micro-cultures grow, inviting new people and building new networks at and across every level, we create a broader university culture that learns.

This workshop will foster participant collaboration on: how can working in student-staff partnership create microcultures that learn in universities? Participants will have the opportunity to:

- learn about the growing field of student-staff partnership in SoTL;
- use international case studies to explore the different levels (micro-, meso-, and macro-) at which student-staff partnership contributes to developing cultures that learn; and
- develop ideas and practices for facilitating these micro-cultures through partnership at varying levels of their own universities.

Plan Learning for Good Learning Reasons: A Toolbox for Engaging in Co-Inquiry
Susanna Barrineau, Alexis Engström, Ulrike Schnaas

As highlighted in the special issue on co-inquiry in ‘Teaching and Learning Inquiry’, student expertise on being learners brings important perspectives into the Scholarship of Teaching and Learning and makes the field stronger (Poole and Chick, 2016). SoTL as an arena for collaboration between
educators and students has the potential to enhance learning for all involved and include and support a larger number of students in the developing of teaching and learning. In the growing higher education field of students as partners, Mercer-Mapstone and colleagues (2017) highlight the relative lack of examples where students are engaged in SoTL, and there is also a call for ‘expanding student engagement in SoTL by encouraging a diversity of student voices to engage in co-inquiry with faculty’ (Felten et al., 2013).

Related to the conference theme ‘a culture of learners’, this workshop therefore invites students and educators to explore what it means to engage in co-inquiry relationships – what it means to succeed as well as at what it means to fail – with the guidance of a number of tools from a newly developed ‘Active Student Participation Companion’. This Companion is part of an effort to provide practical guidance for educators and students in working together in more co-creative ways in higher education and is one output of a two-year university-wide project developing active student participation.

Using an Active Learning Classroom method, the purposes of this workshop are to reflect on 1) one’s own teaching and learning context, one’s role(s) within that context, and how these may change when students are invited to take a bigger responsibility for developing education; 2) the pedagogical benefits and possible ways to work with the challenges of engaging in co-inquiry; and 3) the power dynamics, who is invited, and who feels included in this relationship. After a brief introduction and contextualisation, workshop participants will work in groups to develop concrete ideas for how they could develop their teaching and learning contexts. The Active Learning Classroom (abridged to accommodate a ‘traditional’ classroom) approach of this workshop plays on small group work and peer review at different stages of the process. At the conclusion, the goal is for each participant to have a developed idea (or several) for how to engage in co-inquiry, and a clear understanding of the reasons for doing so.

**Challenges and Benefits in Involving Students as Partners to Improve Teaching and Learning Culture**

*Mari Bjordal, Endre Lygre*

There are many benefits of student involvement and various ways to involve them. To be involved in an environment where your contribution is of significance in the bigger picture is motivational and therefore important for students in a learning perspective (Sørensen et al., 1998). Starting up a project on their own accord can be challenging for students, as student life is temporary and knowledge of which opportunities are available can be scarce. However, if given the chance, many students will stand up to the occasion and contribute if they find the task meaningful. There are several factors which indicate a good project where students can contribute and be a positive force: institutional support, autonomy, meaningful collaboration and encouragement (Freeman et al., 2014). A partnership between students and educational staff should be established to provide good communication and support. With support from experienced staff, students have a good foundation to take on responsibility and become more autonomous, which is an important factor for motivation and satisfaction in students (Astin, 1984).

As student representatives in bioCEED (Centre of Excellence in Biology Education at the University of Bergen), we have had the valuable opportunity to start up and run projects for students by students. Many of these projects are most likely to achieve success because they are student driven, as this removes the power imbalance between staff and students, thus leading to better communication and a lower threshold for fellow students to participate. Although driven by students, collegial help and support from staff is always available. To be part of such an innovative educational community...
where students are engaged as partners is positive for all parts and something we would urge all institutions to actively encourage. Therefore, we will organise a workshop where challenges and benefits of student engagement are discussed. This will also be a ground for brainstorming and experiencing exchange to encourage enhanced student involvement at participants’ respective institutes.

**Toward a Learning Culture: Leveraging the Collaborative Learning Improvement Model**

*Diane Boyd, Megan Rodgers Good*

The current global discussion related to quality in higher education provides a timely catalyst for us to work together to change the conversation (Gilbert, 2018). This interactive workshop will explain one process for building a Learning Culture using the collaborative Learning Improvement Model (Fulcher et al., 2014). In the model, faculty, educational developers, and assessment professionals collaborate to focus on one programmatic student learning outcome to highlight learning stories evidencing improvement in higher education. At our institution, we have preliminary data that the process itself improves organizational cohesion using sense of belonging, organizational culture, and self-efficacy scales (Boelen & Hoyle, 1990; Glaser et al., 1987; Ryan & Deci, 2000). Qualitative interviews analyzed along the Learning Culture Continuum scale suggest similar learning culture improvements (Sagy et al., 2018). Workshop participants will team up to investigate “a case study within a case study” in learning culture via our institutional context, understand and apply the learning improvement model, consider the institutional situational factors that inform their own institutional contexts, and be prepared to launch a learning improvement project using the “Learning Improvement Checklist”.

**Weaving the Threads: How SoTL Can Contribute to a Culture That Learns**

*Karin Brown, Pia Scherrer, Roman Suter*

In higher education contexts where research excites more recognition than teaching (see Deuscher Wissenschaftsrat, 2017), the time and effort required for faculty to publish SoTL research projects is often difficult to afford. Moreover, even when faculty publish about teaching in international journals, the impact on teaching and learning at their local institution may be limited (see Geertsema, 2015).

Our workshop considers how SoTL can contribute to developing a culture that learns within a higher education institution. We build on a definition of SoTL as the systematic inquiry into student learning (Hutchings & Shulman, 1999). In order to establish teaching as a “community property” (Shulman, 1993), this inquiry is shared with peers. Following Stensaker (2017), we view the development of local teaching expertise (Geertsema, 2015; Ashwin, Trigwell, Baume, & Kahn, 2004) as a form of cultural work within an institution.

We conceptualise SoTL artefacts as individual threads of teaching knowledge in a specific higher education institution. We suggest that these threads can develop into a body of collective local teaching expertise if woven in a deliberately planned and facilitated way. First, the threshold for doing SoTL needs to be lowered to include a wider range of systematic inquiry activities (see Huber & Hutchings, 2005). Second, outcomes of all such SoTL activities need to be captured as visible manifestation of culture (see Schein, 1990) in the form of artefacts. Third, the sharing of these artefacts must be promoted. And fourth, artefacts must be systematically reintroduced at the local institutional level.
Our workshop will propose a model that a) allows placing different SoTL artefacts on a continuum ranging from lower to higher degrees of systematic inquiry, and b) reveals opportunities for reintroducing these artefacts. Workshop participants apply the model to their own institutional contexts. They specifically will:

• identify ways to engage a greater number of faculty members in the systematic inquiry of teaching and learning through the production of artefactual outcomes;

• identify opportunities and ways of sharing and reintroducing these artefacts for the purpose of enhancing local knowledge;

• begin to systematically orchestrate these opportunities.

Our workshop provides space for discussion of the model and explicitly encourages participants to share their insights across institutions.

How to Tell a True SoTL Story

Nancy Chick, Peter Felten

The last two ISSOTL conferences have featured plenary sessions that explore how we talk and write about the SoTL we do. In 2016, Karen Manarin urged the ISSOTL community to “name our assumptions” so we can see learning and teaching from perspectives that sometimes are obscured by the genres and conventions of SoTL (2017, p. 7). Last year, Helen Sword demonstrated that by bringing individual perspectives, identities, and emotions into our SoTL writing, we are not abandoning rigor but rather effectively representing our experiences and connecting with our readers.

In this workshop, we will extend these ideas to explore what makes a SoTL story “true.” We take a playful approach to how we communicate our SoTL, drawing inspiration from author Tim O’Brien’s “How to Tell a True War Story” (1990 – the same year Boyer coined the term “the scholarship of teaching”). O’Brien’s writing about U.S. soldiers during the Vietnam War emphasizes how the human tendency to tell stories that are clear, coherent, meaningful, and generalizable may obscure the truth of what happened. Of course, gaps always exist – and must exist – between what happened and the stories we tell about what happened. As O’Brien reminds us, echoing Juan Luis Borges’s story “On the Exactitude of Science” (1946), every story is only a simplified replica of what happened. We could tell multiple “true” (or not so true) stories about each experience. How do we choose which stories to tell, what are the implications of our choices, and, ultimately, what makes a particular story “true”?

In this workshop, we will invite participants to ask these questions about how we communicate our SoTL work. The practice of SoTL – or any form of scholarship – necessarily involves simplifying complex, messy, and personal experiences into a presentation, article, or other genre that appears conclusive, tidy, and comprehensible. In this session, we will co-create with participants examples of a new SoTL genre: true stories.

All Work and No Play? The Gamification of a Biology Lab Session

Jannika Andersson Chronholm

Gamification is defined as “the use of game design elements in non-game contexts” (Deterding et. al., 2011). This definition means that gamification is not a game in itself; it draws on certain elements
from games in order to make a task or learning context more entertaining. This is also the difference between gamification and serious games which is a whole game with a serious purpose (Landers, 2015). There are several different attributes of a game that can be used for gamification purposes as defined by the Bedwell taxonomy (Bedwell et al., 2012). Karl Kapp (2012) points out that although the most common attribute used is assessment (points, badges and levels), gamification is not just attaching points or badges to your course but a careful use of different attributes.

One reason for using gamification in education is that it should contribute to motivating students. There are many models to describe and discuss motivation that usually distinguishes between intrinsic and extrinsic motivation. Gamification of a learning setting is used to promote both intrinsic and extrinsic motivation in the student.

This workshop will lead the participants through a gamified biology lab where we will discuss the different game attributes chosen and how they influence the student’s learning of key concepts. The lab itself is on the basic use of a microscope and no prior knowledge of biology is necessary. Participants will try out some parts of the lab for themselves as this will also provide a practical demonstration of how gamification influences the students motivation for learning. We will also hear the student’s voice in the form of interview excerpts. The workshop will conclude with a discussion on how participants can work with gamification in their own practice.

**ADVOCATE: Supporting Tertiary Students Who Have Experienced Domestic Violence**

Michelle Eady, Kelly Lewer, Kenton Bell, Alison Rutherford, Sharon Crozier-De Rosa, Rebekkah Middleton, Tim Boniface

Domestic violence is a global, gendered issue that continues to grow at an alarming rate (New South Wales Bureau of Crime Statistics and Research, 2016; World Health Organisation, 2000). Those who leave violent relationships face health, legal, parenting and financial challenges (Ambuel, 2013; Mertin, Moyle, & Veremeenko, 2014). Despite these challenges, many successfully pursue new ventures in self-improvement (Chronister, Wettersten & Brown, 2004). One such endeavor includes studying at higher education institutions. Such students have received only scant attention within the literature, even though they may encounter obstacles along their journey (Lewer, in progress). In our tertiary learning communities, university staff act as important mediators between these students and the transition into their initiation of tertiary studies. Project ADVOCATE (Awareness of Domestic Violence on Campus at Tertiary Education) focuses on these students who have experienced domestic violence before enrollment at university. The project will engage university staff in sharing their awareness of students who are affected by domestic violence, how to best provide support, resources available, and suggestions for professional development and changes to policy and procedures that could assist students in their learning journey.

In this workshop, we will share our process so far in working with these learning artifacts, inspired in part by the work of Von Der Heidt (2015). Workshop participants will have an opportunity to practice this kind of analysis using exemplars from our data, and consider how they may apply this kind of approach to their own studies.

Concept maps have been identified by Jaafarpour, Aazami, & Mozafari (2016) as having a positive effect on the academic achievement in nursing students. Schwendimann (2015) after reviewing a range of studies investigating concept maps concludes that, “when used sensibly and skillfully, concept maps can be powerful tools to support knowledge integration processes of complex ideas” (p. 89) and argues that “concept mapping can foster students’ learning for conceptual understanding instead of for memorization of isolated ideas” (p. 87). This workshop will explore means and challenges of actually assessing this kind of learning within the concept maps. We have since found
that many of the students who were exposed to concept maps in the first year subsequently started making their own in later years. We would like to understand who benefits the most from using concept maps — stronger or weaker students — and who is more likely to continue using them after the first year.

Aerial and Microscopic: Programmatic Curriculum Rebuilding for Post-Secondary Cultural Change

Debra Fowler

Changing the culture of post-secondary education requires strategic reform of departmental programs. More specifically, changing the culture encompasses courses and experiences encapsulating a student’s learning within a discipline to ensure programmatic efforts are cohesive, purposeful, and aligned to developing competitive and critically reflective students. In response to the need for a replicable process to support programmatic reform, Texas A&M University engaged in reviewing current and relevant curricular literature and conducting research on programs of study. This effort led to developing an efficient process influencing the culture of learning across the university. The steps for this process include: a) form and orient a team; b) gather data and define the current state of the discipline; c) create program learning outcomes; d) create competency rubrics based on the learning outcomes; e) create a curriculum map; f) create course curriculum materials; g) implement and assess; and h) reflect and refine. Critical to ensuring the effectiveness of curricular changes are the steps aforementioned (a-h) and assembling your team. Key members of this team should include the pedagogical consultant or educational developer and administrative support for the team. The educational consultant provides the pedagogical reasoning behind suggested changes as well as directs the process according to the steps outlined in the curriculum change model. Administrative support at this research one university involves a graduate student dedicated to the process as a goal of their assistantship. Components of the graduate student’s role on the project includes expectations to submit an application to the institutional review board for human subject research, conduct research on the process as it applies to the discipline under review, collaborate with the committee and pedagogical consultant, and publish results. After considering the steps involved in the process and the necessary human capital, universities can adeptly participate in changing the culture of their departmental programs for the holistic benefit of their university. This session will highlight steps in a process to update curriculum at the programmatic level, involving participants in activities to better recognize the approach applicable to their campus context and the holistic education of students currently within their program. Additionally, and more salient to the focus of this conference, this session will incorporate the expectation of SoTL in the initial step of the process.

Transforming Learning Cultures: Participation and Sustainability in Higher Education

Jakob Grandin, Susanna Barrineau, Tarje Wanvik, Alexis Engström, Marikken Wathne, Ragnhild Ødegaard, Johan Elfvling

This workshop examines the role of participation in higher education in the context of sustainable development and social learning. Using a highly interactive "backcasting" methodology, students and researchers are invited to develop visions of higher education futures that will subsequently be used to critically assess present practice. Participants will examine the potential of learner-led education and active student participation as pathways for transforming learning cultures.

The complexity and uncertainty inherent in contemporary sustainability challenges leads to the coexistence of multiple values and problem framings. Within the context of higher education, this
calls for a questioning of power relations in knowledge production, and whose participation and perspectives are valued and why. In pursuit of enhancing a culture for learning, learner-led educational contexts challenge these dynamics. The fields of Education for Sustainable Development (ESD) and Environmental Education (EE) raise the need for a culture for learning where students play a more active and decisive role than they are traditionally assigned. This invites universities and educators to rethink their approaches to research and education, and requires changes in culture, teaching methods, and curricula within higher education.

While examples of students and faculty working as partners in the Scholarship of Teaching and Learning are becoming more frequent, the arena of learner-led inquiry into teaching and learning practices in higher education is rarer. It has been noted that students have perspectives that are valuable and different from that of faculty, and which benefits SoTL practice. SoTL learner-led ESD or EE thus have shared implications for the conference theme, a culture for learning, where we argue for a serious consideration of how learner-led inquiry can and should reshape education cultures.

This workshop brings together students and researchers to explore this topic using a "backcasting" approach. This approach uses visions of the future as a tool to critically reflect on the present. After a brief introduction, participants will be invited to discuss desired futures when it comes to learning and knowledge in the mid-21st century. We will then discuss challenges and opportunities in the present and to explore pathways to these visions of future higher education.

**Advancing a Culture of Learning and Teaching**

*Andrea Greenhoot, Emily Miller, Mary Deane Sorcinelli*

Cultivating an institutional culture in which efforts to improve the quality and effectiveness of undergraduate teaching and learning are a focus of sustained attention and inquiry by all members of the campus community is critical. But what are the distinguishing features of such a culture and how are such cultures built, nurtured, and sustained? In this highly interactive 90-minute workshop, we will move through a series of thought experiments, drawing on participants’ experiences in their own settings. Our first goal is to help participants explore the idea of a culture of teaching and learning to identify its critical, defining features. While anthropologists and organizational psychologists have analyzed a wide variety of cultures, the notion of a culture of teaching and learning in higher education is not a topic of extensive scholarly study (Austin, 2011; Hutchings, 1996; Kezar & Eckle, 2000; Massy, et. al, 1994; Sorcinelli, 2014). But we suspect that every attendee at ISSOTL has thoughts about and experiences with the notion and is eager to articulate these (perhaps tacit) definitions, and we will begin by guiding them through that process. Our second goal is to focus on implementation. If we can say what we mean by this notion of culture, how do we build it? What strategies and levers will be most powerful in cultivating a culture of teaching and learning on our diverse campuses? To address these questions, we will invite participants to explore key institutional levels, stakeholders, and mechanisms for change on their own campuses; strategize about opportunities for strengthening a culture that supports powerful and equitable learning for all members of the campus community and across all institutional levels; and explore what indicators of a culture of teaching and learning are most fully developed, which are missing, and what strategies will help address what is missing or underdeveloped. All participants will receive two print resources, one describing a framework for systemic change in undergraduate education and the other posing essential questions and data sources for continuous improvement of undergraduate teaching and learning. As facilitators, we will draw from our experiences working in multiple academic and administrative roles, institution types, and higher education associations. This session addresses the central conference theme by highlighting the importance of promoting a culture of continuous
improvement to achieving long-lasting and systemic change to teaching and learning in higher education.

**Mapping the SoTL Ecosystem One Cup of Coffee at a Time: Cultural Shifts in a Liberal Arts Landscape**

*Shirley Hall, Bruce Gillespie, Michelle Goodridge*

Creating a culture of student-centred learning at any institution involves work at many different levels across a range of socio-cultural systems, including "small significant networks" (Roxå & Mårtensson, 2009) and "in the dyadic interactins between 'local leaders' at the meso level and those in micro-level networks" (Verwood & Poole, 2016). Fostering such a culture is a long-term undertaking; it does not simply emerge from one classroom, workshop, or program. Indeed, it is better conceived of as a complex ecosystem that encompasses all activities at an institution of higher education.

An important element of this ecosystem is scholarship of teaching and learning (SoTL), the goal of which is to improve learning (McKinney, 2007; Poole & Simmons, 2013; Treml & Dickson, 2013). Cultivating interest in and appreciation for SoTL throughout an institution’s ecosystem can and should happen in a variety of ways so as to engage as wide an audience as possible since “faculty are most influenced by colleagues within their close, significant networks such as departments and workgroups” (Miller-Young et al., 2017).

But as a result of the various stakeholders and approaches involved, it is challenging to assess the health of an institution’s learning ecosystem and determine how to strengthen it. As such, this interactive workshop will offer participants an opportunity first to reflect on and document the achievements made at their institutions and then, through sharing and discussion, assess how to leverage those achievements to enhance their learning ecosystems even further. This will be accomplished through a mapping activity using the micro-meso-macro-mega framework (Weston et al., 2008) for capturing the impact of SoTL work, which has been adopted and expanded on by numerous others (see, for example, Poole & Simmons, 2013; Simmons, 2008 and 2016; Roxå & Mårtensson, 2012; Williams et al., 2013).

The learning outcomes of this workshop are for participants to: (i) identify and map the social networks related to teaching, learning and/or SoTL at their individual institutions, (ii) identify any gaps or obstacles in their ecosystems, (iii) share and discuss their ecosystem maps with other participants, and (iv) jointly strategize on how to enhance their ecosystems and advocacy for SoTL at their institutions. Drawing on their multidisciplinary backgrounds, the workshop leaders – a university teaching fellow, librarian, and educational developer – will demonstrate the mapping technique, sharing their experiences of cultivating a healthy learning ecosystem at a young, rural, liberal arts university satellite campus in Canada.

**Moments in Mentorship: Establishing Inclusive Micro-Communities across Shifting Academic Roles**

*Monica Henderson, AnneMarie Dorland, Dawn Johnston*

Shifting roles in academic communities mean that boundaries between mentors and mentees are in continuous flux. We represent a dynamic mentoring relationship between a senior faculty member, a senior doctoral student and a junior graduate student/recent alumnus. Our relationship is characterized by shifting subject positions and boundaries over a five-year period of working
together, and we have now added a new layer to this history as SoTL co-researchers. Our strong relationship is an indication of how fluidity in mentorship may provide the foundation for supportive and inclusive micro-communities which allow space for the “significant conversations” (Roxå & Martensson, 2009) key to moving learning cultures forward.

In addition to “significant conversations” (Roxå & Martensson, 2009), we draw on Roxå, Martensson and Alveteg (2011)’s network approach to teaching and learning cultures and Lave and Wenger’s understanding of communities of practice (1998) to analyze our relationship. We critically explore the typically hierarchical nature of academic mentorship relationships, and ask how we can acknowledge all members as meaningful agents? We propose that by identifying all subject positions in a multivalent mentoring relationship as launching points for innovation and growth, we can establish mutually fulfilling relationships that positively impact the success of mentors and mentees within an academic micro-community. We contend that such relationships can in turn influence the teaching and learning practices of a wider learning culture by creating lasting moments of engagement, recognition, and insight.

In this workshop, we model our complex relationship using a constellation-mapping technique, and then call upon participants to reflect on their own subject positions in multi-level mentoring relationships. Ultimately, we engage participants in a discussion of generative strategies for fortifying existing academic micro-communities, and/or facilitating the development of new mentorships which have the potential to be lasting sites of meaningful academic discourse.

**Concept Maps: What to Do with Complex Learning Artifacts in SoTL?**

*Sarah Hewitt, Michelle Yeo, Joanne Bouma, Sarah Webb*

In 2014, we started an innovative approach to deliver a first year Anatomy and Physiology course for first year nursing students whereby the instructor created detailed skeleton concept maps that the students filled out each week throughout the course. This approach has since been extended into path-physiology and patho-pharmacology courses in the second year. We have collected copies of concept maps from research participants across several courses, and are working on methods to analyze such complex data for evidence of student learning.

**The Unexamined Curriculum Is Not Worth Teaching (Apologies to Socrates)**

*Tansy Jessop, Claire Saunders*

This workshop addresses the theme of building a sustained culture for learning. It demonstrates how an institutional curriculum design process has contributed to a shared understanding of our educational purpose, in the wider context of higher education curricula lacking a strong theoretical basis (Barnett and Coate, 2005). As in other systems, UK curriculum design is splintered, with lecturers often writing modules independently of the programme, sometimes without a surefoothed educational philosophy. In the UK, quality assurance regimes oversee a paper trail constituting ‘the curriculum’, often relying on traditions, rules and institutional interpretations of these in the process of design, and holding onto a few well-worn mantras like ‘constructive alignment’ and ‘learning outcomes’.

Recently, several UK universities have embarked on institutional processes to implement enhancement-focused curriculum design. Following this trend, we were tasked with devising a curriculum framework which captured the distinctive features of our modern, applied university, as
well as its future direction. We were determined to engage the community in a participatory process. But an institution-wide, consultative process involving research is not for the faint-hearted. In this workshop we adopt the same interactive and consultative approach as our large-scale institutional endeavour, sharing the process, warts and all. Mirroring our process, we will invite participants to:

• Play a card game to identify their curriculum philosophy;
• Contribute to a 'curriculum wall';
• Plot their existing curriculum using a kiviat chart;
• Discuss the curriculum principles we propose;
• Generate and thematically analyse cards that articulate their own ideas about curriculum.

Weaving through the workshop, we will share insights, drawing on mixed data from nine curriculum cafes with 182 staff and a curriculum ‘wall’ eliciting 900 student comments. The theoretical dimensions of our framework draws on ‘powerful knowledge’ (Wheelahan, 2010; Harland and Wald, 2018), and expresses ways to ensure that students complete their journey to self-authorship (Baxter-Magolda, 2014). The six dimensions of the framework integrate theory and data: they are: critical, creative and applied; inspiring research and inquiry; intellectually stimulating for life; authentic and engaging assessment; outward facing; fostering social and personal growth. ‘Personal knowing’ is at the heart of the framework, integrating all dimensions (Polanyi, 1958). Participants will be challenged to consider what this might mean for teachers and students, what such a curriculum might look like, and wider contextual factors that might both enable and inhibit its development.

Is Gandhi Ordering the Pizza? Role Playing Pedagogy and the Learning Community

Mary Looney, Sean Taylor

What if your learning community was comprised of ancient Roman senators, deciding the fate of the Republic? How would it feel to have community members determining whether Charles Darwin is truly eligible for the Royal Academy? Who among you can agree to properly define the nation of India? In your day-to-day activities, what would it be like to interact as more than one identity, and to have your alternate identities be invested in weighty historical matters?

The use of role-playing for educational purposes has long been confirmed as a beneficial tool for students’ development of skills in speaking, writing, critical thinking and empathy. Deeply engaged learning results from such immersive experiences as adopting the philosophical and ideological points of view of characters from history. To this end, hundreds of colleges and universities have incorporated the use of Reacting to the Past role playing pedagogy in their academic programs and learning communities.

