Conference Sponsors & Exhibitors

The ninth annual conference of The International Society for the Scholarship of Teaching and Learning has been made possible through the generous support of the following sponsors:

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Centre for Leadership in Learning, McMaster University

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Journal of the Scholarship of Teaching and Learning
Office of the Dean & Vice-Presidents, Faculty of Health Sciences, McMaster University
Office of the Vice-President, Research & International Affairs, McMaster University

Conference laptops sponsored by Dell Canada.

ISSOTL 2012 also received support from the Social Sciences and Humanities Research Council of Canada.

Exhibitors
John Wiley & Sons Canada and Wiley Learning Institute
The Journal of the Scholarship of Teaching & Learning
Ontario Institute for Studies in Education, University of Toronto
Routledge
The Society for Teaching and Learning in Higher Education (STLHE)
Stylus Publishing
Teaching & Learning Inquiry
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsors &amp; Exhibitors</td>
<td>2</td>
</tr>
<tr>
<td>Letters of Welcome</td>
<td>4</td>
</tr>
<tr>
<td>General Information</td>
<td>9</td>
</tr>
<tr>
<td><strong>About ISSOTL</strong></td>
<td></td>
</tr>
<tr>
<td>About the Society and Membership Benefits</td>
<td>13</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>14</td>
</tr>
<tr>
<td>Founding Members</td>
<td>15</td>
</tr>
<tr>
<td>ISSOTL Committees</td>
<td>16</td>
</tr>
<tr>
<td>ISSOTL Interest Groups</td>
<td>18</td>
</tr>
<tr>
<td><strong>ISSOTL 2012 Conference</strong></td>
<td></td>
</tr>
<tr>
<td>Conference Committee</td>
<td>20</td>
</tr>
<tr>
<td>Proposal Reviewers</td>
<td>21</td>
</tr>
<tr>
<td>Plenary Speakers</td>
<td>23</td>
</tr>
<tr>
<td><strong>Schedule</strong></td>
<td></td>
</tr>
<tr>
<td>Monday-Wednesday</td>
<td>27</td>
</tr>
<tr>
<td>Thursday</td>
<td>41</td>
</tr>
<tr>
<td>Friday</td>
<td>143</td>
</tr>
<tr>
<td>Saturday</td>
<td>217</td>
</tr>
<tr>
<td><strong>Presenters Index</strong></td>
<td>240</td>
</tr>
<tr>
<td><strong>Maps</strong></td>
<td></td>
</tr>
<tr>
<td>Downtown Hamilton</td>
<td>250</td>
</tr>
<tr>
<td>Convention Centre</td>
<td>251</td>
</tr>
<tr>
<td>Sheraton</td>
<td>252</td>
</tr>
<tr>
<td><strong>Advertisements</strong></td>
<td>253</td>
</tr>
</tbody>
</table>
Dear ISSOTL 2012 Delegates,

On behalf of McMaster University, it is my sincere pleasure to welcome you to Hamilton for the 9th Annual International Society for the Scholarship of Teaching and Learning (ISSOTL) Conference.

We are delighted to have the opportunity to host this event and to bring together a diverse group of like-minded scholars and educators from around the world to focus on the critical goal of enhancing learning opportunities and creating stimulating learning environments that enable our students to excel. The work of ISSOTL and its members is crucial in allowing us to consider the latest findings, learn from best practices, and generate new ideas. At McMaster we regard our educational work as inseparable from other essential parts of our mission and the work of ISSOTL clearly demonstrates the successful integration of teaching and learning with research, advancing as it does the state of knowledge about student learning in higher education through scholarly inquiry.

This year’s conference theme, “Research on Teaching and Learning: Integrating Practices,” reminds us of the importance of acting upon and utilizing new knowledge once it is discovered. We are looking forward, over the next several days, not only to sharing ideas and findings about enhancing student learning in higher education, but also to discussing and debating means of integrating these discoveries into our distinct programs and curricula in ways that are meaningful, practical and sustainable.

When thinking about the benefits of integration, a number of other key considerations come to mind: the importance of including student voices in conversations and decisions about educational quality, the value of bringing multiple disciplinary perspectives to bear on challenges we encounter, and the generative potential of meaningful exchange and collaboration between individuals from diverse national and international contexts. This conference provides the opportunity to address all these themes, and I look forward to the exciting ways in which its outcomes will enhance learning and teaching both at McMaster and beyond.

My thanks to the conference organizers for their hard work and dedication and my very best wishes to you all for a stimulating and successful conference.

Sincerely,

Patrick Deane,
President & Vice-Chancellor
Welcome from the President and Board of ISSOTL

I am happy to welcome you to ISSOTL 2012, the ninth annual conference of our organization. We are delighted with the outstanding preparation done by the organizing committee at McMaster University, and we especially appreciate the vision and energy demonstrated by Beth Marquis and Susan Vajoczki from the Centre for Leadership in Learning. We convene a gathering of members and colleagues each year because face-to-face conversations and interactions support development of teaching and learning in open-ended and generative ways. I believe you will find the program has a rich range of topics across the scholarship of teaching and learning, with sessions that connect with a wide spectrum of interests and activities.

We are also happy to have launched the ISSOTL journal, *Teaching and Learning Inquiry*, which will provide a second venue for the exchange of ideas, research, practices, and examples of evidence-based scholarship. Through the leadership of editors Nancy Chick and Gary Poole, the journal will twice a year provide an account of our colleagues’ work in a format that reaches an audience beyond those who attend the annual conference. A permanent record also allows for more extended reflection and consideration of the content, and more people can use and build upon the work of scholars in our part of the teaching and learning professional arena. I hope you will find the new journal to be a useful extension of the intellectual community we sustain through our annual conference.

Looking ahead, ISSOTL is also working on identifying a next-generation online communication and collaboration space. While our journal will appear twice a year, we hope that our community can also engage the issues and topics of our field within an even shorter turnaround cycle. If possible, we hope to promote and capture the kind of high quality interactions that abound during the annual meeting, but have those opportunities continue throughout the time between conferences. Tools for such exchange are available, and we invite members to help identify the most effective and user-friendly formats possible for this next extension of our community’s activities.

Please enjoy this gathering of SOTL scholars from around the world, and I look forward to seeing you again next year in Raleigh, North Carolina, when we celebrate the 10th annual ISSOTL conference, hosted by a consortium of schools led by Elon University.

Dan Bernstein
*ISSOTL President*
Dear ISSOTL 2012 Conference Attendees,

We are excited to welcome you to Hamilton for ISSOTL 2012, the ninth annual conference of the International Society for the Scholarship of Teaching and Learning. It is an honour and privilege to host this conference in our “City of Waterfalls”.

Over the past eight years, ISSOTL conferences have consistently worked to enhance teaching and learning in higher education by providing a context for conversation, exchange and collaboration across disciplinary, situational and geographical boundaries. We look forward, over the next several days, to continuing this tradition, and to learning with and from the hundreds of scholars from around the world who have come to Hamilton to exchange ideas, to initiate or extend collaborations and to share research results. We’re particularly happy to welcome a large number of students, who will be taking part in this year’s meeting as plenary speakers, as session presenters, as volunteers, as delegates, and as pre-conference collaborative writing group members. Students are an integral part of our scholarly community, and we’re thrilled to have the opportunity to connect or to re-connect this week with a diverse group of learners who are passionate about teaching, learning and SOTL.

In an attempt to further facilitate collaboration and knowledge creation, this year’s conference features a new International Collaborative Writing Groups initiative, which brings together scholars from around the world to co-author reflective pieces on teaching and learning. Nine international groups of students, faculty, administrators and staff will meet early this week to develop their collaboratively authored articles, continuing work they began virtually months ago and will resume again online after the conference ends. The final papers will be submitted for peer review to ISSOTL’s new journal, Teaching and Learning Inquiry, and accepted submissions will be published in a special issue in time for ISSOTL 2013. We feel certain that the work to be created by these groups will be provocative and stimulating, and we look forward to conversation about it at next year’s conference and beyond.

We would like to extend our sincere thanks to all of our conference sponsors. They have been integral to the success of this event, and we wholeheartedly appreciate their support. Likewise, this conference would not have come to fruition without the tireless efforts of our international organizing committee. For months, they have worked diligently to bring together all of the individual elements that compose a conference, and they could not have done a better job. Please refer to the lists of sponsors and organizers in this program to recognize the partnerships that have made this meeting possible.

We hope you enjoy both the conference and your stay in Hamilton, and that you take advantage of this exciting opportunity to share ideas, to learn something new, and to collaborate with your peers. If there’s anything we can do to make your conference experience more enjoyable or productive, please don’t hesitate to be in touch over the coming days.

Beth Marquis & Sue Vajoczki
Co-Chairs, ISSOTL 2012
Dear ISSOTL Conference Delegates,

On behalf of Hamilton City Council and all the residents of the City of Hamilton, I extend a sincere and warm welcome to all delegates attending the 2012 International Society for the Scholarship of Teaching and Learning (ISSOTL) Conference on October 24-27, 2012. It is an honour for our city to host ISSOTL 2012, a prestigious event, and we are ready to host you in grand style.

It is wonderful to know that ISSOTL is an international, professional and scholarly society devoted to fostering and disseminating research on teaching and learning in higher education. I trust that the convention will provide delegates and visitors the opportunity to enhance, teach and learn by creating a context for conversation and exchange between teaching and learning scholars from a range of disciplines, institutions, and countries.

I hope that you will take advantage of some of your free time to explore the many entertaining sights and sounds of Hamilton and sample some of our many fine restaurants and shopping areas. Our community has much to offer for all who attend the 2012 International Society for the Scholarship of Teaching and Learning (ISSOTL) Conference and we are very proud to welcome this important event to Hamilton.

Best wishes for a successful and memorable convention. We look forward to your next visit.

Sincerely,

Bob Bratina
Dear Colleagues,

The Society for Teaching and Learning in Higher Education is privileged to have a long and close relationship with ISSOTL since its inception in 2004. STLHE strives to be the pre-eminent Canadian voice, and a world leader, for enhancing teaching and learning in higher education. We share ISSOTL’s goals to foster inquiry, its dissemination and application driven by scholarly ways of improving learning and teaching.

These aligned goals have resulted in something of personal value to both organizations—friendship, fellowship and partnership which we know will continue despite the dramatic change and turbulence we can continue to expect in post secondary education.

We embrace change because it is the essence of what we do to learn about learning even though the process and the meanings we derive sometimes appears in absolute, relative, transitory and/or in contextual terms. In a recent post, Bill Tierney, President of AERA identified several challenges, which resonate loudly for all who have a stake in education. These include new ways of how we publish and communicate; re-imagining annual meetings; offering (and examining?) massive online open courses already reaching millions of learners around the world; and improving our reach to multiple constituencies.

When ISSOTL and like-minded organizations like STLHE and ICED (International Consortium for Educational Development representing 22 countries) commit to shared conversations based on knowledge of good theory and practice, empirical evidence and creative imagination, we become more confident to help shape change and take action for the next generation of learners. We are all advocates to advance learning for tomorrow’s world, which is of immense importance to the future of learners as individuals, citizens and workers.

As we mark another milestone in our journey together, I hope each of you will draw from the conference theme of integrating practice, from the organizational inspiration of the Conference co-Chairs, Sue Vajoczki and Beth Marquis, and from the leadership of President Dan Bernstein, President-elect, Joëlle Fanghanel, and the rest of the ISSOTL executive.

Please take this opportunity to reconnect with friends and make new ones. I look forward to speaking with you over the next few days and to personally wish you a memorable conference.

Best wishes,

Arshad Ahmad
President, STLHE
3M National Teaching Fellow
General Information

Accessibility
All conference session rooms are wheelchair accessible. Elevators at the Convention Centre can be found in the front lobby area and in the underground parking lot, and provide access to the second and third floors. Elevators at the Sheraton are located on every level including parking. The Sheraton’s lobby bar, LOFT Lounge, is also wheelchair accessible.

Conference presenters have been encouraged to consider physical, sensory and intellectual accessibility when crafting their posters, presentations and panels. ASL interpretation will be provided for plenary sessions. The plenaries will also be recorded, captioned, and made available electronically following the conference.

We are committed to making this conference accessible to all participants. If there is anything we can do to assist you, please let a volunteer or a member of the staff at the registration desk know.

Assistance/Registration
At the registration desks on the Second Floor of the Sheraton and the Third Floor of the Convention Centre, you will find staff and volunteers who are available to provide you with your registration materials and answer any questions you might have. Volunteers, who can be identified by the maroon-coloured ISSOTL 2012 t-shirts they will be wearing, will also be circulating through the two conference venues to provide assistance as necessary. Feel free to ask these people for information, directions, or other assistance.

Registration Desk Hours

<table>
<thead>
<tr>
<th>Day</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Monday-Tuesday</td>
<td>Sheraton (Ballroom Foyer, 2nd floor)</td>
<td>7:30am – 3:30pm</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Sheraton (Ballroom Foyer – 2nd floor)</td>
<td>7:30am – 3:00pm</td>
</tr>
<tr>
<td></td>
<td>Convention Centre (Chedoke Foyer – 3rd floor)</td>
<td>3:30pm – 7:30pm</td>
</tr>
<tr>
<td>Thursday</td>
<td>Convention Centre</td>
<td>7:30am – 5:30pm</td>
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<tr>
<td>Friday</td>
<td>Convention Centre</td>
<td>7:30am – 5:30pm</td>
</tr>
<tr>
<td>Saturday</td>
<td>Convention Centre</td>
<td>8:00am – 12:00pm</td>
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</tbody>
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Banquet
An optional conference banquet will be held on the evening of Friday, October 26, 2012, beginning at 6:30pm. This event will feature a full, catered dinner, local entertainment, and opportunities to connect with other conference delegates in a social setting. The banquet will be held at Liuna Station, a beautiful hall that sits within a converted neoclassical train station built by the Canadian National Railway in 1930.

If you purchased a banquet ticket when you registered, this will be included in your conference registration materials. If you would like to add a banquet ticket, you may purchase one at the registration desk until the end of the day on Thursday, October 25. The cost is $95 per ticket.

A bus will be available to transport delegates to/from the banquet. Information about pick up and drop off times and locations can be found at the registration desk. If you would prefer to take a taxi, a flat rate of $6.50 is available to/from the Sheraton Hotel. (See the transportation section below for taxi contact information.) Please state that you are from the ISSOTL Conference in order to receive a discounted rate from another departure location.

Collaboration Tables
For those of you looking for a place to exchange ideas with other conference delegates, tables for meetings and for more informal conversations can be found in the Webster Lounge on the 3rd floor of the Convention Centre. If you’d like to chat over food/drink (outside of the meals and refreshment breaks provided with registration) Chagall’s restaurant and the LOFT lounge at the Sheraton are also options.
## General Information

### Conference bag
As a memento of the 2012 ISSOTL Conference, we are pleased to provide you with a reusable tote bag, made of post-consumer recycled materials. If you do not wish to keep your conference bag, you have the option to donate it back to the conference. All returned tote bags will be donated to the United Way of Burlington and Greater Hamilton – a non-profit organization whose mission is to improve lives and build community by engaging individuals and mobilizing collective action. If you wish to donate your bag, look for the sign marking the ‘conference bag return’ area at the registration desk.

### Conference meals and refreshment breaks
Light breakfasts (Thursday, Friday and Saturday) and lunches (Thursday, Friday) will be available for all conference registrants in the Chedoke room of the Convention Centre. Refreshments will also be provided at the receptions on Wednesday and Thursday evening, and at daily refreshment breaks. For individuals registered in pre-conference workshops or in the Council on Undergraduate Research (CUR) symposium, breakfast, lunch and morning and afternoon refreshment breaks will also be available on Wednesday October 24. Participants in the pre-conference Collaborative Writing Groups on Monday-Tuesday October 22-23 will likewise receive breakfast, lunch and two refreshment breaks, as well as dinners on Sunday October 21 and Monday October 22. Please check your conference program for specific times and locations.

### Dining outside the conference
Arrangements have been made with several local restaurants to provide conference registrants with discounted dining options. To receive a discount, simply let the server know you’re attending the conference and show your name badge. A list of restaurants offering discounts will be available at the registration desk. You can also choose to sign up for a ‘Dine-Around’ to meet and network with other delegates over dinner one evening. If you are interested in participating in a Dine-Around group, please sign up at the conference registration desk by 12:00pm on the date on which you’d like to take part. The reservation will be made for you. Participants will meet in the lobby at a pre-arranged time, and will travel to the restaurant for an evening of fun and good food. Most of the restaurants will be within easy walking distance; the sign-up sheet will indicate if a cab ride is a better option. If so, participants would share a cab. Each participant will pay for his/her own meal. A list of restaurants will be available at the conference registration desk.

### In case of emergency
Dial “0” on any house phone at the Sheraton and “3000” on any house phone at the Convention Centre to be connected to switchboard/reception, which will connect with police/fire/ambulance.

### Exhibits
This year’s Exhibitors Fair will include a number of publishers and organizations that support, foster, and/or disseminate teaching and learning research. Many of these groups will have publications and other materials available for order/purchase, and all will have useful resources and ideas to share. The fair will be located in the Chedoke Foyer (3rd floor) of the Convention Centre, at the following times:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, October 25</td>
<td>10:00am – 6:30pm</td>
</tr>
<tr>
<td>Friday, October 26</td>
<td>10:00am – 5:00pm</td>
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</tbody>
</table>


Other publishers or organizations will have material in your registration package and/or at a ‘common table’ in the exhibits area. These include: The Althouse Press, The Council of Ontario Universities, The Higher Education Quality Council of Ontario, Indiana University Press, McGraw-Hill Canada, Sage Publications UK, and Taylor & Francis Group UK.

### Internet access
Wireless service is available in all session rooms at the Sheraton and the Convention Centre. To connect at the Sheraton, please click on network named for the area of the hotel you are in and
General Information

enter the password ‘issotl12’. To connect at the Convention Centre, please click on the server named HECFI. No password is required in the Convention Centre. If you need help with connecting to the internet, please ask a conference volunteer or inquire at the registration desk.

If you’re looking for a place to sit and check email or conduct other business online, the following locations are available:

Sheraton:
‘The Link @Sheraton Experienced with Microsoft’ is located on the Plaza level next to the LOFT lounge. This area is open to all conference delegates, and includes 6 computer terminals, WiFi access, and a printer.

Convention Centre:
The Webster lounge (3rd floor) contains a number of chairs and tables at which delegates can sit to work on their own laptops or mobile devices.

In-room internet access is included in the room rates for all delegates who booked a room from the conference block at the Sheraton. If you booked your room in an alternate fashion, a separate charge for in-room internet may apply.

Lost and found
Any found item may be turned into the registration desk at the Sheraton (Ballroom Foyer, 2nd floor) or the Convention Centre (Chedoke Foyer, 3rd floor). Please note the registration desk hours listed above.

Mobile Program
In order to make the conference as green as possible, and in an attempt to respect a variety of participant preferences, we have created several electronic versions of this year’s conference program. In addition to the online web version and the downloadable PDF available from http://issotl12.com/program/, we have also created an interactive, mobile version of the program that is compatible with smart phones and tablets, using software provided by ‘Guidebook’. This mobile program allows you to pick sessions you’d like to attend and add them to a personal conference agenda, amongst other things.

To access the mobile program, download the Guidebook app at http://guidebook.com/getit/. Once you’ve opened the app on your device, click on ‘Download Guides’ and then ‘Re Redeem Code’ (or just on ‘Re Redeem’ if you’re a Blackberry or Windows Phone 7 user) and enter the code issotl12.

Name badges
Name badges are your “ticket” to lectures, poster sessions, exhibits, and social events. For security and administrative purposes, you must wear your name badge in a visible manner to all conference functions. Please note that you will require a separate ticket for the banquet if you wish to attend.

Parking
Sheraton:
Daily rate for hotel guests is $9.99 with in and out privileges. If you need to park a vehicle, this charge will be added to your room account. Non-guest daily rate is $9.00, with no in and out privileges.

Convention Centre:
Daily rates are $9.00 (6am-6pm) and $6.00 (6pm-6am). Cash and credit accepted at paystations.

Photos/Videos
Still photos and videos will be taken throughout the conference. These photos/videos could be posted to the conference/ISSOTL websites or included as part of published descriptions or archives of the conference activities. If you do not wish to have your photo taken, please consult the registration desk.
General Information

**Program Changes**
Changes or additions to the program will be listed on a board and/or a digital display at the conference registration area. Please check for changes daily.

**Sustainability**
Conference bags are made from post-consumer recycled materials and can be kept for your own personal use or returned to the conference for donation to the United Way of Burlington and Greater Hamilton. In an attempt to increase re-usability and minimize ink usage, these bags do not include the conference logo.

Water stations are available in both conference venues. You are encouraged to bring your own reusable water bottles and fill them at these stations. Likewise, you are welcome to bring a reusable travel mug to use for coffee and tea at refreshment breaks. All food waste from breakfasts, breaks and lunches will be composted, and biodegradable plates, cups and utensils are used for serving. Individual wrapping will be avoided for meals and refreshment breaks wherever possible.

In order to reduce paper usage, several electronic options have been provided for this year’s conference program. Both an online version of the program and a downloadable PDF are available from the conference website at: http://issotl12.com/program/. A mobile version of the program that will work on smart-phones and iPads has also been created through ‘Guidebook.’ (See ‘Mobile Program’ above for information about how to access this version). Delegates were given the option to forego a print program in favour of these electronic options when registering, which allowed us to reduce the total number of hard copies printed. We would ask that you please take a hard copy of the program ONLY if you indicated that you would like one when you registered.

Name badges will be collected at the end of the conference so that they can be reused at future events. Please return your badge to the marked bins at the registration desk.

**Transportation**

**Local Taxi Service** —
Flat rates are available for conference delegates with local taxi companies. Please state that you are from the ISSOTL 2012 Conference to receive the flat rate. If your service was acceptable, a 10-15% tip is customary. Wheelchair accessible vehicles available on request.

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<tr>
<th>Company</th>
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<tbody>
<tr>
<td>Blue Line Taxi</td>
<td>905-525-2583</td>
</tr>
<tr>
<td>Hamilton Cab</td>
<td>905-777-7777</td>
</tr>
</tbody>
</table>

**Local Public Transit** — Fare: $2.55
Hamilton Street Railway Company (H.S.R) 905-527-4441

**Airport Transportation**
Airways Transit 905-689-4460

**Things to do in the Hamilton Area**
Please visit the City of Hamilton table near the registration desk for information about things to do in and around the city while you’re not attending the conference.

An optional tour to Niagara Falls has been arranged for delegates able to remain in the Hamilton area on Sunday, October 28. Interested delegates can sign up and pay for this tour by filling out the form at: http://www.seesight-tours.com/mc master.html. Those who have registered should meet in the lobby of the Sheraton at 9:00am on Sunday October 28 for pick up. The bus will return you to the Sheraton at approximately 5:00pm that evening.

**Twitter Account**
Follow @issotl12 for updates regarding the conference and news on teaching & learning. Those tweeting during the conference can use the hashtag #ISSOTL12.
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. The goal of the Society is to foster inquiry and disseminate findings about what improves and articulates post-secondary learning and teaching. ISSOTL is organized to:

- Recognize and encourage scholarly work on teaching and learning in each discipline, within other scholarly societies, and across educational levels
- Promote cross-disciplinary conversation to create synergy and prompt new lines of inquiry
- Facilitate the collaboration of scholars in different countries and the flow of new findings and applications across national boundaries
- Encourage the integration of discovery, learning and public engagement
- Advocate for support, review, recognition, and appropriate uses of the scholarship of teaching and learning.

ISSOTL membership is open to all. Membership categories include administrator/faculty/staff, retired faculty/staff, part-time faculty/staff, and student. For current membership fees and benefits, see www.issotl.org.

Membership benefits include:

- Participation and community in ISSOTL
- Subscription to ISSOTL's Journal, Teaching and Learning Inquiry
- Voting rights in organizational business, including the election of officers
- Subscription to The International Commons, ISSOTL's online newsletter
- Discounts on ISSOTL conference fees
- Opportunities to join the growing list of ISSOTL Interest Groups or start a new one
- Interactions and collaborations with an international scholarly community
- Opportunity to shape an exciting international organization
- Advance notices of ISSOTL activities and conferences
- Access to the Scholarship of Teaching and Learning Database
- Discounts of 15%-40% on related journals and books. For a current list, see www.issotl.org

Get Involved

- Publish your news, reviews, research, and opinions in The International Commons.
- Communicate with members through the ISSOTL-Discuss Listserv.
- Network with members through the ISSOTL Facebook Page.
- Volunteer for an ISSOTL committee, such as Going Public, Vision and Planning, Leadership and Elections, Membership and Communications.
- Contribute to an ISSOTL Interest Group
- Join a current group, such as those on Student Engagement, Sociology, Problem-Based Learning, the Humanities, Multi-national Teaching Fellows, and Students as Co-inquirers.
- Form a new group. The Society particularly encourages Interest Groups with international membership and non-traditional groupings based on research interests.

ISSOTL Conferences Around the World

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>“The Scholarship of Teaching and Learning: Perspectives, Intersections, and Directions”</td>
<td>Bloomington, IN, USA</td>
<td>October 21-24</td>
</tr>
<tr>
<td>2005</td>
<td>“Commitment, Community, and Collaboration”</td>
<td>Vancouver, British Columbia, Canada</td>
<td>October 14-16</td>
</tr>
<tr>
<td>2006</td>
<td>“Making a Greater Difference: Connecting to Transformational Agendas”</td>
<td>Washington, DC, USA</td>
<td>November 9-12</td>
</tr>
<tr>
<td>2007</td>
<td>“Locating Learning: Integrative Dimensions in the Scholarship of Teaching and Learning”</td>
<td>Sydney, Australia</td>
<td>July 2-5</td>
</tr>
<tr>
<td>2008</td>
<td>“Celebrating Connections: Learning, Teaching, Scholarship”</td>
<td>Edmonton, Alberta, Canada</td>
<td>October 16-19</td>
</tr>
<tr>
<td>2009</td>
<td>“Solid Foundations, Emerging Knowledge, Shared Futures”</td>
<td>Bloomington, IN, USA</td>
<td>October 22-25</td>
</tr>
<tr>
<td>2011</td>
<td>“Transforming the Academy through the Theory and Practice of SOTL”</td>
<td>Milwaukee, WI, USA</td>
<td>October 20-23</td>
</tr>
<tr>
<td>2012</td>
<td>“Research on Teaching and Learning: Integrating Practices”</td>
<td>Hamilton, Ontario, Canada</td>
<td>October 24-27</td>
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<tr>
<td>2013</td>
<td>“Critical Transitions in Teaching and Learning”</td>
<td>Raleigh, NC, USA</td>
<td>October 3-6</td>
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<tr>
<td>2014</td>
<td></td>
<td>Quebec City, Quebec, Canada</td>
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<tr>
<td>Name</td>
<td>Title</td>
<td>Institution</td>
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<tr>
<td>Dan Bernstein,</td>
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</tr>
<tr>
<td>Randy Bass,</td>
<td>Past-President</td>
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<td><a href="mailto:bassr@georgetown.edu">bassr@georgetown.edu</a></td>
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<td>Academic Developer</td>
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<td>Anthony Ciccone,</td>
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<td>Director, Center for Instructional and Professional Development and Professor of French</td>
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<tr>
<td>Michele Scoufis,</td>
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<td>Associate Dean</td>
<td><a href="mailto:michele.scoufis@sydney.edu.au">michele.scoufis@sydney.edu.au</a></td>
</tr>
<tr>
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<td>Assistant Professor</td>
<td><a href="mailto:nicola.simmons@brocku.ca">nicola.simmons@brocku.ca</a></td>
</tr>
<tr>
<td>Mary Ann Danielson,</td>
<td>Secretary</td>
<td>Associate VP for Academic Excellence and Assessment and Professor of Communication Studies</td>
<td><a href="mailto:maddam@creighton.edu">maddam@creighton.edu</a></td>
</tr>
<tr>
<td>Barbara Gayle,</td>
<td>Treasurer</td>
<td>Vice President for Academic Affairs and Dean of Graduate Studies</td>
<td><a href="mailto:bmgayle@viterbo.edu">bmgayle@viterbo.edu</a></td>
</tr>
<tr>
<td>Jeff Bernstein,</td>
<td>Conference Liaison</td>
<td>Professor of Political Science</td>
<td><a href="mailto:jeffrey.bernstein@emich.edu">jeffrey.bernstein@emich.edu</a></td>
</tr>
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</table>
## ISSOTL Founding Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Jane Aiken</td>
<td>Georgetown University</td>
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<tr>
<td>Thomas Angelo</td>
<td>Victoria University of Wellington</td>
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<tr>
<td>Peter D. Ashworth</td>
<td>Sheffield Hallam University</td>
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<tr>
<td>Marcia Babb</td>
<td>Carnegie Foundation</td>
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<tr>
<td>Bob Bain</td>
<td>University of Michigan</td>
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<tr>
<td>Randy Bass</td>
<td>Georgetown University</td>
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<tr>
<td>Spencer Benson</td>
<td>University of Maryland</td>
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<tr>
<td>Dan Bernstein</td>
<td>University of Kansas</td>
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<tr>
<td>Angela Brew</td>
<td>University of Sydney</td>
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<tr>
<td>Suzanne Burgoyne</td>
<td>University of Missouri</td>
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<tr>
<td>Mary Burman</td>
<td>University of Wyoming</td>
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<tr>
<td>Vernon Burton</td>
<td>University of Illinois</td>
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<tr>
<td>Nick Byrne</td>
<td>London School of Economics &amp; Political Science</td>
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<tr>
<td>Barbara Cambridge</td>
<td>American Association for Higher Education</td>
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<tr>
<td>Nancy Chism</td>
<td>Indiana University-Purdue University</td>
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<tr>
<td>Brian Coppola</td>
<td>University of Michigan</td>
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<tr>
<td>Milt Cox</td>
<td>Miami University-Ohio</td>
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<tr>
<td>Vaneeta D’Andrea</td>
<td>City University of London</td>
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<tr>
<td>Lewis Elton</td>
<td>University College</td>
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<tr>
<td>Daisy Floyd</td>
<td>Texas Technical University</td>
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<td>Richard Gale</td>
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<td>Lee Gass</td>
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<td>Barbara Gayle</td>
<td>University of Portland</td>
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<td>George Gordon</td>
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<td>Mick Healey</td>
<td>University of Glasgowstershire</td>
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<td>Linda Hodges</td>
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<td>Mary Huber</td>
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<td>Pat Hutchings</td>
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<td>Paul Hyland</td>
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<td>Randy Isaacson</td>
<td>Indiana University-South Bend</td>
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<td>Dennis Jacob</td>
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<td>Alan Jenkins</td>
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<td>Mills Kelly</td>
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<td>Carolin Kreber</td>
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<td>Susan Lea</td>
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<td>Davorah Lieberman</td>
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<td>Judith E. Miller</td>
<td>Worcester Polytechnic Institute</td>
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<td>Rob Moore</td>
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<td>Pat Murrell</td>
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<td>Craig Nelson</td>
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<td>Ruth Neumann</td>
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<td>David Pace</td>
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<td>Caroline Persell</td>
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<td>Gary Poole</td>
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<td>Michael Prosser</td>
<td>University of Sydney</td>
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<td>Paul Ramsden</td>
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<tr>
<td>James Rhem</td>
<td>National Teaching &amp; Learning Forum</td>
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<td>Eugene Rice</td>
<td>American Association for Higher Education</td>
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<tr>
<td>Laurie Richlin</td>
<td>Claremont Graduate University</td>
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<td>Anthony Rosie</td>
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<td>Chris Rust</td>
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<td>Anita Salem</td>
<td>Rockhurst University</td>
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<td>Ian Scott</td>
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<td>Diane Sieber</td>
<td>University of Colorado</td>
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<tr>
<td>Kathy Takayama</td>
<td>University of New South Wales</td>
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<tr>
<td>Lynn Taylor</td>
<td>Dalhousie University</td>
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<tr>
<td>Keith Trigwell</td>
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<tr>
<td>Emily VanZee</td>
<td>University of Maryland</td>
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<td>George Walker</td>
<td>Carnegie Foundation</td>
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<td>Mark Walter</td>
<td>Oakton Community College</td>
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<td>John Webster</td>
<td>University of Washington</td>
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<tr>
<td>Deborah Willis</td>
<td>Victoria University</td>
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## ISSOTL Committees

### Vision and Planning Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Randy Bass</td>
<td>University of Wisconsin-Milwaukee, USA</td>
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<tr>
<td><strong>Committee Chair</strong></td>
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<tr>
<td>Tony Ciccone</td>
<td>University of Wisconsin-Milwaukee, USA</td>
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<tr>
<td>Jennifer Robinson</td>
<td>Indiana University, USA</td>
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<tr>
<td>Gihan Osman</td>
<td>Arab Academy for Science and Technology, Egypt</td>
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### Conferences and Convenings Committee

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<tr>
<th>Name</th>
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<tr>
<td>Randy Bass</td>
<td>Georgetown University, USA</td>
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<tr>
<td>Jennifer Robinson</td>
<td>Indiana University, USA</td>
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<tr>
<td>Jan McLean</td>
<td>University of New South Wales, Australia</td>
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<td>Randy Bass</td>
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<tr>
<td>Barbara Gayle</td>
<td>Viterbo University, USA</td>
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### Membership and Communication Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Mary Ann Danielson</td>
<td>Creighton University, USA</td>
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<tr>
<td><strong>Committee Chair</strong></td>
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<tr>
<td>Nancy Chick</td>
<td>Vanderbilt University, USA</td>
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<tr>
<td>Cheelan Bo-Linn</td>
<td>University of Illinois at Urbana-Champaign, USA</td>
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<tr>
<td>Nicola Simmons</td>
<td>Brock University, Canada</td>
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<td>Peter Felten</td>
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<td>Barbara Gayle</td>
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<tr>
<td>Kay Sambell</td>
<td>Northumbria University, UK</td>
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## ISSOTL Committees

### Going Public Committee

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<td>Tony Ciccone</td>
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<td>Eastern Michigan University, USA</td>
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<td>Mary Huber</td>
<td>Carnegie Foundation for the Advancement of Teaching, USA</td>
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<td>Randy Bass</td>
<td>Georgetown University, USA</td>
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<td>Aine Hyland</td>
<td>UK</td>
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### Leadership and Elections Committee

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<tr>
<td>Randy Bass</td>
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<tr>
<td>Torgny Roxa</td>
<td>Lund University, Sweden</td>
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<tr>
<td>Tony Ciccone</td>
<td>University of Wisconsin-Milwaukee, USA</td>
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### Teaching and Learning Inquiry (TLI) Editors

<table>
<thead>
<tr>
<th>Name</th>
<th>Details</th>
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<tbody>
<tr>
<td>Nancy Chick</td>
<td>Assistant Director, Center for Teaching</td>
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<tr>
<td></td>
<td>Affiliated Faculty, English Department</td>
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<td>Vanderbilt University</td>
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<td></td>
<td>Faculty of Medicine</td>
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<td></td>
<td>University of British Columbia</td>
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<td>2206 East Mall</td>
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<tr>
<td></td>
<td><a href="mailto:gary.poole@ubc.ca">gary.poole@ubc.ca</a></td>
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<tr>
<td></td>
<td>T: 604-822-2772</td>
</tr>
<tr>
<td></td>
<td>F: 604-822-4994</td>
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## ISSOTL Interest Groups

<table>
<thead>
<tr>
<th>Interest Group</th>
<th>Description</th>
<th>Meeting Details</th>
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<tbody>
<tr>
<td>Advancing Undergraduate Research (AUR-IG)</td>
<td>Advancing Undergraduate Research (AUR-IG) is an international, interdisciplinary network for faculty and administrators who are interested in investigating undergraduate research through the lens of the scholarship of teaching and learning. We strive to help institutions define undergraduate research and develop assessments to evaluate student learning through research and scholarship across disciplines and individual institutions. We encourage collaborations among interest group members, particularly projects that promote scholarly research on student learning through undergraduate research. We also share resources, disseminate findings, and provide support for institutions to carry out best practices in undergraduate research. If you are interested in joining us, please contact Cecilia Lucero at <a href="mailto:clucero@nd.edu">clucero@nd.edu</a>.</td>
<td>Meeting Thursday, October 25, 12:30-1:30pm. Convention Centre, Room 202 (2nd floor)</td>
</tr>
<tr>
<td>The Humanities</td>
<td>If you are a teacher-scholar in the disciplines of the humanities (literature, philosophy, classics, religion, history, languages, etc) seeking a sense of community within ISSOTL, please join us. Send your name, institution, country, and email address to Nancy Chick at <a href="mailto:nancy.chick@vanderbilt.edu">nancy.chick@vanderbilt.edu</a>. We’re brainstorming ways to have a greater presence at ISSOTL conferences and within SOTL in general, and together we can share ideas and models.</td>
<td>Meeting Thursday, October 25, 6:30-8:30pm. Convention Centre, Albion B (2nd floor)</td>
</tr>
<tr>
<td>National Teaching Fellows &amp; Institutional Teaching Award Winners</td>
<td>Are you a national teaching fellow or an institutional teaching award winner interested to exchange experiences and explore collaborative scholarship opportunities with international colleagues pertaining to issues of innovative educational leadership, curriculum, teaching and/or learning practices in high education? If so, please feel welcome to join members of this ISSOTL Interest Group. Although this interest group will take up matters of importance to national and institutional award winners, all ISSOTL members are welcome to join this group. If you would like to get involved, please contact Earle Abrahamson at <a href="mailto:winedge@hotmail.com">winedge@hotmail.com</a>.</td>
<td>Meeting Thursday, October 25, 10:30am-12:00pm. Sheraton, Beckett Room (Concourse level)</td>
</tr>
<tr>
<td>Problem-Based Learning</td>
<td>Problem-based learning (PBL) is an active learning pedagogy in which students collaborate in groups to solve complex problems. We wish to start an interest group within ISSOTL for those who are interested in problem-based learning. If interested, please contact Ellen Lynch (University of Cincinnati) at <a href="mailto:ellen.lynch@uc.edu">ellen.lynch@uc.edu</a> or Susan Polich at <a href="mailto:smpolich@carilionclinic.org">smpolich@carilionclinic.org</a>.</td>
<td>Meeting Thursday, October 25, 6:00-7:00pm. Convention Centre, Albion A (2nd floor)</td>
</tr>
<tr>
<td>Sociology</td>
<td>Are you a sociologist interested in SOTL? Would you like to join a group of other sociologists for SOTL networking? If so, please send your name, institution/organization, and email address to Melinda Messineo at <a href="mailto:mmessine@bsu.edu">mmessine@bsu.edu</a>, and indicate you are responding to this announcement and whether you are a member of ISSOTL and/or ASA.</td>
<td>Meeting Thursday, October 25, 12:30-1:30pm. Sheraton, Beckett Room (Concourse level)</td>
</tr>
<tr>
<td>Students as Co-Inquirers</td>
<td>Are you a faculty/ staff member who is interested in partnering with students on SOTL inquiry projects? OR are you a student who is interested in partnering with faculty/staff on SOTL inquiry projects? Then join us in creating 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. If you are interested, please send your name and affiliation to Carmen Werder at <a href="mailto:Carmen.Werder@wwu.edu">Carmen.Werder@wwu.edu</a> and Kara Yanagida at <a href="mailto:kara.yanagida@gmail.com">kara.yanagida@gmail.com</a>.</td>
<td>Meeting Thursday, October 25, 6:00-7:00pm. Convention Centre, Albion A (2nd floor)</td>
</tr>
</tbody>
</table>
### ISSOTL Interest Groups

**Student Engagement**

This 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, encourages and promotes scholarly research on the topic, and provides support to ISSOTL members interested in student engagement. If you are interested in joining us, please contact Chris Garrett at cgarrett@okcu.edu.

### Members Seeking Members to Form ISSOTL Interest Groups

<table>
<thead>
<tr>
<th>Biology Education Researchers/Science Faculty with Education Specialty</th>
<th>Contact Mary Pat Wenderoth at <a href="mailto:mpw@u.washington.edu">mpw@u.washington.edu</a>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>Contact Lisa Hunter at <a href="mailto:hunterlr@buffalostate.edu">hunterlr@buffalostate.edu</a>.</td>
</tr>
<tr>
<td>Geography, Earth, or Environmental Sciences/Studies</td>
<td>Contact Paul Wright at Southampton Solent University at <a href="mailto:paul.wright@solent.ac.uk">paul.wright@solent.ac.uk</a>.</td>
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**Meeting Friday, October 26, 5:00-6:00pm. Convention Centre, Webster A (3rd floor)**

### External Affiliates

<table>
<thead>
<tr>
<th>History SoTL</th>
<th>ISSOTL’s first external affiliate group formed through converging interests of historians in Britain, Australia, Sweden, and the United States at ISSOTL 2006 in Washington, D.C. View their website here.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>Meeting Friday, October 26, 5:00-6:00pm. Sheraton, Beckett Room (Concourse level)</strong></td>
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<tr>
<td>Society for Teaching and Learning in Higher Education</td>
<td>Society for Teaching and Learning in Higher Education is a national association of academics interested in the improvement of teaching and learning in higher education. For more information, visit their website at <a href="http://www.stlhe.ca/">www.stlhe.ca/</a>.</td>
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</tbody>
</table>
ISSOTL 2012 Organizing Committee

Conference Chairs:
Beth Marquis, McMaster University
Sue Vajoczki, McMaster University

Assistant Conference Chair:
John Maclachlan, McMaster University

Program & Abstract Review Chair:
Beth Marquis, McMaster University

Local Arrangements Chair:
Tracey Butler, McMaster University

Council on Undergraduate Research (CUR) Session Chairs:
Kelly McConnaughay, Bradley University
Rachel Spronken-Smith, University of Otago

International Collaborative Writing Groups Chairs:
Mick Healey, HE Consultant & Researcher
Beth Marquis, McMaster University
Sue Vajoczki, McMaster University

Posters Chair:
Jennifer Clark, University of New England

Pre-Conference Workshops Chair:
Lesley-Jane Eales-Reynolds, Kingston University

Program Book Chair:
Sarah Symons, McMaster University

Volunteer Chair:
Tracey Butler, McMaster University

Publicity, Web, Awards Chairs:
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Sue Vajoczki, McMaster University

Exhibits Chairs:
Sue Vajoczki, McMaster University
John Maclachlan, McMaster University

Sponsors Chair:
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Technology Chair:
Nick Marquis, McMaster University

Banquet & Refreshments Chair:
Elvia Horvath, McMaster University

International Delegates Chair:
Katarina Mårtensson, Lund University

Social Media Chair:
John Maclachlan, McMaster University

ISSOTL:
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Jeff Bernstein, Eastern Michigan University
Peter Felten, Elon University

Conference Coordinator:
Samantha Applewhaite, McMaster University

Program Book Design: Chris Asimoudis, Radar Concept & Design Inc.
Additional Design & Graphics: Reg Woodruff, McMaster University
Conference Registration & Abstract Submission System Administration:
Melissa Kocias, Indiana University Conferences

The committee would like to thank all of the staff at the Centre for Leadership in Learning, McMaster University for their work in support of the conference, as well as all of the volunteers who have donated their time so generously to make the conference a success.
## ISSOTL 2012 Proposal Reviewers

<table>
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<tr>
<th>Name</th>
<th>Institution</th>
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<tr>
<td>Earle Abrahamson</td>
<td>Graduateplus UK</td>
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Opening Plenary

Wednesday, October 24 4:30-6:00pm

SOTL Travels: Furthering the potential of the scholarship of teaching and learning
Joanna Renc-Roe (Central European University)

Joanna Renc-Roe is Program Manager at the Center for Teaching and Learning, Central European University (a graduate, American and European-accredited University in Budapest, Hungary). She is an experienced academic developer working with faculty from over 25 countries, and a research-active sociologist of education. The focus of her work has been teaching and learning/higher educational pedagogies, the scholarship of teaching and learning and strategic educational development within an international context. Joanna has designed and implemented a range of programs for visiting academics at the Curriculum Resource Center, most notably, the first international developmental scholarship of teaching and learning program for academics from Eastern Europe and the former Soviet Union. She has also implemented the first program of courses on teaching and learning in higher education for doctoral students at Central European University. Joanna is also the lead instructor for several courses at the new CEU Center for Teaching and Learning. Her other projects have included leading a series of executive workshops for university leaders on leadership in teaching and learning, and she has taken an active role in several programs in academic development lead by other international or institutional partners (in Hungary, Slovakia and the West-Bank). Joanna holds a PhD in education from Keele University, UK, an MPhil in gender studies from the Open University, UK, and an MA in English Philology from the University of Gdansk, Poland. Her research interests include internationalization, academic identities, the scholarship of teaching and learning, higher education policy and practice, strategic educational development, and gender and higher education.

Plenary #2

Thursday, October 25 8:30-10:00am

A panel on the topic of students as change agents
Mick Healey (HE Consultant & Researcher), Alison Cook-Sather (Bryn Mawr College), Natalie Gerum (Lakehead University), Kara Yanagida (Western Washington University)

Mick Healey is an HE Consultant and Researcher and Emeritus Professor at the University of Gloucestershire, UK. He is a founding member of ISSOTL and has been to every ISSOTL annual conference. He was the first ISSOTL Vice President for Europe. Until 2010 he was Director of the Centre for Active Learning, a nationally funded Centre for Excellence in Teaching and Learning at the University of Gloucestershire. He is an Honorary Professor at the University of Queensland and a Visiting Professor at Edinburgh Napier University and at the University of Wales, Newport. He was one of the first people in the UK to be awarded a National Teaching Fellowship and to be made a Senior Fellow of the HE Academy. Mick is an experienced presenter. Since 1995 he has given over 400 educational workshops, seminars and conference presentations. He has written and edited over 150 papers, chapters, books and guides on various aspects of teaching and learning in higher education. He is often asked to act as an advisor to projects, universities and national governments on aspects of teaching and learning in HE. For example, he has advised the Australian Learning and Teaching Council, the Canadian Federal government, the HE Authority for Ireland and the League of European Research Universities on research-based teaching and learning. He is a member of the Advisory Committee of the (Irish) National Academy for the Integration of Research, Teaching and Learning. His current main interests are in students as producers and as change agents.
Alison Cook-Sather is Professor of Education, Coordinator of the Teaching and Learning Initiative, and Director of The Andrew W. Mellon Teaching and Learning Institute at Bryn Mawr College.

Supported by grants from the Ford Foundation, The Arthur Vining Davis Foundations, and The Andrew W. Mellon Foundation, Dr. Cook-Sather has developed internationally recognized programs that position students as pedagogical consultants to prospective secondary teachers and to practicing college faculty members. She has given more than 65 keynote addresses, other invited presentations, and papers at refereed conferences in Brazil, Canada, Spain, the United Kingdom, and throughout the United States, and she has published over 40 articles, 10 book chapters, and four books on how students can become partners with teachers and scholars to make education a mutually engaging and empowering process. Her books include Learning from the Student's Perspective: A Sourcebook for Effective Teaching (Paradigm Publishers, 2009), International Handbook of Student Experience in Elementary and Secondary School (co-edited with Dennis Thiessen, Springer Publishers, 2007), Education Is Translation: A Metaphor for Change in Learning and Teaching (University of Pennsylvania Press, 2006), and In Our Own Words: Students' Perspectives on School (co-edited with Jeffrey Shultz, Rowman & Littlefield Publishers, Inc., 2001). Engaging Students as Partners in Teaching & Learning: A Guide for Faculty, a book focused on developing faculty-student partnerships in higher education and co-authored with Catherine Bovill and Peter Felten, is forthcoming from Jossey-Bass. Recently, Dr. Cook-Sather was named the Jean Rudduck Visiting Scholar at the University of Cambridge in England.

Natalie Gerum strives to catalyze learning opportunities that extend beyond the confines of the conventional classroom. Currently in the first year of a Masters of Education degree at Lakehead University, she received SSHRC funding to explore the responsibility of universities to respond to social and ecological injustices and contribute to the creation of more resilient communities. She also works as a research associate with Lakehead University’s Centre for Place and Sustainability Studies. Prior to graduate studies, she completed the International Baccalaureate Diploma at the Lester B. Pearson United World College of the Pacific, and an Honours Bachelor of Arts degree in Geography at Mount Allison University as a Loran Weston Scholar.

In exploring the possibilities for education that is real, relevant, and revolutionary, she has coordinated the Pearson Seminar on Youth Leadership, an international summer program for youth action on global issues, and has developed curriculum in place-responsive learning for educational institutions across Canada, including Mount Allison University, Sea-to-Sky Outdoor School for Sustainability Education, and Renaissance College at the University of New Brunswick. As the student member-at-large for the Board of Directors of the Society for Teaching and Learning in Higher Education, she has delivered addresses on the future of higher education in Canada to numerous organizations, including the Council of 3M Teaching Fellows and the Association of Universities and Colleges of Canada (AUCC). Natalie also co-coordinates the 3M National Student Fellowship for Leadership in Teaching and Learning. Always learning what it means to live well in a place, Natalie turns to the wisdom of the wild as often as she can and enjoys journeying via canoes and snowshoes along the shores of Lake Superior, particularly when the northern lights are out.