This workshop will entail attendees’ participation in a very short role-playing game modeled on the Reacting to the Past formula, then describe its use in English and Norwegian speaking college classrooms, First Year Learning curriculums and accompanying programming. The workshop session will subsequently expand on the pedagogy of Reacting to the Past and its broader applications in a wide variety of educational disciplines, address learning outcomes and assessment studies, and conclude with an announcement about a grant-funded opportunity to learn more about, experience and create Reacting to the Past games in Norway in 2019.
Decoding Diversity: Overcoming Bottlenecks to Embracing Difference across the Disciplines

Jolanta Mikute, David Pace, Simon Warren

No challenge in education is more pressing than helping students learn to gain the cognitive tools they will need to deal effectively with those who differ from them in culture, ethnicity, race, gender, and class. In this workshop, we will explore how the Decoding the Disciplines model can be used in numerous disciplines to provide students with the cognitive and emotional skills needed to bridge these forms of cultural difference.

To help participants who are unfamiliar with Decoding, the session will begin with a brief introduction to the ways in which the Decoding process has been used in the past to identify bottlenecks to learning and help students get past these obstacles through iterations of modeling disciplinary practice, practicing these skills, and formative feedback. The session will explore how Decoding is being expanded to include emotional bottlenecks, such as the reluctance of students to seek to understand the perspectives of people who are different from themselves. And it will consider some conceptual and methodological challenges faced by the Decoding process when applied to inter- and cross-disciplinary issues, such as diversity and intercultural understanding: How do we define diversity bottlenecks? What kind of mental operations are appropriate? How do we model and practice these? How do we assess them?

Then the presenters will describe two efforts to use this approach to increase students’ ability to deal with diversity. In the first case, a historian will show how the identification of crucial mental operations required to understand different cultural perspectives led to the creation of a course that modeled these processes, gave students a chance to practice them through Just-in-Time-Teaching exercises, and assessed the results. A second presentation, done by two collaborating scholars, will share how the Decoding paradigm was systematically employed in four European higher-education institutions to increase understanding of diversity in relation to curriculum content, student and faculty diversity, and institution/community partner relationships.

The final third of the workshop will be devoted to brainstorming in small groups about how the Decoding process can be applied to issues of diversity in a variety of situations.

Towards Interdisciplinarity in SoTL: Don’t Check Your Discipline at the Door

Janice Miller-Young, Michelle Yeo, Natasha Kenny

SoTL is a field that strives to be interdisciplinary and even transdisciplinary (Poole, 2013) in that the field of knowledge integrates or transcends the contributions that can be made from any one discipline. This requires its practitioners to be open to learning and to valuing other disciplinary perspectives. Embracing multiple disciplinary lenses in SoTL will enrich our approaches to inquiry, and expand our ability to develop knowledge that addresses the inherent complexities of teaching and learning in higher education. However, our disciplines dictate which research questions, methods, and forms of evidence we consider to be legitimate (Becher and Trowler, 2001). Thus, when communicating or collaborating within our own disciplines, we follow tacit assumptions about what must be explained or identified at the beginning of a study. In some disciplines, a theoretical framework must be established, while in others, explication is more focused on tactical methods of the research.

To foster a culture that learns, the SoTL community would benefit from improving our ability to clearly articulate how disciplinary or interdisciplinary perspectives inform our work (Hubball and Clarke, 2010; Poole, 2013). Communicating across disciplines requires us to to identify our own
discipline’s way of knowing and understanding the world, be aware of the strengths and weaknesses inherent to it, and be able to explain and defend them to others (Miller-Young and Yeo, 2015). Similarly, SoTL scholars must learn enough about other’s disciplinary ways of approaching research, to respect them and to be able to learn from them (Chick, 2013). This includes scholars from seemingly similar fields such as education, who may have difficulty initially distinguishing SoTL from their own (Miller-Young et al., 2018). Becoming more explicit about one’s own disciplinary assumptions then allows and strengthens translation to the broader, multi-disciplinary “big tent” of SoTL.

To illustrate these ideas, the three workshop facilitators, each from different disciplines, will present some of the literature on disciplinary approaches and faculty experiences in SoTL, and share some of their own difficulties identifying and understanding others’ disciplinary assumptions when discussing SoTL. Case studies of exemplar SoTL studies will be discussed. Finally, workshop participants will have the opportunity to spend time in think-pair-share format, to identify and reflect on the characteristics and assumptions of their own discipline, how it has shaped their SoTL work, how they can help others better understand their work, and to identify new possibilities for future work.

What the Yurt? Round Teaching and Scholarly Inquiry within a Community of Practice

Carrie Nolan, Catharine White, Kathryn Fullerton

What happens when we play with classroom space? How does built pedagogy affect teaching and learning? What is it like to teach in a yurt rather than a traditional classroom? This sharing session centers on Coast Mountain College’s ‘Pebble Project’, the idea that doing one thing different can have a ripple effect of change. Faculty set out to explore ‘round’ teaching, in the yurt classroom lab, as our ‘one thing different’. Did it change our teaching? The learning? Was it any different than ‘circle’ teaching?

Faculty pursued this scholarly inquiry in a community of practice, with 8 faculty participating, representing the disciplines of biology, trades (automotive), geography, early childhood care and education, business, and geoscience. These faculty all taught one semester course in the yurt to create answers as to how space affects teaching and learning. As part of our efforts to answer this question, we documented our answers and gathered regularly to share insights with one another.

Come hear our stories of how ‘built pedagogy’ contributed to teaching and learning and explore how you can play with space and shape in your own classrooms. This session will address both process ('round' teaching) and meta-process (scholarly inquiry within a community of practice). Instructors and faculty developers will take away valuable lessons from both and be provided with opportunity to question how this model of teaching and learning as well as scholarly inquiry and professional development could be implementable in their own institutions.

Decoding Learning Conversations

Niall Palfreyman

This workshop provides a practical introduction to conducting solution-oriented learning-conversations. Learning-conversations constitute the single most important influence (Kyndt et al., 2016) on the professional development of university teachers, yet if not conducted effectively, they can too easily reinforce problems rather than generate solutions to those problems.
Learning-conversations start from a communication bottleneck: you present to me your explanatory model of “how things are”, and I reject that model because it conflicts with my causal story of “how things work”. Bottlenecks occur in all communication – between couples, in teams, in teaching, and between colleagues. Their distinction between models and stories is central to constructivist accounts of learning and plays a key role in driving effective learning-conversations.

A learning-conversation is a dialogue between three roles – an Expert, an Apprentice and a Coach – whose aim is to resolve a bottleneck. In this workshop we review and practise the skills and language structures of learning-conversations that have proven so effective when applied within the Decoding the Disciplines process (Pace, 2017). We break learning-conversations down into four learnable skills:

- Actively build and maintain rapport: The Coach supports the Apprentice in establishing an atmosphere that encourages story-telling by respecting the knowledge and expertise of all conversation participants;
- Bottleneck: This is the trigger for the learning-conversation. The Expert possesses the skills to negotiate the bottleneck; the Apprentice is curious to learn those skills;
- Convert the bottleneck into a learning outcome: Successful learning-conversations start from a positively formulated, sensory-specific, ecological learning outcome;
- Decode the Expert’s story: The Apprentice invites the Expert to explore the story of how she skilfully pursues her learning outcome, analysing this story into step-by-step models.

**Learning to Navigate a New Transformative Doctoral Education Model**

*Marta Pardo, Debra Fowler, Courtney Lavadia, Chi-Ning Chang*

Longstanding challenges face graduate education and are key drivers toward a new doctoral education model: long time to degree, high attrition, preparation focused on dwindling academic careers, lack of knowledge about career opportunities, weak transferable skills, and narrowly focused scholars ill-equipped to work globally, broadly, and creatively. The classical apprenticeship model does not engender learner autonomy or active engagement in the education process, and lacks varied career preparation. This workshop describes a transformative doctoral education model (TDEM), offering options to traditional graduate education and seeks to transform the student to a multidimensional adaptive scholar. In TDEM, a multidimensional adaptive scholar is defined as a mentally and situationally flexible, forward thinking individual firmly rooted in empirically based-knowledge who is able to consume, organize, and analyze complex information and render it into understandable and actionable material. TDEM streamlines doctoral education into an experience of intentional, pertinent, and meaningful learning opportunities. Focus is placed on the acquisition and refinement of knowledge and skills that are useful across job sectors. In TDEM the program, faculty, and students work synergistically to create a climate of learning driven by students’ educational and career needs. The model is dynamic making it highly customizable to individuals, disciplines, and programs. Eight components compose the model. Four units own roles in fulfilling the model components. Workshop attendees will participate in individual reflection and concept mapping, as well as small group discussion. Attendees will tie personal educational and current institutional experience to TDEM, and plan possible action items to help ameliorate challenges their students might be experiencing.
Enacting Student Partnership as Though We Really Mean It

John Peters, Leoarna Mathias

Four years ago, Newman University, Birmingham, UK first introduced a ‘students as partners’ project scheme as its key means of promoting SoTL within a broader inclusive learning culture. It aims to foster ongoing collaboration between a diverse student body and staff across multi-disciplinary and multi-professional teams. The funded projects are designed to enhance engagement, generate scholarly enquiry (GuildHE, 2015:23), and help drive the learning culture of the institution. The programme draws upon the work of Paulo Freire, in the hope of sustaining a commitment to a meaningful, and genuinely transformative, pedagogy of partnership. We hold to a view of the University as a place where ‘people think together and keep questions open’ (Readings, 1996) based upon ‘collaborative, co-operative pedagogies’ (Tinto, 1999). A formal evaluation of the first four years of the programme informs this session.

In the same period, student partnership working has been taken-up across Western HE to the extent that Healey can argue: ‘Engaging students and staff effectively as partners in learning and teaching is arguably one of the most important issues facing HE in the twenty-first century.’ (Healey et al, 2014, 7) Work on ‘students as partners’ has quickly generated its own canon, including a special edition of the International Journal for Academic Development and its own dedicated international journal (NUS, 2012, Nygaard et al., 2013, Cook-Sather et al., 2014, Bovill and Felten, 2016). However, the possibility that partnership working may be delivered through primarily technocratic, or domesticated, means can lead to the authenticity of such practices being challenged (Peters, 2016). It is timely, therefore, to consider the theoretical underpinnings of partnership working and whether particular partnership practices deliver on the claims made for them.

This workshop will explore the principles and purposes of student partnership working. It will examine the opportunities partnership working affords for collaborative, co-operative pedagogies, and consider the challenges of embedding the cultural shifts required. Participants will be invited to consider whether this particular model of student partnership has the capacity to challenge traditional power hierarchies and promote democratic models of practice (Levy et al., 2011; NUS, 2012) that, in turn, can sustain a meaningful culture for learners and learning.

Advancing Our Work Beyond the Classroom: The Scholarship of Learning Analytics and Student Success

George Rehrey, Dennis Groth, Carol Hostetter, Linda Shepard

Post-secondary institutions are rapidly adopting Learning Analytics (LA) to enhance student learning, retention and graduation rates – commonly referred to in the US as student success. Establishing a data-guided campus-citizenry requires collaboration amongst administrators, faculty, departments and support-units. In this workshop we will engage participants in a top-down, bottom-up and middle-out model that supports faculty development and institutional change at the course, program, and institutional levels. During this interactive session participants will explore how large and complex data housed in student information systems can empower faculty to conduct scholarly research about teaching, learning, and student success, expanding the Scholarship of Teaching and Learning beyond the classroom. We have been achieving this goal by establishing a Learning Analytics Fellows program.

Over the past 4-years of our Learning Analytics Fellows program we have discovered that making use of big data and predictive models can augment the accuracy of academic advising while also improving success for underrepresented minority students. The research our Learning Analytics
Fellows have undertaken has also uncovered factors the influence students in making appropriate and often critical choices on their pathway toward graduation and a successful career. A major purpose of the program is to shift faculty perspectives on teaching and learning. The new knowledge produced by the research moves along a continuum from the micro level to the meso, macro and mega levels (classroom, program, institution and career levels) (Williams et al., 2013).

Collaborating in small group discussions, participants will complete a worksheet that guides them through our model of change process. The model is an expansion of work already taking place in our teaching center and leverages the knowledge and expertise of faculty, staff and administrators who are already involved in the Scholarship of Teaching and Learning at our institution. Participants will identify the how the scholarship of student success can be adopted within their current Scholarship of Teaching and Learning communities and initiatives, which is exactly how we started our program. Then they will assess the value of adopting our change model and identify strategies for creating a LA-Fellows program on their campuses. Participants will also have the opportunity to determine the resources required to establish a data-informed, student success culture and how to address some of the more common pitfalls and barriers to establishing such a program.

Constructing Definitions: Contexts and Culture for SoTL

Nicola Simmons

The language we use, as Nystrand (1977) notes, frames the way in which we understand the world. Our language thus contributes to creating the perceived culture in which we operate. The Scholarship of Teaching and Learning (SoTL) is one area in which this is very much true: how institutions (and individuals) define the SoTL frames the culture in which SoTL operates. Historically, there have been many examples of this, and notably, it was a central theme of a special issue of The Scholarship of Teaching and Learning in Canada (Simmons, 2016) in which chapters explored, among other themes, how SoTL was named and defined and how that integrated with the institution’s culture. The SoTL literature contains numerous articles defining the SoTL, beginning with Boyer’s (1990) notion of teaching in and of itself as one form of scholarship. More recently, a common distinction is made in the ways in which scholarly teaching differs from the Scholarship of Teaching and Learning (see, for example, Potter & Kustra, 2011). This can create challenges of exclusion, as those who are starting in the SoTL may be told they’re not doing ‘real SoTL’ yet. Other literature distinguishes the SoTL from the Scholarship of Educational Development (Kenny et al., 2017), which can create a sense that improved student learning is not the end goal of both.

In this session I call on us to view SoTL definitions through the lens of several critical questions:

How do definitions of the SoTL frame how it is taken up?

Who is included in these definitions of the SoTL – and who is excluded?

How might we reimage a definition of the SoTL given what we hope it will achieve?

We will construct responses to these questions, and discuss them in small and large groups. Our responses can reveal insights about our own perceptions, the contexts in which we operate, and the larger field of SoTL – and it is my hope we might compile our insights for sharing with those interested in supporting SoTL cultures.
SoTL in the Margins: Case Studies of Teaching-Stream Roles

Nicola Simmons, Diana Gregory, Lauren Scharff, Michelle Eady

The number of teaching-stream faculty (those hired to focus on teaching, rather than research) continues to rise (Vander Kloet, Frake-Mistak, McGinn, Caldecott, Aspenlieder, Beres, et al., 2017), raising concerns about opportunities for these academics, who are hired to focus on teaching, rather than research, to engage in the Scholarship of Teaching and Learning. Various names for these teaching-stream positions include, but are not limited to, instructional limited term faculty, permanent but not eligible for tenure, equivalent to tenure-track (eligible for tenure), etcetera. These academics, hired for excellence in teaching, and often committed to focusing on improving teaching and learning, face challenges unique to their academically marginalized positions (Flavell, Roberts, Fyfe, & Broughton, 2017; Vander Kloet, Frake-Mistak, McGinn, Caldecott, Aspenlieder, Beres, et al., 2017).

What are the key experiences of these teaching stream faculty vis-a-vis SoTL? In what ways does the institutional culture around teaching and learning affect these roles and in what ways do they affect the culture? Building on our Advocacy and Outreach session at ISSoTL in Calgary in 2017, we have invited teaching-stream faculty to contribute narrative examples of institutional SoTL challenges and strategies for overcoming them. In these case studies, teaching-stream faculty share their perspectives on the following issues:

1. Are you able to engage in SoTL?
2. When you engage in SoTL, what barriers or supports do you encounter that are related to your position?
3. Are SoTL grants or other forms of monetary research support available to you?
4. Are there other exclusions or incentives for engaging in SoTL relating to your position?
5. What supports or institutional factors (including culture) would assist you in engaging in SoTL within your institution?

Using these case studies as starting points for discussion, we invite you to examine compelling themes and the extent to which they resonate with your experiences. There will be opportunity to share your own narratives and discuss issues and potential solutions to creating institutional cultures that are supportive of teaching stream faculty engaging in SoTL. We will finish the session by brainstorming ways we might move forward to create a SoTL teaching-stream community to provide social and professional support.

Guerrilla Leadership and Culture Change in Higher Education: An International Perspective

Heather A. Smith, Claire Hamshire, Rachel Forsyth, Jessica Riddell, Paul C. Taylor

Conversations about a crisis in higher education have been growing in the past two decades. The neo-liberal model of a corporate university threatens to undermine academic freedom, the size and integrity of the professoriate, and research foci. We are also faced with processes that commodify students, dichotomize teaching and research, and divide administrators and faculty. So how do we enact change within our institutions and beyond?

As a common starting point, we assert that a guerrilla-style approach to leadership, informed by Che Guevara’s handbook on guerrilla warfare (1961) and coupled with critical pedagogy, can be particularly effective in shifting conversations around cultures of learning and cultures of learners in ways that challenge dichotomies; furthermore, deploying a guerrilla leadership model can help us to
advocate on behalf of and partner with students, stand as allies across traditional boundaries, and promote holistic, student-centred teaching and learning practices and processes.

Guerrilla leadership operates effectively within the micro-levels of the institutional culture. This form of leadership is agile, mobile, responsive, tenacious, grassroots, and supported from and by local populations. Actions available in this approach include strategic activism, with repetitive and dispersed incursions on multiple fronts, to shift conversations, disrupt centres of power, and create meaningful institutional change. Guerrilla leaders are attuned to the politics of their context, build alliances to achieve common goals, and acknowledge that their efforts often face resistance. The principles that underlie this approach are most closely aligned with social justice and the various situational roles of advocate, champion, or ally. This model borrows from many approaches, and offers us a different lens by which to consider how we approach our work in promoting a culture of learning in our respective fields and our institutions.

Members of the International panel provide examples in a comparative and localized application of the metaphor of guerrilla leadership, thus providing us with insights about both common and unique challenges we face in our efforts to foster a culture of learning in our disciplines and our institutions. All our conversations about the metaphor of guerrilla warfare have been thought-provoking and provocative; however, we believe that provocation can help us all build capacities for strategic engagement as educational leaders. Our experiences tell us that leading change in teaching and learning can be difficult and we want to create a space that acknowledges that conflict exists but also provide a space of hope.

Writing (and Teaching Writing) with Pleasure

Helen Sword

In the modern neoliberal university, the word "writing" signals puritanical virtue, while "pleasure" drips with hedonistic vice. Academic writers are expected to produce robust written artefacts (reports, publications, assignments), not to faff about enjoying themselves. Yet productivity and pleasure are bedfellows, not enemies: a wide range of studies have documented the beneficial effects of positivity and pleasure on human health, well-being, workplace efficiency, and writing quality. We already know, in other words, that academic writers who strike the keys with joy are more likely to be productive researchers, engaging communicators and skilful wordsmiths than those who struggle to get words onto the page. But although seasoned academic writers understand that the joys of writing are inextricably bound up with the hard labor of craftsmanship, that message is not always so clear to our students. Books, blogs and websites aimed at undergraduate writers tend to focus mainly on analytical thinking skills, productive writing habits, and stylistic conventions rather than on fostering intellectual nourishment and delight. As a result, all too many of our students regard formal writing as an irritating chore on the way to a degree, the educational equivalent of “Shut up and eat your vegetables.”

How can we bring pleasure back into our students’ writing – and our own? This workshop will help you develop a learning culture, both in and beyond your classroom, that nurtures writing-related enjoyment, creativity, and play. On completion of the session, you will be able to:

- identify learning activities that nurture your students’ (and your own) pleasure in writing;
- plan targeted interventions based on evidence-based principles;
- adapt the strategies developed in this workshop for writing and teaching activities at your own institution.
Taking a Learning Centred Approach to Facilitating SoTL

Andrea Webb

We talk about redesigning programs, courses, and syllabi to focus on a learning centred perspective (Grunert, 1997; McCowin, 1999), but do we do the same when we teach about SoTL? What about taking a learning centred approach (Hubball & Burt, 2004) to teaching SoTL? Rather than ad hoc or one-off workshops, what do neophyte SoTL scholars need to support their engagement in SoTL research? We know that novice SoTL scholars get caught up in the language and conventions of this new approach to research. This workshop aims to create a community of SoTL educators creating a learning culture by working together to refine how we teach SoTL. We can work to increase the scholarship in SoTL practice by knowing more about how facilitators teach and participants engage with it.

The outline of the workshop will be in four parts. First, the facilitator(s) will begin with a short introduction to a learning centred approach in SoTL. Next, participants will review, with prompts, sample SoTL programs. While the facilitators will offer an introduction, examples, and prompts, the workshop will depend largely on participant interests and interaction. The hands-on work will involve participants bringing in a SoTL program, course, or workshop that they teach or an idea for a program, course, or workshop that they might be teaching soon. In light of what we know about where participants get stuck in SoTL (Manarin & Abrahamson, 2016; Miller-Young, Yeo, & Manarin, 2018; Tierney, 2016; Webb, 2015), workshop participants will work, individually or in small groups, to refine their SoTL offering. The workshop will conclude with participants sharing their refinements and the challenges that they have encountered in adopting a learning centred approach.
POSTER ABSTRACTS

Abstracts in this category are organized alphabetically by first author

Practice and Process: Investigating the Impact of Local Practice on the ISW Process

Amira Abdelrasoul, Wenona Partridge, Susan Bens

Although studies about the transformative impact of the Instructional Skill Workshop (ISW) have been conducted by Dawson, D., Borin, P., Meadows, K., Britnell, J., Olsen, K., & McIntyre, G. (2014) and Russell Day et al., (2004) these have as yet not examined the specific influence of local practice (Hager et al., 2012) on the ISW process. The goal of our exploratory study is to investigate the influence of local practices of teaching and learning on the overall learning process of the ISW. Our reasons for conducting this study include examining the assumptions that have emerged as part of the educational development practice at our own teaching and learning centre. These assumptions inform our view that holding an ISW for a single department or disciplinary area, which we identify as a local practice following Hager et al. (2004), introduces conflict to the ISW process. By conflict, we refer to a tendency within local practitioners to be preoccupied with content rather than strategies used to teach that content. We have thus far addressed this conflict by facilitating the ISW across diverse local practices. In our exploration, we use small case studies of ISWs offered within different local practices. We contrast the process of local practice ISWs with that of multiple practice ISWs held at the University of Saskatchewan. We critically analyze our observations on process, leaving space open on our poster for observers to contribute their own beliefs, experiences, and assumptions they might hold about process of facilitation involving local vs multiple practice participants. We seek to contribute to a culture of learning by challenging assumptions about the influence of local practice on the development and change of learning cultures in higher education through interventions such as the ISW.

Inside the MNTF Special Interest Group - Crafting a Culture for Teaching Excellence

Earle Abrahamson, Duncan Cross

At the heart of ISSoTL, there lies a unique space populated by special interest groups. One such group is the Multinational Teaching Fellows (MNTF). This group was established to support and engage award winning teachers with conversations and debates around defining and recognising teaching excellence. The group has evolved into an inclusive community of practice focussing on supporting aspiring academics by sharing experiences and journeys. Through the group, members have enjoyed contributing towards conference abstract submissions including panels that are tasked with discerning the structures for, and definitions of, teaching excellence. The group tackles questions relating to complex, and often alien landscapes that position teaching excellence within a learning framework:

1. What is excellence in teaching and learning? Can this be defined on an individual and national level?
2. What metrics are useful in measuring teaching excellence?
3. Is excellence a process (the journey) or simply a measure of the product?
4. What is the role and responsibility of the teaching fellow in following the journey of excellence?
5. When we reach the summit of excellence, does the landscape change and how best do we individually, and collectively stay there?
6. Should excellence be recognised, or is it part of the work we are expected to do? (Awards vs Rewards)
7. What role should teaching and learning organisations and interest groups play in moving the journey of excellence closer to the summit?
8. What support do academics need on their journey towards sustained excellence?

Following the last ISSoTL conference in 2017, it was important to develop and sustain a renewed interest in teaching excellence across multinational territories and institutions. To this end, the group co-ordinators convened a SoTLVision network to share ideas and engage wider communities of practice with current thoughts, debates and scholarly outputs in SoTL. This poster identifies the work of the MNTF group by signposting projects, sharing philosophies for practice, and illustrating the architecture for a sustained culture of excellence.