Kara Yanagida recently graduated from Western Washington University, where she majored in human services and minored in mathematics. She has been a member of WWU’s Teaching-Learning Academy for three years, and its Teaching-Learning Leadership Cooperative for two. She currently serves as a student representative on the advisory board for the upcoming international journal for the ISSOTL, and also as co-chair of the Students as Co-Inquirers interest group. Kara recently started an online forum for interest group members to explore teaching and learning together throughout the year. Her current work focuses on researching how partnering with students has impacted faculty, staff, and community members at WWU. She is also a writing mentor and student affairs professional, and hopes to expand the world of SoTL to include more and more untraditional voices. As a teacher and learner in all facets of life, Kara is ultimately passionate about empowering others to explore their beliefs and to take action.
Plenary #3

**Friday, October 26**

**8:30-10:00am**

**Integrating the scholarship of teaching and learning into the academy**

*Harvey P. Weingarten (Higher Education Quality Council of Ontario)*

**Dr. Harvey P. Weingarten** is president and CEO of The Higher Education Quality Council of Ontario (HEQCO) — an arm’s length agency of the Ontario government that conducts research and provides policy advice to government to improve the accessibility, quality and accountability of colleges and universities. HEQCO is the only organization of its type in Canada. Since joining HEQCO in 2010, Dr. Weingarten has expanded the agency’s advisory role and influence with government and has orchestrated a larger public information mandate for HEQCO. Prior to HEQCO, Dr. Weingarten was president and vice-chancellor of the University of Calgary for nine years. Under his leadership, the university increased access, invested in students, recruited world-class faculty and attracted record amounts of research revenue and philanthropic support. Dr. Weingarten was provost at McMaster University from 1996 to 2001. During a 21-year career at McMaster he served as dean of science, professor of psychology, department chair, and a teacher and mentor to many undergraduate and graduate students. His research examined the biological and psychological controls of eating and body weight. He received his B.Sc. from McGill University, and his M.S., M.Phil. and Ph.D. from Yale University. Dr. Weingarten has served on many boards and councils including the Science, Technology and Innovation Council of Canada; Association of Universities and Colleges of Canada; Canadian Language and Literacy Research Network; and Shad Valley.

**Closing Plenary**

**Saturday, October 27**

**11:00am-12:30pm**

**ISSOTL founding members on the past, present & possible futures of SOTL**

*Randy Bass (Georgetown University), Angela Brew (Macquarie University), Gary Poole (University of British Columbia), Jennifer Meta Robinson (Indiana University)*

**Randy Bass** is Associate Provost and Professor of English at Georgetown University, and Executive Director of Georgetown’s Center for New Designs in Learning and Scholarship (CNDLS), a campus-wide center, supporting faculty work in new learning and research environments.

He has been working at the intersections of new media technologies and the scholarship of teaching and learning for twenty years, including serving as Director and Principal Investigator of the Visible Knowledge Project, a five-year scholarship of teaching and learning project involving 70 faculty on 21 university and college campuses. In January 2009, he published a collection of essays and synthesis of findings from the Visible Knowledge Project under the title, “The Difference that Inquiry Makes: A Collaborative Case Study on Technology and Learning, from the Visible Knowledge Project,” (co-edited with Bret Eynon) in the digital journal *Academic Commons* (January 2009: http://academiccommons.org).

From 2003-2009 he was a Consulting Scholar for the Carnegie Foundation for the Advancement of Teaching, where he served, in 1998-99, as a Pew Scholar and Carnegie Fellow. In 1999, he won the EDUCAUSE Medal for Outstanding Achievement in Technology and Undergraduate Education. Bass is the author and editor of numerous books, articles, and electronic projects, including *Border Texts: Cultural Readings for Contemporary Writers* (Houghton Mifflin, 1998, 2002), and with Bret Eynon, co-editor of “Intentional Media: The Crossroads Conversations on Teaching and Technology in the American Cultural History Classroom” (a double issue of the journal *Works & Days*, 1998/99).
Angela Brew PhD, is a Professorial Fellow in the Learning and Teaching Centre at Macquarie University, Australia. She is Honorary Associate Professor, University of Sydney and Visiting Professor, Gloucestershire University UK. She is an elected Fellow of the UK’s Society for Research into Higher Education (SRHE), a Life Member of the Higher Education Research and Development Society of Australasia (HERDSA) and holds a Senior Fellowship of the Staff and Educational Development Association (SEDA). She was President of HERDSA from 1999-2003 and co-editor of the International Journal for Academic Development from 2000-2008. She holds degrees in philosophy, sociology and organisational development.

Angela Brew was awarded a prestigious National Teaching Fellowship from the Australian Learning and Teaching Council (ALTC) to enhance undergraduate engagement by involving them in research and inquiry. Before joining Macquarie in 2009, she worked at the University of Sydney where she led strategic projects developing the scholarship of teaching and learning, research-enhanced learning and teaching, and research higher degree supervision. She has published seven books and over 200 articles, book chapters, conference papers and reports. Her research is focused on the nature of research and its relation to teaching, learning and scholarship, models of research-led teaching and undergraduate research. Her books include: The Nature of Research: Inquiry in Academic Contexts (RoutledgeFalmer 2001); Research and Teaching: beyond the divide (Palgrave Macmillan 2006); Transforming a University: The Scholarship of Teaching and Learning in Practice (University of Sydney Press 2007, with Sachs); and Academic Research and Researchers (McGraw Hill 2009, with Lucas).

From 2000 to 2010, Gary Poole directed the Centre for Teaching and Academic Growth and the Institute for the Scholarship of Teaching and Learning at UBC. He is a past-president of the Society for Teaching and Learning in Higher Education and the International Society for the Scholarship of Teaching and Learning. Gary has received an excellence in teaching award from SFU and a 3M Teaching Fellowship, plus a Queen’s Golden Jubilee Medal for contributions to Higher Education and a Lifetime Achievement Award from STLHE.

He is the co-author of “Effective Teaching with Technology in Higher Education,” and “The Psychology of Health and Health Care: A Canadian Perspective.” Gary is an associate professor in the School of Population and Public Health in UBC’s Faculty of Medicine and Senior Scholar in the Centre for Health Education Scholarship at UBC.

Jennifer Meta Robinson studies how people learn to be themselves, as individuals and as members of communities who negotiate and create systems of socialization and value. Her teaching and research focus on environmental intersections with communication and culture and on the scholarship of teaching and learning. She teaches interpersonal communication and environmental humanities in the Department of Communication and Culture at Indiana University, where she is a senior lecturer. She publishes and speaks widely on the scholarship of teaching and learning and was the fourth president of the International Society for the Scholarship of Teaching and Learning. She directed the Indiana University scholarship of teaching and learning initiative, 2001-2008, which won the Hesburgh Award in 2003. She co-edits the Indiana University Press book series Scholarship of Teaching and Learning. Her publications include A Cultural Approach to Interpersonal Communication (2012), Teaching Environmental Literacy Across Campus and Across the Curriculum (2010), and The Farmers’ Market Book: Growing Food, Cultivating Community (2007).

Abstracts for each of these sessions are available within the schedule section.
Monday, October 22, 2012

**Breakfast**

*Sheraton  Ballroom + Foyer (2nd floor)  8:00-9:00am*

A breakfast buffet will be available for Collaborative Writing Groups participants. Food can be picked up in the foyer, and dining tables are available in the Ballroom.

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**International Collaborative Writing Groups (CWG) Workshop**

*Sheraton  Ballroom South/West  9:00am-5:30pm*

**Program:**
9:00 – 9:15: Introductions and plan for the day
9:15 – 11:00: Groups review feedback, discuss plans for papers
11:15-12:30: Clarifying the focus and contribution of your paper and the way forward for your group through generating and prioritising ideas
12:30-1:15: Lunch
1:15-3:00: Group meeting time
3:00-3:30: Afternoon tea
3:30-5:30: Groups present plans for papers

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**Dinner & Social Event**

*Art Gallery of Hamilton  Tannenbaum Pavilion  6:30pm-10:00pm*

Dinner will be available for all CWG participants at the Art Gallery of Hamilton, directly across the street from the Sheraton. A ‘Ghost Walk’ of Downtown Hamilton will follow.
Tuesday, October 23, 2012

**Breakfast**

*Sheraton Ballroom + Foyer (2nd floor) 8:00-9:00am*

A breakfast buffet will be available for Collaborative Writing Groups participants. Food can be picked up in the foyer, and dining tables are available in the Ballroom.

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**International Collaborative Writing Groups (CWG) Workshop**

*Sheraton Ballroom South/West 9:00am-4:00pm*

**Program:**
- 9:00 – 9:15: Introduction to the day
- 9:15 – 10:30: Liquid cafe
- 10:30 – 12:00: Group meeting time
- 12:00 – 1:00: Lunch
- 1:00 – 1:30: Meet the editors (Nancy Chick and Gary Poole)
- 1:30 – 2:45: Groups work toward finalizing articles and planning for submission
- 2:45 – 3:15: Afternoon tea
- 3:15 – 4:00: Evaluation and future

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**Free time & Dinner on your own**

*4:00pm*

Arrangements have been made with several local restaurants to provide conference registrants with discounted dining options. Consult the registration desk for more information.
Wednesday, October 24, 2012

Registration

| Sheraton | Ballroom + Foyer (2nd floor) | 7:30am-3:00pm |

Breakfast

| Sheraton | Ballroom + Foyer (2nd floor) | 7:30-9:00am |

A breakfast buffet will be available for CUR and pre-conference workshop registrants. Food can be picked up in the foyer, and dining tables are available in the Ballroom. Note that CUR attendees will need to be finished breakfast by 8:30am, as the session begins at this time.

Council on Undergraduate Research (CUR) Symposium

| Sheraton | Ballroom East | 8:30am-4:00pm |

Undergraduate Research and Change in Higher Education  
*Symposium Convenors: Kelly McConnaughay (Bradley University), Rachel Spronken-Smith (University of Otago)*

In this day-long symposium we plan to explore how undergraduate research effects change in Higher Education, and how a variety of changes in Higher Education affect undergraduate research. Under this umbrella theme we have identified some subthemes including:

- Students as change agents
- Undergraduate research generating transformative learning
- The role of undergraduate research in curriculum renewal
- The influence of technological changes on undergraduate research
- The influence of changing student demographics on undergraduate research
- Supporting and sustaining UR in times of times of fiscal challenge

The expected outcomes for participants in this day include:

- A raised awareness of the possibilities of undergraduate research to transform both student and institutional learning
- Consideration of how technology can support and enhance undergraduate research
- Practical advice regarding how to change a curriculum to embed undergraduate research
- The sharing and showcasing of good practice in undergraduate research
- The facilitation of networks amongst staff and students interested in undergraduate research
- The option of joining a collaborative group to continue working on undergraduate research

Program

| 8:30-8:35 | Welcome and introduction to the day |
| 8:35-9:05 | Keynote: Undergraduate research and change in Higher Education |
| 9:05-9:50 | Scoping the landscape of undergraduate research and change – small group work to create mini-posters |
| 9:50-10:20 | Liquid café - Consideration of small group mini-posters |
| 10:20-10:40 | Morning tea |
| 10:40-11:40 | Poster Session |
| 11:40-12:00 | Plenary discussion of small group mini-posters |
| 12:00-1:00 | Lunch |
| 1:00-1:30 | Keynote: Instigating and implementing change in Higher Education |
| 1:30-2:00 | Keynote: Embedding undergraduate research and inquiry in an institution |
| 2:00-2:30 | Small group work to consider a toolkit for implementing institutional change |
| 2:30-3:00 | Plenary discussion |
| 3:00-3:15 | Afternoon tea |
| 3:15-3:50 | Formation of action groups to further UGR initiatives |
| 3:50-4:00 | Closing |
Morning Pre-Conference Workshops:

**W01**

**Critical thinking: The challenge posed by disciplinary languages to interdisciplinary pedagogies**

*Lesley-Jane Eales-Reynolds (Kingston University), Colin Clarke (University of Westminster), David Gillham (Flinders University)*

This preconference workshop will explore disciplinary differences in terminology and practice with respect to critical thinking. Higher Education is becoming increasingly dependent on our ability to create and use new ideas and knowledge. New technologies have made it much easier and faster to access and share a vast array of information. However, information is not knowledge. Knowledge is how we access and use the information to increase our understanding through critical analysis and then synthesise new knowledge from a range of information sources. This knowledge creation requires a wide range of cognitive processes and skills. Many Universities are hailing students as ‘co-creators of knowledge’ and if this is the case, how are they learning to do this? Are we teaching them skills, or is it implicit in particular disciplinary approaches to learning and teaching that successful students will be able to think critically (without necessarily being able to recognise that that is what they are doing)? Phillips & Carol’s (2004) phenomenographic study of undergraduate critical thinking skills found that students understanding of critical thinking was limited. Whereas Tapper (2004) suggests that the development of critical thinking to higher education students is discipline specific and dependent upon an academics’ attitude. The purpose of this workshop is to bring colleagues from different countries and disciplines together to discuss the concept of critical thinking and to attempt to reach a consensus view of what this entails. It is also designed to learn about the disciplinary differences in the discourse around critical thinking and the way in which it is taught.

The workshop will be facilitated using the World Café technique (theworldcafe.com) and generate data to feed into a Delphi study being undertaken in an international research project. Participants will be asked to discuss in groups a series of key statements designed to elicit information about the language used in disciplines to describe critical thinking and also about how it is taught. Initially participants will be arranged in groups of cognate disciplines. In subsequent rounds the disciplines will be mixed and participants will be asked to try and establish consensus in relation to the most important terminologies and pedagogies identified. Finally, these group results will be consolidated for the whole workshop and a discussion with a final vote will be undertaken to identify areas where there is consensus amongst the disciplines and where there are clear differences. Thereby further enhancing participants’ understanding of the complexities of developing critical thinking within Higher Education.

It is proposed that other attendees at the conference will be asked to express their degree of concordance with the findings of the pre-conference workshop either through completing a questionnaire or by joining the facilitators at breakfast meetings.

Research project information will be available and participants in the pre-conference workshop will be able to join in its final stages.

**W02**

**Open-space learning: A transdisciplinary pedagogy**

*Nicholas Monk (University of Warwick)*

Open-space Learning (OSL) grew out of a collaboration between the Royal Shakespeare Company and the University of Warwick’s Departments of Education, and English and Comparative Literary Studies. The fundamental idea was to investigate how the techniques and practices of the rehearsal room, and theatrical ensemble, might be applied to pedagogy across the academic disciplines. From this grew a set of practices and theories that have the ‘workshop’ at their heart. The workshop in OSL is any teaching and learning session that takes place in an environment in which participants can engage, on their feet, with the learning materials that are that session’s focus. Such materials might be textual, but they might also include props, objects, and audio-visual materials. In the session I am offering, participants will work in small groups with these materials in order to fashion or create their own knowledge. This kind of workshop may be both generic and interdisciplinary, but can also accommodate the necessary specificity that academic work requires — in other words it becomes ‘transdisciplinary’. Clearly, the fundamental element in such workshop practices is
that they should take place in an environment in which chairs and tables are either absent or at the margins of the space. This creates, immediately, a situation in which the traditional hierarchy of the lecture theatre and seminar room is amenable to disruption. The open space and the changed relationship between tutor and student combine to permit an atmosphere in which learning takes place in participants’ interactions with both peers and tutors and, not least, their own and others’ physical presence. OSL enables, thereby, a social constructivist approach to teaching and learning by introducing dialogic and experiential inquiry between participants as the means of actively discovering, rather than passively receiving, knowledge. Third or ‘open’ spaces are created, in a both literal and metaphorical sense: the space between theatrical rehearsal room and classroom, is one example, or the open space that exists between a cultural organization and a university and, most importantly, the space that is created when participants encounter an environment in which they are expected to discover and own knowledge for themselves. The focus of this particular session will be ‘theory building’, in which small groups of participants are required to create a ‘theory’, or narrative, from materials provided and represent this as a pattern on the floor of the space. In the second part of the session, participants form ‘tableaux’, or still images, of their theory, using their bodies in conjunction with others in the group, then, finally, add movement through an improvised performance. The session concludes with a plenary that seeks to investigate the ideas developed by the participants, and extends the discussion into broader analyses of research into teaching and learning in the light of the participants’ experiences. This will also be an opportunity to share with participants qualitative and quantitative evidence, from a number of classes and courses, that shows the impact of OSL on student experiences and grades. The content of this session is suitable for professors/lecturers/tutors working across the disciplines, and the nature of the session requires that participants be prepared to interact with each other using a variety of visual, auditory, and kinaesthetic mediums.

Sheraton    Ballroom South (2nd floor)   9:00am-12:00pm

W03

Here today gone tomorrow: Developing strategies to address the resurfacing of student misconceptions after they have passed the course

Theresa Beery (University of Cincinnati)

Relevant Experience: Co-investigator on a SoTL inquiry examining the impact of using conceptual change texts to dispel students’ genetics misconceptions.

Learning Outcomes: The participant will: 1. Describe the factors that contribute to students’ retaining misconceptions despite successful course completion. 2. Identify elements from prior work that are important in trying to achieve conceptual change. 3. Work with others to develop strategies to address students’ misconceptions. 4. Discuss options for testing the effectiveness of those strategies.

Students often come to our courses with inaccurate ideas about course-related topics. Many of these ideas are firmly implanted in their minds, having been with them since their elementary or middle school years. In many cases students have successfully used these ideas in order to make meaning of the world around them and these misconceptions are deeply embedded (Posner, 1982; Duit, 2003). Sometimes students are able to “learn” the explanations taught in the course so that they can do well on an exam, but the misconceptions resurface after the course is over. As educators we seek to help students learn and retain accurate explanations of phenomena as we currently understand them. Most of us are painfully familiar with the 1980’s video of Harvard graduates discussing the reason why we have changes in the seasons. (A Private Universe. Pyramid Film & Video; http://www.learner.org/resources/series28.html). This notorious video opened many eyes to the problems with persistent misconceptions, even in our brightest students, and the challenge of creating long lasting conceptual change. This workshop is designed to explore strategies to assist students in absorbing and retaining course content. This area has been addressed by efforts to improve science literacy, but this problem has implications for all disciplines. Workshop participants will work in groups to (1) design or adapt interventions to promote conceptual change and (2) develop research strategies they can use to measure the impact of these interventions on student learning outcomes. Participants may find that they would like to collaborate with others in the workshop for implementation of a project. That is the joy of ISSOTL! Participants will be asked to consider the following questions after a brief discussion of the current knowledge, models, and challenges related to creating conceptual change. 1. What are common misconceptions relevant to your discipline? 2. What strategies have you used to counter these misconceptions? 3. What strategies discussed in this session or designed by your group, would you like to implement? 4. How would you test the effectiveness of these strategies? 5. Would this work be relevant to disciplines other than your own?
**W04**

**Promoting a reflective approach to teaching by engaging with SOTL through pedagogical action research**  
*Lin Norton (Liverpool Hope University)*

Lin Norton has had substantial experience in facilitating workshops on pedagogical action research nationally and internationally (http://www.linnorton.co.uk/).

The workshop will begin with a brief interactive presentation of the following based on the facilitator’s book (Norton 2009):

- Why pedagogical action research and how does it work in a university context?
- Pedagogical action research, reflective practice and its relationship to SOTL
- Disseminating pedagogical action research findings: making an impact

**Stage 1.** Participants will be given typical learning and teaching ‘issues’ that can be addressed through action research and asked to work in small groups using a simple step by step procedure to design and carry out a pedagogical action research study. Each group will be asked to present their proposed study in a plenary.

**Stage 2.** Participants will be given a number of scenarios that represent different ethical dilemmas in pedagogical research. They will be invited to feedback in a plenary session.

By the end of the workshop, participants will have an insight into how they may research their own practice to produce a study that can be disseminated through a variety of outputs.

**Theoretical context:** The importance of reflective practice was highlighted by the work of Schön, (1983) and is now considered to be a crucial part of a professional approach to university teaching (Brockbank & McGill, 1998; Light, et al, 2009). I will argue though that there is a risk that if we simply engage in untried introspective reflection it might lead to erroneous thinking and consequent changes in our practice that are not necessarily beneficial. Alternatively, it might lead us to thinking that no real change is necessary. The assumptions and beliefs that we may hold dear cannot be challenged unless we are willing to make our thinking and our actions more open to peer scrutiny. This, in essence, is the aim of doing pedagogical action research. Such enquiry-based learning puts us in charge of our own learning about learning. It addresses very practical needs and it is done in order to address a real issue that is of relevance to us when we are undertaking the investigation. In this workshop, I hope to be able to show how carrying out pedagogical action research can draw together reflective practice and engagement with the relevant literature in a way that contributes both to SOTL theory and to improving our own learning, teaching and assessment practice.

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**W05**

**Self-care in the curriculum**  
*Janet Lovegrove (McMaster University), Viola Fodor (The Wellness Centre), Lynn Martin (McMaster University), Elisha Van Harte (Halton Region)*

As educators and health care professionals, we need to take care of ourselves if we are to take care of others. More than a platitude, this is a finding that has been substantiated in health research for decades. We will suffer the consequences, including a sense of ineffectiveness, poor coping, burnout, depression, physical health problems, and addictions, if we do not take care of ourselves. Those problems, in turn, will impact the quality of our work performance.

Despite the recognition of the importance of self-care, a sound and practical program of self-care continues to be absent in curricula and is not considered in many work environments. This is particularly concerning, considering that there are special challenges and demands found among educators and health professionals, who are known to put the needs of others ahead of their own. Many university students feel ill prepared to take on the challenges of their demanding careers.

This lack of preparedness was the sentiment voiced by all participants in a 2011 McMaster Nursing Education Research Unit (NERU) study that encouraged nursing students to assess their present levels of self-care. These
students provided the stirring and heart-felt feedback that they did not want to just survive their under grad; they wanted the understanding and capacity to cope with real life and career pressures.

Sensing an ethical responsibility to these students and others like them, the interdisciplinary research team that designed and conducted the NERU study now wants to represent these students and address their concerns by facilitating a workshop on self-care for educators. Their goals are: (1) to introduce the need for self-care into curricula; (2) to take participants through an awareness exercise so that they can experience an in-depth appreciation for self-care and have the opportunity to assess their own levels of self-care; (3) to discuss how a meaningful program of self-care can be integrated into curricula for students; and (4) to share an example within nursing.

Viola Fodor, M.Ed., will demonstrate how self-care can be integrated into curricula and into one's life. She will guide workshop participants through an awareness exercise designed to help them assess their level of self-care in body, mind, and spirit. Participants will have the opportunity to explore the importance of honest self-examination, quieting the mind, and nurturing the inner self. Janet Lovegrove, RN, MSc, will provide a brief history of the team's joint effort to date and examine with participants the need to move beyond the recognition of the problem to the ‘how’ of implementation. Elisha Van Harte, MSW, RSW, will provide an opportunity for participants to explore the roles that we can have for our students as educators, clinical mentors, seasoned professionals, and ambassadors. Dr. Lynn Martin, Ed.D, will share the feedback that was provided by nursing students in the 2011 McMaster Nursing Education Research Unit (NERU) study, in consideration of the scholarship of discovery and the fact that they requested that we bring their concerns forward on their behalf. She will also address and encourage discussion of the challenges that exist in integrating student self-care into an already full curriculum.

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<td><strong>W06 Pop up tactile academia – Developing reflective thinking through visual book making</strong></td>
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<td>Alke Groppel-Wegener (Staffordshire University), Sarah Williamson (University of Huddersfield), Lisa Gold (Manchester Metropolitan University)</td>
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On the eve of a large conference we need to not only look ahead to the exchanges about to take place, we also need to plan ahead in order to make the most of them. In this workshop we want to introduce participants to responding to stimuli using collage or simple drawing and painting techniques. We will make simple concertina-style books ready to use as a reflective tool over the course of the conference itself, showing participants an alternative to copious written notes never to be looked at again that are so often the outcome of a conference attendance. Taking some time out planning our individual journeys using the materials provided in the conference packs and coming up with ideas of where this journey could lead, the aim is that participants will come away from the conference with their own little artist’s book that reflects on their individual experience. Based on the work that Sarah has done in the past in running Pop Up Art Schools in the context of teacher training at the University of Huddersfield and a project that uses visual book making as reflective tools for the attendance of a Post-graduate teacher training conference, this workshop combines her skills as workshop facilitator with Alke’s practice as a maker of artist’s books and her work in visualising academic practice as well as Lisa’s background as a fine artist. This team based in different departments of different institutions is currently in the process of planning two workshops funded by the UK’s Higher Education Academy to be delivered at Staffordshire University between March and July 2012. While this workshop provides a starting point, we will also encourage participants to ‘touch base’ over the duration of the conference, maybe getting together to work on our books over coffee or similar. The facilitators are also proposing a panel for this conference (Tactile Academia – Integrating Creative Practice into Teaching and Learning), which, if accepted and scheduled for the last day, could be an ideal way of workshop participants to touch base and feedback on their experiences. We also aim to encourage the sharing of images of the finished products and any reflective thoughts on a dedicated blog.
What values are embedded in learning abroad programs?
Michel Desjardins, Joanne Benham Rennick (Wilfrid Laurier University)

We’re eager to develop an international conversation about the role of values embedded in learning abroad programs in institutions of higher education. We have in mind study abroad programs, volunteer and paid internships, practicums, and co-op terms. We’re primarily interested in exploring the ideas, concepts, and interests of highest priority that students bring with them to these experiences, and the institutional values, both tacit and explicit, that support these programs.