Peer Learning Abroad to Embed Intercultural Awareness in a Short-Term Mobility Program

Tina Acuna, Alistair Gracie, Mojith Ariyaratne, Buddh Marambe, Pradeepa Silva, Chalinda Beneragama

There is a significant body of scholarly literature on outward-bound mobility programs, which provide participating students with the opportunity to take part of their study abroad (Dall’Alba & Sidhu, 2015) and connects student learning with life outside the classroom. Potential benefits to students are self-awareness, adaptability and resilience, experiences in culture, study and travel. It is suggested that these benefits and the development of intercultural awareness of small groups of students who participate in short-term mobility programs is less than those on semester-long exchange (Dwyer, 2004). Approaches to embed intercultural awareness in short-term programs include pre-departure training, reflective practice in assessment, and debriefing sessions with students (Forsey, Broomhall, & Davis, 2011). There is scant scholarly literature on how peer learning abroad between visiting and host students contribute to their intercultural awareness. This paper examines this topic via a case study that evaluated the reflections of 12 Australian students who participated in a short-term mobility program on tropical biodiversity and sustainable agricultural systems in Sri Lanka using Barnett and Coates (2005) framework (HREC approval H16859). Small groups of three Australian students were paired with a Sri Lankan student throughout the 4-week residential program, who together worked on a project of their choice for presentation to faculty at its conclusion. The Sri Lankan students acted as translators and through conversation they provided the Australian students with a personal insight into the culture that they were immersed and vice-versa, whether through formal study, the associated activities or in their free time. The students described a range of personal insights and attributes that demonstrated enhanced knowing, acting and being, consistent with (Barnett & Coates, 2005). For example, ‘Inclusion of the Sri Lankan students in the program facilitated the formation of valuable friendships, which increased the learning experience beyond academia. The informal nature of information shared between friends provided a very personal insight into the culture and society as viewed by people of similar age, undergoing similar personal university experiences. We recommend that providing the opportunity for peer learning abroad that is linked with assessment is one approach to embed intercultural competency in the curriculum.
IKD: Cooperative and Dynamic Teaching and Learning Model in the Basque Country University

Mirari Ayerbe, Elena Diaz, Idoia Fernandez, Mikel Garmendia, Urtza Garay, Iker Ros, Eneritz Ugarte

In April 2010 the University of the Basque Country, UPV/EHU, approved its own educative model: IKD, ikaskuntza kooperatibo eta dinamikoa, cooperative and dynamic learning. During the course 2010-11 the new degree studies started. It was the right moment to establish new politics. This model states over five pillars:

• Curriculum development
• Active learning
• Professional development
• Institutional politics and development
• Social and land development

This model is the natural evolution of the policies and strategies which drove the development of the studies after EHEA and Bologna process.

UPV/EHU offers 68 degrees based on the skills graduates should dominate. Prior to this, SAE-HELAZ offered formation for teachers who wanted to redesign their subjects based on the learning outcomes. More than 2400 teachers followed them.

Professionals were contacted to advise the design. 24 included external practices in institutions and companies in the Basque Country, so students are trained in close contact with the society. Indeed, 5 degrees offer the opportunity to combine studies and work during their formation.

The year before launching, ERAGIN (=trigger) began forming 75 teachers per year in active and cooperative teaching and learning methodologies: Problem based learning, Project based learning and Case methodology. In six editions, 334 teachers finished an 18-month program to design and implement the chosen methodology in their classes. Up to 350 materials are public in “ikd baliabideak”. The main goal of ERAGIN is that participants put into practice their designs and mentors follow up both design implementation phases. This is an effective manner to weave a net and create nodes connecting people from all categories and positions, to create a culture of innovation and cooperation. Teachers are mentors of other teachers, functioning as viral vectors spreading their experiences and convincing others to apply active methodologies themselves.

Coordination is fundamental. EHUNDU (=knit) is the plan for the curricular development of the Degree studies in accordance with the external quality assessment bureaus and the ikd model. Through this, training courses for degree and module coordinators were delivered to build up strong structures for proper development of degree studies. The Rectors have obtained extra funding from Basque Country Government for this.

Concurrently, connection with the society is growing through programs as ikdGAZtE (=young ikd) or Campus Bizia Lab (living lab): students cooperate with teachers, staff and institutions suggesting solutions to problems related to the territory and SDOs.

Towards Integrated Earth System Science Education in Norway

Jostein Bakke

Earth science education is a cornerstone of Norwegian Society, underpinning Norway’s major energy and resource based industries, but is also key to societal resilience and environmental safety. Yet the Earth sciences are in change, posed by changing climate, shifting energy landscape and resource
utilization acutely highlight the inter-dependence between human society and our planet. In this proposal, we build a national consortium with broad international networks, to transform the Earth Science education in Norway. We will connect excellence in research to excellence in student-active learning by: 1) creating a national competence centre for earth science education, 2) developing a generic approach to cross-disciplinary earth science education within critical fields of societal relevance (geohazards, resources, energy, environment, climate), 3) establishing a coherent system of evaluation to foster teaching excellence and identify best practices to disseminate worldwide.

Changing the Learning Environment by Developing a National Cross-Disciplinary Course in Geohazards

Jostein Bakke, Åse Hestnes

Geological and environmental hazards (i.e. earthquakes, landslides, floods, etc.) are a threat to society, and bound to increase in a changing climate. Therefore, we need competent Earth scientists to help society tackle these challenges. Hence, it is a pertinent question how educational institutes can fulfil the obligation to create a learning environment that helps to equip students with the relevant knowledge and tools to understand geohazards and implement necessary mitigation measures (Boulton, 2009. University world news). Our vision is to help students build broader skills and competencies, integrating a strong theoretical basis with real-life work and research experiences (Kastens & Manduca 2012. Earth and Mind II). Therefore, iEarth is developing a cross-disciplinary national online course on geohazards, including a two-day hands-on excursion. A unique feature of the course will be that students will benefit from the expertise of all partnering institutes (UiB, UiO, UiT, UNIS, NVE), exposing students to the research environment beyond their home institution and outside of academia. A digital platform is being developed to provide the basis for activities, webinars and group work. The focus is on research-based active learning and the use of information and communication technology. All teaching will be tailored to reduce threshold terms (Meyer & Land, 2003. ETL Project report) and redundancy in the curriculum.

This course leaves a good opportunity to research the challenges and opportunities such a course poses, being multi-institutional, combining several techniques new to the teachers and distance learning with local teaching. Building the scholarship of teaching and learning (SoTL) structure leaves some questions: 1) should the research be carried out by separate institutional teams or as one investigation? 2) Who investigates - bachelor/master students, iEarth or the course teachers? And 3) what is investigated - student learning outcomes, barriers to teachers implementing a new teaching form (or many new methods) with many colleagues, or challenges with the webinar form?

With this course at the core of iEarth we want to initiate a shift in Earth science education in Norway towards an inter-disciplinary Earth System approach. We aim introduce a more holistic perspective to change education from a teaching culture to a learning culture, creating a student-active research-based learning environment that is supportive of innovation and delivering graduates with a broad understanding of key issues in the Earth sciences, as well as future societal and industrial needs (Barr & Tagg, 1995. Change 27).

Exploring How Students Come to Understand the University

Deb Bennett, Glen Ryland

While philosophers and educators have been hammering out the purpose of the university, students have rarely been asked what they see as the university’s purpose and place. We neglect to introduce
students to the university as an object of study in its own right, except perhaps in a graduate level philosophy or education class. Petruzzelli and Romanazzi (2010) found that universities would have more success with student retention if they could show students how the university is a service toward an individual student’s objectives for attending in addition to stressing the social value of the university.

Scholarship of teaching and learning research has explored motivations for attending university and choices students make while at university. Many explore such diverse notions as the utility of the university and the student experience. Other studies on student perceptions focus on the way students engage and experience the university. What is missing is an understanding of the university itself, especially as its students perceive it and where they fit within it. Only a few SoTL studies venture into such areas. Absent are studies that explore how university students come to understand the university: its aims, its purposes, its history, and its challenges.

Our SoTL study began with the question: how do undergraduates perceive meaning, purpose and the social roles of the university and its graduates? Within our poster presentation we will be sharing the initial findings of our qualitative study which utilized an interpretive inquiry approach. This methodology was a critical approach for this study as student understandings can be explored through the interpretation of phenomena and the meanings made by study participants (Cohen, Kahn, & Steeves, 2000).

This SoTL study took place within a variety of sections of our undergraduate studies courses: Effective Learning in the Undergraduate Context. This course is open to all students in our university, allowing a variety of perspectives, experiences and backgrounds to be explored. Through student interviews and class reflections we gleaned information on how students come to understand the university. We plan on continuing this work with additional sections and dialogue with other SoTL scholars will inform future research and curriculum development.

**Researching Institutional Change: A Longitudinal Study on Faculty Teaching Practices**

*Adriana Briseno-Garzon, Andrea Han, Gulnur Birol*

Considerable institutional efforts have been implemented in Canadian post secondary institutions aiming at promoting and sustaining a culture for learning based on teaching excellence. The University of British Columbia (UBC), for instance, introduced the rank of Professor of Teaching into the Educational Leadership stream in July of 2011 with the goal of reinforcing the University’s “commitment to provide educational leadership, outstanding teaching, and curriculum development, and to recognize and reward it when it happens” (UBC, 2016). In 2013, the Flexible Learning Initiative aimed at promoting “evidence-based, technology-enabled teaching methods that improve the learning experience for a broader student community”. The new institutional Strategic Plan includes “transformative learning” as a core element to reach the goal of “enhancing the quality and impact of teaching for all students” (UBC, 2018).

Despite these big pushes to direct the institution towards a culture that promotes meaningful teaching and learning across departments and programs, it is difficult to discern the impact that such initiatives are having in faculty’s teaching and learning practices, attitudes about teaching or their perceptions of institutional value for teaching.

In this poster we will explore longitudinal change in a large research-intensive university’s teaching culture through a multi-year study on faculty teaching practices and perceptions. Faculty’s and others with teaching responsibilities’ responses to an online survey were collected in Fall of 2014 and Spring of 2018. The campus-wide survey explores teaching practices in large enrolment courses,
attitudes toward specific teaching practices, faculty perceptions of the teaching climate at our institution. Faculty feedback has also been collected about the biggest challenges for teaching and the factors that have improved their teaching.

In this poster we will share our methodology and a summary of relevant findings in relation to institutional shift in teaching and learning culture in the 2014-2018 time period. We will also discuss with the audience connections to existing research (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010; Kuh, Kinzie, Schuh, & Whitt, 2005) and the bearing and implications of our findings for their institutional contexts.

Co-Discovery: A Collaborative Evaluation of Broadening

Akeisha Brown, Caroline Campbell, Robert Irnazarow, Karen Llewellyn, Chandni Pandya

This poster shares the outcomes of an evaluative research project funded by the Leeds Institute for Teaching Excellence (LITE). Co-created by two staff and three undergraduates, the aim of the project was to explore the value of the concept of ‘Broadening’ within the University of Leeds’ undergraduate curriculum, from the perspectives of both students and employers.

With a focus on the acquisition of knowledge, skills and attributes, and specifically in the context of developing (foreign) language skills, the project sought to map the learning experiences of students to the perceptions of employers in order to reveal the resonance and/or dissonance in their understanding of the value of broadening as a concept. It adopted a developmental evaluation approach (Patton 1996, 2008, Saunders 2000, 2012) and used inductive analysis (Corbin & Strauss 2015) as the research methodology. The data from 40 semi-structured interviews was analysed to reveal the emergent core categories or themes and where commonalties and differences surface between students and employers.

While small in its scale, the findings have relevance to ‘sustaining meaningful teaching and learning’ in Higher Education. They identify the need to encourage students to articulate the breadth of their experience – both curricular and co-curricular – and to develop their individual ‘brand’ to enhance their employability. They identify the graduate attributes which employers are looking for and highlight where universities can do more to support the development of skills and provide access to opportunities and to enable students to better articulate their learning.

Fostering a Culture for Learning: Embedding Active Learning in European Higher Education

Therese Collins, Marian McCarthy, Catherine O’Mahony

There is an increased emphasis in European Higher Education on teaching approaches that foster active learning (High Level Group, 2013, EUA, 2018) and “encourage students to take an active role in creating the learning process” (ESG, 2015). Active learning can be supported through a multitude of pedagogical approaches which involve “students in doing things and thinking about the things they are doing” (Bonwell & Eison, 1991).

This poster will review differing active learning approaches used in higher education institutions in 10 countries in Europe. The different approaches will be critiqued to uncover how they could better support a culture for learning. Key questions to be asked of the institutional examples will include:
1: to what extent is active learning included in institutional strategies and policies?
2: how are staff supported and incentivised to engage in active learning approaches?
3: are there disciplinary differences in how teachers enact active learning strategies?
4: what learning can be drawn from these case studies in terms of addressing common challenges in active learning?

This poster will conclude with a series of recommendations on how to promote and embed active learning in Higher Education.

A Culturally Competent Course-Based Research Experience (CRE) for Graduate Students

Sehoya Cotner, Lorelei Patrick, Aud Helen Halbritter Reichsteiner, Brian Engquist, Vigdis Vandvik

For developing scientists, the myriad benefits of research experiences are well established. In response, many collegiate science departments have begun to reimagine the curriculum in ways that incorporate more meaningful (or "authentic") scientific experiences. Course-based research experiences (CREs) make research more inclusive and can lead to positive outcomes similar to those realized from a more traditional, apprentice-style research experience. A growing body of literature documents novel course-based undergraduate research experiences (or CUREs), but less work has focused on opportunities in graduate-level training. Also, developers have struggled with ways to make curriculum-based research broadly relevant to a community beyond the classroom (and thus authentic). We present a course-based research experience for graduate students that is intensive, international, and collaborative. Specifically, graduate students from 12-plus nationalities participated in one of two Plant Functional Traits Courses (PFTC) offered in March (in the Peruvian Andes) and July (on Spitsbergen, Svalbard Archipelago, Norway) 2018. Students contributed to ongoing, Principle Investigator-driven research projects while learning transferrable skills such as measurement techniques in plant functional ecology, collaborative research, data management and interpretation, and scientific communication. Further, students participated in a small outreach project, surveying area inhabitants (in Peru and Norway) about their knowledge and perceptions of climate-change ecology; these data then informed a discussion about culturally variable challenges in scientific communication. This course was thus doubly innovative: the student experience was evaluated to determine a relationship between specific course elements and desired outcomes (something rarely done for graduate level science courses); and cultural competence, alongside scientific communication, was integrated into the experience. Surveys, as well as pre- and post-course writing assignments, form the basis of assessment—both of the course in general, and the scientific communication piece specifically. Discussion will conclude with recommendations for other educators, who seek to make discipline-based education more collaborative, inclusive, and culturally competent.

Making SoTL Accessible to Academics: a Blended Course Offered as a SPOC

Josephine Csete

How can we support academics who have an initial interest in SoTL? What may they already know and what knowledge and skills related to SoTL would they find useful, especially when they are starting out in SoTL? Do they have skills from their core discipline that are readily transferable? What questions and concerns may they have that, if addressed, can further motivate them to pursue SoTL? Can we support them in a way that is both effective as well as makes efficient use of their time investment?

Questions such as these were asked in the first stage of a two year project that led to developing, piloting and further refining an introduction to SoTL that is currently provided as a seven-hour short
course offered in blended mode with two ninety minute face-to-face sessions and four hours of online effort in a small private online course (SPOC).

This interactive poster provides multimedia information to:

- describe the three stages of a multi-year project to develop the course and

- provide access to elements of the current short course including
* intended learning outcomes
* content areas and modes of presentation
* interactive learning activities and assessments
* design decisions for face-to-face and online components

Please stop by to experience, provide feedback and engage in discussion. A take away QR code is provided so that the participants can refer to the poster at a later date and a version of the online portion of the short course will be available for access for a period of time after the conference is over.

Preparation Students for the Fourth Industrial Revolution - A South African Perspective

Danie de Klerk, Ashwini JadHAV

A recent World Economic Forum report (WEF, 2016) outlines the vast changes the fourth industrial revolution will bring and explores the impact these changes will have on the world of work as we know it. The advent of this revolution (also known as Industry 4.0) is here and higher education, like most other sectors of society, will not go unaffected. Yet the higher education landscape remains a complex space, in a continuous state of change (Andrews & Osman, 2015; Hornsby & Osman, 2014; Maree, 2015; McGhie & du Preez, 2015). The future of present-day universities is being questioned (Arvanitakis & Hornsby, 2016) and calls for responsible citizen scholars abound (Duncan, 2016; Nichols, 2016) and the South African higher education sector is not immune to these realities. The graduates leaving institutions of higher learning are expected to have acquired particular skills and abilities (graduate attributes). These are the disciplinary, ethical, critical, and life-long learning skills and abilities (Jones, 2002). In this paper, the authors explore graduate attributes for an unknown future by drawing on the projected skills necessities outlined in the aforementioned WEF report (2016). They review the graduate attribute policies of six South African higher education institutions to determine the extent to which they may or may not align with the needs identified by the WEF (2016). Preliminary findings indicate that although some attributes may already be encapsulated in students’ tertiary experiences, others may not be. A case is argued for South African higher education institutions to be responsive (Moll, 2004; Ogude, Nel, & Oosthuizen, 2005) to the realities of the fourth industrial revolution, and for the importance of preparing current and future graduates for the unknown future they will live and work in. Recommendations are made for the review of current university policies and the implementation of co-curricular transcripts to track attribute development.
Transition to the Profession: The Importance of Capstone Courses

Tayler Delannoy, Jessica Barabas, Jessica Booke, Pat Kostouros

There has been extensive research that demonstrates the important role that capstone courses play as a bridge or rite of passage by allowing students to transition from their university experiences to professional practice (Collier, 2000; Daspit & D'Souza, 2012; Dunlap, 2005; Durel, 1993; Todd & Magleby, 2005). These experiences increase student understanding of their chosen field and better prepare them for career options. In addition, capstone courses assist with opportunities to network with professionals already in the field. Capstone courses might include practicum, research, and community projects which assist students in gaining useful skills and knowledge.

All the professional degree programs in the Faculty of Health, Community, and Education (FHCE) at Mount Royal University have a capstone course. Students in these programs take part in a variety of capstone opportunities from practicum and fieldwork to research and community projects. These opportunities act to expose students to their chosen field and provide the necessary learning with regards to putting skills to practice. The capstone course serves as the culminating and integrative educational experience and has been designated as one of the top ten high impact educational practices (Kuh, 2008). While these experiences offer students vital opportunities, in degree programs, it is important to build from this foundation. The purpose of this research study was to foster inspired learning, and community engagement through the development of a common vision, mission, and set of principles for our FHCE capstone courses. This presentation will highlight the qualitative research design (Cohen, Kahn, & Steeves) and common themes discovered, and conclude with suggestions of how to foster collaborative teaching and learning across a variety of disciplines.

Developing Learning Culture through Field Work – Effect of Group-Work Organization

Pernille Eidesen, Tina Dahl

Studies have shown that field work is associated with improved learning outcomes of both discipline knowledge and practical skills (e.g. Lonergan & Andresen, 1988; Lisowski & Disinger, 1991; Kent et al., 1997; Fuller et al., 2014; Eidesen et al., 2017; Fleischner et al., 2017). Another benefit associated with field work is promotion of group interactions, both among students and between teachers and students, creating a beneficial learning environment both during the time spent outside and for the remaining classroom part of a course (Harland et al., 2006). However, how we organise the learning activities in the field, promote different learning environments, and to some extent the learning culture.

In two different courses, students were divided into project groups of three to four students, and each of the groups had to develop an inquiry-based research project. Data collection was done during a one-week field cruise. In the first course, the different student groups collected data subsequently, so in each sampling location, only one group collected data at the time, and they were supposed to instruct the other students to help out collecting data to their project. In the other course, all groups worked in parallel. The latter reduced sampling intensity per site, but increased the number of sites/locations sampled.

Different group organization had pro and cons. By helping each other, all students got a better introduction to the other projects, and experience with e.g. the challenges of communication, delegation of responsibility, and the importance of good sampling sheets. These interactions created higher risk of conflicts, but introduced a wider range of skills and knowledge. In the other course, the different groups were much less involved in each other’s projects. This resulted in less conflict during
sampling, and higher quality of the data collection. Less conflict is however not equivalent to good learning culture.

**Contemplative Pedagogy – Toward a Learning Culture Supported by Mindfulness Practice?**

*Tatiana Eldridge-Hinners, Silvia Wehmeier*

The concept of mindfulness, as a secular contemplative practice, has gained traction in many sectors of society: in higher education we are seeing it take the form of contemplative pedagogy. Mindfulness is still a relatively new concept in universities and often mainly found in medical schools.

Contemplation practices provide a powerful pedagogy towards a present mind, foundational academic competencies, and have been seen to benefit wellbeing, social and emotional growth, performance, character development, and insight. Mindfulness practice may support a learning culture, a liberating and empowering education, by intentionally creating a space in which to see learning in its full context — scientific, cultural, political and personal.

The project explored the influence of mindfulness practice on the wellbeing of chemistry students. Chemistry students participated in a 6 week ‘Introduction to Mindfulness’ course and engaged as co-researcher answering pre- and post-course questionnaires, and taking part in a semi-structured interview. Questioners from participant (n = 8) and control group (n = 9) were analysed using the Mann-Whitney U Test and Wilcoxon Sign-Rank Test. Interview transcripts were analysed by a coding process.

The data showed a significant difference in stress level ratings, and a shift in awareness. Themes developed from qualitative data analysis were helpful new skill, improved personal life, and improved studying and concentration.

“I learnt how to ground myself, which was helpful, outside of studying. This had a knock-on effect allowing me to have more time for uni work.”

Contemplative pedagogy, in the form of mindfulness practice, point to a path toward a learning culture by widening the field of receptivity, developing student and teacher attributes of reflexivity, openness and creativity.

**Creating a Culture for Learning: Teaming Up! to Re-Imagine Multi-Course Teaching in Large Classes**

*Michelle French, Franco Taverna, Melody Neumann*

At universities, knowledge is typically compartmentalized into courses or subjects, and often students do not recognize the connections between them. As well, opportunities to reinforce learning are lost due to lack of cross-course/cross-departmental curriculum design. To address this, we are developing a cross-disciplinary, interactive teaching model that will be tested in three large courses with a combined yearly enrollment of 3500 students. Specifically, we have created video case studies with a storytelling arc that spans three disciplines in biology: cell and molecular biology, physiology and neuroscience. The case studies form the basis for interactive classes in each course with small group work and teaching assistants to facilitate discussion to foster learning. A feature is the in-class use of Team Up! (developed by Dr. Neumann). It allows students to use their devices to form groups and submit group answers, and provides immediate feedback: groups get full marks if they select the correct answer on the first try and partial marks thereafter. To pilot Team Up!, we examined two active learning approaches in two classes of a physiology course. Content was
delivered via both on-line and in-class lectures with the final 30-40 min of class time devoted to
group work: groups either used Team Up! or completed a worksheet. In a survey, the majority of
students (62% vs 38%, n = 110) reported that active learning helped them learn the material better
and that they enjoyed it more than traditional lectures. Of those who preferred active learning, the
majority preferred Team Up! to both learning (71%) and enjoyment (81%). To
examine actual learning, we compared student performance on test questions related to active
learning content (6 questions) to overall test scores (30 questions) and also compared performance
of students who attended both active learning sessions to those who attended one or were absent.
As expected students who attended both sessions had significantly higher test scores, but scores for
group work questions were not significantly different to the overall test score within each group.
Multiple measures of learning are likely a better way to assess new teaching methods. Our results,
however, suggest that Team Up! engages students, and we look forward to examining its use in our
cross-course initiative.

Everybody Hates Discussion Boards: Engaging Students in Critical Thinking Online and In-Person

Jennifer Gonyea

Students want to engage with material instead of listening to lectures or passively reading content
(Roehl, Reddy, & Shannon, 2013); and consistently report that faculty use technology ineffectively
(Burkley & Burkley, 2009; Price, 2009). Creative, integrative writing assignments that require
technology meet student demands for interaction with faculty and with each other (Kotz, 2016) while
assisting them in thinking critically about course content. This poster presents an assessment of both
the degree of engagement between students and the level of critical thinking skills demonstrated by
video log assignments that are designed to have students integrate course content, substantiate
arguments, and broaden their perspectives. Video log assignments require students to select a
perspective from which to make their argument and then select a peer’s video from the opposing
viewpoint to engage the other student in a conversation about the topic. Student videos and
responses from a summer online section and two fall in-person sections of the same course were
analyzed according to Bloom’s taxonomy of learning (Anderson & Krathwohl, 2000) using Quick Flip
Questions for the Revised Bloom’s Taxonomy (Barton, 2007) in order to assess the levels of critical
thinking represented in student video logs and responses using two separate raters (Cohen’s κ = .92).
The findings indicate students use more higher order thinking language in later video logs when
compared to early video log submissions. Currently, the level of critical thinking in video logs in the
online section is being compared to those in the in-person section, using Bloom’s taxonomy of levels
of cognition. The log responses were also coded according for the degree of student engagement
measures as whether or not the responder: used information from the original post (OP) to further
the conversation; added new information in their response; and interacted with the OP and other
responders (number of interactions). These data are currently being analyzed to compare the level of
engagement in e-courses to that of in-person courses with regard to the degree of engagement
between students in both the online and in-person sections.