Many universities and colleges imply a commitment to shaping the values of their students through vision statements that describe their graduates as global citizens and future leaders concerned with social justice and the common good. We know that students are profoundly affected by their learning abroad experiences, educators sing the praises of this type of pedagogy, and post-secondary institutions are increasing the number of programs being offered.

Canada has seen a remarkable lack of discussion by educators about these sorts of programs—and there is a dearth of research on the role of values in learning abroad programs in higher education. As directors of learning abroad programs at two separate Canadian universities we set out to learn more with others across Canada who were involved in similar programs (students, faculty, staff, and administrators) by setting up a think tank that ran for two years (2008-10), and was dedicated to examining ideas about “Good Global Citizenship” in Canadian learning abroad programs. Student contributions were vital to the entire process. The results of this qualitative research were presented in two panels at last year’s Congress of the Humanities and Social Sciences, and are currently under review as an edited volume with the University of Toronto Press (Good Global Citizenship? International Learning Programs in Canadian Higher Education).

The Good Global Citizenship Think Tank I (January 2010) and II (January 2011) provided a forum for students, scholars and program facilitators to listen, think together and learn about the implications of international experience programs on student learning and on the international communities to which our students travel. We were able to focus on the ethical and moral implications of such education and asked questions surrounding the kinds of values implicit in and absent from such programs. Together we identified some core concerns and worked to examine these through student reflection papers, scholarly articles on internationalization of education, and case studies that examine the kinds of programming happening in Canada today.

We were able to establish a community of scholars who incorporate service learning in their programs to define and elaborate the parameters of the discipline in its various forms. We believe this community and this type of reflection are crucial if we do not want to put our students at greater risk than necessary or repeat the hegemonic mistakes of the past in the vulnerable populations with whom we work. In collaborating with stakeholders from different programming levels we have identified some of the broader challenges of creating and maintaining these types of meaningful exchanges for our students. The challenge is to continue this dialogue in a meaningful way and to engage more stakeholders to join the discussion.

Much of our previous research has dealt with pedagogy and values. Desjardins is a 3M National Teaching Fellow (and recipient of two additional university teaching awards) with a long string of publications on the scholarship of teaching and learning. Benham Rennick in several publications has examined the role of values in the Canadian Forces, and in other Canadian institutions.

Our goals in this workshop?
• Share the results of our 2-year Good Global Citizenship think tank with colleagues, including some key terms and concepts to which we’ll seek responses in the final hour (30 minutes)
• Facilitate the exchange of information from workshop participants: what are their connections with learning abroad programs, and their initial responses to what they’ve heard so far? (40 minutes)
• Accelerate connections by means of a short nutrition break (15 minutes)
• Bring together diverse, international perspectives in order to think together about the programs that we know best, with the conversation sparked by responses to the think tank terms and concepts, and short presentations by 2 students and 1 administrator who will share their first-hand experiences (integrating student voices in this way worked well in our previous think tank sessions) (15 minutes of presentations, followed by 45 minutes of facilitated conversation)
• Generate questions and a follow-up plan (30 minutes)
**Lunch**

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<th>Sheraton</th>
<th>Ballroom + Foyer (2nd floor)</th>
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Lunch will be available for all CUR and pre-conference workshop registrants. Food can be picked in the Ballroom foyer, and dining tables are available in each of the Ballroom sections.

**Afternoon Pre-Conference Workshops:**

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**W09 Decoding the Disciplines: Getting through bottlenecks and thresholds**

*Joan Middendorf, David Pace, Leah Shopkow, Arlene Diaz (Indiana University)*

**Relevant Experience:** Middendorf and Pace developed the “Decoding the Disciplines” (DtD) methodology, and Diaz and Shopkow joined them to apply it to the discipline of history; the four have published widely and led faculty workshops around the world. Honors include the 2009 McGraw-Hill and Magna Publications Scholarly Work on Teaching and Learning Award.

**Learning Goals and Outcomes for the Workshop:** Participants will be able to identify places where students get stuck, to conduct interviews of subject matter experts to uncover their tacit knowledge and desired thinking operations, and to use Decoding the Disciplines to move students through the stuck places.

Plan for interaction:
1. Workshop facilitators will provide an overview of Decoding the Disciplines, with particular attention to bottlenecks and threshold concepts, as well as examples of “decoded” thinking in different disciplines and assessments of such efforts.
2. Working with their own materials, workshop participants will choose a particular student bottleneck to learning. They will practice the decoding of tacit knowledge through interviews in small groups.
3. They will develop metaphors to model the crucial operations for their own bottleneck concepts.
4. Final Activity: Discussion of the whole—Practical considerations in getting students through the threshold using the Decoding process.

Thirty years of the scholarship of teaching and learning have resulted in two juxtaposed problems: Many students struggle to learn at the university level, while ever more techniques are being developed to help students learn and to measure their success. On the student learning side of the problem are several “theories of difficulties”, which attempt to describe the nature of the student problem. Since the 1990s Decoding the Disciplines has helped instructors define and overcome specific blocks (bottlenecks). Besides providing a framework for analyzing the reasons for students “stuckness”, the model employs a systematic scaffolding to lead students through the bottleneck. Decoding the Disciplines has also been deployed to good effect for those attempting to negotiate threshold concepts (Meyers & Land, 2006). Decoding the Disciplines (Pace & Middendorf, 2004) arose from the realization that there is a “disciplinary unconscious,” automatic moves learned tacitly by experts. Teachers expect, however, that students will be able to make these moves equally automatically, without being told to do so, much less how or why they should (Perkins, 2008). As a theoretical model, Decoding the Disciplines brings order to the chaos by providing a strategy to isolate the key thinking skills required in a discipline and identify the teaching techniques that will enable students to negotiate the threshold. “Decoding the Disciplines” provides a systematic methodology for choosing teaching and assessment techniques and a way to judge results. It does so by showing faculty how to identify disciplinary assumptions and types of thinking, by linking disciplinary ways of knowing with teaching (Shopkow, Diaz, Middendorf & Pace, 2012).

The point of SoTL, since Boyer (1997) set it beside the scholarship of discovery, has been to bridge the gap between teaching and research. “Decoding” provides a bridge between research in a discipline, the epistemology of that discipline, and research in pedagogy that can infuse teaching with all of them (Shopkow, Diaz, Middendorf & Pace, 2012).
W10

Developing the scholarship of teaching at an institutional level
Angela Brew (Macquarie University)

Within institutions, small groups of enthusiastic faculty may engage in the scholarship of teaching and learning. But how do you move to a situation where it pervades teaching practice across a whole institution, and where curricula are routinely designed on the basis of scholarly work on teaching and learning? The aim of this pre-conference workshop is to provide an opportunity for participants to consider how they can contribute to spreading the scholarship of teaching and learning across a whole university or college. An outcome of the workshop is for participants to come away with practical strategies that they can apply in their own institution.

The workshop draws on my experience of working to support institutional strategies in the scholarship of teaching and learning at two universities in Australia over the past 12 years. This work has involved leading strategic projects, conducting workshops, carrying out research and publishing.

These universities are taking systematic and scholarly approaches to the improvement of teaching and learning through a Teaching Index. This is an approach that rewards departments for performance on a defined and weighted set of scholarly accomplishments in relation to teaching and learning. As well as improving teaching and learning, the Teaching Index is designed also to lead to considerable achievements in terms of published scholarly work on teaching and learning, increased awards and grants for teaching excellence and increases in the numbers of faculty with qualifications in teaching and learning in higher education.

This workshop will proceed through a series of formal and informal presentations each followed by a period of time spent in small group discussion and collaborative working. I will begin by explaining the elements of the Teaching Index, how the scholarship of teaching and learning is being encouraged and faculty responses in these two institutions. Participants will then have an opportunity to share practices in their own institutions. A discussion of challenges to be overcome will follow and participants will be encouraged to share their ideas. Implementing a university-wide scholarship of teaching Index is not easy, steps need to be taken to ensure that claims for SOTL are backed up by evidence and recent work has demonstrated some interesting misunderstandings about what SOTL is. These will be shared within the context of this discussion. The workshop will then explore some of the challenges of disciplinary academics learning to engage in the scholarship of teaching and learning through a number of written case examples where sustained scholarship has led to real improvements in course design and student experiences.

Evidence that engaging in the scholarship of teaching and learning can make a positive difference in terms of improving students’ learning experiences is important in gaining institutional support for SOTL. An analysis of achievements on the Index when correlated with information on students’ experiences, provides such evidence from one institution and this will be presented and discussed. The final activity of the workshop will be for participants to create a plan of action to move the scholarship of teaching and learning forward in their own institution.

W11

Integrating multiple frameworks into teaching and into designing SOTL
Craig Nelson (Indiana University)

Overview: As SOTL matures we are in a position to ask: How can we make our conclusions more robust? And: How can we apply SOTL more effectively in fostering deeper learning and more robust higher order outcomes? “Multiple working hypotheses” may allow faster progress towards each of these goals. I will offer specific suggestions and examples. Participants will add others and will explore applications.

Learning Goals and Outcomes:
• Participants will understand at least six distinct SOTL frameworks.
• Participants will consider applying at least four of the frameworks to improve student learning.
• Participants will consider assessing at least three of the frameworks as potentially complicating factors in their own SOTL projects.
• Participants will contribute often and deeply and all of us will have a darned good time.
Description: Too often faculty members have few frameworks (beyond good v bad students) for understanding the factors that affect student performance. Similarly, SOTL studies often focus on only one hypothesis of what is needed to improve student attainment. We will apply Chamberlin’s idea of “multiple working hypotheses” to both contexts. Specifically, diverse SOTL results may help us as teachers to identify additional interventions that might predictably produce further strong improvements in learning and in higher order outcomes. Similarly, SOTL projects might profitably examine the effects of a number of potentially complicating factors. Doing so may allow us to ask whether there are easily identifiable groups of students for whom our interventions are more or less powerful. Theories and examples will be drawn from at least three continents. Specific ideas examined (some rather briefly) will probably include: Making a gestalt switch from student quality to learning design quality; deep v surface learning and how course design controls it; concrete, formal and post-formal thinking and learning cycles; misconceptions and conceptual change theory; overcoming problems in learning higher order-skills; cognitive development and self-authorship; and more. Quick assessment tools will be noted where available. These facilitate quick examinations of potential applicability in teaching and in projects. Appropriate data based literature will be used throughout and listed in an annotated bibliography.

Interactive workshop: Brief presentations will be interspersed with writing and small and whole group discussions of possible applications and of additional ideas. Much of the “content” will be on a handout thus minimizing the need for giving details during the session and maximizing time for interactions and contributions by others. (I have a reputation for giving very interactive presentations even when doing keynotes.)

Reflective critique: I will use examples from my own history where “dysfunctional illusions of rigor” kept me from more quickly applying a richer array of SOTL findings in my own teaching and where “foolish pride” kept me chained to a limited array of frameworks in my own projects.

Facilitator’s relevant experience: 50 SOTL publications addressed some of these ideas; many invited workshops at conferences and individual institutions on key pieces; several short recent invited workshops and keynotes sketching an overview of the ideas that will be developed more fully here.

Sheraton MacNab Room (2nd floor) 1:00-4:00pm

W12 Empowering students to develop independent learning; utilising coaching approaches and techniques to support learning and personal development. Dawne Gurbutt (Higher Education Academy)

Dawne Gurbutt is a qualified nurse, midwife and health visitor with more than a decade of experience in healthcare practice and over 15 years’ experience of teaching students from across a range of healthcare disciplines, but in particular applied public health and primary care. Having completed a postgraduate programme in coaching for organisational performance and as a founder member of the coaching network within her employing university, the opportunity arose to conduct some action learning around using some coaching approaches to develop student confidence, enhance motivation and engage students with personal development planning. This workshop builds on the expertise gained from the implementation of coaching within a range of healthcare programmes and settings.

Workshop learning outcomes: At the end of the workshop participants would:
• have a basic understanding of some of the potential applications of coaching approaches in the context of teaching undergraduate students in higher education settings
• be able to describe some basic coaching principles and techniques which may be applicable to working with students in Higher Education
• have engaged in some introductory practise of coaching, using simple models and reflected on the experience of coaching and being coached.

The workshop would include the following engagement for participants:
• discussion of the issues and challenges in motivation students in relation to teaching and learning on arts and humanities courses
• a brief introduction to coaching approaches and models which have been utilised in practice with staff and students within HE in the UK. Opportunity for participants to engage (in pairs) with identified coaching models
• Group work using action learning approaches
• Space for reflection on the experience of using coaching models
• Personal development planning in relation to developing and using some elements of coaching in teaching and learning.
**W13**

**Looking for ‘trouble’: Encountering the unknown – what the visual arts can teach us about learning**

**Marian McCarthy, Daniel Blackshields (University College Cork)**

This workshop addresses the question of how encountering some intriguing works of art can help teachers in higher education “venture into new and strange places” (Barnett, 2007: 147), constructing what might constitute ‘troublesome knowledge’ (Perkins, 1998) for them, when out of the comfort zone of their own disciplines. It is hoped that such a venturing forth, will help chart ‘the unknown’, enabling teachers to identify with their students’ experience of liminality. The workshop process will introduce participants to the visual arts as a catalyst for learning in the disciplines. Both workshop leaders use the arts across the disciplines, aesthetically and pedagogically, as focal points to reflect on critical, creative and disciplinary thinking and understanding.

Within accredited programmes in teaching and learning in higher education, a fundamental threshold concept is that teaching is about learning, rather than about the delivery of disciplinary knowledge. If all scholarship is concerned with encountering the unknown (Schwartzman, 2010, in Land, 2011), then lecturers on these programmes find themselves in liminal spaces grappling with the troublesome knowledge of realising that content knowledge and pedagogical content knowledge (Shulman, 1994) are substantively different. The former is focused on the disciplinary knowledge in which the lecturer is expert; the latter is concerned with the dilemmas of how the discipline might be taught. Teaching the discipline constitutes another way of knowing for the lecturer and another way of being. Teaching the students how to learn in the discipline is all about listening to them, rather than talking at them, and realising that the discipline does not exist in splendid isolation, but is nestled in the four scholarships of discovery, integration, application and teaching (Boyer, 1990). It is difficult for lecturers to realise that there is another discipline that is part of the DNA of disciplinary understanding – that of teaching as learning and as research- in short, teaching as scholarship, which means looking for the evidence of student learning – looking for trouble, indeed. Lecturers need to take a risk, to let go of their transmission of the discipline, in the interest of transformation and student learning. This workshop sets out to meet this need in foregrounding and encountering ‘troublesome knowledge’.

The workshop provides participants with the opportunity to examine selected works of visual art, through the Project MUSE approach and Gardner’s (1999) Entry Points to Learning. Participants will appreciate and critique their chosen work through a variety of these lenses and reflect on this process in the context of the diversity of student learning and the ‘troublesome’ nature of disciplinary knowledge/understanding. The workshop will also introduce participants to the process of Teaching for Understanding and the tools of disciplinary understanding (Wiske, 1998) as ways of naming the parts of teaching and mapping the nature of learning.

Both facilitators have provided workshops in this field in several European countries and in the USA, and have published widely in the field of the arts and their integration across the disciplines.

**W14**

**Integrating slow principles into our professional practice**

**Barbara Seeber (Brock University), Maggie Berg (Queen’s University)**

This workshop is on the conference theme, “Research on Teaching and Learning: Integrating Practices.” It arises out of our scholarship on Teaching and Learning in the context of the increasing corporatisation of the Universities and its deleterious effects on our own and our students’ personal and intellectual well-being. Our current project, The Slow Professor: Challenging the Culture of Speed in the Academy, counters the emphasis on speed in Higher Education. It is well-documented that changes in academic culture have created significant work stress among teachers, but what has not been noticed is the conspicuous link between the corporate reliance on efficiency and the problem of lack of time in learning, teaching, and research. A popular movement to challenge the consequences of our fast-paced society known as the Slow Movement has inspired our examination of the relevance of its principles for the academic context.

The most important question we raise related to the conference theme of “Integrating Practices” is how to achieve consistent values in our teaching, learning, research, and service. We find that the increasing corporatisation of the University potentially fragments our professional lives, and we are searching for ways – personally and politically- to resist this.
Our session is in two parts: 1) The one-hour talk summarises our (secondary) research into student and teacher stress; examines the effects of corporatisation in speeding up our work lives; introduces the principles of Slow Food and the Slow Movement; and reflects more personally on the value of “Slow.” We have found that the “question and answer” period of our talk leads to conversation among participants, which provides a natural transition to the workshop.

2) The active workshop involves participants in writing replies to “Ms Mentor”-type letters which we have created to express, in humorous ways, common problems resulting from the time-stresses of today’s academic work. (Ms. Mentor is the pseudonymous author of a regular column in the Chronicle of Higher Education devoted to “realistic and witty” academic advice). We feel it is important, having raised problems associated with speed, to facilitate participants’ own abilities to counter these challenges, since stress is connected to self-perception. It is also important to laugh at ourselves. We are struck, each time we present this, by the immense resourcefulness and good humour of the participants.

Participants gain an understanding of the distinctiveness of academic stress, its pervasiveness, and the systemic changes in academic culture which produce it. They can thus challenge the internalization of stress as “individual” failure. Participants find ways to adopt “slow” principles in their own professional practice and explore ways to change institutional cultures.

We have extensive experience as professors of English in Canada and abroad, including serving as Graduate and Undergraduate Chairs. Maggie Berg is currently Queen’s University Chair of Teaching and Learning on the basis of multiple teaching awards and has given many workshops on teaching. We have experience in co-facilitation; we were invited to present a two-hour version of this workshop at four universities during the last year.

SHERATON CHARLTON ROOM (2ND FLOOR) 1:00-4:00PM

W15

Making curriculum visible: Strategies for articulating, communicating and evaluating degree program learning

Kelly Matthews (University of Queensland), Kyle Seifert (James Madison University)

In the current era of external accountability policies and internal cycles of curricula reviews for degree programs, how can we develop and communicate higher education curricula that are meaningful and useful to teaching academics, relevant and understandable to students, accessible to the public and policy-makers, and effective for evaluating the desired student learning outcomes? This workshop provides the space for International Society for the Scholarship of Teaching and Learning conference attendees to consider, discuss and develop strategies for ‘making curriculum visible’ – a model emerging from research into the student experience, and research exploring the academic perspective, of building curricular learning outcomes. The workshop adopts a big picture perspective, examining curriculum at the level of the degree program in relation to the achievement of student learning outcomes. Claims in the literature suggest that research-intensive institutions and science-based disciplines are recalcitrant in curriculum development and evaluation. Thus, the workshop is of particular relevance for those teaching, researching and leading educational reforms in those contexts.

The majority of the workshop is interactive, with practical-based activities designed to allow participants (1) to identify critical pathways in their undergraduate curricula for building desired learning outcomes, (2) to develop strategies for engaging their colleagues in constructive, action-based conversations around student learning across the degree program, and (3) to conceptualise evaluation plans that can enhance teaching and learning. While oriented to practice, the session is nonetheless research-informed, drawing on the work of (1) Ronald Barnett and John Biggs (higher education curriculum and learning outcomes), (2) Michael Fullan (educational change), and (3) Michael Q. Patton (utilization-focused evaluation).

Kelly Matthews is a Lecturer in Higher Education at the University of Queensland in Australia. She has experience facilitating similar workshops in the USA (Assessment Institute and Project Kaleidoscope (PKAL) STEM Conference) and Australia (Australian Council of Deans of Science Teaching and Learning Leadership Conference). Kyle Seifert is an Associate Professor of Biology and the chair of the committee responsible for student and program assessment for the Biology Department at James Madison University (USA). He has led various workshops on developing assessment programs for complex majors through Project
Registration

**Convention Centre**  
3rd floor foyer  
3:30-7:30pm

Afternoon Break

**Convention Centre**  
3rd floor lobby  
4:00-4:30pm

Refreshments available

Session A: Plenary Presentation

**Convention Centre**  
Chedoke AB (3rd floor)  
4:30-6:00pm

**A01**  
**SOTL Travels: Furthering the potential of the scholarship of teaching and learning**  
*Joanna Renc-Roe (Central European University)*

Despite some important recent conversations on the international character and inclusiveness of SOTL (e.g. Wang et al., 2011, Gunn et al. 2010), it is still often perceived as a concept or practice largely institutionalised in the Western, English-speaking university systems (with some notable exceptions). This state of affairs needs to be acknowledged and inquired into, both critically and productively. Mary Huber has asked a number of thought-provoking questions around how far the scholarship of teaching and learning can really travel, and what might happen to it when it gets somewhere new (Huber, 2009)? This plenary aims to stimulate reflection on the question of whether and how we might further integrate international perspectives and participants into SOTL research and institutional impact, through ISSOTL and in other venues. The issue is whether SOTL truly represents a new form of knowledge creation in both the disciplines and in educational sciences (Huber 2009, McKinney 2007), and to what extent this can become a global development? This necessitates a research-based and experience-based reflection on the politics of location that might impede the travel of SOTL. It will involve theorizing concepts such as the notions of internationalization, of academic identity and practice, and the context of practice (including comparative university systems). By this, I mean an inquiry that is open to comparative, policy-related but particularly socio-cultural analyses of academic life, academic practice, and, above all, academic networks or communities (see for example, Huber and Hutchings 2005, Roxxå and Mårtensson, 2009, Garrison and Vaughan, 2007, Wenger 1998 for various theorizations of "a community"). A fundamental issue is paying serious attention to how non-western scholars might use SOTL as an alternative avenue for academic socialization and professional development as well as how non-western institutions may come to adapt it as an aspect of academic practice. We need to seriously ask, however, what are the material pre-conditions, opportunities and obstacles for this movement, participation and exchange? What sort of roles do Western scholars, institutions and societies, such as ISSOTL may need to fulfill in order to make this a substantial and productive movement of ideas, applications, programs and scholars? How can long-term, sustainable, international academic networks be created to sustain significant academic relationships round SOTL and make the global travel of the classroom inquiry possible? Following some selected conceptual interventions, I will share my own critical observations on the international and transformational potential of SOTL based on my research and professional practice. In particular, I will draw out some specificities of SOTL projects and SOTL journeys from scholars in one international SOTL program which I have had the pleasure to lead. I will try to make space not just for my own voice but for the voices of the scholars in this program to be heard, regarding both barriers and opportunities of the international travel of SOTL work. Finally, together with the attendees, I will provide some provisional conclusions and implications of these notions and concepts for the work of the scholars at this conference, this society and beyond.

Opening Reception

**Convention Centre**  
Chedoke C (3rd floor)  
6:00-7:30pm

All conference registrants are invited to take part in an opening reception co-sponsored by the Office of the President and the Office of the Provost, McMaster University. Refreshments available.

Dinner on your own

7:30pm

Arrangements have been made with several local restaurants to provide conference registrants with discounted dining options. You can also sign up for a ‘dine around’ and meet other conference delegates over dinner. Please consult the registration desk for more information.
Thursday, October 25, 2012

Registration

Convention Centre (3rd floor foyer) 7:30am-5:30pm

Breakfast

Convention Centre Chedoke ABC (3rd floor) 7:30-8:30am

General Breakfast
A breakfast buffet will be available for all registrants. Food can be picked up in Chedoke C, and dining tables are available in Chedoke AB.

Conference Mentors Breakfast
Delegates who have signed up for the conference mentorship initiative should proceed to Webster C after picking up their breakfast in Chedoke C to meet with their assigned mentor/mentee.

Session B: Plenary Presentation

Convention Centre Chedoke AB (3rd floor) 8:30-10:00am

B01 A panel on the topic of students as change agents

Mick Healey (HE Consultant & Researcher), Alison Cook-Sather (Bryn Mawr College), Natalie Gerum (Lakehead University), Kara Yanagida (Western Washington University)

By involving students in the Scholarship of Teaching and Learning (SoTL), we create opportunities for students to act as change agents to enhance the quality of teaching and learning practices and policies in their universities. Too often students are simply the subjects of our SoTL research; by engaging them as co-researchers and independent researchers we can give them a more empowering and transformative educational experience as producers and change agents.

Students may be engaged in all four of Boyer’s (1990) scholarships – discovery, integration, engagement and teaching. This session will focus on the last of these, in particular on how we may build on and move beyond listening to the student voice and involve students as change agents who can have an impact on the teaching and learning that they and their fellow students experience. This topic is part of a wider debate on how students can be engaged throughout their undergraduate courses in producing knowledge, not just consuming it.

The Panel will fall into two parts. In the first, the Chair, Mick Healey an HE Consultant and Researcher from the UK, will run an interactive session which will explore the theoretical basis for this approach and illustrate, with reference to many examples from different kinds of higher education institution in a range of countries, different ways of engaging students as change agents, including:

1. Engaging students as pedagogical consultants
2. Engaging students as co-designers of courses
3. Engaging students as SoTL practitioners
4. Engaging students as strategy developers and advisors.

In the second and longer part, Mick will chair a discussion between the three panellists (two students and a member of faculty) and the delegates. The questions and answers will be interspersed with five minute talks from each of the panellists.
Kara Yanagida, a student from Western Washington (US), will speak about engaging students in ways that are sustainable in terms of the system and for individual participants, such as offering credit, titles, or awards that recognize students for their work.

The talk by Alison Cook-Sather, a member of faculty at Bryn Mawr (US), is entitled: “Students as change agents or student voices: The challenges of naming and navigating transformative partnerships”. She will argue that the language we use is critical in persuading students and faculty to engage with this agenda.

Natalie Gerum, a Masters student at Lakehead (Canada), will speak about “Connecting university classrooms with community to catalyze students creating change”. Natalie will explore students’ ability to be co-researchers, pedagogical consultants, and active community members, both within the university and the local community.

ISSOTL delegates will have an opportunity in advance of the conference to submit potential questions for the panel and the audience to discuss and during the Panel there will be an opportunity for delegates to exchange ideas with each other at their tables.

**Morning Break**

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**Exhibits**

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<td>Other publishers or organizations will have material in your registration package and/or at a ‘common table’ in the exhibits area. These include: The Althouse Press, The Council of Ontario Universities, The Higher Education Quality Council of Ontario, Indiana University Press, McGraw-Hill Canada, Sage Publications UK, and Taylor &amp; Francis Group UK.</td>
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**Session C: Concurrent Sessions**

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| C01               | **We Have Found the Threshold and it is Us: “Decoding” the Disconnect between Disciplinary Thinking and Teaching Practice**  
Leah Shopkow, Arlene Diaz, Joan Middendorf, David Pace (Indiana University) |

Since the late 1990s scholars have been exploring the nature of knowledge in the disciplines and the obstacles students face in becoming expert in them (Troublesome Knowledge [Perkins 2006], Decoding the Disciplines [Middendorf and Pace 2004], Robust Misconceptions [Chi 2005], Threshold Concepts [Land and Meyer 2003]). While these theoretical approaches have been enormously useful, they run the risk of reifying the disciplines. Many ideas about teaching and learning arise from the premise that disciplines have a real existence, outside of the thinking of those within the discipline. So we say that students have a problem mastering the thinking of the discipline or the concepts of the discipline, as though the discipline had some sort of external reality. However, disciplines are epistemic communities. (Haas 1992; Sutherland 2007) This means that they exist as a set of “shared norms, causal beliefs, notions of validity and common practice” (Sutherland 2007:500), in other words, in the minds and practices of accredited members of the disciplines. Not all members of a discipline may share all facets of practice, may think all norms equally important, or appeal to the same principles of...
causality, even if they acknowledge the correctness of another practitioner's recourse to them. The obstacles students face, therefore, are products of our own disciplinary thinking, not objective difficulties. We are the threshold students have to get through.

Faculty at Indiana University have primarily been working on the methodology of “stuck” places that has become known as “Decoding the Disciplines.” As part of this methodology, we interview faculty members about the difficulties their students experience (“bottlenecks”). The interviews probe the “unconscious competence” of the faculty members in a social process. (Faculty have also successfully used content analysis and subtractive rubrics to do this, although most people find that the social dimension powerfully facilitates their learning.) Once the expert’s thought processes have been clarified, the teacher can model his or her thinking and give students the opportunity to practice and receive feedback about their degree of mastery.

Our interviews with faculty members in History and Geology have led us to two important revelations. The first is that many of the things practitioners do in the classroom don’t reflect the way they themselves think in the disciplines. For example, an historian never considers a single primary source in isolation, yet a teacher may assign a single source and ask students to determine its significance, leading students to see the source as an illustration. Our second insight is that exploring the ways experts think within their disciplinary cultures and how we might teach these ways of thinking to students forces us to think about the value of the disciplines and leads us to justify what we do. In an age when universities are increasingly expected to demonstrate both that the students are learning and what they are learning has real value, this is not a trivial matter.

In this ninety-minute session we will demonstrate specific difficulties students have encountered with tacit ways of knowing in History and Geology, tell what we did to address these, provide assessment results, and explain what this process told us about disciplinary understanding. Audience members will discuss, depending on their familiarity with decoding and bottlenecks, a bottleneck they have experienced or unspoken understandings in the culture of their disciplines and how these line up student bottlenecks (two simultaneous discussions).

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**Integrating Student Voices: Evidence of Changing Attitudes that Change Practices**  
*Carmen Werder, Shevell Thibou, Lauren Lyshall, Precious Angeli Barrientos, Cathy McDonald (Western Washington University)*

While the inclination to engage students in the study of teaching and learning seems to be on the rise (Werder and Otis, eds. 2010), little research is available to show what impact that co-inquiry has on its participants in terms of changing attitudes or of changing practices. Presenters in this session will provide results of research conducted at their university addressing the question - To what extent does partnering with students in the study of teaching and learning change attitudes that, in turn, enact changes in individual and institutional practices? This question is a crucial one for SoTL practitioners because even though intuitively it seems like a good, egalitarian move to bring students into this work, we need to understand better what exactly changes as a result of that partnering. By understanding better the dynamics of partnering with students, as well as the results of those partnerships, we can more readily see if efforts at co-inquiry are worth pursuing and how to do so. We need to understand better what attitudes, if any are influenced. Do certain attitudinal changes matter more than others when it comes to enabling better practices? And what relationships, if any, exist between certain kinds of attitudinal changes and actual changes in behavior?

Panelists will include two undergraduate students, one graduate student/staff member, and a faculty member who all have participated in one or more of their campus scholarship of teaching and learning venues. They will present evidence that comes from three institutional structures for advancing SoTL at their institution: 1) the Teaching-Learning Academy (TLA), a decade-long dialogue forum to study and enhance the learning environment, 2) Writing Research Fellows, a collaborative inquiry program pairing...
faculties and students in studying a selected practice for teaching writing that began five years ago, and 3) a SoTL Residency, a multiple-day research and publishing residency in its second year which brings together faculty, students, and staff who are researching topics on teaching and learning.

Presenters will draw on evidence gathered from surveys and individual interviews to represent views of various categories of participants who have been involved in co-inquiry at their institution including students, faculty, staff, administrators, and community members. They will present that evidence in the form of charts/tables, video clips, and case stories to illustrate the kinds of attitudinal changes reported across these constituent groups and reported changes in individual teaching and learning practices, as well as on institutional change initiatives. Voices in this presentation (live and virtual) include undergraduate students, graduate students, classified staff, faculty members at various ranks, central administrators including a dean, as well as members of the off-campus community. The focus will be on highlighting the individual attitudinal shifts reported and how they might correlate with reported changes in both individual teaching and learning practices as well as on institutional change initiatives.

The data will highlight attitudinal gains across participants such as more empathy for each other’s challenges, a greater sense of caring for each other as individuals, a great sense of connection with the University, and a deeper sense of being part of a larger learning community. The data will also highlight some of the individual changes learners have made in the way they interact with faculty, changes faculty have made in their teaching practices, and some of the changes to the general education curriculum/advising resulting from the co-inquiry. Panelists will also address challenges of analyzing some of the data (such as the quarterly surveys) because co-inquiry is a continuing process and the benefits may not surface after just one academic term or even a particular set of projects. Furthermore, even positive attitudinal shifts may not translate into individual changes in practices. Additionally, tracking institutional change initiatives that may result from this co-inquiry represents an even more daunting task since the pathways are not always explicit or immediate.

In the first 30-minute segment of this session, panelists will provide a brief overview of the research agenda including methods followed by “evidence snapshots” - sample data sets gathered. In the second 30-minute segment, participants will work in smaller groups to interpret the data together and suggest findings. In the third 30-minute segment, presenters will facilitate a whole group dialogue to synthesize findings and suggest implications for further research and practice.

Conceptual underpinnings for this session include theories regarding engagement in learning communities (Zhao and Kuh, 2004), attitude-behavior consistency (Kallgren and Wood, 1986), self-authorship and culture change (Baxter Magolda, Creamer, and Meszaros, 2010), efficacy expectancies (Bandura 1997), and pedagogical intelligence (Hutchings 2005). For example, there is quite a bit of research on learning communities and their effects on student engagement: “findings indicate that participating in a learning community is positively linked to engagement as well as student self-reported outcomes and overall satisfaction with college” (Zhao & Kuh, 2004). Based on past studies, it is quite obvious that student engagement in classroom and non-classroom activities promote a better educational experience for students. However, these studies have focused solely on the students, rather than on the other members of the learning community, namely faculty. Little is known on how faculty interaction with students in a non-classroom setting influences their perspectives on teaching including if the interaction results in changes to attitude/practices. The purpose of this study is to identify how SoTL learning communities that include students impact attitudes of participating faculty, staff, community members as well as students themselves, and how any attitudinal changes may, in turn, affect teaching and learning behavior/practices.

Note: This session was designed to complement the plenary on “Students as Change Agents” and focuses on the extent to which integrating student voices in the study of teaching and learning can change teaching and learning attitudes and practices - for the better.
Critical Reading, Integration and the Research Paper: A Collaborative SoTL Project
Karen Manarin, Miriam Carey, Melanie Rathburn, Glen Ryland (Mount Royal University)

In this panel, we discuss results from a collaborative SoTL project into critical reading in four very different first-year general education courses: Controversies in Science; Texts and Ideas--Genocide; Communities and Societies; and Critical Writing and Reading. More specifically, we examine student reflective writing and research papers in terms of ability to identify genre and ability to make connections across texts and perspectives. If General Education is to develop “important intellectual and civic capacities” in students, as described in the Mount Royal University mission, integration and inference are key skills for reading for academic purposes. This panel explores the troubling absence of integration in the student texts and suggests some strategies for thinking about what is, and is not, happening when students are asked to make connections in research papers. Audience members will be invited into a debate about the role of the research paper in the undergraduate classroom.

The first part of the panel will briefly outline the larger study. Student data were gathered in Winter 2011. Four researchers shared the same research question—How do students demonstrate critical reading, defined as reading for academic purposes and reading for social engagement?—research protocol, data gathering methods and methodology for analysing the data. The student work examined includes weekly written reflective assignments and assignments leading up to a research paper in each course. We examined these assignments using a combination of textual analysis and hybridized versions of the American Association of Colleges and University (AAC&U) VALUE rubrics for reading, critical thinking, information literacy, and civic engagement, keeping in mind that the two definitions of critical reading require different rubrics. We conducted inter-rater reliability tests for the rubrics. We looked for indicators of critical reading, levels of accomplishment, and change over time. We also arranged for post-course semi-structured interviews with students willing to talk about their readings of the course texts and their perceptions of critical reading.

The second part of the panel will focus on two indicators from the Reading for Academic Purposes Rubric: Genres (from the VALUE rubric for Reading) and Connections to Discipline (from the VALUE rubric for Integrative Learning). Teachers have long intuited the importance of genre recognition and integration for comprehension (see, for example, Bean 2011 and Henderson 2012); researchers have explored the different aspects how these processes work, including theorizing text, situation, and documents models in a hierarchical relationship (Trites & McGroarty 2005); paying attention to cognitive, textual and social dimensions of integrating texts into written work (Beck 2009); and considering the role that personal epistemology plays in students’ ability to integrate (Braten & Stromso 2006). Recognizing that many, though not all, of the students in these general education courses were at the beginning of their post-secondary studies, our research examines written work for traces of genre recognition and connections among texts. While students seemed able to recognize at least basic generic distinctions in readings for the Critical Writing and Reading course, perhaps because of their assumptions about the course content, genre was much more problematic for students in some of the other courses. Many students did not seem to approach reading different types of texts differently; students had difficulty recognizing satire; many students did not make distinctions between academic and non-academic sources. Students in all four courses demonstrated very little integration of texts in the research papers. Although scaffolding in how to read academic articles had been provided, students tended to rely on data-mining rather than synthesis and inference.

The third part of the panel engages participants in a dialogue about what these results might mean for student learning and what we can do about it. We ask participants whether they assign research papers in the undergraduate classroom and why. We query whether the purpose is matched by the assessment techniques. We offer a series of, we hope, provocative questions that panel members will debate with participants. Are we emphasizing process or product? If most of our focus is on format, why are we upset when students provide faux research papers—those papers that look all right on the surface until you realize the sources are only abstracts? Do we reward integration or proficiency? Has a focus on finding and using information overwhelmed a focus on reading the information with a goal of understanding and integration? Are we willing to pay the price of content memory that integration might cost (Britt & Sommer 2004)? We finish the session by offering a few examples of how the results from this study have already changed our practice.
High Impact Practice and Student Engagement: Impact on Retention and Graduation  
Susan Wolfgram, Glenda Jones, Suejung Han, Jeffrey Sweat (University of Wisconsin-Stout)

Summary of Panel: This panel will present high impact teaching and student engagement survey research results as a follow up to our ISSOTL 2011 panel across disciplines which addressed how the practice of high impact teaching in and out of the classroom inspired SOTL inquiries, and conversely, how these inquiries inspired and transformed our teaching practices. George Kuh's teaching and learning practices have been widely tested and have been shown to be beneficial for college students from many backgrounds. There is a sizable body of research on student success resulting from High Impact Practices, which include First-Year Seminars and Experiences, Common Intellectual Experiences, Learning Communities, Writing-Intensive Courses, Collaborative Assignments and Projects, Undergraduate Research, Diversity/Global Learning, Service Learning, Community-Based Learning, Internships, Capstone Courses and Projects. In Student Success in College: Creating Conditions that Matter (2010), Kuh argues that at many institutions the utilization of active learning practices is unsystematic, to the detriment of student learning. The University of Wisconsin-Stout is a comprehensive, career-focused polytechnic university where students, faculty and staff use applied learning, scientific theory and research to solve real-world problems, grow the state economy and serve society. In this study, we sought to determine which high impact practices students are exposed to while studying at UW-Stout and the impact of those experiences on validated measures of student engagement. If the research of Kuh and others working within his framework is replicated at UW-Stout, the recommendation would be to place more focus on creating high impact practices, with the goal of increasing student retention and graduation rates.

Abstract of the Panel: Dr. Susan M. Wolfgram, Ph.D. (Session Chair), Dr. Glenda Jones, Dr. Suejung Han, and Dr. Jeffrey Sweat are all committed in their research and pedagogy to inclusivity and equity for all students.

Questions and Rationale: The heart of SOTL is its applied nature and intentionality to improve teaching and enhance learning. The rationale for this presentation is to share the results of our research, consistent with the conference thread, that will provide empirical evidence if high impact practices engage students and impact their retention and graduation at our university. It will also provide empirical evidence if ethnic-minority students have equitable access to these practices, and if so, their college success is promoted more by these practices than is that of majority white students. There is evidence that high impact practices can lead to a wide range of positive outcomes (academic, personal, and civic) for the general population of college students as well as underserved student populations and specifically underrepresented minorities, low-income students, and first-generation college students (Swaner & Brownell, 2008). However, there has been a lack of systematic investigation of the benefits of these practices and particularly for underserved students.

Theoretical Framework: Lave and Wenger made the argument that learning changes a person’s identity (1991). This is also a SOTL tenet and if so, then we need to understand and make sense of the practices that students participate in and how they themselves understand, change, and grow through these practices (Gerhard & Mayer-Smith, 2008). This panel presentation is informed by a Socio-Cultural theoretical framework. Socio-cultural theories of learning are based on the assumption that learning is not isolated to the individual but actually a social phenomenon (Wenger, 1998). Hanks (1991) talked of this theory as a “way of being in the social world, not as a way of knowing about it” (p.24). From this perspective, engaging students in their learning through high impact practices, takes their learning beyond the acquisition of knowledge to the building of identities and cultures. The socio-cultural perspective facilitates learning outcomes through collaboration and community building, a social context.

Outcomes: Preliminary findings indicate that (1) white majority students were exposed with greater frequency to 7/10 of the high impact practices; and (2) for both ethnic minority and white majority students together and separately, high impact practices predicted student engagement significantly.

Reflective Critique: According to Glassick, Huber and Maeroff (1997) reflective critique of scholarly work involves evaluating one’s own work, thinking from multiple perspectives, and using that evaluation to improve future work. Panel members will discuss how the results of this work will be used to improve their own teaching and how the results can be integrated into the university curriculum in the future.

Audience Engagement: Participants will be invited to share their own experiences and challenges of integrating high impact practice into their teaching as well as the benefits for engaging and retaining underserved groups of students in collaboration with the panelists.
Are Our Universities Producing Too Many Doctoral Graduates?
Richard Wiggers (Higher Education Quality Council of Ontario)

Over the past decade, Ontario universities have nearly doubled enrolments in and graduations from their doctoral programs. The financial resources for this unprecedented growth have been provided largely by the federal (commencing with the 2002 Innovation Strategy) and provincial (particularly with Reaching Higher, 2005) governments, and the rationales included an anticipated shortage of qualified university faculty (which never transpired) and the need for more “highly qualified personnel” (HQP) who could translate university research into new commercial enterprises (which still occurs relatively rarely in Canada).

For the individual who decides to pursue a doctorate, there can be a myriad of personal and professional motivations. Some require the credential if they hope to become a university professor, or work as a laboratory researcher or in other professional pursuits. Others may be drawn, at least originally, by the intellectual challenge or the offer of funding support. The doctorate may also be the culmination of a lifelong dream or a source of family or personal pride.

Enrolments in Ontario doctoral programs have experienced substantial growth as a result, and in a survey conducted among upper-year students at Ontario universities in the fall of 2009, a surprising 13% expressed their intention to pursue a doctorate. A number of commentators over the past year, meanwhile, have expressed concern about the “over production” of PhDs, and the Higher Education Quality Council of Ontario (HEQCO) has launched a series of major research studies intended to better understand current trends and outcomes related to Ontario’s doctoral programs. This presentation will draw from the following research undertaken and published over the months preceding the ISSoTL conference:

- July 2012 Publication: HEQCO has contracted with Statistics Canada, using mainly National Graduate Survey (NGS) data for three cohorts (1995, 2000, 2005) and the Survey of Earned Doctorates (SED), to examine the labour market outcomes for doctoral graduates.
- Fall 2012 Publication: In 2007 and 2010, the Canadian Graduate and Professional Student Survey (CGPSS) was administered to master’s, professional and doctoral students Ontario universities. In a joint study initiated in 2011, COU and HEQCO are examining the pooled data to determine what factors, both individual and program-related, influence graduate student satisfaction.
- Fall 2012 Publication: HEQCO is preparing a paper directed at aspiring doctoral students that will examine recent trends in enrolments in Ontario universities, and explore the labour market pathways for doctoral graduates, both for those who aspire to become university professors, and for those who seek or end up in other careers.

This presentation will focus on how many Ontario doctoral graduates aspire to careers as university professors, how many actually are able to pursue that route, and how many instead end up in alternative pathways such as postdoctoral and sessional/contract teaching appointments.

A Self-study of Factors that Impact Success: Sustainability and Community Building through a Doctoral Process
Bernie Murray (University of Toronto)

The purpose of this self-study was to explore adopted strategies and challenges that impact the success and completion of students’ doctoral degrees. This study addressed potential challenges in the senior years of study and provided solutions to problems. The participants were five doctoral students registered in a year-long course colloquium. The students’ were at various stages of completion of the Curriculum Studies and Teacher Development degree in the department of Curriculum, Teaching, and Learning. This small scale study was conducted in order to evaluate students’ perceptions and potential success in doctoral degrees. The focus of the proseminar course introduced students to doctoral work and academic life. Students were encouraged to organize study groups to continue class discussions, share resources, teaching experience,
conference proposals, publishing opportunities, or information about academic jobs. The students were to use the study group as support and personal development.

In this qualitative study data were collected from personal interviews, a focus group, and journals. Personal interviews focused on a detailed account of adopted strategies from class content. The purpose of the focus group was to provide data regarding the learning community that was supportive in the students’ program. Participants in the focus group had an opportunity to reflect on personal experiences. Journals were collected from each participant in the learning community. The journals contained information that the participants deemed supportive or provided a challenge within the doctoral program. The participants collectively provided solutions for potential challenges. The text was analyzed and coded from developing themes that emerged.

Results of the study revealed adopted strategies that were resources and personal support. Shared resources, conference information, and proposal writing contributed to meaningful experiences for the participants in this study. Personal support included shared experiences described as respectful, caring, and helpful. These experiences contributed to the participants feeling of belonging and a part of the educational community. All participants found support and guidance from the prosemian course and learning community. Strategies or adopted techniques included scheduled writing sessions with constructive feedback. Reflection of experiences was an ongoing activity and peer support enhanced students’ satisfaction in the graduate program. These techniques can be implemented into educational programs and enhance the learners’ experiences of community building and professional development. The findings may provide solutions that lower the attrition rate in higher education programs.

Findings from this study could impact the curriculum in graduate programs. A discussion will provide information about students’ experiences, recent strategies adopted to ensure success, program challenges, and opportunities for community building that are student initiated. The information from this session will be a benefit to academic administrators, educational developers, teaching assistants, and faculty members in higher education. This study will contribute to the literature by providing strategies that doctoral students used to increase the success rate for completion of the degree. The findings from this study may provide the educational community with information that emphasizes the importance of building learning communities.

From the Student as Consumer to the Self-Actualizing Graduate Student: Selling (out) Better Teaching
Erin Aspenlieder (Independent Scholar), Marie Vander Kloet (Independent Scholar)

Tasked with reviewing graduate student teaching programming, we discovered a slippery boundary between providing support to graduate students and replicating forms of neoliberal self governance. While caring deeply for the experiences and goals of graduate students at our institutions, we are troubled by the sort of higher education environment that we risk recreating in our work. This paper examines what sort of student subject is created in the push towards the creation of individualized and self actualizing training initiatives and modes of support and considers the implications of normalizing the language and practices of neoliberalism in teaching and learning centres’ programming.

Critical scholarship and popular discourse has repeatedly flagged the ‘student as consumer’ phenomenon as troubling and revealing of a fundamental shift in the goals of education and the sort of politicized identities made possible for students in higher education. While graduate students are invited to affiliate with the frustrated professoriate in their task of teaching ‘student consumers’, the experience of graduate student life is structured by similar desires to gain ‘value’ from education, with the tenure track position as the most prized possession and with other esteemed professions as a close second. Increasingly, institutions seek to demonstrate the employability of their graduate students and, as we observe in our daily work and in a recent survey at a midsize research intensive university, the extent to which graduate students take up this language and orientation in describing their own needs and desires from programming at the teaching and learning centre. At the core of this survey, we note that the desire for a ‘good job’ supersedes the quest for relevant and better teaching resources. Rather than departing from the ‘student as consumer’ discourse, we observe and critique how the ‘self actualizing graduate student subject’ might fast become the most vocal
neoliberal subject on Canadian campuses. In this paper, we contribute to the growing body of scholarly
teaching and learning literature which interrogates not just how we might teach well but under what
conditions and with what consequences.

Drawing on the theoretical work of Nikolas Rose and Wendy Brown, we hazard a consideration of specific
graduate student program models and objectives and we conduct discursive analysis of the language of
graduate student teaching program descriptions. We suggest that without further examination graduate
student development risks reproducing the neoliberal student as consumer in future faculty. By integrating
our theoretical questions with our practical experience as educational consultants and teachers we wrestle
with the very unsettling task of bridging theory and practice in scholarly research on teaching and learning.

The Impact of Technologies on Student Learning Outcomes

We Will Rock You: Curricular Disruption With The iPad
Joyce Lazier, Samantha Birk (Indiana University - Purdue University Fort Wayne)

This paper will address the “integrating diverse disciplinary approaches to teaching, learning and SOTL”
conference thread. My original question was simply how to get the students to spend more time editing
their research papers to obtain a higher quality paper. This led to the idea of creating an iMovie research
paper where the students would have to narrate their text, add images, and music for a final project.
I put together a proposal requesting iPads for my seven students in Modern Philosophy. The final iMovie
project brought together various disciplines since it required the student to find both visual components for
their movie but also music appropriate to the time period. They were also encouraged to connect modern
philosophy with some other discipline. The students wrote their paper as an iThoughts storyboard, found
and/or created images to enhance that text, added music, and read their text as the narration of the movie.
This single project, therefore, engages a diverse array of learners: auditory, visual, collaborative, creative,
critical, linear. This one project also encompasses diverse disciplinary approaches: writing a traditional
paper, art appreciation, music appreciation, visual arts, and multi-media presentation. One of the outcomes
of the iMovie project was better text for their research papers since it required the students to continually
revisit the text and therefore to continually edit. Comparison of papers between same level philosophy
classes confirmed that the iMovie project resulted in better research paper text.

This proof of concept course has inspired an ongoing SOTL investigation into the efficacy of mobile devices
in better meeting student learning outcomes. Questions to be addressed this fall are: 1) to what extent do
mobile devices support learning outcomes? 2) To what extent is student learning and retention enhanced
by mobile technology? 3) Does curricular re-design around mobile devices better meet the learning
objective of critical thinking?