The Understanding of Independence in Swedish Higher Education before and after Bologna

Jan-Olaf Gullö

Within the Bologna cooperation, an overall European framework has been developed with general
learning outcomes and competences for different examination levels. In the Swedish interpretation
of this framework, independence is a central concept. Student’s ten-week (15 ECTS credits) bachelor
essays or degree projects are, for example, called independent projects in the Swedish system of
higher education. Independence is however a concept that can be understood in different ways in different contexts. Ambiguities in how independence is understood and used in practice can lead to uncertainty and may even be a barrier to student exchange and hamper international comparability in accordance with the intentions of the Bologna Declaration. The aim of this study is therefore to explore how the concept of independence is understood in national and local steering documents in Sweden and how the understanding of independence has changed over time, before and after the Bologna Declaration in 1999. This study is a part of a research project where we gather data from Russia and Sweden from two different educational programs, journalist and teacher education. The collected data includes interviews with students and supervisors and analyses of supervision sessions. The analysed material in this study also includes national as well as local steering documents that form the legal basis for the practice of producing independent projects (bachelor essays). The steering documents consist of learning outcomes, assessment criteria, instructions and descriptions concerning the educational programs, including the independent project. Such documents may be important for how a culture for learning is developed within and across courses, programs, departments and institutions. The results show that the use of independence as central concept has changed over time in Swedish higher education. This is partly a result of the Bologna Declaration, but also and probably even more a result of changes in the surrounding society where independence over the years has gained importance in different ways. On the other hand, the results show fewer differences than expected between how teachers, as supervisors, relate to their students’ independence when comparing gathered data from Sweden and Russia, despite that the steering documents in these countries differ significantly. This clearly indicates that the teachers who participated in the study, irrespective of the steering documents being used, first and foremost, strive to create good conditions for their students’ learning and development.

Innovative Strategies for High Impact Practices: Access, Success, and the Student-Athlete

*Eric E Hall, Anthony Weaver, Caroline J Ketcham*

High impact practices (HIPs), such as study abroad, internships, learning communities, and undergraduate research, have repeatedly been shown to positively affect academic success (Kuh, 2008), yet not all students have equal access to these experiences. One cohort who often have high time demands and resource constraints are student-athletes (SAs); limiting their opportunities to participate in HIPs and potentially negatively impacting their academic experiences and success. SAs face unique challenges, such as heavy time commitments to their sport including seasons that overlap multiple semesters and pressure to achieve athletic success, which can reduce access to and involvement in HIPs. The SA cohort has not been a focus in HIP research and thus participation rates and barriers are not well represented or understood. Extensive research within the breadth of HIPs across institutions is essential to elevate the SA experience and inform institutions about potential barriers and challenges for underrepresented populations. It is clear that in order for SAs to participate in many HIPs, innovative practices are required. This work is a portion of a funded two year collaboration with 9 participating Division I collegiate institutions from the same conference. The overall goal is to identify best practices and barriers to participation and strategies to improve the quality of their experience. This poster will highlight the 1st year data including participation rates of SA in HIPs across the nine institutions. Preliminary analysis shows that defining and tracking of these practices is inconsistent. More importantly, HIP offerings and SA participation rates vary across institutions. Further analysis will include best practices and quality of HIP experiences for SAs within and across institutions. Consideration and discussion of how the 8 elements of HIPs as defined by Kuh and colleagues can be applied to intercollegiate athletics would be beneficial for institutions to consider to increase access to HIPs. Recommendations related to how to intentionally supplement and elevate the athletic experience to incorporate qualities related to HIPs will be provided.
Waving a Magic Wand: An Innovative Journey for Early Career Researchers and SoTL Engagement

Melanie J Hamilton, Andy M Benoit

A growing number of faculty at colleges in Canada are developing their scholarship of teaching and learning (SoTL) skills. However, little is known about the college faculty experience (Simmons & Poole, 2016) of conceptualizing and developing a research proposal and the needed supports. According to Bazeley (2003), there is no single path to developing an academic research career, and most academics have different discipline paths to research experience. There are many interpretations in the literature about early career researchers (ECR); however, the European Research Commission uses the term Early-Stage researcher and defines it as “researchers in the first four years (full-time equivalent) of their research activity, including the period of research training.” (De Montfort University, 2018).

Over the period of one semester, we partnered with mid-career faculty; early-career researchers and researched their journey to developing a SoTL Project. Throughout the four months, we assisted faculty to develop a SoTL research project using the SoTL Guide Book: "Engaging in the Scholarship of Teaching and Learning: A guide to the process, and how to develop a project from start to finish" (Bishop-Clark & Dietz-Uhler, 2012). At the beginning of the study, participants were asked to conceptualize an idea for a SoTL project that was of interest to them. Over the semester, the participants were expected to complete the worksheets within the book, and at the same time using an LMS system for peer-support and feedback.

For this study, we used case-study methodology and convenience sampling, and we used three methods to triangulate our data. The dataset included interview and focus group data, a participant research diary and project documentation.

This poster session offers a summary of the research findings on what institutional supports are needed to assist mid-career faculty, ECR with developing a SoTL research focus.

The poster audience will be encouraged to engage in dialogue on what services and supports are offered at their home institutions and what barriers ECR face as the engage in the SoTL process and which has various supports that maximize their success. Mighty (2013) emphasizes that fostering SoTL is more achievable in scholarly communities when faculty share ideas about ideas, methodologies, and experiences.

Data Analysis in Geosciences: Fostering Computational Learning

Bjarte Hannisdal, Einar Iversen

Data analysis and statistics play a key role in the geosciences, but have been nearly absent in traditional geology BSc curricula. At our department, geology students have historically been offered a one-week intensive lecture-based course at the MSc level. In 2017, the authors launched a major revision of both form and content of this course. Our goal is for students to adopt computational practices as a means of developing their expertise in solving authentic, ill-structured problems (Scherer et al., 2017, J. Geosci. Educ. 65).

As a first step we reoriented the form of instruction towards real-time problem-solving using the programming language R and the RStudio desktop interface. Both instructors were present during the organized instruction, one demonstrating computational practices and the other demonstrating problems on the blackboard. This paired instruction enabled continuous peer review and feedback on the form and content of the course. Students performed all computations on their own laptops,
and also engaged in group activities (such as rolling toy dice in the corridors to experience the central limit theorem). Assessment was based mainly on an inquiry-based term project designed to let students define and test statistical hypotheses in R using their own data or other published data relevant to their research topic. In a course evaluation group interview, students noted that they would have preferred to work with real data from the start.

We intend to further develop and test new learning activities in a revised course offered in 2019. Our primary hypothesis is that data practices and computational practices (Weintrop et al. 2016, J. Sci. Educ. Technol. 25) significantly improve student learning in the context of authentic, ill-structured problem-solving (Holder et al., 2017, J. Geosci. Educ. 65). To test this hypothesis, we will assign students to an experimental group that uses computational practices, and a control group that reads the same instructional material, and use pre- and post-instruction interviews to assess their progress from novice towards expert-like thinking.

We solicit input from ISSoTL18 participants on our proposed experiment, specifically on setting up integrated assessment and evaluation of computational practices. A challenging "threshold" concept in elementary statistics is the central limit theorem (CLT). With a computer, however, students can discover the CLT themselves without any prior theoretical knowledge. In our presentation, we invite ISSoTL18 participants to also make this discovery by playing with virtual dice using simple computer code.

**Non-Biology Majors’ Preferences for Student-Led Inquiry vs. Broadly Relevant Research Experiences**

*Sadie Hebert, Jessamina Blum, Deena Wassenberg, Sehoya Cotner*

Course-based undergraduate research experiences (CUREs) are laboratory experiences that involve students in five dimensions - use of scientific practices, discovery, broadly relevant work, collaboration, and iteration. Based on several learning theories including social activism, social cognitive, and situated learning, we know that participating in real-world, relevant, collaborative experiences that connect to the world outside of the classroom can lead to meaningful learning. In the CURE framework, real-world, relevant experiences come from the dimension of broadly relevant work. However, implementing the “broadly relevant work” dimension is logistically challenging in a large-enrollment, non-majors course and it is unclear if this dimension is necessary for positive student outcomes. To understand how broadly relevant research experiences impact student outcomes, we surveyed non-biology majors following participation in a student-led inquiry or broadly relevant research experience. Students in the student-led inquiry research experience asked their own research question but did not contribute new information to the scientific community, whereas students in the broadly relevant research experience (a CURE) were assigned a research question and did contribute new information to the scientific community. In the survey, students were asked whether they preferred choosing their own research question for which the results are already known; they would not contribute new information with broad relevance to the scientific community (hereafter "choice") or being assigned a research question for which the results are not known; they would contribute new information with broad relevance to the scientific community (hereafter "relevance"). For students that participated in the student-led inquiry research experience, 46% preferred "choice" and 54% preferred "relevance". In contrast, students that participated in the broadly relevant research experience overwhelmingly preferred "relevance" (90%) over "choice" (10%). There was a significant association between research experience and preference \( \chi^2 (1) = 22.53, p < 0.001 \). The most common reasons students chose "choice" were personal interest or enjoyment (58%) and confirmation of known results (36%). The most common reasons students chose "relevance" were interest or enjoyment (45%), broad relevance (44%), or discovery (32%).
results from project ownership questions showed that students that participated in the broadly relevant research experience reported a greater sense of project ownership compared to students that participated in the student-led inquiry research experience. Future analysis will investigate these students’ science attitudes, confidence, and identity to determine whether broad relevance is necessary for positive student outcomes in this population.

**Divide and Conquer: Can a Short Animation Support Student Learning of Meiosis?**

*Melissa Hills, Kathy Davies, Carolyn Ives*

Meiosis is the foundation of heredity, and a core concept in genetics. It is also one that is challenging to learn, and ingrained misconceptions are common amongst students. As meiosis is a dynamic process, traditional lecture formats alone are not effective in maximizing student learning of the concept. Meiosis, therefore, provides a useful test case to evaluate approaches to generate and sustain meaningful learning in biology. Video is frequently used as a learning tool in and out of the classroom. Students often rely on online videos on platforms such as YouTube; however, these videos can lack key detail, and some may reinforce existing misconceptions. Therefore, we developed a short, engaging, animated video about meiosis (4:38). The objective of this research was to determine whether this video, when used as a supplement to usual classroom instruction, enhanced understanding and student engagement. A validated Meiosis Concept Inventory (Kalas et al. 2013) was used to assess understanding of meiosis prior to instruction. Students then received the usual classroom instruction on meiosis, and half of the students received access to the meiosis animation. The Meiosis Concept Inventory was then administered as a post-test. Data collected included pre- and post-test results, video usage data, demographic data, course grade, and student perceptions of the utility of the video using a validated survey. Data collection took place in the winter, spring and fall terms in 2017 through to 2018. This research will enable us to explore the dynamic relationship between academic performance, understanding of meiosis, and learner behaviour, including animated video usage, and learner perceptions of the value of the animation as a learning tool.

**Mentorship as a Model for Academic Staff Competence and Culture Development**

*Rune Hjelsvold, Terje Stafseng*

Academic competence and dedication are key components in cultivating an effective learning culture. However, non-orchestrated teaching, research, and administrative obligations limit the capabilities of faculty members to keep up with technological progressions and latest developments in their fields. Moreover, only a few studies have shown how teaching faculty, collectively and supported by higher management support, successfully contribute to the development of a learning culture.

This article studies the long-term effect of a three-year old project involving teaching faculty of five different bachelor programs in computer science. Faculty management initiated the process by inviting an expert from the software industry to work with faculty members to identify skills and knowledge, which were important in computer science practice, but were not properly addressed in the curricula. Higher management and faculty jointly decided to address these discrepancies by launching a development process within the department where selected faculty worked together as a development team – under the mentorship of two senior software architects/developers from the industry. The faculty team used the tools and methodologies of the industry and thereby itself acquired knowledge and skills that were missing from the studies at that time. Concepts relevant to
two-way knowledge communication between academia and industry is elaborated upon in this poster.

Empirically, in-depth interviews with six participating teaching staff over a period of three years after the project were conducted. The study also took into consideration curricula changes, which were implemented during this three-year period. The aim of the study was to identify the long-term effects on the staff culture, on the curricula, and on the relationship between university and industry. Major effects on the culture were that the teaching staff got to know each other better and during the project developed a common platform for further collaboration and development. Major effects on the curricula were improved methodological alignments with current practices in the industry as well as changes that solidified the red thread that goes through the curricula. Major effects on the university-industry relationship was improved awareness of how academia and industry may complement each other and of what is needed to keep academia well-aligned with state-of-the-art in the industry.

Faculty members considered management support and mentorship from industry as important for the success of the project. Major challenges were to find time for everyone to participate and to deal with large differences in prior experience concerning the use of tools and methods.

**In-Class and After-Class Interactive Learning with Smart Phone App in Engineering Higher Education**

*Yao Hu, Qun Hao, Ya Zhou, Yifan Huang*

Classroom is the basic and critical environment for higher education in common cases. However, this traditional face-to-face teaching and learning environment can hardly draw the attention of the students if the lecturer is not talkative. Some theoretical courses are complained to be boring and some other practical courses are not easy to understand if no demonstration experiments are involved. On the other hand, students in/from East Asia are often too shy to address their opinions and questions. Due to the low lecturer/student ratio, typically less than 1:100 in some engineering courses in Universities and Colleges, most of the students gave up the chance of one-to-one communication with the lecturers even when they were confused. An effective and better convenient tool is expected to enhance the in-class and after-class communications between teachers and learners, and help creating a pleasant learning environment.

Smart phones and multi-functional Apps have changed peoples’ lives worldwide for more than ten years. Instant message Apps make social interactions easier and faster. An online learning environment could be an effective supplementary to traditional classroom environment. Smart phone App Rain Classroom associated with messaging App Wechat is developed to be offered freely for better education environment in the New Media Era. It enables the lecturers to receive instant feedback from students through bullet screen, push preview and review materials and post in-class quiz. Two years of introduction of Rain Classroom to an engineering compulsory course for senior students have been done. Investigation showed that 76% of the students enjoyed the new interactive tool, acknowledging its help in understanding the topic better, improving in-class interaction, and after class communications. Meanwhile, higher requirements for the preparation of the class are suggested. In this proposal, we will share the experiences and bring forward the problems related to higher education in the New Media Era.
Contributing to Intercultural Learning: A Chinese and Danish Collaboration

Donna Hurford, Yan Ding

We are two academic developers, one at a Chinese university and the other at a Danish university. Through the ‘International Network Project’ (Danish Ministry of Education and Research) we are intent on developing a new intercultural research partnership by exploring shared professional and academic interests. We are interested in exploring how our collaboration on these authentic, international projects (Leask, 2009) contributes to our intercultural learning and to review the potential of such international partnerships for academic developers.

Whilst academic development and its associated learning culture or cultures has a longer history in Danish than Chinese universities, identifying opportunities to better understand and develop our respective learning cultures is applicable in both contexts. Fudan University in China aims to support peer universities to promote the growth of their academic developers through co-construction, sharing and dissemination of online teacher training resources supplemented by the establishment of the academic developer appraisal system. Academic developers in Denmark have access to a national network (Dansk Universitetspaedagogisk Netværk) which provides support and dissemination opportunities through events and Special Interest Groups.

Our poster will focus on findings from surveys of Chinese and Danish academic developers’ perceptions of their roles and whether they map on to Land’s (2004) and Neame’s (2011) ‘orientations’ of roles or whether alternatives emerge; academic developers’ self-identified professional development needs and their current or potential contributions to their academic developers’ learning culture or cultures. In addition, we will share our considerations on the findings and offer questions for reflection and discussion on the international role of academic developers and how they could contribute to and benefit from international learning cultures.

Findings from such surveys at institutional or national level would of themselves yield valuable information, however including an additional international level invites critical discussion and intercultural perspectives. The increased diversity of teachers’ and students’ nationalities and cultures is a common outcome from universities’ internationalisation strategies (Spencer-Oatey and Dauber, 2015), which means academic developers are increasingly turned to for intercultural pedagogic guidance (Killick, 2015). Therefore, our international collaboration is well-placed to provide unique comparative insights into Chinese and Danish academic developers’ perceptions of their roles, their learning needs and to inform discussions on academic developers’ contributions to universities’ intercultural learning cultures.

Faculty Perceptions of Scholarship of Teaching and Learning in US Colleges/Schools of Pharmacy

Mohammed Islam, Reza Taheri, Sarah McBane, Rahmat Talukder

The 1990 publication of “Scholarship Reconsidered: Priorities of the Professoriate” by Ernest Boyer paved the way for the eventual birth of the Scholarship of Teaching and Learning (SoTL). Reflective of the ISSOTL 2018 conference threads, but most specifically to “An inclusive learning culture” and “A culture that learns”, this poster will focus on the faculty perceptions of SoTL, their engagement in SoTL, and recognition of SoTL in US colleges/schools of pharmacy. SoTL is gaining momentum within academic pharmacy, as pharmacy curricula evolve along with the profession, creating multiple opportunities for faculty to pursue scholarship (McLaughlin et al., 2013; Peeters, 2013; Mehvar 2017). The Accreditation Council for Pharmacy Education Standards 2016 expects that colleges/schools engage in research in the design and delivery of the curriculum. A survey instrument was developed to collect quantitative and qualitative information on the faculty attitude towards
SoTL and its roles in faculty reward structure. An electronic hyperlink to the survey instrument was emailed to 6454 faculty members of 139 PharmD programs in the United States and its territories. SurveyMonkey (SurveyMonkey, Inc., Portland, OR) was used to collect responses. Survey data were analyzed using Chi-square test of independence, z-test, Mann-Whitney U test, and Kruskal-Wallis test. A total of 643 faculty representing 100% of US colleges/schools of pharmacy participated in the study. From a list of 11 scholarly activities, correct SoTL activities were identified by 78–98% of participants with statistically significant differences between faculty disciplines. Over 94% of participants indicated that institutional policies should encourage SoTL. More than 70% of respondents strongly/agreed that SoTL should be incorporated into criteria for promotion and tenure. Majority of the respondents (83.5%) reported that their institutions accept SoTL as criteria for promotion and tenure. Only 40% of respondents reported that their colleges/schools considered SoTL for merit-based salary increase which was more prevalent in public versus private universities (p<.01). SoTL engagement was indicated by 74% of respondents. Competing faculty time commitments and lack of funding, faculty interest, institutional recognition and awareness of SoTL were identified as challenges to SoTL. In conclusion, our results show that US colleges/schools of pharmacy recognize and value SoTL. Majority of the respondents believe that institutional/school policies should encourage SoTL and incorporate it into criteria for promotion and tenure. Findings from this study may serve as an impetus for inclusion of SoTL in institutional reward structure across pharmacy academy.

**University Teachers’ Approaches to Teaching in the Context of a Pedagogical Course**

*Mari Karm, Anu Sarv, Airi Niilo, Ene Voolaid, Merje Miliste, James Grocca*

Learning-centered approach to teaching and active student engagement becomes more and more valued in universities. Therefore, the goal of pedagogical courses should be supporting the development of learning-centered teaching. Åkerlind (2007) supports the position that the focus of teaching improvement is influenced by the teacher’s conception of teaching. If the teacher holds a content-centered approach, particular strategies are used to build up better content knowledge. On the contrary, in the learning-centered approach the purpose of teaching is to improve student learning and an emphasis is also placed on continuous improvement of one’s own teaching (Postareff & Lindblom-Ylänne, 2008, Eley, 2006).

Studies show that teaching conceptions are not stable and change during the teaching experience (Kugel 1993). When examining the impact of pedagogical training of university teachers, it has been found that teaching conception of teachers who participated in longer teacher training courses changed towards a more student-centered approach (Postareff et al. 2007, Gibbs & Coffey 2004).

Acting as academic developers, we aim to support the development of learning-centered approach to teaching in our training courses. However, we lack the evidence how efficient our teaching in such training courses is to achieve these purposes and whether the activities and tasks in the courses support the change towards learning-centered approach to teaching.

This was a reason to carry out a qualitative study among three groups of university teachers participating in a long-term pedagogical training (6 ECTS) course during 2016-2018. Data was collected from the participants at the beginning and at end of the course. The participants were asked to write answers to open questions about their planning of teaching, their teaching methods or activities, the assessment strategies and methods in their teaching practice, and how they understand teaching and learning before and after the course. The texts were analyzed with qualitative content analysis and discourse analysis.
Preliminary results show that the conceptions of teaching that concern the teaching and the teaching methods used are richer in details at the end of the course rather than at the beginning of the course. The teachers evaluated most highly the practical tasks that gave them experience about different teaching methods. The teachers reported that reading articles about teaching influenced their thinking as teachers. Peer observations of teaching as a part of their pedagogical training were described as most influential in their everyday practice as teachers.

Providing the Big Picture Makes a Curriculum Jigsaw Puzzle Easier to Negotiate

John Keating, Laura Sahm, William Joynes, Sima Purohit

Background:
It can be a daunting task for an undergraduate student to comprehend the structure of their curriculum and how it relates to the profession they wish to practise post-graduation. It is akin to arriving in a new city but without a map, or trying to solve a jigsaw puzzle without access to the puzzle image. Without signposting to students the reasons underpinning the design of their curriculum, their engagement can falter and learning suffer.

The Pharmaceutical Society of Ireland (PSI) Core Competency Framework (CCF) is the cornerstone of the PSI’s programme to reform/inform training and education of undergraduate and practising Irish pharmacists. The design, content and pedagogical approaches within the University College Cork (UCC) MPharm programme have been heavily influenced and mapped to the CCF framework. Testimonies from UCC MPharm students and faculty have uncovered challenges recognising where pharmacy themes such as patient safety and diabetes are located and taught across the curriculum and how they link to CCF behaviours. Such challenges have been documented with pharmacy students in other jurisdictions.

To help fill this knowledge gap, visually appealing, informative and systematically designed posters were developed which map UCC MPharm curriculum themes in a hierarchical manner to academic years, modules, modular activities and, ultimately, the CCF. These posters were evaluated for their usefulness and ease of navigation by the key end-user stakeholders – pharmacy faculty and undergraduate pharmacy students.

Methodology
Data on curriculum components relevant to three MPharm themes – patient safety, antimicrobials and diabetes – were collected by interviewing module coordinators and analysing Blackboard® Virtual Learning Environment modular content and Book of Modules entries. Following data collection, landscape-orientated A0 posters (one poster per theme), were designed to illustrate how each theme maps to the CCF via associated activities performed within modules. Posters were critiqued on their design, content and usefulness through five focus groups composed of MPharm student year groups and pharmacy faculty. Thematic analysis of focus group data was subsequently performed.

Results
Pharmacy students and faculty found the theme-mapped posters intuitively straightforward to navigate, user-friendly and enhanced their understanding of the relevance and application of the PSI CCF in informing the design of their MPharm curriculum. Analysis of focus group data has further indicated that the chosen spider diagram-like mapping design is readily adaptable to map not only a competency framework to a curriculum but also other curricular features such as pedagogical approaches and experiential placements.
The Changing Landscape of Capstone Experiences: Diverse Needs of Students and Institution Types

Caroline Ketcham, Anthony Weaver, Jillian Kinzie

Capstone experiences are a high impact practice that many institutions identify as ‘transformational’ experiences for their students. There is currently very little research on what constitutes a high-quality capstone experience. Particularly, what the various types of capstones experiences are and whether students from a variety of diverse backgrounds receive the transformational outcomes. This poster will highlight the 1st year outcomes of a multi-year, multi-institutional model of research on capstone experiences. Leaders guide participants through 3 years of team-oriented deep dive questions related to capstone experiences. Of primary interest is addressing how the landscape of capstone experiences is changing as our student and institutional needs continue to increase. Both the diversity of students entering as well as the diversity of educational goals call on institutional leaders to better define access and success. This process includes 4-5 team projects with 5-6 faculty members from diverse disciplines, institutions, and geographic locations. Participants meet for a week each summer for 3 consecutive summers to plan research questions, analyze data and disseminate results. While each team works on more targeted questions, the seminar leaders are focused on the big picture, larger landscape questions and outcomes. The questions of our teams are around contemporary capstones; faculty development for high qualities capstone experiences; understanding how to address a diverse group of students and student needs; and identifying differences in curricular and co-curricular goals and outcomes. The combination of these deep dive questions allow seminar leaders to address the broader question of how to both develop and assess high quality capstone experiences with transformative learning goals and outcomes.

Promoting a Culture of Learning through a Learning Philosophy Assignment: First-Year Biology

Kelly Keus, Neil Haave

Many students inhabit a learning culture in which the dominant study strategy is to memorize-regurgitate-purge which leads to superficial learning (Brown, Roediger, & McDaniel, 2014). In order to promote deep learning that connects to students' life goals, we developed a learning philosophy (LP) assignment which promotes students' metacognition of their learning. Metacognition is known to promote student learning outcomes (Coutinho, 2007; Girash, 2014; Tanner, 2012). Our study was designed to determine whether our LP assignment promoted students' specific learning outcomes (i.e., exam performance) and whether student construction of their LP promoted their general learning outcomes (i.e., intellectual development) as indicated by their cognitive complexity. Specific learning outcomes were determined by comparing the difference between students' performance on their final and midterm exams using a one-tailed t-test between student cohorts (+/- LP). General learning outcomes were assessed using the Learning Environment Preferences (LEP) Survey (Moore, 1989) which returns a cognitive complexity index indicating their level of intellectual development on the Perry Scheme. Between the two exams and the two LEP surveys students were given feedback on their developing learning philosophy which addressed how, what, and why they learn. Feedback pushed students to consider how their learning was helping them to become who they wanted to be (e.g., a professional) and to consider the evidence that their current learning strategies were useful for attaining their goals and if, based on their evidence (e.g., exam performance), alternative study strategies should be considered. Our study was approved by our research ethics board and permitted us to use course and survey data with students’ consent. We found that our LP assignment could positively impact students’ general and specific learning outcomes, but this influence was dependent upon instructor and student year level. Qualitative analysis of students’ written LPs indicated that all students were engaged in metacognition of their learning but that senior students were better equipped to regulate their learning strategies.
Strategies for Preventing Burnout and Promoting Well-Being in the Workplace

Klodiana Kolomitrò, Natasha Kenny, Suzanne Le-May Sheffield

The roles of educational developers have been redefined, reimagined, and repurposed. Beach et al. (2016) have witnessed, “mounting evidence that faculty development has become a more essential support for institutional strategic initiatives” (p. 1). Pressures are high on teaching and learning centres to do more with less as educational developers are being called upon to address institutional priorities and metrics of success and are increasingly functioning as organizational change agents. This paradigm shift has positioned developers with a unique role of becoming predictive in their work by anticipating and effecting institutional changes and new directions. At the same time, if educational developers are to support, lead, manage and participate in change initiatives, then they need to start paying more attention to how they take care of themselves and prevent burnout. Maslach and Leiter (2000) describe burnout as “the index of dislocation between what people are and what they have to do” and further add that “individual employees become the ‘shock absorbers’ for organizational strains”. In The Slow Professor (2016), Maggie Berg and Barbara Seeber concerned about the frantic pace of contemporary life call for academics to adopt principles of the “slow food” movement in order to alleviate stress and prevent burnout. At the same time, Stacy Grooters delivered a session at the Professional Organization Network Conference in October 2017 on Exploring the Possibilities of "Slow" Educational Development.

We developed and administered a survey to better understand the concept of burnout and workplace well-being (Hyett and Parker, 2015) amongst educational developers, in order to suggest strategies for creating flourishing workplace environments. At this conference, we aim to engage our community through a poster session and use a collaborative process to capture participants’ feedback on the research results and strategies for supporting workplace well-being amongst educational developers. This research connects to the ISSOTL18 conference theme—A culture of learners. To cultivate and support a culture of learners, we must nurture not only our intellectual being but also emotional, spiritual and mental being. Only by encouraging wellness, buoyancy, and optimism can we develop a resilient, strong, and healthy community of scholars. Our hope is that the results of this project will benefit not only educational developers but also the wider community in adapting strategies that encourage a flourishing work environment and support educator well-being.

Results of Objective Structured Clinical Examinations (OSCEs) for Assessment of Clinical Competence

Nancy Krusen, Debra Rollins

The presentation reports outcomes of a first-trial objective structured clinical examination (OSCE) used to assess clinical competence. OSCEs are brief, multiple stations assessing a variety of clinical practice skills. The presentation analyzes the educational value of OSCE as a performance-based tool. The presentation supports a culture of learning, assuring skill prior to clinical practice placement. We describe task-specific checklist and global scores, descriptive statistics for seventeen OSCE stations, descriptive statistics for learner performance, phenomenological analysis of learner and rater feedback, and plans for additional research. Through formal presentation, small group discussion, and large group sharing, learners will be able to differentiate skill-specific and overall rating scales, deliberate reliability and validity of OSCE use, and seek additional resources for OSCE implementation.

Harden and Gleeson (1975) first outlined OSCEs for use in medical school assessment to support traditional didactic and clinical examinations. OSCEs are used frequently across health professions to demonstrate competence, conduct program evaluation, and indicate compliance with educational
Standards. We founded the OSCE in transformative learning (Mezirow, 1981), through which students transform old knowledge by reflecting on new experiences, and in situated learning (Lave & Wenger, 1991), through which faculty design the just-right challenge at the just-right time.

Faculty from a School of Occupational Therapy unanimously identified the need for a performance-based measure of clinical competence (other than traditional didactic or clinical examination) prior to clinical placement. Faculty members identified a preference for the measure to be formative for student learning and summative for program evaluation. (Development of the OSCE is reported elsewhere.) A cohort of students (n=40) each completed a rotation of seventeen OSCE stations in competence areas matching those of the national Fieldwork Performance Evaluation. The OSCE presentation supports a culture of learning across a curriculum with long-term impact assuring quality for the public.

Authors will present quantitative analysis of learner performance comparing item-specific task checklist with global scores for each OSCE station, analysis of a self-completed student survey data, and analysis of station-specific difficulty level data. Authors will also present qualitative textual analysis of learner and rater feedback. To inform educational practice, authors recommend and plan further research on the psychometric properties of the OSCE as a measure of competence including rater reliability; correlation with other measures of clinical competence; correlation of performance with curricular courses; the predictive value for clinical performance; and the relationship between OSCE performance, classroom performance, and clinical training performance.

Professional Development in Teaching and Learning: Interpreting Experiences and Responding to Needs

Laura Lee, Catherine O’ Mahony

This research critically evaluates survey data gathered from staff who support student learning in Higher Education, on the topic of professional development (PD) in Teaching and Learning (T&L). As coordinators of PD activities for staff and postgraduate students, we are interested in exploring the following research questions:

- To what extent do staff who support student learning engage in PD opportunities, including activities related to the scholarship of teaching and learning (SoTL)?
- What are the interests and needs of staff in relation to PD in T&L?
- Do factors such as employment status, position, and discipline influence the types of PD activities in T&L that staff engage in and have interest in, including activities specifically related to SoTL?
- Are there barriers to participation in PD opportunities?

Underpinning this research is the recognition that the demands of teaching in higher education (HE) are numerous, and research has indicated that many teachers are unprepared for same (European Science Foundation, 2011). Teaching staff play a central role in the learning experience of students, and it is vital that they are equipped to perform in a complex learning culture. The European University Association’s recent position paper acknowledges that ‘enhancing L&T requires promoting staff development’, while the European Principles for the Enhancement of Learning and Teaching (2018) speak to the significance of recognising teaching as ‘a professional and skilled activity’. We see teaching, then, as a profession in need of specialised support which is both dynamic and continuous.

Recent research (e.g. Slowey, Kozina, & Tan, 2014; Teichler & Cummings, 2015) has highlighted the keen interest of academic staff in a wide range of academic development topics and in SoTL. The current study aims to build on this work by exploring the current T&L landscape of our staff, as per
the research questions outlined above. Qualitative data, derived from open-ended comments, will provide rich insight into the voiced opinions of staff regarding the methods and actions which would best support their teaching. Our ultimate aim is for these data to guide the professional development activities in T&L offered to our staff. More broadly, these results will allow us to situate this review within a broader international conversation about how to enhance the quality of teaching in Higher Education.

**Lecturers’ Curational Skills in Higher Education Curriculum Development: A Research Design**

*Rose Leighton, Didi Griffioen*

In today’s era of content abundance, education has to deal with changed practices for the dissemination of knowledge. Many digital resources are available, and they have the potential to take the place of textbooks. ‘The role of the classic textbook as the key, immutable reference point for any class subject, is rapidly fading’, says Good (2016). Educational publishers like Pearson see a decline in textbook use (Sweney, 2017), and a study at a Dutch university of applied sciences (Leighton, 2015) indicates that lecturers in higher education move away from textbooks towards a variety of materials, including powerpoint slides, websites, and videos. Baron & Zablot (2015) complement this, saying ‘teachers now have the possibility to create and modify resources’.

This development carries the risk that the structure, continuity and coherence textbooks are supposed to provide (Littlejohn, 2011) disappear. One could argue that when structure and coherence disappear from learning materials, the quality of education is at risk. To make the most of (digital) materials that teachers select, they must be organized well (Deschaine & Sharma, 2015).

In order to do that, lecturers will have to act as skilled curators when selecting and structuring learning materials. Central in the concept of curation is that it goes beyond selection: providing coherence and context is what sets out curation from mere selection (Bhaskar, 2016). Considered from the perspective of teaching, curating means selecting and structuring learning content for students, while also providing them with context and coherence.

The notion of lecturers as curators has been discussed by Siemens (2008), who describes the changing roles of lecturers and identifies ‘curational educators’ as those who ‘acknowledge the autonomy of learners, yet understand the frustration of exploring unknown territories without a map’. So far, the literature mainly focusses on providing students with curational skills, since these are important 21st century and media literacy skills (e.g. Jenkins et al., 2009; Potter, 2012). Little empirical research has been done when it comes to curational roles of lecturers.

This proposed poster provides a mixed-methods research design for a PhD study. A survey study (expected N=500) identifies lecturers’ current practices. This is followed by interviews with 25 lecturers, exploring their viewpoints on curation in education. In a third study, guidelines for curation in a context of higher professional education are designed. With this proposed poster, the authors aim to invite questions, feedback and discussion on the research design.

**Learning to Argue Like a Scientist: A Systematic Literature Review on Socio-Scientific Argumentation**

*Olga Loannidou, Andreas Hetmanek, Frank Fischer, Tina Seidel*

As the world is faced with critical issues such as climate change, or the use of vaccines, the call for teaching scientific literacy to pre-service and in-service teachers and students is more prominent
than ever. Socio-scientific argumentation (SSA) has been introduced to science education as an attempt to promote civic and scientific literacy (Sadler, 2007). Although teachers embraced the concept as beneficial for students’ learning, they report difficulties in teaching in SSA contexts, because they often do not feel confident and well-prepared to address the complexity of these issues (Juntunen & Aksela, 2014). This problem is amplified by the fact that teachers are expected to teach SSA without having a clear definition and a way to reliably measure it. In order to address this issue, this study investigates the way that researchers define and measure socio-scientific argumentation. A systematic literature review was conducted and a mixed-methods approach was followed. Data was gathered from two electronic databases (Web of Science and EBSCO); from 572 articles retrieved, 75 articles were included in the full-text analysis phase. In the qualitative analysis, a coding scheme was constructed based on content analysis and the articles were analyzed with MAXQDA software. Among other findings, our quantitative analysis revealed that 77% of the articles conceptually connected SSA with scientific literacy, while 59% linked it with civic competencies. Furthermore, most of the studies between 2014 and 2017 presented SSA as issue-specific, while Toulmin Argumentation Pattern (TAP) was the measurement mostly used. As a next step, a pilot study will be conducted in which pre-service teachers will validate the emerged definition and measurement.

How Can Use of a Shared Collaborative Whiteboard Support Discussions in Lectures?

Kristine Ludvigsen

This poster presents an intervention study of how we used Flinga, a shared online whiteboard (http://www.nordtouch.fi/) to support peer discussions in lectures. The overarching purpose of the study was to explore affordances of using Flinga to open dialogical spaces (Wegerif, 2013) in the context of lectures. When describing dialogical spaces, terms such as opening - how the dialogical space is enabled, widening - how many possible different voices and perspectives it allows for, and deepening - the extent of critical reflections on the perspectives it provides for, are crucial dimensions.

The research question that guides across two cases was: “What kind of affordances are there in collaborative whiteboard to support the dimensions of the opening, widening, and deepening dialogical spaces in lectures? We used a design-based research approach that included audio-recordings of peer-discussions, material produced in lectures, focus group interviews with students and course evaluation from teachers. We argue that opening dialogical spaces in lecture provides students with rich possibilities to reflect on concepts and to develop their arguments, and thus to get feedback on their understanding of course content. For the lecturers, the critical point was to deepen the space and to orchestrate a dialogue with students. We found the idea of a dialogical space to be fruitful for planning and assessing discussion-based activities in the context of the lecture. In the poster session, the participants will be invited to discuss opportunities and constrain of using such tools to support discussions.

A Culture Change: Using the Five-Stage Model of Change to Transition the Campus LMS

Sara Marcketti, Ann Marie VanDerZanden

In fall 2016, it was decided that our University’s 10 year contract with the Learning Management System (LMS) would come to an end and a new LMS would be adopted. The University decided upon a fast track adoption of the new LMS: Canvas, with the product on campus July 2017, a group of 300 early adopter instructors utilizing it in fall 2017, and the entirety of campus adopting the system in Spring 2018.
Our midwestern university's Center for Excellence in Learning and Teaching (CELT) was placed in charge of the implementation. The poster will provide detailed methods of how we smoothly transitioned the campus. The framework guiding many of our decisions was that of the five-stage model of change (Prochaska & Norcross, 2001).

While most of the university was not considering adopting a new LMS (pre-contemplation), CELT worked with the Associate Deans of each of the seven colleges to appoint a College Coordinator. The coordinators worked on sub-committees including vendor finalist evaluation committee and the technical migration committee, as well as serving as an important outlet for communicating to CELT as well as their college.

Once Canvas was selected as the LMS (contemplation), the decision was made to allow for as many early adopters as possible to teach in the LMS during fall semester 2017. While the Canvas community typically suggests 10 to 15 individuals as early adopters, we allowed 300 instructors to teach 17,000 students. These early adopters provided knowledge and positive word of mouth regarding the new LMS. Each was recognized at the end of fall semester with a “Certificate of Merit” and informally became a mentor within their programs and departments.

To prepare campus for the transition (preparation), CELT offered 30 personalized departmental workshops; taught 65 university-wide workshops; and provided over 400 hours of “open labs” and individual consultations. We developed and delivered an exhaustive communication plan. To further excite campus about the change, we posted a Countdown Clock to the existing LMS interface.

In spring semester 2018, CELT continued to offer open labs, individual consultations, and training workshops (action). Informed by a campus wide survey, CELT designed an intensive summer workshop focused on course design/redesign. To celebrate the innovative work around the new LMS (maintenance), CELT coordinated an on-campus Canvas conference for fall semester 2018 and designed more complex workshop sessions.

**SoTL Engagement as Compared to Total Outputs for Promotion and Tenure**

*Sara Marcketti, Ann Marie VanDerZanden, Joshua Mitchell*

Much of the research published on the scholarship of teaching and learning (SoTL) has focused on one of the primary purposes of strengthening faculty teaching practices and improving student learning (Condone, Iverson, Manduca, Rutz, & Willett, 2016). While our Midwestern University values SoTL as indicated in its inclusion in the Faculty Handbook which governs faculty life, anecdotally, one often hears that those who conduct SoTL must do more to have their work “counted” towards promotion and tenure decisions. We sought to understand the association between engagement in SoTL activities and number of total outputs as counted in the promotion and tenure process.

Working with the Office of the Senior Vice President and Provost, a team evaluated the CVs of each faculty member who was successfully promoted to associate professor or professor between 2010 to 2017. Initially, data retrieved from each CV were entered into Excel and included the total number of peer-reviewed publications, academic presentations, external and internal grants awarded, and all other publications (e.g., extension pamphlets, technical documents), regardless of its classification as SoTL or non-SoTL. Then, the team documented and counted every occurrence of SoTL within these same categories. Data were then de-identified and analyzed for this study using SPSS (Version 24).

The sample consisted of data collected between 2010 and 2017 from the promotion and tenure curriculum vitae (CV) of 431 faculty members seeking promotion and tenure to the ranks of associate professor (57%, n = 247) and professor (43%, n = 184). Forty-seven percent of the faculty members
included in the study were engaged in SoTL as part of their P&T activities. We used a one-way ANOVA to compare statistical differences based on SoTL engagement. The results indicated that faculty who do not engage in SoTL activities published more journal articles, while faculty who engaged in SoTL activities received more grants. However, no statistical or substantive differences were found in the total number of other publications or presentations. One possible explanation for the overall lower number publications despite the higher number of grants among faculty members who engage in SoTL may be the greater opportunities to engage in internal grants related to teaching and learning. Centers for Teaching and Learning could consider the importance of working with individuals who receive SoTL related grants to assist them with their data collection and analysis in order to effectively publish and disseminate their findings.

Impact of Interdisciplinary Communities of Teachers on Enhancing the Scholarship of Teaching and Learning

Irma Meijerman

An important aspect of making SoTL an integral part of a learning culture within universities is a sustainable change owned by the teachers. Engaging teachers in SoTL, making SoTL an integral part of their approach to teaching, often means that they have to move beyond disciplinary research boundaries and get familiar with more social science research methods. SoTL- communities, where teachers collaborate with colleagues, and peer review each other’s projects, can be a driving force to support teachers in getting familiar with the approaches and methods of SoTL. Within Utrecht University, until now, very few teachers are involved in SoTL, and no institutional support or teacher development programs involving SoTL are offered. To engage teachers in SoTL in this exploratory pilot, two interdisciplinary communities of practitioners were formed. In the first community teachers from the whole university could get involved on a voluntary basis. The second community consisted of teachers from different disciplines of the Faculty of Science and was part of a wider project on teaching innovations. Teachers met on a monthly basis to get instruction about methods of SoTL, and the opportunity to exchange experiences with their peers. The participants received a questionnaire at the beginning and the end of their SoTL-project (about 1.5 years) with questions about their views, behaviour and attitude towards SoTL. In addition, several participants were interviewed at the end of their SoTL-projects. Based on the first explorative results conclusions can be drawn for future SoTL-communities and teacher development activities that are related to many of the current SoTL-discussions. The participants enjoyed being part of the community. Most of them managed to make scholarly changes in their teaching, and showed changes in their views on teaching and learning. However, only few of them managed to share or publish their results. Participants expressed a general feeling that they had to do it ‘all alone’ in their own time, making them feel extra workload. In addition, they felt that the time spend on the project was not rewarded, and appreciated, within their own department. Especially in the voluntary group this lead to a drop out of more than half of the participants. The first experiences of this pilot emphasise the importance of support structures, especially the support of the institute and the appreciation of teachers engaged in SoTL. Giving dedicated time for SoTL and valuing their contribution to teaching and learning seems the most important.
ComPAIR: an Online Adaptive Comparative Judgement Tool for Peer Feedback and Assessment

Firas Moosvi, Hendrik Blok, Tiffany Potter, James Charbonneau, Letitia Englund, Andrew Gardener, Pan Luo, Ido Roll

Giving and receiving feedback has been identified as a key focus in redesigning assessments for long term learning (Boud, 2006) as peer feedback has been shown to improve motivation (White, 1998) and provide learning benefits (Jhangiani, 2016). However, challenges in implementation have prevented its widespread use. Leveraging the process of comparative judgement has the potential to facilitate peer feedback and assessment at scale. Performing an active comparative process facilitates students’ future learning by enabling them to go beyond identifying superficial features of a phenomenon (Bransford, 1999; Schwartz, 1998). Developing the capacity in students to be an effective ‘assessor of learning’ prepares students for lifelong learning by preparing them to make complex judgements about their own work, as well as that of their peers (Boud, 2006).

ComPAIR is an adaptive comparative judgement (ACJ)-based online learning tool that facilitates peer feedback at scale (Potter, 2017) and has recently been proposed as reliable in assessing complex items (Pollitt, 2012). Learners evaluate, comment upon, and rank pairs of submissions in many classroom contexts across disciplines (English, Mathematics, Integrated Sciences, and Physics courses for this study). In previous work, particularly in the English and Physics cohorts, students found the tool intuitive to use and reported very strong perceptions of improved ability and confidence in their ability to complete a similar task in future or to begin a more complex related task. Students perceive ComPAIR as an effective tool for teaching and learning (Potter, 2017). Others have shown that feedback from multiple peers led to more significant improvements in revised papers than feedback provided by experts (Cho, 2007).

In addition to the cognitive benefits of assessing peer assignments and providing feedback, ComPAIR may reduce marking load and increase consistency (Pollitt, 2012). English (ENGL110; 150 students) and Integrated Sciences (ISCI360; 44 students) were used to evaluate ComPAIR for grading. Each student in ENGL110 judged three pairs of submissions on one criterion and ISCI360 students assessed six pairs on three criteria. Expert judgements on the same submissions were also made in ComPAIR to evaluate the reliability of the tool. The assignments were also manually graded by two teaching assistants. Simulation data suggest that the effect of ‘misjudgements’ has a large impact tool reliability, especially with a limited amount of judgements. In this presentation we will share results of our study using ComPAIR as a tool for assessment, and provide evidence-based practices for using ComPAIR in the classroom.

Meaningful Academic Integrity Conversations: Frameworks for Teaching and Learning

Leanne Morrow, Roxanne Ross, Asher Ghaffar

Finding effective teaching practices for engaging students in meaningful dialogue on academic integrity (AI) is a continual challenge for academic institutions. This poster presentation highlights a recent SoTL collaboration between the Student Success Centre, the Library and the Faculty of Arts at the University of Calgary looking to explore optimal ways to create meaningful learning for students engaging with the topic of AI. Using a traditional, writing skills-based instruction framework from Babcock and Thonus, (2012) and contrasting that with a framework focusing on scenario based, moral decision-making from Bandura (2002) the goal in this SoTL project was to explore the ways in which these two distinct frameworks helped students gain a deeper understanding of AI. We also explored whether certain aspects of each framework could positively contribute to students’ behavioural, affective and cognitive engagement (Chapman, 2003). This project used a mixed methods approach that included pre and post- surveys, classroom observations and student focus
groups. Drawing upon practice and a review of AI literature, the team collaboratively designed two modules, one for each framework, using course creation software Articulate 360 for students to review and test. The team also developed corresponding discussion activities for working with students in the classroom. The skills module highlighted writing as a social practice, presenting Bruffee’s (1984) notion of the “academic conversation”. In-class facilitation activities integrated course readings and were designed to extend understanding of common knowledge, critical reading and paraphrasing. The second module framed AI with an ethical lens, as standards of practice that can at times challenge decision-making. This module highlighted common scenarios that pose potential AI conflicts developed from in-house current practice and the literature on student perceptions of AI. In addition to Bandura’s theory of moral disengagement (1990), a decision-making framework adapted from Morey and Dansereau (2010) introduced students to a 3-step process for ethical decision-making. In-class activities were developed to facilitate the discussion and analysis of similar scenarios, decision-making and moral disengagement processes. We will present some of our preliminary findings and we will share some of our most valuable outcomes to date which includes our increased understanding of the complexities involved in the teaching and learning of AI. This poster will also showcase effective collaborations with faculty to teach AI issues like plagiarism and collusion outside the classroom and through relationships with the Library and Student Services.

**Pivot Points: Maximizing the Learning Potential of a Professional Graduate Program**

*Phillip M Motley, Derek Lackaff*

This research poster will share how we have attempted to develop an inclusive learning culture in a diverse professional graduate program in interactive media. We will draw on student interviews and programmatic evaluation data to explore (1) the role of the advising process; (2) the design of curricular and co-curricular opportunities; and (3) the messaging provided to students prior to and following admission. We reflect on facilitating meaningful learning experiences that allow students to pivot between academic and professional learning objectives, and demonstrate how best practices are not ad hoc, but programmatically designed and implemented by all faculty.

**Visualizing the History of a Learning Culture**

*Victoria Myhand*

This project is a comprehensive history of the Scholarship of Teaching and Learning within the United States. I have been working with documents and visiting with noteworthy scholars who were involved in the foundation of the Scholarship of Teaching and Learning. We have been discussing memorable and pivotal moments during the foundation and establishment of SOTL over time, as well as specific instances which exemplify the learning culture SOTL strives to generate. I believe my project is quite serendipitous with this year’s conference theme. In discussing Toward a Learning Culture, it seems necessary to examine how the Scholarship of Teaching and Learning sprouted, and how the culture of learning and learners blossomed.

My research process involves conducting interviews with academics who were heavily involved in the SOTL implementation process. ISSOTL in History has been a fruitful resource in assisting me with contacting historians. During the 2018-2019 academic year I will be attending the University of Kent in Canterbury, England. I plan to interview important SOTL authors during my time abroad. A number of questions to engage my interviewees during our visits will reveal what key Scholarship pioneers believe led to this need for reform in how teachers teach and students learn. For this project focuses not only on what happened and when, but why.
This project is a perfect example of what the inclusive learning culture of connecting student learning to life and work experiences beyond the classroom looks like. I am an undergraduate student who relinquished instruction of a syllabus to take on a research project. However, this project is something I never could have achieved without previous experience in the classroom. My work here reflects my classroom experiences teaching me well enough so that I could take what I have learned throughout my university experience and master a project independently. In other words, this project is proof that an inclusive learning culture works.

This project focuses on the Scholarship’s beginnings in the United States, which may be very informative for Society members both foreign and domestic. My position as an undergraduate student of history makes me uniquely qualified to study and speak on this subject. Who better to discuss the present culture of learning than a pupil who is currently experiencing it? Where better to discuss how our learning culture has developed and can improve in the future than the environment of this conference?

**Computational Practices in Student Learning of Earth Systems**

*Tor Einar Møller, Laura De Luca Peña, Kristian A. Haaga, Henriette Linge, Bjarte Hannisdal*

Student learning of dynamical interactions in complex Earth systems is a major challenge in geoscience education (Assaraf & Orion, 2005, J. Res. Sci. Teach. 42; Scherer et al., 2017, J. Geosci. Educ. 65). Students exposed to traditional teaching have been found to maintain their default perception of causal relationships as linear chains of events and to struggle with dynamical systems thinking (Raia, 2008, J. Geosci. Educ. 56).

The development of systems thinking goes hand-in-hand with computational thinking and practices (Weintrop et al. 2016, J. Sci. Educ. Technol. 25). In 2017, in a course offered to 3rd semester students in geology with no prior computational experience, we introduced a computational activity involving Daisyworld - a virtual planet with a simple interacting climate and biosphere (Watson & Lovelock, 1983, Tellus B 35). This simple analogue invites students to carefully define the components and processes in a system, and then couple them together to discover and explore nonlinear behavior, feedbacks, and thresholds, which are key properties of natural systems.

Students worked in groups using R in a three-stage activity, where each stage had overlapping learning outcomes intended to build a coherent learning progression. Each student group presented their findings and performed a written, critical self-reflection and evaluation. We found that the lack of a common language for systems and computational thinking reduced student engagement in the learning process. Faced with well-structured "textbook" problems, students were still uncomfortable doing repeated rounds of trial and error. Moreover, students did not perceive any real-world implications of the imaginary Daisyworld scenario, suggesting that greater authenticity would enhance their learning motivation.