The Educause Horizon Report (2010) mentions several universities that are experimenting with mobile
devices. However in all cases, the mobile device was substituted into the classroom either for a textbook,
video screen, or notebook. None of the case studies thus far have investigated the efficacy of mobile
devices to transform the curriculum to better meet student learning outcomes. My preliminary findings
indicate that these devices can transform the classroom curriculum to better meet learning outcomes.
A larger study will be conducted in the fall at my University that compares iPad-required sections with
non-iPad sections to measure the extent that mobile devices play in better meeting student outcomes
through curricular re-envisioning. The use of mobile devices is not for the kind of teacher who prefers to
be the “sage on the stage.” Mobile devices allow the student to become a colleague in the content of
the course, which better engages them since they have a greater ownership in the content. The session
seeks to achieve a better appreciation of how mobile devices can easily tap into diverse disciplines that
transform the classroom resulting in deeper student learning, prolonged engagement, and heightened
critical thinking skills.
The main purpose of this study was to examine the effectiveness of video data on graduate students’ presentation performances, and their ability to learn and improve from such data. The study focused on the research question: “Does the use of video recordings help to improve graduate students’ presentation skills?” Presentation skills that were addressed in this study include: verbal and non-verbal communication skills, facial expressions, organization of presentation content, and engagement of the audience.

There is abundant literature suggesting that the use of video data can significantly help to improve communication skills and this technique has been widely used in teacher education. According to research by Allen & Ryan (1969) on videotaped microteaching/presentations conducted at Harvard University, videotaped student teachers performed better than those with standard preparation (i.e., without the use of videotaping). It was also reported that videotaping is a time efficient technique for teacher preparation—the total time involvement in the videotaped microteaching/presentations was less than 10 hours per week, as compared with the 25-hour-per-week commitment normally required.

A qualitative research approach was used, including ethnography and content analysis. To help achieve data triangulation, multiple sources of data were obtained, including: students’ videotaped presentations (two per student) conducted over an interval of four weeks, students’ weekly learning journals and their reflections on their presentations, peer and instructor feedback on the presentations, and class observations. An ethnographic approach was used to closely examine the video data, and content analysis was applied to look at the curriculum content areas.

Sixteen participants were randomly assigned to the experimental and control groups. All of the participants were K-12 teachers studying in a graduate educational technology program. Half of the participants were assigned to the experimental group, and the other half to the control group. Participants in the experimental group had access to the videotaped recordings of their two presentations, while they were writing their reflections on their presentation performances. Participants in the control group did not have access to their video recordings until after they had completed their two reflections.

Results from the study showed that the use of video recordings can be a useful tool for improving students’ classroom presentation skills. Students perceived the video recordings as an effective way to learn and help improve their presentation skills. Students in the experimental group enjoyed the engaging aspects of video recordings and found it easy to improve their second presentation after watching a video recording of their first presentation. Students in the control group reported that “it is extremely difficult to assess yourself without being able to review video data.”

During the conference presentation, participants will be asked to identify common problems that presenters often make. Video recordings of students’ first and second presentations will be shown, after which conference participants will be asked to identify student presentation problems (first recordings), as well as student improvements (second recordings). Conclusions, implications, and suggestions for using video recordings to help improve student presentation skills will also be discussed.
it hinders learning (Adesope & Nesbit, 2012; Kalyuga, Chandler, Sweller, 1998, 1999), little research has examined why redundant text is such a common visual aid. As the present results suggest, one reason for its abundant use may be because learners falsely perceive redundant text promotes understanding. Research in metacognition would suggest that learners may have developed a sense of familiarity and comfort with redundant text presentations due to repeated educational exposure, consequently promoting a false sense of instructional effectiveness (Kornell & Bjork, 2008). Importantly, this misleading sense of comfort interferes with the ability of both learners and instructors to recognize when understanding is hindered. These results demonstrate that it is critical for instructors to have access to appropriate multimedia theory and training to avoid reliance on redundant text. By educating instructors on appropriate multimedia design, they can in turn communicate to students why redundant text, although subjectively preferred, is an ineffective learning tool. Future research hopes to broaden the experimental sample and test in a variety of settings with different groups of learners to help increase the generalizability of this study's results.

**C11**

**Empowering Faculty to Improve Students’ Learning through Collaborative Assessment:**

The Illinois Initiative on Transparency in Teaching and Learning in Higher Education

Mary-Ann Winkelmes, Elisa Mustari (University of Illinois at Urbana-Champaign)

Since 2010, the Illinois Initiative on Transparency in Learning and Teaching has involved approximately 7500 students in seventy-two courses at nine universities in five countries. The project aims to improve higher education teaching and learning experiences for faculty and students through two main activities:

- promoting students’ conscious understanding of how they learn, and
- enabling faculty to gather, share and promptly benefit from current data about students’ learning by coordinating their efforts across disciplines, institutions and countries.

Early findings indicate statistically significant benefits to students’ ratings of their learning experiences in courses where instructors implement methods for engaging students in explicit (or transparent) dialogue about learning processes and teaching practices. Results from many types of courses, institutions, students and faculty are compiled and studied. Participating instructors receive insights about how to improve students’ learning, based on current data gathered from their own students and other, similar students in comparable courses. The data complements traditional student ratings of instruction by offering a measure of how teaching impacts students’ views of their learning, instead of how students rate teaching performance.

This presentation will identify the high-impact teaching and learning practices tested in the study, and the data on how these practices impacted students’ learning with respect to discipline, level of expertise, class size, students’ self-declared majors and ethnicities. A brief overview of the psychometric methods for the study will also be provided.

Session participants are asked to contribute suggestions about further ways to apply the data, and additional methods of “transparent” teaching and learning that can be tested.

**C12**

**Avoiding Pedagogical Solitude: An Interdisciplinary Learning Collaborative**

Judy Esposito, Resa Walch (Elon University)

What happens when faculty from different disciplines come together to examine the same issue? In his book, Teaching as Community Property: Essays on Higher Education, Lee S. Shulman (2004) writes about faculty isolation in the classroom, sometimes referred to as “pedagogical solitude.” When faculty from different disciplines come together to examine the same issue, we break out of pedagogical solitude and create a collaborative learning environment that deeply enriches the teaching/learning experience. This paper analyzes a case of interdisciplinary collaboration, rooted in subject matter and linked with the lives of students, between two courses: Fatherhood and Substance Abuse and Human Behavior.

The Fatherhood course is a Human Service Studies elective course that focuses on the many issues, societal expectations, joys and challenges that accompany...
fatherhood. Substance Abuse and Human Behavior is an upper level course in the General Studies curriculum taught by a faculty member in Health and Human Performance.

Research indicates that alcohol consumption is commonplace among college students and a serious problem for some. Additionally, our institutional data indicates that many students report addiction issues in their immediate and/or extended families. Certainly, substance abuse and family issues resonate with students. Collaboration between these two instructors facilitated student inquiry and helped to emphasize the critical impact substance abuse has on the family.

This particular interdisciplinary project prompted the two instructors to approach student learning from a different perspective, exploring how to make knowledge accessible through a collaborative process. Through the use of stories, media examples, quotes, panel discussions, research articles and film, students examined what they already knew, challenged misperceptions, explored new ways of thinking and then constructed new representations of the impact of addiction on families. The instructors combined their classes for a total of six hours during regular class time and one movie-night, and co-hosted a mini-conference in which local community members served as panelists for small and large group discussions. These classroom strategies allowed students to experience clear connections between disciplines, while challenging them to see course content from multiple perspectives.

Learning outcomes of the mini-conference and related assignments are evident through student responses to open-ended questions pre- and post- mini-conference, as well as field notes written throughout the experience. Additional evidence of student learning is indicated by our students’ demonstrated ability to apply the concepts of family roles, and how those roles are affected by addiction through secondary writing assignments.

This paper contributes to the understanding and practice of SOTL by providing evidence of student learning based on interdisciplinary collaboration and teaching from the perspective of what students already know, rather than their lack of knowledge (Shulman, 2004). Additionally, the faculty partners will discuss their own critical reflections of this experience and how it impacted their roles in interdisciplinary teaching and learning, providing a framework for faculty with shared interests. Participants will receive a full description and agenda of the student mini-conference, along with detailed descriptions of the related assignments. Participants will also take part in an engaged learning activity from this project.

Value Creation in a Professional Learning Community
Sylvia Currie (BCcampus)

This paper uses a conceptual framework developed by Wenger, Trayner, and de Laat (2011) to assess the learning enabled by involvement in the SCoPE online community. SCoPE is an international community of educational practitioners and researchers that is supported and hosted by BCcampus, a collaboration of all 25 British Columbia public post-secondary institutions. The core activity in SCoPE is scheduled, facilitated, monthly seminars on topics that emerge through participation. The community is sustained by volunteer facilitators and event coordinators within the province and beyond, and its purpose aligns with the community of practice model to bring people together across disciplines and geographical boundaries “to learn from and with each other about a particular domain” - that domain being teaching and learning in higher education.

The value creation framework involves collecting personal and collective narratives, and five “cycle streams” of data to create a “compelling picture of how communities and networks create value for the members, hosting organizations, and for sponsors”. In this regard, the results of this study will be useful for members to understand their contributions and benefits, as well as for BCcampus to gain insights into the effectiveness of communities and networks for professional learning.

Four of the five cycles presented in this framework are adapted from Donald Kirkpatrick’s (1994) model for training and program evaluation. The fifth cycle, and application in a community/network context, is new. In addition to creating a picture of the value creation in the SCoPE community, a second outcome of this research will be to provide feedback on the framework itself.

This session will engage participants in dialogue based on the key questions for reflecting on value creation as they relate to their own experiences in communities and networks. This study is in progress and is expected to be completed by August, 2012.
**C14**  
**Individual Paper**  

**Evaluating Learning Objectives in a Research Methods Course**  
*Mark Earley (Bowling Green State University)*

Having taught a Master’s level introductory research methods course for 13 years, I’m surprised I still find myself questioning the quality of the course - it is the one course I dread teaching because of this discomfort. I cannot pinpoint why I am not comfortable with the course, which only heightens my anxiety when teaching it. I decided to explore each aspect of the course through a long-term classroom action research study with the goal of improving my impression that the course is a good one for students.

I applied a classroom action research model (Kemmis, 1988 as cited in Mills, 2003) that first requires identifying an area of focus. For my first look at the course, I decided to focus on learning objectives. I selected this topic for research because the learning objectives of a course fuel everything else - teaching methods and assessment in particular (Fink, 2003). Knowing that my learning objectives are relevant and achievable will then allow me to focus on how to help students achieve them. The next step in the classroom research cycle is to collect information from peers, the literature, and other sources as appropriate. For this step, I started with a search of the research methods education literature for any discussion of learning objectives. Some research presents the goal of a research methods course as introducing students to the research process (e.g., Aguado, 2009; Lei 2010), few authors explicitly discuss the learning outcomes of such courses (Wagner, Garner, & Kawulich, 2011), which aroused my curiosity as to why this research focus was lacking; this added to my purpose for conducting the study. I decided to conduct a review of others’ course syllabi found on the Internet as a way to see what objectives my peers use. I focused on the first 100 that appeared to be introductory, graduate level courses similar to mine.

The analysis of these 100 syllabi is ongoing, focusing on (a) the content of the approximately 1,000 learning objectives found in these syllabi, and (b) the categorization of the types of learning objectives based on L. Dee Fink’s (2003) model of significant learning. The presentation of this paper will focus on these results, how they informed my assessment of my learning objectives, and how I modified my learning objectives based on this assessment, thus integrating my research with my teaching. The course, with new learning objectives, will be taught in summer 2012; I will also present my reflections on this first cycle and plans for the next cycle in the classroom action research process. Equally important in this presentation will be the students’ assessment of the learning objectives as to whether or not they were achieved by the end of the course, and whether or not students find them reasonable and relevant objectives for their learning. One key contribution of this study will be a new look a research methods instruction through the careful application of the scholarship of teaching and learning.

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**C15**  
**Individual Paper**

**Using observed student team problem solving to monitor and stimulate development of complex integrated professional skills**  
*Anders Ahlberg, Marie Wahlgren (Lund University)*

This submission presents a method developed to monitor and stimulate the progression of learning in two 5-year professional study programs. Multi-stage cases based on real industrial situations were used to monitor a range of integrated core professional skills relating to subject discipline knowledge and professional conduct among teams of chemical engineer and biotechnology students. Separate sessions were arranged with student groups from pre-university classes, 1st, 3rd and 5th year of university studies. These cohorts were all monitored using the same case. We used cases that are relatively simple in terms of the presentation material (limited info added at each stage of the case) and analytical dimension (immediately discerned questions) but advanced in terms of conceptual complexity (cf. Leenders et al. 2010), so that each session lasted approximately two hours. The monitored aspects were:

- Approaches to industrial problem solving
- Appropriate use of technical and scientific language
- Knowledge of chemistry, biochemistry and engineering
- Statistical reasoning
- The sense of economic consequences of ones actions
- Group behavior, including project documentation
- Views on the professional engineering role in relation to other interacting professionals, companies and society (ethics & risk)
- Quality and extent of questions asked during sessions
These foci include aspects stressed in national (Swedish) requirements on engineering study program outcomes, as well as values encountered in focus group interviews with students, alumni and teachers of the two study programs, along with input from interviews of potential employers of these students. Our integrative approach differs from progress testing of knowledge items that is commonplace in medical training (Muijtjens et al 2008) and from curriculum mapping used in engineering schools internationally (CDIO, Malmqvist et al.2005).

Case class leader and case team observers (academics from the teaching teams) reported and discussed student team performance after each session and subsequently reported their findings back to the student teams.

At the 2012 ISSoTL conference we aim to present the observed pattern of documented study program progression in professional skills and how this can be used to further support development of professional skills. One general observation is that with increased skills in professional problem solving and “businessmindedness”, ethical concerns became gradually less pronounced. We have therefore concluded that issues of ethics and risk need to be better integrated in teaching and learning in the latter part of the two investigated study programs.

**C16**

**Evaluating the Program Using Graduation Objectives: Simple, Inexpensive, Rigourous**

*Marcel D’Eon (University of Saskatchewan), Krista Trinder (University of Saskatchewan), Damon Sakai (University of Hawaii)*

Many educational and training interventions lack the resources to undertake thorough, systematic, and expensive evaluations (Bamberger et al, 2004; Pratt et al, 2000). This is especially true when considering overall program objectives that may span several course and years. An accurate measure of the group mean of the achievement of graduation objectives can be obtained through the skilled use of grouped self-assessment data. Though self-assessments of learning are notoriously inaccurate on an individual level (D’Eon et al, 2008; Violato & Lockyer, 2006; Eva et al, 2004; Ross, 1989) there is considerable empirical evidence in support of the use of grouped self-assessments for program evaluation (Nimon et al, 2011; Reuland at al, 2009; D’Eon et al, 2008; Litzelman et al, 1994; Pratt et al, 2000; Skeff et al, 1992; Eva et al, 2004; a reanalysis of Violato and Lockyer, 2006; three as yet unpublished studies by D’Eon et al; and especially Blanch-Hartigan, 2011). Though participant learning is not sufficient for a comprehensive program evaluation (Lam, 2009) it is vitally important (Kirkpatrick, 1994; Steinert et al, 2006).

At the University of Saskatchewan College of Medicine we needed to know to what extent our program was making a difference in the achievement of our graduation objectives. Though we had some data (mostly national exam results) they did not cover the full range of graduation objectives especially in areas of collaboration, patient advocacy, and professionalism. We have now been collecting self-assessment data for over 4 years. We formulated our 60 goals and objectives into statements with a 10-point scale and ask the students to indicate to what extent they met the objectives (NOW and THEN). We ask students just before they enter their clerkship (hospital rotations) and upon graduation to assess themselves at that point in time (NOW) and on the first day of medical school (THEN). When we calculate the class means of the self-assessments we create a dependable approximation of the skill level of the students as a group for all our graduation objectives. This then allows us to interpret how well our program is helping our students to acquire the stated goals and objectives of the school and to make more informed curriculum decisions.

The John A Burns School of Medicine has collected data based on their own graduation objectives using this same procedure from one graduating class (NOW and THEN) and have also used 15 statements from the U of S form to be able to compare program outcomes between institutions.

We will (1) present representative data from each medical school, (2) highlight comparative data (both within and between medical schools), (3) describe how such data are and could be used by curriculum planners and (4) explain how this approach could even be used for other program and even individual courses within programs.
C17
Individual Paper

Listening to Teacher Voices in Understanding the Professional Development Journey
Lana Khong (National Institute of Education, Singapore)

This paper reports preliminary findings of a school-based research project that investigates the beliefs and practices of primary (elementary) school teachers with regard to their continuing professional development (PD) experiences and how PD contributes to strengthening teacher competencies and pedagogies to improve pupils’ academic achievements through pupil engagement in learning. This Singapore study involves a whole-school sample of teachers, ranging from beginning teachers with at least 1 year of teaching to veteran teachers with more than 20 years experience. The 2 research questions around which the study focuses are: a) “How are teachers’ competencies and pedagogies related to pupil engagement in learning?” and b) “How are teachers’ beliefs and practices for pupil engagement in learning influenced by their experiences of, and opportunities for, professional development?” Actively soliciting teachers’ own voices in their journey of professional development as evidence for policy implementation is a ‘bottom-up’ SOTL approach that usefully informs and supports school leaders in understanding how to increase the school’s ‘return on investment’ while strategically enhancing learning opportunities for their teaching staff, and ultimately, improving learning for their pupils. The study also considers the constructive linkages between PD and Professional Learning Communities (Du Four, 2004) as a rich context for the scholarship of teaching and learning. The researcher is a faculty member in the National Institute of Education which is the primary teacher education and accreditation institution in Singapore and this study reflects a fruitful collaborative partnership between higher education and school where a school leader posed initial questions about the teaching and learning of her teachers, and how she could support them more effectively in improving pupils’ academic learning. Within Hutchings’ (2000) taxonomy of SOTL questions, this study primarily considers “what is?” (in terms of professional development opportunities and teacher learning), moves into an investigation of “what works?” (in terms of transferability of what is learned into classroom teaching) and the possibilities of “what could be?” (in terms of developing a new understanding of teacher attitudes towards, and practices of, professional learning).

C18
Individual Paper

Enhancing the Impact of Continuing Professional Education on Practice: Whose responsibility is it?
Elisabeth Clark, Jan Draper (The Open University)

Background: The importance and complexity of evaluating the effectiveness of continuing professional education (CPE) has been widely recognised (see, for example, Ellis and Nolan, 2005; Lee, 2011). Despite increasing interest in this area, little significant progress is apparent in the healthcare, education or management literature. This probably reflects the inherent challenges involved (MacKinnon Partnership, 2007).

Purpose: This study, funded by the Higher Education Funding Council for England’s Higher Education Innovation Funding (HEIF4) and a strategic health authority in England, investigated stakeholder views of the need for, and utility of, the Impact on Practice (IIMP) framework. This framework was developed during Phase 1 of the project (2007-9), based on a structured literature review, contributions from an expert advisory group, in-depth conversations with a range of stakeholders and a series of interactive workshops and presentations.

Approach: From the literature review, it was evident that the effectiveness of CPE needs to be examined from a more pluralistic perspective than has previously been the case. Therefore, this study used a realist evaluation approach to determine ‘what works for whom in what circumstances’ (Pawson and Tilley, 1997).

Two rounds of semi-structured interviews, each lasting up to one hour, were undertaken with self-selected post-registration healthcare students, managers, module leaders and NHS Trust Board members (N=73) in one county in England.

The interviews were digitally recorded and transcribed verbatim. The data were analysed using NVivo. Thematic analysis was initially undertaken separately for each stakeholder group and each round of interviews. The guiding principle of ‘what works’ and ‘what does not work’ was used to search for meaning across all the data.
Findings: With its emphasis on contextual sensitivity (Tolson, 1999), realist evaluation enabled us to identify the factors that enabled or constrained the impact of CPE on practice. Four crosscutting themes were identified from the combined data:

• Organisational context with two sub-themes: ‘strategic approach to CPE’ and ‘culture and process’ relating to the workplace, education provider and shared
• Partnership working - education provider led and workplace led
• Supportive learning environment in the workplace and in the education setting
• Attributes of the learners, managers and educators.

Discussion: The implications of the findings for stakeholders will be discussed; these include:

a) The need for integrated thinking that ‘stitches together’ service needs, education commissioning and education provision
b) Effective appraisal systems that focus on organisational, as well as individual, needs
c) Transparent recruitment and selection of individuals to undertake CPE
d) A focus on planned change rather than the acquisition of new knowledge and an expectation that there will be follow-up about how learning is being used to benefit patient care
e) Feedback from service managers about their CPE requirements and the appropriateness and benefits of the CPE undertaken
f) The importance of ongoing support, including the crucial role of managers in this regard
g) The importance of effective partnership working between service and education providers.

Taken together, the findings suggest that we need to ‘do less better’ in the future.

Navigating the Process of Identity Change in Chronic Illness through Support Group Participation: Exploring the Influences of Feminist Care Ethics and Dialogic Narrative on the Transformative Learning Experiences of Women with Scleroderma

Susan Docherty-Skippen (McMaster University), Joyce Engel (Brock University), Margaret Larche (McMaster University), Nancy Fenton (University of Waterloo), Maureen Worron-Sauve (Scleroderma Societies of Ontario & Canada)

Background / Introduction: In seeking care, ill persons describe stories about their illness experiences. These stories often express perceptions of self-identity in context to interaction, continuity and situation (Frank, 1995; Nettelbeck, 2008; Ollerenshaw & Cresswell, 2002). Learning to understand the constructs of one’s identity involves critical self-reflection and contextualization of meanings underlying the assumptions grounding one’s beliefs, values and feelings (Mezirow, 2000). As pre and post illness experiences reframe the deconstruction and reconstruction of self-concept, persons with chronic illnesses endure identity change (Barclay-Goddard, King, Dubouloz & Schwartz, 2012). Through this process, different methods of coping with chronic illness may be learned (Charmaz, 1995).

Problem / Objective: Many women with Scleroderma experience a reduced quality of life attributed to loss of physical and psychological functioning (Hudson et al., 2009; Mendelson & Poole, 2007). To date, the literature has not explicitly addressed the expression of women’s Scleroderma symptoms from a person-centered perspective - nor have researchers studied the influence of educational theories on the identity change process through support group participation. Accordingly, the aim of this research is to explore the influences of feminist care ethics and dialogic narrative on the transformative learning experiences and perceptions of identity change in women with Scleroderma through their participation in a Scleroderma Society of Ontario Patient Support Group.

Method: Research objectives will be accomplished through the creation of a profoundly humane educational resource, the Scleroderma narrative. Study participants will include four women volunteers from a Scleroderma Society of Ontario Patient Support Group. All participants will share the experience of living with the chronic illness of Systemic Sclerosis, a type of Scleroderma that often leads to disfigurement, disability and untimely death. Perceptions of self-identity change in response to Scleroderma symptom onset and diagnosis experiences will be shared by participants through dialogic storytelling. Stories will be told through the participants’ roles as “care-giver” and “cared-for” in relation to their family, friends, co-workers, and healthcare professionals. As participants seek to understand the similarities and differences within each others’ stories, new meaning perspectives will emerge in the creation of new stories. In the final conception of a
Scleroderma narrative, analysis will consider: 1) experiences with self and others, 2) continuity of experiences to past, present and future, 3) situational backdrop of the participants’ lens.

**Implications:** Because dialogic narrative research focuses on the “participants’ engagement in their own struggles of becoming ... not as surrogate observations of their lives outside the interview but as acts of engagement with researchers” (Mishler as cited in Frank, 2005, p. 968), it is anticipated that the Scleroderma narrative will serve as an important educational resource designed to improve the care of women with Scleroderma. For women participating in support groups, the Scleroderma narrative will provide a framework for individual discovery and self-identity learning changes in response to illness experiences.

### Experiential and Community-based Approaches to Teaching & Learning

#### Sustainability Education and Environmental Nihilism:
**Transforming Suburbia through Ecological Literacy**

*Darien Ripple (Chandler Gilbert Community College)*

This paper will focus on a research project in the fall of 2011 at Chandler Gilbert Community College that set out to better understand the learning process of experiential education by observing the comments and actions of students interacting in nature-based learning. The research is based on the premise that students who develop a moral awareness of nature will better understand the core conceptual components of environmental sustainability. The presentation will primarily focus on integrating theory and practice in SOTL, although will also the integrating SOTL research results and teaching practices.

A literature review was developed to formulate the pedagogy and educational practices associated with a planned learning model. The intent of the literature review was to establish clear and plausible theories associated with experiential learning and transformational education, noting how theoretical methods apply to my research. The experiential learning model involved a technique referred to as sequence and reinforcement. Sequence and reinforcement involves building upon basic learning assignments then progressing toward more complex problem solving situations, while continually reinforcing previous learned skills and ideas. The process develops from group-supported activities towards solo endeavors.