Learning from this experience, we will test new learning activities for a revamped course in 2019. We replace Daisyworld with the global carbon cycle, a real-world system of vital importance. Leaning on the 'problem-solving in practice' framework for ill-structured problems (Holder et al., 2017, J. Geosci. Educ. 65), we hypothesise that computational practices improve student learning of complex dynamical systems in geoscience. To test our hypothesis, we will assign students to an experimental group that uses computational practices, and a control group that reads the same instructional material, and use pre- and post-instruction quizzes to assess their progress from novice towards expert-like thinking.
We solicit input from ISSoTL18 participants on our proposed experiment, specifically on (1) setting up scaffolding to foster and sustain student motivation, and (2) integrated assessment and evaluation of computational practices.

**Understanding and Fostering SoTL Cultures across a Nation**

*Genevieve Newton, Chris Ostrowski, Monica Sanago, Janice Miller-Young*

SoTL Canada is a constituency of the Society for Teaching and Learning in Higher Education and we are part of the SoTL Canada executive team, elected by its membership. Formed in 2012, SoTL Canada strives to provide “a targeted opportunity for SoTL scholars to form a community to share findings and challenges, engage in opportunities for broader dissemination of SoTL work, and consider ways to catalyze SoTL initiatives at the institutional, regional, national, and international levels.” Past projects include pre-conference workshops, a special issue of New Directions in Teaching and Learning about the history and impact of SoTL across Canada, and collaborative writing groups which resulted in a special issue of the Canadian Journal for the Scholarship of Teaching and Learning. In a 2014 membership survey, SoTL Canada members expressed interest in writing support, peer mentoring, and methods workshops.

Before initiating a peer mentoring program, we wanted to discover who is engaged in SoTL and what SoTL activities are taking place across Canada. An online survey was distributed to SoTL Canada members and liaisons at Canadian institutions, who invited colleagues engaged in SoTL (i.e., snowball sampling). In addition to demographic and institutional characteristics, participants were asked about the type of SoTL work they are involved in; if they have collaborated with students; the integration of SoTL into job descriptions at their institutions; the level and type of funding they received for SoTL; and their dissemination methods of SoTL.

Across Canada, 257 faculty and staff from higher education institutions participated in this study. Interestingly, nearly half of the participants indicated SoTL was part of their job description or expectations, suggesting wider recognition of SoTL as a valuable use of institutional time and resources. At the same time, almost 40% of participants did not receive any funding to do SoTL, suggesting misalignment between available funding infrastructure and positive institutional sentiment for SoTL (Felten, Gardner, Schroeder, Lambert, & Barefoot, 2016). In addition to these, we will discuss insights and details from the survey responses to map the terrain of how SoTL is being taken up in Canada.

Together with the audience, we will discuss how similar surveys might be conducted elsewhere, and how such knowledge could be used to yield positive outcomes such as advocating for support, facilitating collaborations, and leveraging expertise.

**Paddles and Pedagogy: Journeying Towards a Learning Culture**

*Kevin Nolan, Catharine White*

Come hear about Coast Mountain College’s efforts to move towards a learning culture with a unique experiential professional development endeavor. Called ‘Paddles and Pedagogy’, 10 instructors and 1 faculty developer embarked on a six day sea kayak trip during which a course in experiential place-based learning was offered covering such topics as defining experiential place-based learning, why it matters, and how to design, deliver and evaluate in accordance to experiential principles. The journey was a transformative learning adventure for all involved. That this experience influenced
change in teaching and connection to one another (the time travelling in the wilderness together created tight bonds with one another - we alternatively called ‘paddles and pedagogy’ ‘pooping with peers’ - come hear what happens when distance between colleagues is removed).

Members of the expedition will share narratives around their growth. This poster will also explore key principles that contributed to the success of this learning adventure, including immersion, adventure, and strange lands experience, all implementable in other forms of teaching and learning as well as professional development. The outcomes of this professional development include inspiration, connections and appreciation. Come hear about all aspects of the planning, funding and the lived experience of experiential professional development and consider how it might be manifested in your own context.

**Learning Outcome Transformation in Course Redesigns**

*Ludmila Nunes, Erica Lott*

How does a course redesign program impact development of a learning culture? And how can this impact be measured? We suggest that changes in learning outcomes (LO) proposed by faculty who went through an institution-wide course redesign program are: 1) an indicator of the program success; and 2) a measure of learning culture.

As Barr and Tagg (1995) conceptualized, the “shift from teaching to learning” implies that the measure of success in a learning institution shifts from a measure of quantity and quality of resources to a measure of quality of LOs. Thus, the way faculty conceptualize the LOs for their courses should reflect this change of focus towards a learning culture. Bloom’s taxonomy (Bloom et al., 1956) can be used to categorize LOs into six categories that vary in terms of cognitive processes and go from concrete and simple to abstract and complex knowledge. Despite the need for the simplest categories (e.g., remember and understand) to achieve the most complex ones (e.g., create and evaluate), in a culture focused on learning, students should be expected to achieve the complex categories that require critical thinking instead of simple root memorization.

Here we compare how faculty change LOs as they go through a semester-long faculty development program focused on autonomy-supportive course transformations (see SDT, Ryan & Deci, 2000). This program has reached over 250 instructors since 2011 and thus its effects might indicate changes in the general learning culture of the university. Initial LOs (before the program) and revised LOs (after the program) were quantified and categorized in terms of their Bloom’s dimension. The average number of LOs per course decreased from 5.37 to 3.75 and the level of Bloom’s dimension significantly increased (d = 0.91, [0.66, 1.16]). These results suggest that the program was successful in increasing the quality of LOs. We will discuss the implications for learning culture in the university. We will also present a case study, where student performance on the different LOs was measured. This case study explores student learning as LOs are refined and become more complex and can hint at an increased academic rigor.

**Technology and Teaching Methods in Geoscience Education - Results from a Worldwide Survey**

*Bjørn Nyberg, Henk Keers*

Two important topics in university education are the use of technology and the use of teaching methods (specifically active learning methodologies versus more traditional teaching methods). These topics have received considerable attention from both educators and policy makers. However,
relatively little is known about these topics, and how they are related. In particular, it is useful to know which technologies are considered important, whether there is a preferred way to teach about and with certain technologies, whether there is any correlation with other factors (such as class size, age of teacher, geographic location, topic, etc.). Moreover, these issues are likely to be dependent on the field/topic. In order to find out about these and related issues, we conducted a worldwide survey on technology and teaching methods among university geoscience educators. The survey consisted of 22 questions and contained three different categories exploring the type and demographics of the course, the use of technology in teaching and the type of teaching used in the course.

Responses were received from 71 people from 65 universities in 23 countries most of whom were relatively experienced (38 with >10 years of teaching experience). The topics (e.g. geophysics, sedimentology, geochemistry), class sizes (from less than 5 to over 70), teaching location (e.g. classroom, field, laboratory) and teaching method (e.g. lecturers, practicals, active learning) varied considerably. The main results suggest that traditional lecturing methods are still important (60%) in a traditional classroom setting (75%), also among the younger generation of geoscience teachers. Most teachers (65%) consider the use of technology to be an essential teaching component but typically rely on traditional presentation aids (44%). However, among the youngest teachers (less than 30 years old) both the use of active learning methods as well as the use of social media technology, to enhance student learning, is higher than among the other teachers. In the next five years, a majority of teachers foresee an increase in the use of technology as an aid in teaching the course (77%) and foresee an increase in teaching the use of technology in the course curriculum (60%). The results highlight that teachers in the geosciences, which is typically viewed as a qualitative, and subjective discipline, see technology as an increasingly important part of the course curriculum, and that there is a correlation with active learning methods, especially in the younger generation.

**Advancing Culture of Learners: Forcefully Engaging Into Creativity Learning**

*Tõnu Oja*

This research is about how to better facilitate student learning in subjects assuming creative attitude (modelling, programming, photogrammetry).

**Questions and Rationale**

Courses aim to help students to combine knowledge about programming and skills in different GIS software use, logical thinking and model design, and to encourage them towards ability to create individualized GIS solutions. For better learning in the subjects students need support to work on their own; this can be developed by better engagement of students into specification and realization of learning process. Jang et al. (2016) found that students tend towards a semester-long trajectory of rising engagement when they perceive teachers to be autonomy supportive. Chang et al. (2017) showed positive influence of collaborative problem solving. Students have brought out paying attention, effort and active participation as rational indicators of engagement but also emotional indicators as interest, fun and excitement are valued high (Fredericks et al 2016). Gulland et al. (2011) showed that combined e-study and face-to-face learning in classroom have positive impact on results.

**Methods and Framework**

Goals of the experiment were to raise study motivation and satisfaction with the obtained skills by improvement of communication with students, combining individual work, e-learning in Moodle and classroom face-to-face exercises still supporting their autonomy (creativity). Using flipped classroom helps students to focus attention on questions discussed.
The research focused on how modifications in the way of teaching (facilitating learning) influence advancement of students and their satisfaction with the results.

As research method logging of the process in Moodle and written feedbacks from students was used. Also, practical solutions offered by students were analysed. During the course mind maps were made by teacher to record reactions, decisions and impression about the process. Questionnaires were used to get feedback from students.

Outcome
Students were happy. They appreciated the results (they had learned something new, even if they had to learn it by themselves but the course provided an additional stimulator to “find time”. The use of different forms of study (e-learning combined with classroom seminars and individual work) was appreciated. Students found it worked well for them. Also, learning from fellow students was appreciated. More frequent step-by-step feedback, division of tasks into clear smaller subtasks improved the results.

Reflective critique.
The clear guides and frequent feedback support students learning, however, the suppressive impact of too predefined learning process on creativity remains a concern.

Use of a Mobile Application to Support Learning of Evidence-Based Practice in Higher Education

Nina R Olsen, Susanne G Johnson, Grete O Hole, Kristine B Titlestad, Ilona Heldal, Lillebeth Larun

Background: In this proposal, we address the challenges associated with the use of a mobile application to support learning of evidence-based practice (EBP) among students in health and social care education. Research show that students typically struggle to apply EBP in clinical settings. In partnership with students, we developed a mobile application (app), the EBPsteps, to better equip students to meet the expectations of practicing evidence-based. The app guides students through the five EBP steps (ask, search, appraise, integrate and evaluate), enables documentation of the process, and provides links to internet-based learning resource. Our aim was to explore user experience of the EBPsteps among bachelor students who have used the app during clinical education.

Methods: We conducted four focus group interviews in 2017 with students from social education (n=10), occupation therapy (n=3) and physiotherapy (n=2). Interviewing different participant-categories ensured comparative analysis and enabled us to exploit differences in perspectives and interactions. Interpretive description guided the data collection and analysis (Thorne, 2008).

Results: We found evidence of three integrative themes associated with use of the mobile application: “Triggers for EBP”, “EBP competence - a prerequisite”, and “design matters”. Students experienced that they used the “EBPsteps” app when exposed to triggers for EBP, such as information need during clinical placement, supervisor wanting them to find research, and demands from teachers. Several students felt that EBP competence was a prerequisite for using the app. In particularly, lack of searching skills for research evidence was identified a barrier. Links to learning resources in the app were helpful when competence was lacking. Students preferred links in the app to books about EBP. When lacking EBP competence, the design of the app was helpful as the design structured the process of the EBP steps and supported the students to work evidence based. Students experienced the interface as intuitive, as the app gave a good overview of the EBP process, facilitated the EBP steps and enabled them to store information in one place. Not all students realised the potential of the app, for example, opportunities to use the app on phone and computer;
or functions as email or glossary for research terms. Our findings indicate a need for studying user experiences of the app further, and there is a need for developing an instruction video.

Conclusions: The EBPsteps is a promising tool for supporting the learning of EBP within health- and social care programs.

An Academic Developer’s Insights on Designing Fully Online Professional Development Experiences

Charina Ong

The Centre for Development of Teaching and Learning (CDTL), the professional development arm of the National University of Singapore (NUS), exists to “advance cutting-edge, evidence-based, impactful teaching and learning practices in ways that support the educational vision of NUS”. Consistent with CDTL’s mission, this study investigates the potential of fully online professional development workshops to support engaging, meaningful professional development for academics, while accommodating their needs for convenience and flexibility – given the advances in learning technologies and platforms and latest research on effective online pedagogies.

This study will: (1) examine academics’ ratings and qualitative feedback of the existing “Developing e-Learning Resources Using Camtasia Studio” workshop; (2) redesign the workshop to a fully online version based on academics’ feedback of the existing face-to-face session and current research on fully online professional development; (3) examine academics’ ratings and feedback of the fully online “Developing e-Learning Resources Using Camtasia Studio” workshop; and (4) discuss implications for use in future online professional development offerings.

Academics’ feedback will be collected via a pre and post-survey using the COI survey instrument and an adapted COI survey instrument respectively. Results will discuss pre and post COI survey results, academics’ suggestions to further refine the online workshop, and fully online workshop feedback results compared to previous face-to-face workshop results.

The findings of this study may encourage other academic developers to explore alternative models and formats for conducting faculty professional development workshops and courses, as well as provide an opportunity to contribute to research on emerging best practices for fully online courses.

The research questions of this study are:

1. What key factor/s are important to academics in a fully online professional development workshop?

2. How can the online workshop (prototype) be further refined based on the academics’ feedback?

3. How can we apply insights from this study to future online professional development offerings?

Learning Code Using Tangible Aids: Making Code Engaging for All Learners

George Paravantes, Adam Thomas

Learning how to code can be challenging (Gomes & Mendes, 2007). Teaching code to students who are not interested in learning code can be even more challenging. Having students who are not engaged in a course topic or are only enrolled in a course as it is a requirement is something all post secondary instructors experience. I have been teaching code at a college in Toronto, Canada for over ten years and I have observed several consistent barriers to success that students face: a) they often
believe that learning to code is out of their reach; b) they intend to put in “just enough” effort to pass; and/or c) they are only enrolled because the course is a requirement.

Millennials are often disengaged with current pedagogies in postsecondary education, and consequently, overcoming barriers such as those described above is even more challenging (DiLullo, McGee, & Kriebel, 2011). Although educators may be hesitant to change their practices, adapting pedagogy to accommodate all learners does not have to mean lowering the quality of the learning experience; it can make the classroom more engaging, improve learning, and even make it more enjoyable for instructors.

With this poster, I will describe a SoTL research project that I have conducted on a series of innovative pedagogical approaches, aimed at addressing these barriers. Based on the idea that millennials prefer authentic problem-solving and projects based on real-life experiences (Oblinger, 2003), I have been integrating a series of tangible aids - board games, other STEM educational tools, Raspberry Pis, and Lego Mindstorms EV3 - to help ease students into the idea of learning code.

The tangible aids were integrated into six “Introduction to Coding” classes. Students completed pre- and post-semester surveys and participated in a series of focus groups. I will share the research findings that show that after integrating these tangible aids, students had an easier time recognizing the relationship between their code and its outcome, identifying errors, and developing solutions. I will also show evidence that students were less intimidated by the idea of coding, and showed greater levels of confidence when they were introduced to coding with playful, tangible aids (c.f. Kurebayashi et al., 2006).

Does Service Learning Increase Empathy in Introductory Psychology Students?

Jocelyn Paul, Elizabeth Bowering

Service Learning (SL) is a high impact educational practice in which students work on “real world” activities with a community partner (i.e., the service component) and then reflect on that experience (i.e., the learning component). The purpose of the current study was to evaluate the influence of a SL experience on the development of empathy in university students. Here, students registered in an Introductory Psychology course at a Canadian university engaged with international students new to Canada and reflected on how culture mediates human behavior. Specifically, we randomly assigned students to experiential or non-experiential (control) learning formats, with the groups otherwise treated equivalently. We hypothesized that participants (n = 16 females) who took part in five hours of structured, small group interaction with international students would demonstrate increased empathy on questionnaire measures, relative to similarly aged controls (n = total of 55 females).

When asked to reflect specifically on their SL experience, experiential participants reported significantly greater understanding of racial and cultural differences as well as greater support for the statement that “humans are more alike than different regardless of their culture”. Additionally, SL participants reported increased ability to imagine another’s situation and perceive their thoughts and feelings, as well as an increased desire to be kind and helpful to others (all p’s < .002) compared to the control respondents. As expected, SL participants did not report superior organizational, problem-solving, and/or communication skills compared to the control respondents (because the SL experience was not designed to facilitate development of these skills). Finally, as measured by standardized questionnaires, participants in the experiential condition did not express significantly higher levels of empathy compared to control participants.

Our findings indicate that even a brief SL intervention implemented in a first year course can significantly increase perspective-taking and empathy in women, at least in the short term, as
assessed by a measure contextualized to the SL experience. In contrast, standardized empathy questionnaires may lack sufficient specificity for use in a SL context such as described in the current study. Our future research is intended to clarify the process by which SL encourages the development of empathetic thoughts and feelings in university students.

A Culture of Writing Excellence for Learning, of Learners, and that Learns

Tim Peeples, Paula Rosinski

Five years ago, our university embarked on a wide-reaching Writing Excellence Initiative in an effort to transform the culture of writing across our entire campus. This endeavor is innovative in its scope and its goals, which are to alter student, faculty, and staff attitudes and behaviors toward and practices of writing broadly conceived, valuing equally writing-to-learn, writing in a discipline/profession, and writing as a citizen. The major goals aim to build and sustain a writing culture that recognizes that learning to teach writing and gaining writing expertise is an iterative, reflective, practice; that there is potential to transfer writing strategies and practices across contexts and disciplines; and that transforming a campus culture of writing is long-term and requires the dedicated work of all faculty, staff and students. Valuing a culture of writing means valuing the labor of teaching, doing, struggling with and talking about writing by all constituents, even as much of this important works seems invisible.

Planning, study, and assessments have been focused on not only traditional kinds of efforts, such as improving faculty development around writing pedagogy and enhancing student supports, but also more innovative efforts, such as increasing conversations about writing on our campus between students, faculty and staff; making the writing and struggles around writing already happening in so many places more visible; and encouraging meta-thinking about writing to improve the chance that students, faculty, and staff come to view writing more as a complicated, messy, rhetorical kind of activity by which we transform our lives.

Our initiative is firmly grounded in the scholarship of best practices in writing pedagogy, in particular, research on transfer (Anson and Moore, 2016; Robertson, Taczak, Yancey 2012), writing across the curriculum (Carter, 2007; Maimon, 2006; McArdle, 2009), faculty development (Condon, Iverson, Rutz, and Willet, 2016), and assessment (Anson, 2006; Yancey, 1999).

This poster will focus on theorizing and evidence an iterative organizational learning process that has been employed across our entire campus over the past five years, leading to emerging transformations in the culture of writing “for” learning (e.g., pedagogies and curricula), “of” learners (e.g., changing student, faculty, and staff attitudes toward learning to write and teaching writing), and “that” learns (e.g., sponsored research around writing). The poster will also generalize from our institutional experience some ways similar processes might be employed to transform learning cultures more broadly and across institutional types.

Painting a Picture of the Learning Process and Culture in Electronic vs Hand Notetaking Environments

Nichole Powell

Our collaborative laboratory environment is designed using a social constructivism model, and students work in groups to decide on the best ways to achieve the goals for each laboratory session. This often involves discussion to decide on the best method for collecting the necessary data as well
as division of labor. We piloted the use of electronic laboratory notebooks as a cost saving and sustainability measure. Our observations that students working in these pilot lab sections behave differently (and develop a different learning culture) from those in paper-notebook course sections, have led us to question what is happening when students use an electronic laboratory notebook in a collaborative learning laboratory environment. We will present observations of student behaviors as well as student perspectives gained from interviews.

Positive Impact of Midterm Course Evaluation on Students

Yihong Qiu, Lijuan Wang

Student rating of teaching is popular in colleges and universities. From the administrative perspective, the aim of student rating is to help instructors improve teaching. However, due to the fact that rating is a kind of summative evaluation and usually has time lag, instructors often believe that ratings do not help to improve teaching, and they are indifferent or even disgusted with student rating. Although instructors do not recognize the value of student rating, they acknowledge that students’ feedback based on learning experience can contribute to improving teaching. Researchers have found that instructors acting upon midterm course evaluation, especially with the help of professional consultants, can actually improve the quality of teaching, because midterm course evaluation is a formative evaluation, which is essentially with "diagnosis” characteristics and a good timeliness.

Our center has provided midterm course evaluation, which is originated from small group instructional diagnostic, to instructors for 6 years. Survey from the instructors who received this service showed that 98.7% of them recognized the value of the service. But whether this service has any impact on students is unknown. Thus, in study, we have two research questions: 1. what are the students’ perception of the service? 2. whether the service impacts the students’ learning? We designed a questionnaire which consisted of 16 items on a five point Likert scale and one open question, and delivered to students of 15 courses at the end of the spring and fall semesters in 2017. In total, 391 anonymous responses were collected. 93.1% of students regarded that the process of midterm course evaluation was efficient. 91.6% of students perceived some changes in teaching made by their instructors. 89.7% students thought the midterm course evaluation had positive influence on learning environment, and 88.2% students believed that it increased their motivation in learning, but only 51.7% students reported that they had more engagement with the course. In conclusion, midterm course evaluation has positive impact on students.

Supporting Systematic Interpretation of and Engagement with Student Evaluations of Teaching

Kiruthika Ragupathi, Johan Geertsema, Adrian Lee

Student feedback for instructors (or student evaluation of teaching, SET) is widely used to make personnel decisions, yet its strength lies in the instructors’ systematic interpretation of data. The National University of Singapore (NUS) introduced SET in 1992, and a new system with richer data analysis and reporting capabilities was implemented in 2016.

Though the purpose of SET is primarily to improve teaching by informing and stimulating instructor’s reflection about the strengths and weaknesses of their teaching practice (Alhija, 2017), it has been challenging for instructors and academic leaders to systematically engage in and use SET data to inform teaching development, and thereby student learning. And yet, they receive little or no guidance from the university on this process. Additionally, there are concerns around the potential
opportunities campus.

These initial concerns, strategic institutional initiatives and the recent introduction of a new online system with richer data analysis and reporting capabilities warrants for a rethink of the purpose and use of SETs at NUS. Chalmers and Hunt (2016) argue that SET is most effective when it is used by teachers for reflection and improvement of themselves and the courses they teach, and by course coordinators for improving programmes. This paper is part of a larger study that investigates the barriers involved in using SET as a reflective tool that is informed by evidence to provide improved opportunities for teacher development and students’ learning. In this paper, I set out to answer: How can academic development units support academics and academic leaders in systematically engage in and use SET data for reflection and improvement of teaching and learning on campus? The study hopes to address a key issue that the appropriate use of SET data is a key ingredient to ‘building a high-quality teaching ecosystem’ (Linse, 2017), and aims to provide guidelines and strategies to promote the appropriate, responsible and accurate use of SET data for improving teaching quality on campus.

Integrating Writing Resources: An Instructor’s Influence on the Student Experience

Amy Rogers

In this poster session, the influence instructor communication has on student success is reinforced. Practical instructional strategies are shared from a recent study in which instructors connect graduate students in the online classroom with institutional supports, in this case, the writing center’s tutoring service known as Paper Review.

Preliminary results are shared, revealing effective communication strategies that foster a culture for learning and an inclusive learning culture that participants may find applicable to their own instructional practice. Connections may be made between the writing support featured in this study with participants’ own resources, emphasizing the value of generating learning across departments.

Final Degree Projects Based on a Multidisciplinary Problem-Based Learning Methodology

Edorta Santos-Vizcaino, Rosa Berrando Juarristí, María Yolanda Fernández de Aránguiz Guridi, Águeda Fernández de Aránguiz Guridi, José Ángel Ruiz Ortega, Mirari Ayerbe Díaz, Begoña Leceoa Arana, Edorta Martínez de Marigorta Izaga, Rosa María Hernández Martín, Manoli Igartua Olaechea, Aiala Salvador Martínez, Karmele Colom Aristondo

Final Degree Project (FDP) is an activity that students carry out at the end of their training process, being the opportune moment for them to demonstrate their professional qualification. However, during the last years, some important aspects to be improved have been detected in the Faculty of Pharmacy of the University of the Basque Country (UPV/EHU). By means of a statistical analysis (multivariate logistic regression) of the most important characteristics in FDPs, we found that most of FDPs contained knowledge of a single module of the curriculum, usually barely connected to any of the professional possibilities of the degree. Therefore, the present paper proposes an intervention to solve observed deficiencies and improve the execution dynamics of the FDP. The proposal includes a working methodology of a teaching group that is involved and participates in the proposal, elaboration, direction and evaluation of the FDP. Our teaching group is multidisciplinary, formed by
specialists in different subjects of all the courses of the degree. The methodology used, by both the teaching group and the students, was Problem-Based Learning (PBL). We applied this methodology to different professional possibilities, such as the Community Pharmacy, the development of vaccines or the R&D. The proposed methodology for the carrying out of FDPs allows the integration of specific competencies from very different areas, which provides an enriching and unusual global perspective in the FDP. In addition, we designed methodologies and evaluation tools to work and quantify the achievement of some of the most relevant cross-curricular competencies (oral communication, written communication, and information search). This proposal, which is largely implementable in any Degree, strengthens the coordination of teaching groups, the originality and creativity of the FDP, the active role of students and teachers, and a direct relationship with professional opportunities. On the other hand, it favors the application of a PBL methodology among different areas of knowledge, unlike most published works on active methodologies, which are applied to individual subjects or groups of subjects of similar areas. This idea can be extrapolated not only to other degrees, but also to the creation of larger teams in a wider scenario such as the Campus and/or the University. To this end, our teaching innovation group conducts training courses at the University and shares video tutorials on-line accessible to those interested in learning the suggested methodology.