The main objective of this research was to assess the transformational learning of students enrolled in PHI-216 Environmental Ethics courses who were actively engaging in experiential methods of learning. The research focused on their ability to understanding environmental sustainability. The goals and questions associated with my research are as follows:

**Goal 1** - Understand the process of experiential learning in relation to adult learning. Question - How does student interaction with nature facilitate the learning process?

**Goal 2** - Understand the process of transformational learning in relation to experiential learning. Question - What aspects of nature-based learning transform student perceptions of sustainability?

**Goal 3** - Promote sustainability in curriculum development. Question - How can nature-based experiential learning be incorporated into coursework?

I implemented a multi-level qualitative research approach that collected data from four different sources: 1) student surveys, 2) focus groups, 3) individual student journals and 4) a grounded participant observation. I engaged in a concurrent nested model that simultaneously collected data from the different questions at a variety of levels.

The paper sets out to demonstrate that the established experiential model allowed students to overcome passive educational tendencies associated with backgrounds in instructive education while developing as independent adult learners who transformed in their understanding of sustainability. Ultimately, the paper ought warrant discussion regarding the importance of qualitative research in the understanding of student learning at the community college level, while influencing my discipline to rethink how environmental ethics is taught.
Service learning outcomes of an American world language teacher education course
Susan Hildebrandt, Iryna Brown (Illinois State University)

Service learning can provide undergraduates the opportunity to engage in real-world application, collaboration and interaction, meaning making through reflection, and enhancement of course content (Bowen, 2010). This project integrates language teacher professional learning and Higher Education, while facilitating undergraduate Spanish teacher candidates integration of theory and practice in the areas of second language acquisition, child development and psychology, classroom management, and professional development. This project explores outcomes of service learning at a local community center, exploring the benefits and challenges present themselves to language teacher candidates as they work with a local community center in a service learning project.

Service learning is “a form of experiential education in which students engage in activities that address human and community needs” (Jacoby, 1996, p. 5). Jacoby’s definition, it could be argued, also describes teaching. Measuring outcomes of both service learning and teaching can be difficult with cause-effect relationships rare.

This study measures service learning outcomes, using tools designed to measure language teacher candidates’ abilities, such as philosophy of teaching statements, sample lessons, and videotaped lessons. Those tools elicited rich information for which qualitative analyses (Miles & Huberman, 1994) proved the most appropriate means of analysis.

Ten undergraduate Spanish teacher candidates from a medium-sized Midwestern university participated as they completed six credits of world language pedagogy classes and 11 weeks of student teaching. The researchers’ home university's Institution Review Board granted permission for this study. The principal investigator was the professor for the pedagogy classes, but she did not have access to any information about who did and did not participate until after student teaching ended. That precaution was taken to avoid unduly coercing teacher candidate participation or influencing her evaluation of students’ work. The project’s co-investigator, therefore, gained informed consent from participants.

This work complements the modest existing work on world language teacher candidate service learning (Tilley-Lubbs, 2004). Four areas, with their benefits and challenges, are explored in this study: second language acquisition, child development and psychology, classroom management, and teacher candidate professional development. Highlights include an increased attentiveness to communities and connections, as described by the National Standards for Foreign Language Learning (ACTFL, 1999), explicit connections between teaching events and previous child development and psychology classes, and real time implementation of classroom management strategies studied during world language pedagogy courses. Additionally, data focus on the difficulties among teacher candidates to transition from student/observer to teacher/leader.

Adult stakeholders’ reflections more fully described the benefits of service learning and teaching experiences. The co-investigators, experts in language teacher development, gained invaluable experience and perspectives in administering a service learning project with language teacher candidates. Context proved tantamount as they sought to understand a learning/teaching environment different from their own. Community center directors, experts in child development and the teaching environment, provided valuable reflections on teacher candidate performance, and the elementary school Spanish learners as individuals. Language teacher candidate reflections addressed instruction carried out during class time, as well as their own performance as instructors.

Motivating Student Engagement by Integrating Theory and Practice of Qualitative Methods through Community Based Research
Jeji Varghese (University of Guelph)

This paper presentation focuses on a study conducted around the following research question: In a large undergraduate class, to what extent does community based research (CBR) conducted in collaborative learning teams motivate student engagement by providing meaningful opportunities to a) experience real-world research issues, b) apply their classroom knowledge (i.e., theory) to their experiences, and c) develop skills as qualitative researchers. One of two sections of a third year undergraduate qualitative
methods course at the University of Guelph actively engages student collaborative learning teams to conduct a qualitative study to address a local community group’s expressed research needs. This CBR approach is designed to enable students to gain valuable skills in group work, qualitative research design, conducting ethical research, recruiting and interviewing participants, transcribing interviews, analyzing data using NVivo and presenting their findings in a qualitative research report and a poster presentation.

**Literatures:** There is a growing literature on the benefits and challenges of higher education and CBR (e.g., Martin et al. 2005; Seifer 2006), experiential learning (e.g., Katula and Threnhauser 1999; Kolb and Kolb 2005), and service learning (e.g., Eyler et al. 2001; Bringle and Hatcher 1990, Rice and Brown 1998). CBR involves students’ engagement (Strand et al. 2003). This study broadly focuses on students’ engagement to examine the merits of CBR for student learning. Research has shown the positive linkages between student engagement and desired learning outcomes (Carini et al. 2006). Meanwhile it is recognized that engagement is complex and is one of many factors that influence learning (Ewell 2002; Klein et al., 2005; Pascarella and Terenzini 2005). Engagement involves a number of interacting factors (Zepke and Leach 2010) including intrinsic motivation and exercising student agency (Schuetz 2008), transactional engagement (Kuh, 2001; Umbach and Wawrzynski 2005), institutional support (Porter 2006), active citizenship and socio-political context (McInnis 2003; McMahon and Portelli 2004; Yorke 2006) and environmental factors such as family background and economic status (Law 2005; Miliszewska and Horwood 2004). This study explores CBR projects as a mechanism for motivating learning and fostering student agency in their learning.

**Methods:** Findings of this study are drawn from 1) focus group and in-depth interviews conducted in Fall 2011 and Winter 2012 with students from two sections of the qualitative methods course from three winter semesters (2010-2012), which enabled a comparison of traditional practical assignments employed in section 1 (e.g., interviews and research proposal) with the CBR approach employed in section 2 (i.e., with an explicit service learning component) and a 2) content analysis of Section 2 student critical reflections on the learning achieved through the CBR approach.

Preliminary themes identified by students engaged in CBR include confidence in qualitative research skills, understanding of the entire research process, community networking, and application of transferable skills beyond the course. Conference participants will be encouraged to discuss ongoing challenges and opportunities with conducting and researching community engaged learning approaches with and in large undergraduate classes.
We will present an overview of the development of the strategy which adopted an appreciative enquiry approach involving staff from both academic and professional service departments, as well as the student association, and led to the subsequent formation of a ‘dynamic’ three level strategy.

- Level 1: a short framing statement/set of statements set across the University which set strategic direction and remain fixed over the five-year period
- Level 2: School, Professional Service and Student Association responses to the key themes (can be changed as required)
- Level 3: A resource bank of case studies of good practice and LTA resources specifically designed to underpin the institution’s LTA strategy.

The formal launch of the strategy was in September 2010 with the ‘dynamic’ version being launched at the staff conference in January 2011. The lifespan of the strategy is until 2015. Formal evaluation has taken place and has involved an online anonymous questionnaire and focus group interviews. Data from this evaluation has provided an opportunity to refine and develop the strategy during its lifespan, thus further demonstrating the responsive nature of such approach. Finally we reflect on the hopes and intentions behind the approach; and provide analysis of the initial evaluation of the strategy and lessons learned from the first year of its implementation. We also seek ways to share our experiences further in the wider sector, and learn from others who may have adopted similar approaches to integrating a culture of scholarship through their institutional strategies.

It is intended that this workshop will facilitate discussion and sharing of experiences by participants and this will be encouraged through the use of dialogues sheets to focus the discussion on key related factors to implementing LTA strategy and fostering a positive culture of engagement and scholarship.

**C24**

**Integrating Students into SoTL: Students’ Knowledge-Based Descriptions and Expectations of Faculty Demonstration of Four Institutional Core Values**  
*Charles Dickel, Mary Ann Danielson (Creighton University)*

Every educational institution specifies the values that it intends to impart to its students. These are often contained within the institution’s mission statement, or they may be a part of the institution’s core values, directly attributable to the institution’s founders. In the case of this presentation, the institutional core values come from Ignatius of Loyola, the founder of the Jesuits, and while not always explicit in the mission statement of the institution, they are values that students are expected to acquire during their studies at a Jesuit institution. For Jesuit education, the core values are known as charisms. Research on the teaching and learning of institutional core values increases the probability that students will actually acquire the intended values through both teaching and learning efforts.

Based on ideas from signature pedagogy (Gurung, Chick, & Haynie, 2009) and disciplinary styles in SoTL (Huber & Morreale, 2002), this SoTL presentation is a continuation of previous research (Dickel, Ishii-Jordan, & Cook, 2006; Dickel & Ishii-Jordan, 2008; Ishii-Jordan & Dickel, 2008) in which we have looked at how faculty can model the core values that the institution intends to impart to students. Previous research focused on what faculty believes to be behaviors consistent with the institutional core values. For this research, the voices of undergraduate and graduate students were integrated into this SoTL research when they were asked to describe how faculty demonstrating four different institutional core values (charisms) would behave both in and out of the classroom. The institutional core values are “cura personalis (care of the person),” “magis (the more),” “men and women for and with others,” and “contemplation in action.”

This program will present the voices and expectations of students as they describe how faculty can be examples of these four core values both in and out of the classroom. Qualitative methodology was used to synthesize student responses into suggestions for faculty development and faculty evaluation. The presenter will offer these suggestions as well as engage those in attendance in discussion of the core values of their institutions and how faculty can model these for students.
The purpose of higher education from the educators’ perspective: Comparing Canada, the United States and Norway

Yael Harlap (University of Bergen)

University mission statements in Canada and the United States typically include lofty aspirations for their students, in terms of their values and behaviours upon graduation as well as their disciplinary or professional skills and knowledge. For example, students will be “global citizens,” they will be “leaders and citizens who will challenge the present and enrich the future,” and so forth. Universities in Norway are less likely to include these kinds of aspirational statements in their mission/vision statements or their strategic plans. Only recently in Norway has there emerged a strong public discourse about the role of ‘dannelse’ in higher education - the German bildung, a word for education with emphasis on aspects sometimes translated as ‘formation’ or ‘cultivation’ - with the publication of a large edited book on the topic last year (Hagtvet & Ognjenovic, 2011).

These differences in the discourses of vision and mission statements, documents that formally outline university goals, seem to point to differences in underlying assumptions about the purpose of higher education. This comparative SOTL study explores how these national/cultural differences are taken up by individual university professors. In particular, the study addresses the following research questions:

- What values, beliefs and assumptions about the purpose of university education do university educators from the USA, Canada and Norway construct in interview discourse?
- In particular, are there national-contextual differences in terms of the role of democracy, citizenship, pluralism and intercultural understanding in higher education?
- How do these values, beliefs and assumptions relate to how the educators’ articulate their teaching intentions and practices? How do the educators assess whether student learning meets their aspirations?

Participants in this study are American, Canadian and Norwegian professors and associate professors who have taught in both the U.S./Canada and Norway, as well as Norwegian educators who have only taught in Norway. All of the participants are currently teaching in a Norwegian university or university college. The analysis is based on in-depth qualitative interviews and supporting documents (syllabi, teaching assignments, etc.), and is placed in the context of research on university educators’ academic identities (e.g., Halvorsen & Nyhagen, 2011; Henkel, 2000) and scholarship on higher education institutional values (e.g., Nixon, 2008; Taylor, 1999). In addition, the paper will discuss the implications from this research for educational development, as the findings from this study are being used in the development of modules in a mandatory educational development program for university teaching staff.
Summary: Education has followed in the footsteps of medicine by embracing the idea of ‘evidence based practice’ (Harden et al. 2000; Shantakumari and Eldeeb 2012; Davies 1999) -- this can be best seen in the growing culture of assessment. However, evidence based medicine is not without critics (Little 2003; Ashcroft 2004; Bluhm 2010; Kvernbeck 2011). The criticisms focus on, among other things, the reductionism of the approach and the alleged removal of the ‘art’ of medicine from the practice of medicine -- criticisms that should be familiar to those mired in discussions about assessment. Nor is evidence based medicine without alternatives (Campion-Smith et al. 2011; Mezzich et al. 2011; Apostoleris 2012). The proposed alternatives of narrative based and values based medicine focus on filling the gaps left by an evidence based approach working to include both the art and the patient centered aspects of health care. We, in education, can learn from the conversations about making the best clinical decisions to refine our own approach to determining what practices are best for our classrooms by including humanities oriented discussions and, as a consequences, find space for both the art and heart of teaching. In particular, narrative-based and values-based (and other) approaches can create space for those trained in the humanities to contribute to the development of improved teaching practices without moving out of their disciplines and becoming social scientists.

Drawing on the model of listening to patients’ and physicians’ stories to improve clinical decision-making (Charon and Wyer 2008; Greenhalgh 1999; Schleifer 2012) as well as moving to the forefront of conversation the core values of practice, we, in education, can contribute the crucial relational aspects of teaching. In particular, in this interactive discussion we will focus on ways those trained in the humanities can contribute to SOTL without trying to become social scientists -- since it isn’t simply data of a very narrow sort that we need but also understanding of our students’, colleagues’ and experiences. Our teaching practices can be improved by listening, in a systematic way, to the stories of students and teachers and of determining who we want to be as teachers. Though outside the scope of ‘evidence based practice’ these inquiries, will make us better teachers by focusing in on the art and heart of teaching. If time permits, we will then move to consider what else we can learn from the professions that share some of our core values and problems.

SoTL Imperative: Theoretical and Socio-political Contexts
Lorraine Gilpin, Delores Liston (Georgia Southern University)

The twenty years between Scholarship Reconsidered (Boyer, 1990) and The Scholarship of Teaching and Learning [SoTL] Reconsidered (Hutchings, Huber, and Ciccone, 2011) has inculcated within higher education the conception of teaching as a form of inquiry into student learning (Huber & Morreale, 2002, p. 9). This has become the signature of SoTL at its most fundamental level: inquiry into teaching and learning for the purpose of improving student learning. Simultaneously, the movement has catalyzed a shift in perceptions of teaching from private and idiosyncratic to public and community oriented (Gilpin, et al, 2009 and Huber & Hutchings, 2005). It is against this backdrop that SoTL inquiry as research involving questioning, designing, investigating and analyzing and subject to peer review and evaluation (Bass, 1999) gained legitimacy in some settings. This session explores two specific contexts as imperative for SoTL if it is to maintain momentum and broaden its influence over the next decade. The first deals with the theoretical and previous research grounding of works done under the auspices of SoTL. The second concerns the socio-political milieu in which teaching and learning and, by extension, SoTL inquiries, is set. Kanuka (2005) has called for SoTL works to be grounded in theory and informed by previous research, while Gerhard & Mayer Smith (2008) have charged those engaged in SoTL to use a wider range of theoretical perspectives including classic cognition perspective, constructivism socio-cultural theories of learning, and complexity theories. Further, SoTL scholars highlight the urgency for SoTL to work toward social transformation with “moral and civic purposes” (Kibre, 2006, p. 88) and “toward our ideals of equality and justice” (Atkinson, 2001 p. 1227). For foundational literature on SoTL promote it as context responsive, to changing demographics and technologies for instance, and laden with moral and pedagogical imperatives (Huber & Hutchings, 2005; Hutchings, 2002; Huber & Morreale, 2002; and Shulman, 2002). This presentation highlights the importance of these two contexts in SoTL and illustrates SoTL works, drawn from a review of over 300 pieces of SoTL literature, which exemplify them. The session highlights the need for SoTL works to be situated in and contribute to broader theory building. The theoretical framework, including epistemological stance, is the vantage point from which inquiry is launched and conducted. Contribution to theory building will help with external validation of SoTL as ‘legitimate’ research and scholarship. The need for SoTL works to be responsive to the social, political, and economic contexts in which they are set is also highlighted. The landscape of SoTL works is a diverse terrain laden with histories of privileges and prejudices. SoTL will most rapidly transform education if it helps to close this gap. Participants will be engaged in the discussion of questions such as the following: What is SoTLs role in transforming the educational experience for those who have historically benefitted the least from education and its litany of reform movements? What is SoTLs responsibility to theory building within and across disciplines? Must SoTL impact the academy in socially and theoretically meaningful ways?
Checking Our Blind Spots: Integrating Theory and Practice
Kelly Hewson (Mount Royal University), Lee Easton (Sheridan College)

With its insistence on a critical scrutiny of much that comprises our pedagogical activities—from course design to assignment creation to classroom modalities to assessment strategies—SoTL and our encounters with it have transformed us as teachers. Assumptions are uncovered; favoured methods are viewed through entirely different lenses. We reconfigure our practices because of evidence-based research we hope will help us do the right thing by our students.

But the question that keeps arising for us as we read, analyse and produce SoTL work is this: Whose interests are being served by our teaching and students learning better? To our eyes, SoTL appears to be a well-intentioned but relatively unexamined space, with little evidence of the reflexive gaze it urges practitioners to adopt turned on itself.

We wonder, for instance, why markers of class and race are rendered either invisible or irrelevant under the category of generic student in much SoTL research. Why do age and gender make only fitful appearances, usually under that other troubling label: student voice? We need as a community of practitioners to do more than be aware of these and other blind spots; they have to be checked if we are to make the scholarship of teaching and learning critically responsive, meaningful and alive to the times in which we live.

Our paper will begin with a summary of our lengthy research journey involving student spectators’ responses to race in several Canadian introductory film classes. Their varied responses—surprising, unexpected, challenging—forced and continue to force us to check our individual blind spots in our own teaching and scholarship. In the spirit of healthy debate, we plan to follow this summary with a series of critical questions regarding SoTL work which we enjoin participants to help answer, unpack or reframe.

Delivering feedback for adaptive learning
Earle Abrahamson (GraduateplusUK)

This small scale SOTL study used an educational action research methodology and focus groups to examine how best to construct feedback so that the recipient is able to internalise, analyse, and develop best practices for future change and enhancement. The paper further considers and introduces the concepts of adaptive and adoptive learning by integrating theory with practice. Feedback practices have been heavily criticised for being vague, ambiguous, wordy, and irrelevant to student learning, but yet remain crucial to learner enhancement and development (Rust, 2006). The literature is rich with examples and guidelines on assessment practice enhancement, and provides significant interpretation of impact and changes to practice. Despite the years devoted to analysing, conceptualising, interpreting and organising information, scholarship, and application of teaching practices, little is known about how feedback truly benefits learner development. This is partially due to the individual differences among motivational prerequisites and the subjective nature of feedback in practice. Questions such as: for whom is feedback intended and how do we know that feedback is effective and used for adaptive learning, still remain elusive and largely unexplained. The constant paradox of giving feedback often negates common sense in knowing how to deliver feedback for change and learning transformation. What is clear is that research is still on-going addressing differential parameters of feedback such as its role in knowledge development and skill acquisition, based on experimental studies and meta-analyses. Despite this continuous battle to clearly define and relate mechanisms of feedback to learning, research findings are inconclusive and vague (Mory, 2004). For feedback to be receptive it must be attractive, relevant and purposely delivered to the learner. It further requires transferability to enhance learning across learning clusters. To this end, feedback influences adaptive learning. Adaptive learners are able to interpret change, reflect on change relevance, and direct efforts to implement meaningful changes, distinctly different to adoptive learning where change through instruction becomes the modus operandi. Learners need guidelines illustrating the process for improvement and not simply a loquacious commentary of information. For learners to be receptive to feedback, feedforward needs to be a
critical component of the process. It is therefore essential to prepare and motivate the learner by respecting their unique position within the feedback dialogue discourse. Learning from feedback augments the process of learning and changing through feedback (Dihoff, et.al, 2003). The key findings confirm that feedforward is the instrument against which progress should be measured, analysed, and enriched. The skills of the assessor, to accurately diagnose what needs to be included in the feedback process, is important in promoting inclusivity, adaptation and feasibility within an assessment context (Corbett & Anderson, 2001). This paper discusses the pilot study findings by directing participants to key questions and debates within this area of SOTL. The notion of tailoring feedback to promote adaptation and change is emphasised and compared with models of adoptive feedback and learning. The paper will further explore the conceptual undertones of doing things better by learning to do better things.

Constructively Aligning Assessment and Feedback - A way forward for Integrating SOTL Theory and Practice in Large-Scale Undergraduate Classrooms

Jack Wang, Roy Hall, Mark Schembri (University of Queensland)

The appropriate design and implementation of assessment tasks that effectively support student learning is one of the biggest challenges facing educators across all disciplines. The Scholarship of Teaching and Learning (SOTL) has provided much guidance on this topic, emphasising that assessment is the main lens through which students view the outcomes and value of a course (Biggs 2003), which must then be coupled with timely, detailed, and personalised feedback to truly facilitate learning gains (Gibbs and Simpson 2004-2005). Despite good intentions however, the integration of these assessment practices into large classes remains limited. Time and resource constraints often lower the frequency of both formative and summative assessment, while severely diminishing instructor capacity for providing feedback. Interventions need to be devised in order to bridge the widening chasm between SOTL theory and practice in assessing large student cohorts.

This study attempted to address these issues by applying Biggs’ theory of Constructive Alignment in course design to the 2011 offering of MICR2000, an introductory Microbiology course offered at the University of Queensland, Australia. The course’s learning objectives, activities and outcomes were all explicitly aligned to a progressive assessment scheme comprising of coursework assignments and examinations. Internal alignment was achieved in each of these iterative series of assessment tasks as they followed a common set of criteria, standards, and learning objectives. Feedback sessions for each assessment task were conducted throughout the semester, and student performances in these tasks as well as responses to ethics-approved surveys were monitored. When comparing the constructively aligned 2011 offering of MICR2000 to its 2010 counterpart, students obtained higher marks in both coursework assignments and multiple-choice/short-answer examinations as the semester progressed; this trend was clearly absent from the 2010 cohort. Students also appreciated the additional feedback provided, as student scores for the statement “I received helpful feedback on how I was going in the course” increased from 3.8 in 2010 to 4.1 in 2011 on a 5-point Likert scale (p<0.05). Furthermore using qualitative thematic analysis, 87% of student respondents who answered the question “What are the best aspects of this course?” identified assessment and feedback as a key strength of MICR2000.

Evidently by designing MICR2000 using constructive alignment and iterative assessment tasks that followed a common set of learning outcomes, the course teaching team were able to provide adequate feedback on numerous assessment tasks throughout the semester that ultimately bolstered student performance and learning gains. This can be attributed to the internal alignment within each series of assessment tasks, which allowed the teaching team to define clear standards and expectations applicable across multiple assessment items. This greatly improved the efficiency of providing feedback, even in a high-enrolment course such as MICR2000 that typically teaches 400 students every year. This project offers MICR2000 as a case study in how the theoretical basis of SOTL can be integrated and operationalized into real-world teaching practices for large-scale courses.
Culturally relevant assessment in FCC 240 Child Welfare: A SoTL research project to develop and implement a course student assessment model using the medicine wheel
Roselynn Verwoord (University of British Columbia)

This paper will present initial findings from a SoTL research project conducted at Native Education College (NEC), a private Aboriginal post-secondary institution in Vancouver, B.C., Canada. The research project aimed to understand the impact of using a student assessment model based on the medicine wheel, on students’ understanding of course goals and learning objectives, within a course on child welfare in the Family and Community Counselling Program at NEC. The research question explored was “What is the impact of using an assessment model based on the medicine wheel, on students’ understanding of course goals and learning objectives, in FCC 240: Child Welfare?” Preliminary results and initial findings from the study will be highlighted and the author will discuss the development and implementation of the course student assessment model. Drawing from theory on culturally relevant assessment (Estrin & Nelson-Barber, 1995; Fryberg & Markus, 2007; Ortiz & Boyer, 2003; Rust, O’Donovan, & Price, 2005), the author presents an assessment model that privileges students’ many ways of knowing in the context of a course on child welfare. The framework for assessing students takes into account the institutional aims and objectives of NEC, the specific course goals and learning objectives of FCC 240, and supports the diverse perspectives and experiences of the Indigenous learners who are studying to be social workers. By emphasizing these perspectives, the students can focus on their strengths as Indigenous youth, make their learning more meaningful, and place learning within a context that may be more culturally relevant. In this paper session, participants will engage in brief small group discussions about developing course specific culturally relevant assessment models and will be exposed to and be able to identify key principles in the development of an assessment model using the medicine wheel, that can be used in diverse settings. This session is of interest to SoTL practitioners, educational developers, faculty, and graduate students who will gain an enhanced awareness of the development and implications of culturally relevant student assessment models for student learning.
**Session D: Concurrent Sessions**

**Analysing SOTL: Gaps, Challenges and Future Directions**

**STEM (Science, Technology, Engineering and Math) Scholars Transitioning to SoTL: Bumps, Barriers and Bridges along the Road**

Niamh Kelly (University of British Columbia), Susan Nesbit (University of British Columbia), Janice Miller-Young (Mount Royal University), Bettie Higgs (University College Cork), Carolyn Oliver (University of British Columbia)

In a paper presented at the last (8th) ISSoTL conference and an essay published in the International Journal for the Scholarship of Teaching and Learning (http://academics.georgiasouthern.edu/ijsoTL/v6n1.html), Niamh Kelly (a scientist) and Susan Nesbit (an engineer) wrote about the difficulties they encountered transitioning between the scholarship of STEM and that of SoTL. They termed themselves ‘scholar-travelers’ and wrote about difficulties relating to time, emotions, intellectual training and world-views. Responses to Niamh and Susan’s conference presentation and publication brought them into the company of Bettie Higgs (scientist) and Janice Miller-Young (engineer) with whom they have continued their dialogue. These four STEM practitioners would like to extend this dialogue further in a 90minute panel presentation devoted to exploring bumps, barriers and bridges in transitioning from STEM to SoTL.