The Writers’ Banquet: Creating Space for Teaching-Focused Academics to Write

Claire Saunders, Tansy Jessop

This poster addresses the conference theme of building a culture for learning. We argue that developing a stronger writing culture amongst academic staff can have far-reaching impact on the wider learning culture of the university through the integration of teaching, research and writing in the academic role. Two writing interventions were implemented in our institution. Each was underpinned by a view of writing as a process rather than simply a final product, and each recognised the daily realities and pressures of academic life. Both were designed to carve out a space where there was time to think, write and share.

Using visual methods and reflective data, we examined the gradual changes in teachers’ academic writing identities through two parallel interventions. The first was a rapid-fire six-part series of workshops on the craft of academic writing; the second was a slow burn series of monthly writing groups. This poster tells the story of how these interventions helped teachers shift their view of writing as an unremitting drive for output, beginning to see its potential as a creative and rewarding process that generates thinking, enlivens teaching and opens research and ideas to a wider audience.

We suggest that there are both some ‘quick wins’ that can revitalise teachers’ attitudes to writing, and a ‘long game’ in which sustained effort begins to shift both individual and institutional perceptions of the value of writing. We hope that the poster triggers reflection on the place of writing as a powerful, creative agent for thinking, learning and teaching in higher education.

Problem Design in Chinese ESL and American Writing Outcomes

Petger Schaberg

While the field of Rhetoric & Composition has demonstrated a robust scholarly commitment to the implementation of pedagogies that harness a learner’s motivations and insights (Elbow and Belanoff, 1999), Writing & Rhetoric instructors can benefit from curricular insight generated in the Scholarship of Teaching and Learning (SOTL). SOTL researchers have made significant strides in understanding the
paradox of the teacher/learner relationship, as evident in areas of inquiry as varied as Reading Compliance (Burchfield & Sappington 2000); Integrated Scholarship (Hubball and Clarke 2010); Design-Based Learning (Nelson 1984; Nelson & Sundt 1994; Ablin 2015); and Writing-to-Learn (Rivard 1994, Archer-Kuhn 2017). The present study set out to test Ablin’s contention that improved writing could result from organizing classrooms, “as places of problem design rather than the more traditional notion of problem solving” (Ablin, 2015). Two separate hypotheses were tested: 1) Would a pedagogical focus on “problem creation” throughout the semester improve student writing by “moving students from thinking about science as a collection of facts ... toward a deeper understanding of concepts and scientific ways of thinking.” (Reynolds et. al. 2012) And, 2) Would these two distinct student populations: Chinese ESL learners at Jiaotong University in Xi’an China, and American first-language speakers at the University of Colorado show different or similar results? To test these questions, student writing data was collected in the summer and fall of 2016 from both Chinese ESL and American student populations. Both qualitative and quantitative analysis of these materials revealed that casting course assignments as Design Problems which students needed to construct, rather than merely respond to, did increase the likelihood that students in both Chinese and American populations learned to move beyond "conceiving science as a collection of facts, toward a deeper understanding of concepts and scientific ways of thinking." This finding is important for the field of Rhetoric & Composition because it demonstrates how methodologies applied from different disciplines, SOTL in particular, can offer pedagogical support for instructors in both ESL classrooms and those focusing on Scientific Writing, Popular Science Communication, and the Rhetoric of Science. The results can also engage SOTL scholars though the comparative analysis of two very different writing cultures in China and the US, as well as the particular methodological focus on writing outcomes.

Grand Challenges for the Scholarship of Teaching and Learning, Phase I

Lauren Scharff, John Draeger, Arshad Ahmad, Jennifer Friberg

SoTL research has grown over the past three decades with a majority of the work motivated by questions focused within specific course or institutional contexts. This type of work is at the heart of SoTL. The Culture for Learning theme asks, How do we generate and sustain meaningful teaching and learning that have a lasting impact, within and across courses, programs, departments and institutions? Inspired by the success of the globally-relevant Grand Challenges of Engineering (NAE, 2008), members of the ISSoTL Advocacy and Outreach Committee believe that the time has come to establish the Grand Challenges for SoTL. Grand challenges address wicked problems related to a discipline, although solving them will require multidisciplinary efforts, as well as culture changes across a variety of levels within and across institutions (Roxå & Mårtensson, 2015).

Identification of Grand Challenges can promote greater concentration of research efforts and far-reaching collaborations. Additionally we believe that a clear articulation of SoTL Grand Challenges might resonate broadly and facilitate conversations beyond SoTL researchers, increasing the likelihood of impact on policies and creation of new funding opportunities.

Previous SoTL leaders have proposed some big ideas that projected the future of SoTL (Shulman, 2000) and offered direction for leaders to support SoTL engagement and growth (Hutchings, Huber & Ciccone, 2011). These might provide a start in the development of SoTL Grand Challenges. We also would like to capture challenges faced by SoTL practitioners and educators as they work to enhance teaching and learning. For example, what challenges are faced by those who strive to develop student competencies such as those identified by the Association of American Colleges and Universities as being vital to prepare students for 21st century challenges (e.g. quantitative literacy, ethical reasoning)? As was determined in the Engineering Grand Challenges, we think it’s likely that
challenges might cluster within a smaller number of themes. For example, some themes might relate to resources for SoTL research, while others might relate to promoting lifelong learning or the effective use of technology to support learning.

We propose following an identification process similar to the Grand Challenges of Engineering: first gather inputs from a large and varied group of stakeholders, and then have recognized experts within the field to help cull the inputs into the final list of Grand Challenges. This ISSoTL poster will provide a start at gathering inputs from SoTL stakeholders from around the world.

Flipping Classroom Observations: Professional Development for the Observer Instead of the Observed

*Meadow Schroeder, Robin Mueller*

Post-secondary institutions in Canada are becoming increasingly aware of the importance of quality instruction for student learning (Fraser & Ling, 2014). What was traditionally considered secondary to research, instruction has found increased prominence within academia. Universities have started to provide professional development for faculty in the areas of teaching and assessment (Fraser & Ling, 2014). To create a culture of learning, our University created a teaching academy made up of faculty recognized for their teaching excellence. The academy was asked to generate ways to encourage other faculty members to participate in teaching development opportunities. In response, the Academy proposed that instructors across campus be invited to open their classrooms to peer observers. The academy believed that by observing how other faculty created a culture for learning through the use of different pedagogies and technological tools, peer observers would be motivated to change the culture of learning in their own classrooms. During one week, volunteer faculty from multiple disciplines opened their classrooms to peer observers. Unlike typical classroom observations, the observations were non-evaluative, meaning the observers did not provide feedback to the instructors (Hendry, Bell, & Thomson, 2014). Instead, the observations were an opportunity for observers to reflect upon their own teaching practices. There is a paucity of research on non-evaluative peer observations. At the end of the week, observer participants were surveyed about their experience. Results found that after observing their colleagues, faculty were motivated to change or revise their teaching practice. They reported an increased appreciation for the student experience and how different teaching practices affected classroom learning. Detailed findings and implications for teaching practice will be discussed.

Scholarly Digital Storytelling: Fostering a Culture of Learning within and beyond the Classroom

*Kelly Schrum*

"There's a life after this class," wrote a scholarly digital storytelling student. "We are creating content that is usable, valuable, shareable."

Digital storytelling can be many things: narrative . . . interactive . . . linear . . . nonlinear . . . ethnographic . . . artistic. It can also be scholarly. In higher education, it can provide a compelling approach to reimagining academic research, intended audiences, and scholarly communication and to teaching practical digital skills. It can create authentic, meaningful learning with a lasting impact beyond the classroom.

This poster presents research on scholarly digital storytelling addressing the following questions: 1) Does participation in scholarly digital storytelling influence students’ academic research? 2) Does
participation in scholarly digital storytelling facilitate communication of scholarly work beyond the classroom? 3) Do students apply skills learned through scholarly digital storytelling in other academic and non-academic environments?

Digital storytelling is commonly used for crafting personal narratives. Faculty have begun to incorporate it into higher education teaching and learning. This research emphasizes scholarly digital storytelling in graduate and undergraduate classrooms with a focus on meaningful learning in the classroom and long-term outcomes. It builds on several decades of SoTL work and addresses noted SoTL gaps by focusing on graduate education and longitudinal work beyond individual learning experiences.

This qualitative, collective case study includes a review of syllabi, assignments, and student work as well as semi-structured interviews with students who have taken the author’s course and with faculty and their students internationally. The poster, including sample student stories, will focus on creating a meaningful culture of learning with scholarly digital storytelling and exploring its lasting impact.

Can Digital Field Notebooks Improve Geoscientific Field Learning in Extreme Environments?

Kim Senger, Ivar Nordmo

Geology is a study of spatial and temporal evolution of a wide range of processes through studying the geological record. By definition, geological studies thus inherently involve the use of sub-optimal and incomplete data sets, and thus geologically meaningful intra- and extrapolation is required between the exposed outcrops within a 3D spatial framework. In this experiment, we hypothesize that digital field notebooks can improve students’ learning in the context of field education onshore the Arctic archipelago of Svalbard. The digital notebooks comprise a ruggedized iPad with relevant applications, notably the FieldMove app, and were handed out to each student group prior to the fieldwork. We conducted a study of three geological field campaigns organized by UNIS to gain qualitative and quantitative data on students’ experiences of using the digital notebooks. Our primary objective was to test whether the iPad/FieldMove solution facilitates the student’s spatial thinking.

The BSc-level AG-209 course was taken by 24 students, and the 6-day long snow-scooter based excursion focused on observing geological features along a regional 400 km long transect across Spitsbergen in March 2017. The majority of the students indicate that battery life and frozen fingers made using the tool impractical, likely linked to the relatively cold temperatures (-20°C) during the excursion. In contrast, the majority of students also considered the overall usability and the rapid recording of geological measurements as very useful.

The MSc/PhD-level AG-336 course was taken by 18 students, with the 8-day field campaign in September 2017 divided into a 3 days as a whole group excursion and the rest fieldwork in smaller groups of 3 students. Transport was mostly by foot with some small boat transport, and centered around a relatively compact geological feature, the Billefjorden Trough. The majority of students found the iPads very useful and no major practical issues were encountered.

In addition to the questionnaires we also analyzed the FieldMove projects from the students to gain an insight into what the students used it for. Electronic and geo-referenced note- and photo-taking was by far dominant. In addition, some groups collected significant structural data using the built-in sensors. The ability to store student observations in the correct spatial location, and the detailed observations from each locality, can assist to develop a more comprehensive spatial understanding.
Furthermore, we are currently working on implementing virtual field trips to assist both in fieldwork preparation and further post-fieldwork analyses.

**Perspectives on Connecting SoTL across the (Co-)Curriculum at a Small Liberal Arts College**

*Celeste Sharpe, Sarah Calhoun, Melissa Eblen-Zayas, Iris Jastram, Kristin Partlo, Janet Russell*

Learning often blurs curricular and co-curricular lines, and scholarship of teaching and learning (SoTL) needs to encompass learning in all the ways that it happens and in all places that it happens. At the same time, what constitutes teaching practice has increasingly expanded beyond the sole instructor model (Iannuzzi, 2007; Bernstein and Greenhoot, 2014). In our small liberal arts college context, groups like the learning and teaching center (LTC), academic technology (AT), and reference and instruction librarians (R&I) do reflective practice and assessment during, around, and in-between courses.

This poster will present three examples of the overlapping SoTL initiatives conducted, and the ways in which these projects are surfacing gaps and providing critical foundation for a more concerted, campus-wide effort. Drawing on the literature on connected learning and high-impact practices (Watson et al, 2016), we argue for an expanded understanding of SoTL that recognizes how teaching practices occur throughout the formal and informal curriculum. The LTC has focused on the question of supporting reflective teaching, with a range of programming spanning the curriculum. Together, the LTC and AT have explored high-impact practices, particularly digital portfolios as primary instruments, for increasing both reflective faculty teaching and student learning. The second example is the development of internship positions supervised by AT and R&I that draw on student learning in the formal curriculum and apply it in the areas of digital scholarship and librarianship. The third example is the long-term study of information literacy. For ten years, R&I have developed and used a rubric to measure evidence of information literacy in sophomore student writing (Hoseth, 2009; Jastram, Leebaw, and Tompkins, 2014; Leebaw, Partlo, and Tompkins, 2013) and have used both the data and the norming and reading experiences to reflect on R&I teaching (in classrooms, consultations, and online research guides) and inform understandings of where students succeed and struggle.

Together, our experiences and data suggest a growing need to shift toward a more integrated model of SoTL that accounts for our students’ connected learning experiences. Our institutional context as a small liberal arts college has allowed us to map many of the frameworks and practices that connect and expand beyond individual courses (reflective teaching and learning, high-impact practices in the co-curriculum, information literacy), and to begin work toward a sustainable and shared understanding of curricular and co-curricular teaching and learning.

**Towards a More Inclusive Learning Culture: Exploring the Engagement of BAME Commuting Students**

*Susan Smith*

The reasons for the Black, Asian and Minority Ethnic (BAME) students’ poorer learning experience, the degree attainment gap and their reduced employability are complex and multifactorial (Richardson, 2008 a & b; Allen, 2016; Newbold et al, 2011). This inequality may be compounded in the case of those disproportionately high numbers of BAME students who also commute to the LBU campus (Thomas & Jones, 2017).
This poster outlines findings from a qualitative project at Leeds Beckett University (LBU) focusing on the commuting experience of BAME undergraduates and explores how their articulated needs have been addressed through a range of cultural, infrastructural and curricular interventions generated from ideas from the students themselves.

An interpretive approach was adopted for this mixed methods project focussing on qualitative enquiry (Cresswell, 2007) and action research (Healey et al, 2010) to explore commuter students’ experiences.

The findings from 2 focus groups with 20 self-selecting BAME students are identified in the poster. Many difficulties faced by BAME commuting students are identical to those faced by all commuting students: e.g. stress, impractical timetabling and assessment deadlines.

The impetus to solve these issues must be situated within a broader framework of inclusive academic practice, drawing on a “holistic engagement vision” (Pickford, 2016) of infrastructural support and partnership working between students and staff to build a more inclusive learning culture. Thomas and Jones (2017) showed that commuting BAME students prioritise academic engagement but may be unaware of the wider social and cultural capital that enhances social mobility gained from participating in extra-curricular activities.

Students were invited to offer solutions to issues raised and a series of actions were agreed with the aim of building an inclusive learning culture for all but which aimed to solve the problems the BAME commuting students had raised. This poster lists the actions as discussion points and asks readers whether they are transferable to other universities and specifically if their BAME students’ commuting experiences are similar.

i) The maximising on-campus time; ii) the building of activities which could be undertaken in the working day which develop students’ wider social and cultural capital; iii) a focus on induction and transition and post graduate aspiration at every level; iv) facilitating access to online resources; v) estate measures (more dwell space) which facilitated an all day, on-campus stay; vi) targeted academic advising; and vii) building of an online student support framework accessible off-campus.

**The Educational Development Landscape in Singapore: What Can We Learn?**

*Nachamma Sockalingam*

Educational development differs across nations - often steered by national policies. This paper presents a snapshot of the educational development landscape in Singapore by studying Educational Development Centres (EDCs) from five Singaporean universities.

Universities in Singapore top various global rankings. The question is if this emphasis on research and rankings is paralleled in educational development efforts reflecting a culture that learns. Also, there is a lack of documentation on educational development work in Asia and in particular, Singapore. This paper is the first to scan and document the educational development landscape, as far as the Singapore context is concerned.

The research questions in this study are: (1) What does educational development look like in Singapore, (2) What is the profile of educational developers in Singapore, and (3) What inferences can we draw from the existing educational development work in Singapore and what are the lessons learnt?

To this end, the author profiled Singapore EDCs in terms of organizational structures, EDC programmes and services, and the demography of educational developers. Data for this study was
obtained from official websites that is available to public. Mixed method was used to analyze the data.

The snapshot of EDCs in Singapore are that typically these centres are centrally deployed, under the purview of Provost. The centres tend to take a holistic focus on faculty development, instructional development, organizational development and community development, although faculty development tends to be the most emphasized. Not surprisingly, the mission of the universities tend to shape the focus of the EDCs.

The size of EDCs range from 2 to 18 and this encompasses educational developers and administrative staff, with educational developers making the majority (50-89%) of the total 46. In terms of gender, there was a slight bias towards male educational developers (60%) and strong bias towards female administrative staff (81.25%). A good percentage (33 to 100%) of educational developers across the five centres hold a Doctorate degree although typically not in education (60%).

The presentation compares the data with other studies, discusses the age and maturity of the EDCs in terms of their programme and services, the rationale behind these and the inferences drawn.

The outcomes of the study represent the tip of an iceberg and indicates a good level of university support for educational development work in Singapore but suggests areas for improvement. More details are shared at the presentation.

**Role Play Discussions as an Approach to Teach Interdisciplinary Challenges in Meteorology**

_Harald Sodemann_

Interdisciplinary problems in natural sciences can be challenging to teach. A series of innovative teaching exercises was conducted in a Master’s level course in the field of Meteorology at the Geophysical Institute at the University of Bergen, Norway. Embracing the concept of student-active learning, students were assigned expert roles in a mockup board meeting. The students performed a role play in which they were asked to solve a challenging professional situation that touched upon different aspects they had learned about before in the lectures and from the syllabus. The role play was repeated again at the end of the course, but this time the characters in the role play were also assigned personalities which gave rise to dilemmas in terms of finding the optimal solution. The discussions were lead by one of the students and the outcome entirely open.

In oral and written evaluations, students reported substantially higher levels of engagement with the material than for more common teaching activities. Furthermore, the role play exercises allowed students to train for the final oral exam in an arena that was both challenging and fun. The effect is an improved constructive alignment in the course.

Ways to improve the role play activity concern the definition of boundary conditions that lead to realistic constraints during the discussions. This can be accomplished by delivering quantitative information for the discussion preparation beforehand.

In general, it is concluded that even in the context of a subject that has strong theoretical and mathematical components, role plays can be an enriching and motivating teaching activity, and be highly effective teaching tools if they contribute to the constructive alignment of the overall lecture course.
BIOst@ts, a Learning Platform for Statistical Analysis and Management of Biological Data

Jonathan Soulé, Øystein Varpe, Sigrunn Eliassen

Biology is a discipline that makes extensive use of mathematical models, numerical tools, data management, and statistical analysis. In the course of their curriculum, biology students must acquire numerical skills and quantitative competence to better comprehend biological theories, systems and problems (‘Vision and Change’; AAAS 2011). However, many students do not appear to successfully translate these skills into their subject context. In the classroom, educators face the challenge to keep their audience engaged and confident when trying to apply quantitative reasoning. Even if courses in mathematics and statistical analysis are compulsory in the curriculum, they either seem maladapted to biological problems, or fail to put numerical knowledge into the biological context (Touchon et al., 2016). Most higher-education institutions also lack a concrete plan for giving students and teachers the tools to make numeracy a transferable skill in courses and study programs (Speth et al. 2010).

The Centre for Excellence in Biology Education, bioCEED has created bioST@TS, a web-based learning platform (http://biostats.uib.no/) dedicated to helping biology students understand the basics of data management and statistical analysis. Directed towards both bachelor- and master students, bioST@TS provides tutorials and instructive videos that are relevant primarily, but not exclusively, for biology courses at University of Bergen (Norway) and at the University Centre in Svalbard (Norway). The platform makes broad use of videos since this media has been found to increase student achievement, competence, learner satisfaction and engagement (Dupuis et al., 2013; Oruset et al., 2016; Sherer & Shea, 2011). A pilot study suggests that bioST@TS video resources constitute an effective tool as a supplement to regular teaching.

bioST@TS learning modules for undergraduate students focus on the basics of data management and visualization through tables and charts in MS Excel 2016. Modules for master students include statistical analysis and apply the open source programme R, with instructions to the coding needed in this program. bioST@TS also offers videos that explain key-concepts in statistics using simple, concrete examples in biology. bioST@TS is also a repository for resources created in collaboration with both teachers and students.

This poster will provide an overview of the modules and resources available on the website, as well as some reflections on the scholarly motivation behind the initiative and experiences with how it so far has helped promote learning and understanding of biological phenomenon. Tablets will be available for participants to practically explore the platform.

Transformative Learning through an Undergraduate Public Health Service-Learning Course

Kari Brossard Stoos

This project provides a model for developing social and cultural sensitivity and inclusivity through service-learning. The proposal directly addresses a conference aim by describing an approach connecting student learning to life and work experiences outside the physical classroom. Robert Sigmon established the framework for service-learning by providing three principles that premised work in a reciprocal process between communities and institutions of higher education (Sigmon, 1979). Sigmon’s framework was later operationalized as providing a course-based (credit-bearing) experience for students to engage in need-based community activities simultaneously leading to enhanced content learning and appreciation for civic duties (Bringle et al, 2006). These scaffolds were applied during the design phase of a public and community health course aiming to educate students about factors contributing to county health statistics in a rural, and resource limited
community. The course also aims to guide students through the complexities of program development with community collaborators employing the PRECEED/ PROCEED model, thus meeting Sigmon’s first principle “those being served control the services provided” (Green, 1980; Sigmon, 1979). Students worked with community collaborators designing need-based health education activities for children attending youth center services. The youth center is located within the Seneca Nation of Indians Allegany Territory, and is governed by the City of Salamanca Youth Bureau. The course design addresses the issue of white normativity in service-learning activities while educating students on the history and culture of the community. Foundational lesson plans were based on the history of colonialism, forced assimilation, forced relocation, and the destruction of sacred lands, using resources written and edited by Seneca scholars. Qualitative assessment of student learning was analyzed through review of weekly written reflections and student interviews. Data collected through narrative inquiry and open ended oral interviews were coded and categorized into major and minor themes including rural health, intersectionality, self-actualization, self-awareness, metacognition, and metamorphosis. Narrative analyses applied Mezirow’s Transformative Learning Theory and O’Sullivan’s interpretation of such (Mezirow, 1975, 1991; O’Sullivan, 2003). Preliminary data demonstrates that this course design effectively initiated the process of perspective shifting resulting in a transmissive, transactional, and transformational learning experience. Additionally, each theme provided evidence of a synergistic impact on public health learning by combining discussion based classroom lesson plans with application through community engagement. The entire experience resulted in prepared, invested student community advocates for healthy behaviors. This sustainable service-learning course can serve as a model for other undergraduate public health programs.

International Extended Flipped Classroom: Collaborative Online Learning and Study Abroad

Kristi Straus, Wei Zuo

The “international extended flipped classroom” was conceived as part of the University of Washington (UW) Teaching & Learning Initiative. The goal was to increase global engagement for UW students through a two part process: 1) collaborative online international learning between UW and Tsinghua University in China (THU) followed by 2) a short-term study abroad program to THU. This program was designed to be accessible to students unable to participate in a longer study abroad program, promoting access and equity at UW.

In first steps, Dr. Kristi Straus modified her ENVR 239 (Sustainability: Personal Choices, Broad Impacts) course together with faculty members teaching sustainability at THU to create shared material for our students to complete online. These courses were taught in parallel. Students from THU and UW collaborated online during autumn quarter, interviewing one another about sustainability in their lives, on their campuses, and in their cities. These online connections increased global engagement as students learned course material not only through reading, lecture, and discussion with students at their own university but also through dialogue with students in a very different part of the world.

15 UW students chosen for the program took ENVR 239 as a prerequisite, then met weekly to learn about sustainability in China, build community, and establish expectations. During the ten-day study abroad program, with the help of Dr. Wei Zuo and Dr. Kristi, students from the two universities who met and collaborated online now met face to face, learning with and from each other. Students worked together, attending lectures and field trips, learning how sustainability is defined in Beijing and how the city meets its energy needs and manages pollution. Student feedback indicated that the study abroad program enhanced the relationships built in the online component of the course and broadened the global perspective of students at both campuses.
SoTL and the Career Path: Academic Culture Issues within and across Institutions

Amanda Sturgill

Understanding teaching and learning is mission-critical for academics. While we have the ability to extend our skills in inquiry to our work with and for students, academics sometimes lack the incentives to do so. This poster will present the impacts on the career path for choosing SoTL work from the perspective of disciplines in the liberal arts and professional schools, with a focus on the impacts on the short-term and longer-term implications for faculty, looking at SoTL conducted in a multi-institutional context.

“We Shape Our Buildings and Afterwards the Buildings Shape Us”: Space as a Catalyst for SoTL

Briony Supple, Laura Lee

Teaching and learning spaces have been identified as integral to innovative pedagogies and to creative, student-centred curriculum design. Space is neither neutral nor innocent (McCarthy, 2015). As Winston Churchill once said during a presentation to the House of Lords: “We shape our buildings and afterwards the buildings shape us” (Churchill, 1943).

In the traditional, hierarchical construct of space, “teaching rooms and media are deliberately designed for one-way delivery” (Biggs, 2003, p. 21). However, conceptualisations of space need to consider its centrality as an overall part of the student learning experience.

While new learning spaces become proving grounds for innovative approaches to research, teaching and learning, opening up a critique of ‘older’ and more traditional spaces also provide a baseline from which critical questions can be asked about teaching approaches. While new learning spaces like active learning classrooms create exciting new teaching and learning opportunities for instructors and students, they also create unique challenges that require investigation. Teaching and learning in these new spaces necessitates that instructors rethink their approach to teaching and that students rethink their approach to learning, hence the need for teaching resources to support such transformation.

This poster will showcase the findings from an international project with partners from Ireland and the UK, which prioritises the transformation of concepts of space, rather than physical spaces themselves. We have captured many images which illustrate our learnings about space from various contexts. Our poster will illustrate how we are thinking about various conceptualisations of both physical and virtual spaces as a catalyst for dynamic and innovative teaching approaches. As part of these research and knowledge exchanges, our overarching points of inquiry are:

How do staff stay connected to the discussion/progress around teaching spaces at other institutions?

What are some examples of flexible learning spaces at other universities in the UK?

How can space help staff and students transcend disciplinary boundaries?
Faculty Development and Reward Structures to Promote SoTL in US 4-Year Colleges and Universities

Rahmat Talukder, Yumi So, Mohammed Islam

SoTL is a systematic research grounded in the literature, peer-reviewed, and disseminated through publication or presentation (Secret et al., 2011; McKinney, 2004). Today, the scope of SoTL has expanded beyond classroom practices and includes instructional design, curriculum development, and assessment of student learning at curriculum and programmatic level (Hubbal et al., 2013). Literature identified a gap in the understanding of what is considered as SoTL between faculty with varying experience and disciplines (Secret et al., 2011; Gurung et al., 2008). While SoTL possesses the recognized attributes of research, it is not universally accepted and faculty may not be rewarded for SoTL activities in higher education. The establishment of organizational bodies such as SoTL institute or SoTL forum may help foster SoTL activity among faculty. The objective of this study is to explore the existing organizational structures in US higher education institutions that foster the practice of scholarship of teaching and learning (SoTL) and create campus cultures where SoTL is recognized as an important scholarly work. A thorough Google search was conducted to identify institutions with teaching and learning centers using the keywords: “scholarship of teaching and learning”, “SoTL”, “teaching and learning” combined with “center”. Each institution’s website was visited to search pages with information on SoTL. All the identified pages on SoTL, faculty development, SoTL award, or SoTL grant were retrieved. Data extraction from website was performed utilizing a systematic content analysis method. Two-hundred thirty-seven US 4-year colleges and universities were identified with existing teaching and learning centers. Eighty-three percent (n=196) of these institutions have structured programs that foster SoTL practices and faculty development. Common structures include SoTL forums, SoTL Community, SoTL Commons, faculty development center, educational research development unit, etc. They provide workshops, mini-conferences, forums, seminars, summer SoTL, and teaching and learning fairs. Fifty-one institutions (22%) were identified that provide faculty awards and grants on SoTL accomplishments. In conclusion, our results document the existing structures that promote SoTL at institutional level in US higher education institutions. A community of SoTL researchers plays a critical role to enhance and sustain on-going SoTL research. Specific examples of case studies related to faculty development opportunities in SoTL, resources, and reward structures will be presented in the poster. Schools or programs that do not have any supporting structures to foster faculty SoTL activities can consider developing similar structures identified in the present study.

Science Teacher Education as an Asset and an Opportunity for Educational Development

Catrine Tellefsen, Kristin Glørstad Tsigaridas, Andreas Görgen

Science teacher education can be a key to change toward a learning culture in higher education disciplinary departments. We show how science teacher students working as facilitators for teaching assistants can contribute to creating a culture for learning in introductory courses in mathematics, physics and biology. We use the student evaluations along with feedback from teaching assistants to show how the work has developed since 2015. We also show how the master theses of student teachers, when focused on teaching and learning in undergraduate courses, can foster development and growth in higher education.
Targeted Professional Development to Promote Inclusive Teaching by Teaching Assistants in Biology

_Seth Thompson, Meaghan Stein_

Research over the last decade has indicated that a diverse student population can positively contribute to better learning outcomes in undergraduate biology courses. Transforming the instructional methods at the undergraduate level to incorporate diversity and inclusion is vital for promoting an inclusive culture of student learning (Handelsman, J., Miller, S., & Pfund, C., 2007). This is particularly true in science laboratory courses, where there is often an emphasis on collaborative work. In North America, the primary instructor of laboratory classes is often a graduate or undergraduate student teaching assistant (Adams, D. J., 2009). These novice instructors often lack the pedagogical knowledge and experience to effectively implement inclusive instructional practices and require targeted support to develop the knowledge and skills needed to promote an inclusive classroom (Gormally, C., Sullivan, C. S., & Szeinbaum, N., 2016).

Here, we describe three iterations of a theoretically and contextually grounded professional development program aimed at providing inclusivity training for biology teaching assistants. We start by describing the theory that informed the design of the program and how the program changed over time in response to participant feedback. Next, we explore survey data gathered from participants related to their attitudes and confidence with implementing inclusive teaching. Based on data collected in Fall 2017, teaching assistants reported an increase in their knowledge of strategies for creating an inclusive classroom, minimizing the impact of implicit bias, minimizing stereotype threat in the classroom, and issues associated with bias in the sciences. Teaching assistants also reported increased confidence in implementing strategies to achieve more inclusive classrooms. Teaching assistant survey responses also indicated the development of a multicultural, rather than colorblind, ideology with regard to incorporating inclusive teaching into their classrooms. Overall, preliminary data demonstrates that professional development focused on diversity and inclusion for teaching assistants results in increased knowledge and confidence related to inclusive teaching practice.

We conclude with the following recommendations for others who would like to offer similar programming at their own institutions: 1) incorporate in-person meetings into the programming, to the extent it is possible, to provide opportunities for discussion and peer-to-peer learning; 2) provide opportunities for participants to self-select some of the inclusive teaching topics they are interested in, as this leads to stronger engagement in the program; and 3) incorporate formative assessment strategies to provide feedback to participants and promote discussion within the participant cohort.

The Impact of Space on Teaching - Towards Spatial Literacy as a Pedagogical Concept

_Rie Troelsen_

Churchill once said: “We shape the buildings, and then the buildings shape us”, indicating the interplay between space and its occupants. Until now, researching this interplay has concentrated on the design of spaces for a new generation of students according to “new” views on learning (Bennett, 2006; Grummon, 2009; Jamieson, 2003; Laing & Sörö, 2016; Villano, 2010). In this exploratory, small-scale project we set out to explore how teachers are in dialogue with the learning space they are going to use for teaching – that is, how teachers shape the room and how the room then shapes their teaching.

One way to analyse the complex relationship between space and its occupation is proposed by Lefebvre (1991) in his “spatial triad”. The triad consists of the perceived, the conceived and the lived
space as space is not only decided on by architects, but also produced by the way people use it and by the meaning they ascribe to it. In our context Lefebvre’s spatial triad is transformed into the following methodological framework:

- conceived space - teachers’ sketching their perception of the learning space and analyses of these sketches as to which elements are drawn and in which order;
- perceived space - interviews of teachers describing actions and activities that will take place in the learning space;
- lived space – observational studies of how teaching proceeds focusing on how teachers and students use the learning space in a teaching situation.

Ten teachers at a university in Denmark are selected for interview and observation of their teaching sessions. All teachers teach in smaller learning spaces with room for up to 80-90 persons with a variation in furniture (for example group tables, no tables, horse shoe, fixed rows of tables...). Each teacher is interviewed about his/her conception and perception of the space and observed while teaching in the space.

The interview and observations have not yet been fully analysed, but preliminary findings suggest that the teachers’ pedagogical considerations on space can be described as spatial literacy, meaning that understanding of how to effectively use learning spaces can be defined by a specific taxonomy.

**Writing a Master’s Thesis - Why is it So Difficult?**

*Ere Uibu*

The University of Tartu is the only institution of higher education in Estonia which offers a postgraduate level curriculum in Nursing Science. The study form is open university part-time studies, because the student of nursing science is often a working nurse/midwife, a nurse manager or a teacher of a Health Care College, often married, with children or about to start a family. This background makes the students more likely to be at risk of poor commitment to studying, and even though the compulsory subjects will be passed, writing a master’s thesis may turn out to be "a mission impossible". Also, earlier research has shown that writing a research-based thesis and academic texts represent a real challenge for undergraduate and graduate students. Based on this prior knowledge, the main focus of this action research was to map students’ advancements in their studies and in master’s thesis writing and to identify the support and the main obstacles they have been experienced during this process. On the basis of gained information, it is possible to continue and plan the most suitable interventions for helping them to be more successful. An e-environment-based anonymous questionnaire was used for data collection and the targeted population were all students (N=51). The final sample comprised of 29 students. 14 students confirmed advancing as planned while 15 of the students had been advancing slower. 10 students reported their participating in master’s thesis writing camps and 8 in joint supervising seminars. Students reported that, during their studies, they received a large amount of help from teachers and tutors, from the curriculum and from their families. Nearly of equal importance were their internal motivation, willpower and persistence and time planning abilities. Students claimed that for thesis writing they mainly received help from their supervisors, from relevant courses, from teachers and from peers. The main obstacles to advancing properly were high working loads, weak (time)planning skills, family problems and problems with conducting research. Students still need more supervising, including extra motivation from supervisors, extra assistance and feedback in specific topics (for example in philosophy, methodology, data collection, academic writing), some concrete additional materials (for example materials about research methods) and a time planning guidance. The results indicate that extra assistance is needed mainly in specific topics, including critical thinking and writing skills.
development. The results may also refer to uneven prior training and to insufficient self-supporting learning skills.

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**A Sociocultural Analysis of Fostering Intercultural Understanding through Language Studies Abroad**

*Maureen Vandermaas-Peeler, Enrico Cecconi*

Educators have increasingly recognized the need to provide opportunities that foster students’ intercultural understanding and prepare them for work in a complex, interconnected world (Hovland, 2014). Study abroad is one of the high-impact practices associated with powerful educational benefits such as cultural awareness, intercultural competence, and appreciation for diversity (Engberg, 2013; Kuh, 2008; Stebleton, Soria & Cherney, 2013). Studying abroad fosters exploration of linguistic and cultural traditions through academics and community engagement.

Sociocultural theories emphasize the importance of social interactions in culturally relevant activities for learning and development (e.g., Rogoff, 1990; Vygotsky, 1978). When students interact with others in community-embedded programs, they learn to apply knowledge and utilize developing language skills in real-world contexts (Kinginger, 2008).

We employed a sociocultural analytical framework to investigate the language experiences of 44 U.S. students (76% female) who participated in a semester study abroad program in Florence, Italy between 2009 and 2014. Participants completed a 50-question survey, developed specifically for this study but based on prior research (e.g., Shadowen, Chieffo & Guerra, 2015). Overwhelmingly, students rated their experiences in the city (e.g., talking to local vendors, going to markets) with language instructors, peers, and on their own as highly significant for their language learning. Additional results related to language practices and relevant activities will be presented.

The results will be considered in terms of the conference themes of creating and sustaining a culture of learning that engages students in meaningful experiences beyond the traditional classroom. Our results support the sociocultural theoretical perspective that participation in “situated activities” in everyday life fosters development and learning and enhances preparation for the future (Lave & Wenger, 1991). We will also highlight the benefits of conducting SoTL research in the context of study abroad and discuss the importance of multi-disciplinary collaborations for faculty development.

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**Creating an Inclusive Learning Culture by Making Online Courses Accessible to All Learners**

*Ann Marie VanDerZand, Laura Bestler, Sara Marcketti*

How do the course format and course content support, or limit, accessibility? This is a critical framing question to consider when designing or redesigning a course. Accessible courses and course content anticipate the potential needs of diverse learners, and remove barriers or provide alternatives so all learners can be successful. Embedding accessibility in courses is becoming increasingly more important as the population of college students becomes more diverse and these students are arriving at the university with more diverse backgrounds and abilities. A report from the U.S. Department of Education (2016) shows that in 2007-2008 and again in 2011-2012, eleven percent of college age individuals reported a disability. Further, among those enrolled in public 4-year institutions, 33% of students with disabilities completed a bachelor’s degree, compared with 48% of students without disabilities (3Play Media, 2018). This discrepancy in graduation rates may be linked in part to accessibility issues around courses and other digital content related to their degree.
program. In an effort to address accessibility issues on an institutional scale, many institutions of higher education in the United States have implemented digital access initiatives to create an institutional framework for digital content development and compliance with the United States federal digital accessibility requirements. Digital technologies have led to a number of new teaching modalities (e.g. blended, flipped, fully online), and use of these technologies requires thoughtful consideration to ensure course content is accessible to all learners. This poster will highlight ten basic strategies for creating accessible online course content. Participants will learn about the Quality Matters framework and specific approaches to address accessibility and usability. The poster will be graphically rich and be organized in a funnel approach starting with broad framing topics and sequentially guiding a viewer through the ten strategies to increase accessibility in online courses. The final takeaway product for participants will be a model action plan that they can use to build a personalized timeline for implementing course changes to improve accessibility. The poster will provide both context for increasing accessibility as well as actionable items an individual can complete to enhance accessibility in their course and course content.

Promoting Reflection about Assessment to Improve the Learning-Teaching Process

Mikel Villamañe, Ainhoa Alvarez, Mikel Larrañaga

This poster is related to the thread “A culture of learners”, more specifically, on supporting teachers and students on their assessment processes. Assessment is often the key element used to decide whether implemented actions and techniques are being effective or not, as it allows measuring the teaching and learning outcomes (Dunn et al., 2011) and to analyze how to adequately improve it. However, to be able to use the assessment as a reliable measure, a fair marking that truly reflects the student performance must be guaranteed. The first step to obtain this fairness is the standardization of the criteria (Chan, 2001) what can be obtained, for example, through the use of rubrics. Defining good rubrics is a complex task which can be supported by e-assessment tools (Villamañe et al., 2016). Even when assessment criteria have been established, objectivity is not always assured. Systematic patterns in evaluation behaviors can significantly influence the final grade (Engelhard Jr George & Wang, Jue, 2015). These behaviors, called rater effects, can be produced in an unconscious way, due to the different personal perceptions and tendencies of the raters or on purpose to affect some student’s score in a positive or negative sense. Often, the data gathered during an evaluation process may include different students, with several works where each work is scored by different raters, so its analysis to detect rater effects is not trivial. Therefore, it is important to provide software that automates some of the rater monitoring aspects (Wolfe, 2014); for example, by analyzing statistics related to particular raters and automatically detecting scoring patterns. This software can also support the process of gathering and analyzing information (Ras et al., 2015), helping to make adequate decisions and to improve the assessment process itself as well as the quality of the teaching-learning process (Rodríguez-Conde et al., 2016).

This poster presents the satisfying experiences in the use of AdESMuS (Villamañe et al., 2015) and its visualization capabilities to analyze assessment processes in order to identify different rater effects and controversial evaluations. The audience will be encouraged to reflect on their own assessment processes and on the usefulness of visualization techniques to identify rater effects and biased evaluations.

This work is supported by the UPV/EHU (EHUA 16/22) and the Office of the Vice-Chancellor for Innovation, Social Engagement and Cultural action of the UPV/EHU through the SAE-HELAZ (HBT-Adituak 2018-19/6).
Integrate Disparities

Franziska Widmer

Bachelor students in social work at a university of applied sciences have diverse educational backgrounds. As a consequence, during a lecture, one group may feel overwhelmed whereas the other group is bored and not challenged enough.

The hypothesis of the SoTL project is thus the following: What can be done in the process of lesson preparation and during the actual lecture to address the heterogeneity of the students in order to best serve their needs and interests so that as many students as possible feel challenged, neither bored nor overwhelmed?

The goal of the project is to take material from an already existing course and rework the course based on theory. Feedback from students is used to determine whether their level of theoretical and practical knowledge has been addressed. The results serve to critically examine the usefulness of the measures applied and to develop considerations for further adaptation for diversity-sensitive teaching.

Theory-based proposals dealing with such disparities are incorporated in presentations and lectures, mostly based on last year’s material.

The research bases on three qualitative group interviews and by an anonymous evaluation. The material is evaluated with content analysis based on Mayring.

Results: The general level of adaption to previous knowledge is satisfying. The need of repetition of knowledge from previous courses has been discussed controversial. A need students acknowledge is to have theory more merged with practical issues. Students know what workload they can expect, but they wish to have tasks given as early as possible, to have a better chance to join lectures well prepared. This might be a possibility to enhance accessibility.

Instruction for composition for group work is important to establish a trustful learning atmosphere.

Last not least, hardly any conclusions can be drawn about motivation, interest and satisfaction from the behavior of students in class.

Enhancing Student Engagement with Physics Textbooks to Frame More Meaningful Learning Experiences

Shawn M Willis, Randall E Carlson, Jessica H Dwyer

The United States Air Force Academy Department of Physics incorporates a supplemental journal to complement the calculus-based physics textbook used in each of its introductory physics courses. The journals are designed to promote deeper student examination of the material and to identify areas of student difficulty. Integrating worked examples and explanatory question sets into the journal is a teaching strategy the department implemented to encourage students to think more critically about physics concepts and establish or strengthen scaffolding. The feedback gleaned from student answers informs an instructor’s process for selecting appropriate lesson activities aimed at helping resolve student misconceptions. Instructors also use Just-in-Time Teaching assignments to garner awareness of the cognitive status of the class, which allows them to tailor learning experiences accordingly. The faculty recently administered surveys to the introductory physics students to gain insight about the following three key areas: a) the overall value students placed on the journal exercises, b) which elements of the journal students viewed as most useful, and c) how
Building a Culture of Reflective Practice in Athletic Therapy Students

Michelle Yeo, Mark Lafave, Jeffery Owen

Based upon an evolving culture and recent changes to professional standards in Athletic Therapy (AT) in Canada, calling for implementation of competency-based curriculum by the year 2020 (Lafave et al., 2016), the AT faculty at our institution agreed to implement a clinical presentation (CP) approach to facilitate competency-based curriculum requirements (Dornan, Boshuizen, King, & Scherpber, 2007). This innovation to pedagogy required a re-imagination of how teaching, learning and assessment is approached (Yeo et al., 2017). Our team is currently in the midst of a longitudinal study, focusing both on student learning as well as faculty development within this curriculum transformation.

We are in the third year of our mixed method study to understand the student experiences using CP logbooks and how it may impact their learning in AT. A second aspect of the study is faculty development and understanding within the curriculum transformation. Early results have already led to pedagogical and assessment changes. Since this is a longitudinal study, multiple cohorts are being studied.

Part of the new approach involves students tracking their own competence through a CP logbook and portfolio. Students record their interactions with specific clinical presentations over the entire program and reflect weekly on their learning. In the early phases of this implementation, instructors noticed students struggling with this reflective activity. We are in the process of inquiring into this resistance more deeply. We wonder about potential causes of the source of this resistance, such as cognitive overload, difficulty in understanding the value and process of reflective practice, affective aspects (Middendorf et al., 2015), and cultural factors within the profession of Athletic Therapy. Instructors have begun to address these issues through different approaches to assessment and obtaining feedback.

In our interviews, we have asked students about their reflective process and have begun to learn about their challenges. For example, participants felt unsure about what was expected from the reflective process, sometimes had difficulty identifying appropriate experiences to reflect about, and were challenged to dedicate time to reflection while engaged in practical learning experiences. Participants also commented on the feedback they receive from instructors. Additionally, we intend to interview instructors who are encountering “reflective resistance” in their students. Our poster will present results of this inquiry, using a qualitative approach with thematic analysis of the interviews with students and instructors, as we work towards creating a culture of learners.
What Else Can Be Learnt in a Project-Based Course Beyond Knowledge?

Ya Zhou, Yao Hu, Yuejin Zhao, Liquan Dong, Ming Liu, Lingqin Kong

Unlike traditional, teacher-led classroom activities, students often must organize their own work and manage their own time in a project-based class. Project-based instruction differs from traditional inquiry by its emphasis on students’ collaborative or individual artifact construction to represent what is being learned. It also gives students the opportunity to explore problems and challenges that have real-world applications, increasing the possibility of long-term retention of skills and concepts. Unlike traditional course in which gaining the professional knowledge is the highest priority, there are a lot of personal and interpersonal skills involved in a project-base course. In this paper, we would like to discuss one issue: What else can be learnt in a project-based course beyond knowledge?

The analysis and discussion are based on a 12-week-long project-based experimental course Optoelectronic Instrument Experiments (OIE), which is a lecture-lab course which aims to familiarize students with the principal ideas of optoelectronic apparatus design and train students to apply the knowledge to identifying, analyzing and solving problems in optoelectronic system construction. According to our experience and efforts on this course for nearly 10 years, we find that at least two attributes can be involved in a project-based course.

Self-awareness of their aptitude: Students from China are always intelligent but lack creativity. This is partially because of the reserved or implicit culture. In the traditional single assessment criterion education circumstance, students chase for the high marks even without knowing their interests or aptitudes. In OIE, we try to encourage the students to dig their aptitudes and help them prepare themselves for engineering-related jobs in the further, by which we called “Aptitude Digging Education”.

Teamwork in real engineering environment: Collaboration is one of the most treasured attributes for a qualified contemporary engineer. In order to work in modern team-based environments, students must develop the interpersonal skills of teamwork. However, teamwork in real engineering environment is not always like it is in a band. You will not always work with people who share the same interests and are at a similar competence level. There must be task assignment and benefit distribution. In OIE, we designed several strategies to expose the student to a real engineering environment and let them deal with it. Our purpose is to find a way to make student learn the interpersonal skill of working in team.

Reciprocal Review as Educational Development: Diversifying the SoTL Landscape

Sue Fostaty Young, Meagan Troop

In our poster session, we plan to delve into the collaborative writing process currently undertaken to produce an edited volume on the ICE model (Fostaty Young & Wilson, 2000; Fostaty Young, 2005). With chapters from twelve contributors working at universities in Japan, Sweden, and Canada, who describe the diverse ways that each have adapted the ICE model of thinking, learning, and assessment into their teaching practices, this edition will foster a culture that learns through a reciprocal review process. Interestingly, while each author reported the transformative effects of the model on both their conceptions of learning and their approaches to course delivery and assessment, their uses of the model each differ from the others’. The reciprocal review process adopted for the collaboration evolved through the editor’s conceptual weaving of a variety of sources: Wilcox’s (2009) work on self-study as educational development; Wyatt and Gale’s (2014) exposition of collaborative writing as inquiry; Troop’s (2017) examination of keyword writing; Healey, Marquis and
Vajoczki’s (2013) exploration of SoTL through collaborative writing groups; and the Bowen theory-informed use of Teaching Triangles. Building on these process pedagogies, the interdisciplinary and international lens of this latest edition will be highlighted through the multiple collaborative case studies that are shared.

In the summer term of 2018, each author was invited to contribute a chapter to illustrate: (a) their teaching context, (b) their use of the ICE model, (c) the impact of their application of the model on their students’ learning, and (d) their own development as post-secondary educators. As part of the inquiry process, it is expected that with the act of articulating their experiences, each author will gain greater insight into their own teaching practice, as well as into their students’ learning. Nevertheless, the greatest potential for professional growth for the contributors and editor alike is expected to be gained through the review process, whereby each author reviews chapters written by two other contributors – one from a discipline closely related to their own and one from a discipline they are less familiar with. In much the same way that Teaching Triangles invite participants to reflect on their own practice rather than to critique others’ teaching, our use of reciprocal review is designed as an invitation to broaden and deepen our conceptions of teaching and learning through the diverse exchange of perspectives and experiences within a developing SoTL community of practice.

Living Diversity - Internationalisation through the Course Open Networked Learning

Lotta Åbjörnsson, Lars Uhlin, Alastair Creelman, Maria Kvarnström

The Open Networked Learning course is organised collaboratively by educational developers at Lund University, Karolinska Institutet and Linnaeus University, Sweden, with several collaborating institutions in Sweden and abroad, including The Independent Institute of Education/Varsity College, South Africa. Inviting anyone with an interest in the area, the course mixes participants from the collaborating institutions with non-affiliated learners in small groups, working online assisted by facilitators from either of the institutions and co-facilitators who are previous course participants. This structure means each group contains a mixture of people from different cultures and contexts, providing “internationalisation at home” - a great opportunity for all.

The course uses open, free digital tools and social media and covers four topics over eleven weeks: Online participation and digital literacies, Open learning - sharing and openness, Learning in communities - networked and collaborative learning, and Design for online and blended learning. More than 600 people from all continents have participated so far.

The ideas behind the course are manifold: most universities need courses for teachers about using digital tools for teaching and learning, the student body is changing towards greater diversity, and most universities’ strategic documents include a section about the value of internationalisation. Collaborating beyond institutional and geographical borders, this course creates an arena for learning, not only about the use of digital tools for teaching and learning, but also about collaborating and learning in a cross-cultural and -contextual community of peers, thus constituting an example of a truly inclusive learning culture. Course evaluations show the mix of participants to be considered valuable for learning – some examples: “This, if anything, highlighted the value of online engagement as it allows people from all over the world to come together and talk! It was a valuable learning experience.” “Increased the element of curiosity, moved our comfort zone and was interesting to learn different perspectives from across the globe.” “Learning about and appreciating differences in experience and outlook was to a large extent very valuable for my learning.”