Niamh, trained as a medical microbiologist (Ph.D., Trinity College Dublin), is a faculty member in the Department of Pathology and Laboratory Medicine at the University of British Columbia (Vancouver, Canada). She started in the professoriate as a successful scientist garnering grants, presentations, publications and patents before moving her research full time into SoTL. The considerable delay experienced by Niamh before she became productive in this new academic field motivated her to examine the difficulties engendered by STEM scholars entering into the SoTL ‘trading zone’.

Educated in the applications of chemical engineering science to the industrial sector (B.A.Sc., P.Eng., Ph.D., University of British Columbia), Susan’s fascination with teaching and learning began when she became a faculty member in the Department of Civil Engineering at the University of British Columbia. Her first foray into the SoTL peer review world was in 2010 and she has since been delighted to discover others like her who have taken time to develop “sea legs” in SoTL. Susan’s SoTL interests include the application of teaching and learning theories to course and curriculum design, and more generally, the behaviour and management of socio-curricular systems.

Janice holds a Ph.D. in mechanical engineering, biomechanics, and became an engineering faculty member at Mount Royal University (then College) in 2004. She continued her Ph.D.-related research for the first few years, but her new interest was teaching and learning, and she soon decided to put her focus there. In 2009 she took part in a one-year program designed to help faculty develop and implement a SoTL project, which yielded surprising results and caused her to re-evaluate her teaching philosophy. Janice still feels like a novice in this new academic field but welcomes the new opportunities that are unfolding such as sitting on the Human Research Ethics Board, and a part-time faculty development position.

Bettie holds a Ph.D. in geophysics (University of Sheffield, UK) and became a part-time faculty member in the Geology Department of University College Cork (Ireland) in 1987, as well as an Associate Lecturer in Earth Sciences in the Open University (UK) in 1990. While passionate about her scientific discipline, a gradual shift in identity from geologist towards teacher occurred with the advent of accreditation in ‘Teaching and Learning’ at the latter institution in the late 90s, and a half-time position in supporting faculty, researchers, and graduate students in their inquiry into their own teaching within University College Cork in 2002. Her SOTL focus was cemented when she became a Carnegie Scholar in 2005 and completed an MA in Teaching and Learning in Higher Education in 2007. Continuing to teach undergraduate students in her discipline provides the evidence for her SoTL work, and increases her empathy with colleagues across the institution when supporting them in their teaching.

Bumps and barriers that the panelists will touch on point to the magnitude of this intellectual shift that includes learning a new attitude and belief system, new language and epistemologies and, of course, new methodologies. Bridges that have helped them ‘cross-over’ to SoTL from STEM include moving from an imperative of proof to an imperative of understanding and developing an appreciation of “complexity” and the role of narrative. The panel will be chaired by Carolyn Oliver, a Ph.D. candidate in the School of Social
Work at the University of British Columbia. She has used her knowledge of qualitative research methodologies to help Niamh and Susan chart their transitioning journey. Carolyn will facilitate a discussion in which audience members and panelists will be encouraged to share stories of the bumps, barriers and bridges encountered in journeying from STEM to SoTL. In addition to providing support for STEM scholar-travelers, the dialogue accompanying this panel presentation may be enlightening for those involved in designing SoTL faculty development and mentoring activities.

**Convention Centre**  
**Webster B (3rd floor)**  
**1:30-3:00pm**

**D02**  
**Panel Presentation**

**A Humanistic Adaptation of the Maryland Physics Expectations Survey (MPEX)**

*Ali Erkan (Ithaca College), Michael Smith (Ithaca College), David Pace (Indiana University), Randall Bass (Georgetown University)*

In many ways, students entering higher education are far from being at a well-defined initial state for learning; their engagement with higher education is profoundly shaped by their attitudes, beliefs, and expectations they bring from earlier stages of their lives.

The Maryland Physics EXpectations (MPEX) survey is a 34-item Likert-scale agree/disagree instrument that probes student attitudes, beliefs, and assumptions about physics. Since its validation, it has captured students’ development (or lack thereof) along these three dimensions. The MPEX has revealed pedagogical flaws in introductory physics courses at numerous institutions and provided valuable information for educators to reduce educational misconceptions.

Despite being specific to physics education, the MPEX instrument is general enough to be utilized in other disciplines. For example, in the context of the NSF sponsored project “Multidisciplinary Sustainability Modules: Integrating STEM Courses”, this instrument is being adapted to the computing domain and is already revealing notable results. There is reason to assume that the adaptation can be made for humanities as well, where the expectations of incoming students are potentially more varied (and perhaps even more “off target”) than their peers in the sciences, especially with respect to their readiness for an analytical approach to history.

The Humanistic Adaptation of the MPEX (HAMPEX) survey is our attempt at adapting MPEX to the humanities (in general) and history (in particular) and has already been used in two offerings of an introductory history course at Ithaca College. The purpose of the proposed panel is to introduce this adaptation, discuss the physics-to-history mapping of the statements, and (most importantly) work with the audience to establish a baseline response. We think that if we can establish the usefulness of this adaptation, we will have an important tool to assess the “initial conditions” of students studying history at the introductory college level as well as observe (through the pre-post delta) the changes in how they approach history. Furthermore, if we can validate the adaptation, we think this tool will be able to assess the effects of novel methods/interventions tried in introductory history courses (and eventually other introductory courses in the humanities).

The development of the HAMPEX survey, the establishment of the baselines, and the testing of the instrument with the students, will allow us to explore the following questions:

- To what extent are students in an introductory history course unified in their attitudes, beliefs, and expectations when they begin their studies?
- If graduating students are indeed mostly unified in their attitudes, beliefs, and expectations, at what point do they converge and what interventions or pedagogical approaches contributed to the convergence?
- Do history educators have a unified set of attitudes, beliefs, and expectations associated with a conventional curriculum? That is, is it reasonable to assume that there will be a clear-cut baseline from the humanistic community (in general) and panel audience members (in particular)?
- If there is no clear-cut baseline from the humanistic community, is it possible to detect multiple baselines, perhaps based on demographic information (such as fields, institution, etc.) of the participants?

We believe that the current changes in the academic landscape (in terms of both students and institutions) require us to focus on such instruments for several reasons. First, incoming students have a wider range of
readiness for college education than ever before. Second, pedagogical techniques that rely on analysis are ever more important since students need more support in becoming better thinkers (from humanities to the sciences). Third, innovative interventions need to have validated instruments to gauge their effect beyond that of anecdotal evidence. Consequently, we think it is important to explore whether an MPEX derived instrument can be used for all these goals in the context of history (and eventually other humanistic disciplines).

Although establishing expert vs. novice baselines for historical thinking will necessarily require insights from those experienced in this (or a related) field, we welcome participation and insights from any ISSOTL attendees interested in exploring the issues our research is trying to address—we will simply ask those who participate in the survey to identify their disciplinary “home”. Participating in the survey will, however, be optional and is not required for the follow-up discussion.

Panel plan

- Panelists briefly provide their thoughts on the topic, including the history of the project to date.
- Panelists present a potential humanistic adaptation of the MPEX survey.
- Each audience member interested in participating fills out an online HAMPEX form, made available as a Google doc—a portable device for accessing this form will be necessary to do this.
- Panelists present the aggregate results of the audience responses; this information is immediately available since the spreadsheet Google doc automatically computes the required sums and averages.
- Panelists lead a discussion on the adaptation of the statements; all observations, comments, questions, and criticisms are logged to refine the candidate tool.

Sheraton Ballroom Centre (2nd floor) 1:30-3:00pm

Searching for Quality: An International Perspective
Paola Borin (Ryerson University), Åsa Lindberg-Sand (Lund University)

The time and resources committed to quality assurance (QA) and quality monitoring in higher education has increased dramatically over the last twenty years and is carried out at many levels. Since the 1990s, QA has changed its focus and methods and is continuing to evolve. Using Harvey & Green’s widely cited definitions of quality as a foundation, and Biggs 3P model to distinguish variables under consideration, this panel will examine how QA processes have shifted and how they may relate to educational development framed by SoTL.

In the over 40 nations in the European Higher Education Area (EHEA) the development of external QA has been framed by recommendations put forward in the European Standards and Guidelines (ESG, 2005) as part of the Bologna Process. The recommended QA model is primarily enhancement-oriented and consists of external reviews based on self-assessment reports and site-visits, and is now widely practiced in EHEA. ESG also includes recommendations for the development of institutional QA, which is implemented at a slower pace (Sursock & Smidt, 2010). The focus on enhancement is also called into question from different perspectives (Nair, Webster & Mertova, 2010).

QA methods influence what is valued and affect how teaching and learning is assessed. The movement towards outcome-based education has growing impact on the types of measures being used in QA with increased emphasis on, for instance, learning outcomes. As a result, universities in Ontario are required to describe programs in the form of outcomes, and the development of external quality assurance in Sweden has evolved to include the direct assessment of student learning outcomes by external review of student theses.

This session will explore how changing practices of QA relate to the development of teaching & learning framed by SoTL. It will focus on efforts in Sweden, Europe, and Canada. A brief summary of international literature dealing with QA will provide a foundation for discussion and evidence for its evolving focus. Participants will engage in small group and plenary discussions and provide additional international perspectives and insights by reflecting on a) whether QA efforts have changed their focus and methods in the participant’s own context, and b) in what ways QA efforts integrate in the development of teaching & learning.
Integrating Visual Learning and Linguistic Diversity in Higher Education: Lessons from Bilingual ASL/English Classrooms
Michael Coventry, Carol Erting, H-Dirksen Bauman, Miako Rankin, Kristin Mulrooney, Sharon Pajka, Thomas Horejes (Gallaudet University)

Institutions of higher education world-wide are serving students who are increasingly linguistically diverse, visually tuned-in, and technologically fluent. Faculty race to develop skills and curricula, aiming for a pedagogy that allows students to “invent the University” (David Bartholomae 1985) where linguistic, visual, and technological agility are central.

What better place to explore this pedagogy than Gallaudet University, the world’s only university for Deaf people. Gallaudet, with its English and American Sign Language bilingual mission, serves students who are deaf, hard of hearing, and hearing—with varying levels of fluency in English, ASL, and other spoken and world signed languages. Similarly diverse faculty employ technologies such as projection systems, course site platforms, presentation software, websites, blogs, and social media. Classroom communities at Gallaudet also incorporate ASL interpreters, real-time captioning, and an unrelenting focus on getting two things right: (1) visual accessibility, e.g., Is the lighting right? Can everyone see each other? Is there visual distraction in the classroom?, and (2) linguistic accessibility, e.g., Is the professor fluent in both target languages? How fluent are the students in both target languages? How are the languages being used during classroom discourse? Where are notes and materials stored for class and in what language(s)?

Our 10-member Gallaudet Scholarship of Teaching and Learning Initiative SoTL group began in the fall of 2011 and is funded in part by a grant from the Booth Ferris Foundation. The team, represented by this panel, is grounded in diverse disciplines including sociology, anthropology, ASL and English linguistics, critical pedagogy, and cultural studies. Working from the notion of “making learning visible” (Bass & Eynon 2009) by focusing on the intermediate steps, moments of puzzlement, and bottlenecks of learning (Pace & Middendorf 2004), our research considers and analyzes those moments as they happen in the communicative context of our uniquely bilingual, technologically and visually-rich classrooms.

Description: Carol Erting, Dean, Graduate School and Professional Programs and H-Dirksen Bauman, Office of Bilingual Teaching and Learning
Dr. Erting and Dr. Bauman introduce the core project questions:
• What does it mean to engage students in “dual ownership” of English and ASL as the constituent languages of formal, academic discourse?
• What is the relationship between pedagogies embedded in visual-spatial and technology-rich learning environments and students as reflective learners developing academic, social and personal identities?

Miako Rankin, Department of Linguistics
Capitalizing on Linguistic Diversity to Create Culturally-Sensitive Science
Dr. Rankin analyzes one of the major bottlenecks to student learning in linguistics courses at Gallaudet University: students’ ability to distinguish between definitions and examples to effectively identify features of American Sign Language (ASL), our language of study. This project, based on an initial mapping of assignments, class activities and the course final project, considers what opportunities students have to see, demonstrate, and display aptitude at providing representative examples and effective definitions. Videotaped classroom data provides evidence of how students from different language backgrounds approach definitions and examples.

Kristin Mulrooney, Department of Linguistics
How does an effective assignment feedback process help students take ownership of ASL used in an academic setting?
Dr. Mulrooney focuses on effective ways to provide feedback on assignments produced in ASL. Dr. Mulrooney uses evidence from student assignments over the course of the semester and the feedback they receive on these assignments to assess whether students effectively see and understand ASL as an object of study—and how this can help them take ownership of their academic communication skills. Because ASL is not used as widely in academic settings as English, resources for assessment of student learning are not ‘standardized’ in
the way they are for spoken English (teaching rhetorical skills for instance). There is a need to describe both the target product (what ASL summaries look like at the freshman, sophomore, junior, and senior levels, for example) as well as produce resources to support students’ learning of these skills.

Sharon Pajka, Department of English
Creating “Place” in a Visually-Oriented and Linguistically-Diverse First-Year Course
Dr. Pajka asks: How does place—the creation of a community both in the classroom and online—illuminate the relationship between the emotional and epistemological dimensions of learning and cultural critique? And how does a semiotic approach to “reading the world” improve students’ literacy skills? Dr. Pajka explores student community membership and connections to and between academic blogs and classroom sessions. This is accomplished via an examination of the construction of academic community in the intellectual, electronic, and physical spaces created in the classroom.

Thomas Horejes, Department of Sociology
Integrating Student Capital(s) via bilingualism (American Sign Language and English) as a diverse disciplinary approach to SoTL
Dr. Horejes explores the ways that identifying and understanding diverse students’ linguistic, social, and cultural capital contributes to the scholarship of teaching and learning. What are teaching strategies that maximize various student capital(s) for shared and collective knowledge? Which alternative teaching approach shows the strongest evidence of maximizing the utilization of students’ capital both individually and as a collective? And why is this so? How can this alternative teaching approach get students to think about the different aspects of criminal justice within the larger schemes of SoTL.

Audience Discussion: Michael Coventry, Gallaudet Scholarship of Teaching and Learning Initiative
Dr. Coventry will moderate audience discussion framed around two questions:
• In what ways can these ideas benefit your work with students in your academic setting?
• What from your experience (for instance, in other bilingual settings or with students from diverse linguistic backgrounds) can you offer as suggestions or strategies for our work?

SOTL in Performance Disciplines
The Effect of Peer Tutoring on Undergraduate Aural Skills Performance
Victoria Furby (Buffalo State College, State University of New York)
Many teachers of aural skills classes complete assessment at the group rather than the individual level. Demorest (1998) discovered that students who received regular individualized evaluation were significantly more likely to be more successful in a sight-singing task. Peer tutoring, an arrangement in which two students work together on an academic activity, with one student providing assistance, instruction, and feedback to the other, is now an accepted strategy to promote learning and academic achievement across the curriculum (Darrow, Gibbs & Wedel, 2005). The proposed union of both individualized assessment and peer tutoring will be examined. The research questions investigated include: Does individualized peer tutoring result in higher achievement on sight-singing and dictation assessments? How do students describe their psychological and educational responses to the peer-tutoring process? How do peer tutors describe their psychological and educational responses to the peer-tutoring process?

In the Aural Skills sequence, first-semester students are evaluated individually on the musical skills of sight singing and dictation within the first three weeks of the semester. For the conclusion of the course sequence, students completed weekly individual examinations of either sight singing or dictation skills, culminating in a final examination of these skills. After identifying the weakest 50% of performers on the first two examinations, which are given as a pre-existing portion of the class in which they are enrolled, these students were encouraged to participate in the peer-tutoring program. Students were not required to participate in the program, but were told the potential benefits of their participation, including increased knowledge of the subject matter, and potential success for the remainder of the four-semester course sequence. The college Aural Skills staff selected five tutors for the program, enlisting only those students
who had successfully completed all four semesters of the Aural Skills sequence. Each tutor worked individually with identified freshman from the Aural Skills I course, for an hour each week in addition to regularly scheduled coursework. Tutors were be given suggested material to study with their students to prepare them for the weekly quizzes, along with an outline of course objectives to be reached by then end of the semester. The weekly quizzes, along with midterm and final examinations, were designed to complement in-class instruction, were sequential in nature and were uniform in design and delivery. At the conclusion of the semester, comparisons between the weakest 50% of performers from the 2010 Aural Skills I class, and the weakest 50% of performers from the 2011 Aural Skills I class, were undertaken. A comparison of each groups’ weaker performers on the initial evaluations, and also on their final examination scores helped to determine the efficacy of peer tutoring. Also, the subjects from the treatment group (the 2011 aural skills I class) were interviewed to comment upon their peer tutoring experience.

D06

Individual Paper

A Team SOTL Approach to Developing Integrated Learning in a Freshman Foundation Course
Kathleen Perkins, Brian Shaw, Kendra Thulin (Columbia College Chicago)

This presentation discusses the organization and use of team SOTL inquiry in the on-going process of developing a Freshman Foundation in Theatre Course. The innovative course is based on a pedagogy of application, emphasizing ensemble creation in a devised performance setting. Encompassing nine credit hours, it is team taught in student cohorts of sixteen and covers a broad swathe of introductory content in theatre including basic acting, voice, and movement skills and design concepts within a context of theatre history fundamentals. It is designed to integrate a large set of students (typically 250 to 300 potential majors) with widely varied theatrical experience and college preparation into a department that emphasizes a curriculum of ensemble in applied productions.

A near decade-long practice of team SOTL in the department has greatly contributed to this endeavor. Previous SOTL projects investigating the integration of performance skills across the department curriculum provided some of the impetus for the course and helped inform its initial development. Research in collaborative learning and threshold concepts formed the theoretical background while initial teaching practices were developed in an in-house freshman orientation program entitled, “New Tribe.” SOTL methodology is presently being used by the Foundation Course faculty team in two main initiatives: 1). measuring the levels of content delivery across disciplinary areas in demonstrated learning outcomes; and 2). measuring levels of performance skills integration (i.e. acting, voice and movement). In each instance a specific application exercise will be the site for data collection using rubrics being developed from the experiences gained in the initial pilot classes.

Eventually SOTL research will be used to determine which variants of the approach utilized by the different teaching teams have the strongest results. Long term studies of how the course affects students’ progress over the next three years of the curriculum are also planned. The initial data from the present inquiries should be available to share in this presentation. The emphasis, however, is on the process of using SOTL research as an integral part of a major curricular change and as an essential tool in assessing the integration of diverse disciplinary content and practices in the classroom.

D07

Individual Paper

Mentoring: A study in studio pedagogy, as it relates to voice training for classical singers at the undergraduate level
Reid Spencer (Mount Royal University)

As teachers of classical voice, we have seen a marked change in student attitude to the process of mentoring from the time that we ourselves were students, and we face the challenge of realigning our methods to a new paradigm of student learning.

Students, in this age of easily available information on most any topic, including the study of the singing voice, are challenging the old system, but lack the language and insight to fairly judge the process. It is important none the less to include the student perspective, and not only their ‘voice’ in the act and art of singing. “Inviting students into a learning partnership exemplifies and enacts a radically new idea for most students:
students can offer something to the process of education—a different point of view” (Flannery, p11). Flannery made this comment with reference to classroom teaching. Can we also introduce the concept in the studio, working one-on-one with the student?

As teachers of voice, if we ignore the student’s experience, we risk turning out carbon-copies of our own voice, rather than looking to develop that which is unique in the student’s voice. By inviting the student into the process—by asking the student to self-assess and refine learning based on that assessment—we open a collaborative element to the master/apprentice relationship of traditional vocal pedagogy. The old “method” has been in existence for well over 500 years, in which the Master demonstrates and the student approximates, until the Master is satisfied. If we are to alter that time honoured tradition, the question then becomes, “How do we continue to mentor?” By connecting the process of student learning inquiry in music performance to the long-established theoretical framework of mentoring, this paper builds a deeper understanding of both the learning and the inquiry process, opening new doors to understanding and improving our pedagogy and our students’ learning.

Based on a research project sponsored by Mount Royal University’s Institute for Scholarship of Teaching and Learning, this paper will address early findings of a study in studio pedagogy that seeks to bring student voice into the process; it will take as its investigative approach the scholarship of teaching and learning, wherein student learning is examined from an evidence-based perspective by the instructor who is responsible for the pedagogy of the course. Data gathered will be based in student reflections on the studio process, seeking to identify the mentoring process from the student perspective.

It is perhaps obvious that this research will have an impact for undergraduate and graduate teachers of singing. The mentoring model is, however, more universal in application. Mentoring occurs in most all of the professional disciplines, from the acting studio in theatre school, to the drafting tables of interior design and architecture, to the nurse practitioner mentoring a student in clinical methods on the ward. This study seeks to define a new approach to the student/teacher mentoring relationship beyond the confines of the voice studio.

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**Teaching & Learning Writing**

**DO8**

**D08: Individual Paper**

**The Value of Rewriting in Graduate Educator Preparatory Programs**

*Phyllis Gimbel, David Mills (Bridgewater State University)*

“We cannot build a nation of educated people who can communicate effectively without teachers and administrators who value, understand, and practice writing themselves.” (National Writing Project & Nagin, 2006, p. 60).

The United States is poised to infuse writing into the K-16 curriculum. The Common Core State Standards have been adopted by 47 states and the English Language Arts and Literacy Standards set benchmarks for literacy in history/social studies, the sciences, and technical coursework (Common Core State Standards Initiative, 2010).

The high numbers of graduate students of education seeking advanced degrees, licensure and college credits force many colleges to put an emphasis on access. Research into educator/administrator preparatory programs is a low priority for colleges and universities (Anders et al., 2000).

The paucity of studies of graduate writing programs and student outcomes, especially in educational licensure programs, does not mean there are no literacy strategies for instructors to pursue. Recent research has indicated that there is a gap between instructor expectations and what graduate students understand they are expected to do. Often, graduate students are seen as expert writers with the necessary knowledge and skill to handle the expectations of master’s and doctoral programs (Sallee, Hallett & Tierney, 2011; Singleton-Jackson et al., 2009). This assertion is reinforced by the fact that most graduate programs neither offer nor require specific courses in writing (Norman et al., 2005; Singleton-Jackson et al., 2009).
If there are any writing courses in graduate programs, they are often remedial or for English Language Learners (Sallee et al., 2011). The graduate students themselves assume this expectation. The more students expect themselves to already have expert literary skills, the less likely they will accept feedback and advice on improving their writing (Sommers et al., 2004). In a case study, Abbate-Vaughn (2007) found that 77 percent of her graduate students in education rated themselves as good writers, but writing tests found only 15 percent as actually competent for graduate-level work. Of the students who rated themselves as competent writers, only 13 percent actually were (Abbate-Vaughn, 2007). The small amount of extant literature on the writing skills of graduate students enrolled in educator licensure programs suggests that graduate students in general struggle with writing and rarely revise. Studies suggest that feedback can motivate revision, though it is more often lexical, not conceptual revision.

The purpose of this retrospective, exploratory study is to understand the motivation of a random sample of 50 graduate students enrolled in educator preparatory programs at our state university with regard to why these students chose to rewrite an assignment. More specifically, the research question is: What motivates graduate students enrolled in educational licensure programs to rewrite an assignment and how do such students perceive the input of instructor feedback on their written work? Data were collected via a voluntary, anonymous, student questionnaire. Data analysis was thematic, using rereading to identify themes emerging from the data (Braun & Clarke, 2006). Findings suggest that integrating the teaching of writing into school licensure programs and providing focused, detailed instructor feedback is helpful to guiding students to revise and improve their writing.

**Tackling a Fear of Academic Writing: An Experience of Using the SOTL Approach**

*Lana Khong (National Institute of Education, Singapore)*

This paper will discuss the design of a course, using a SOTL approach, that included a variety of teaching strategies to help adult learners tackle their self-perceived lack of experience and skills with doing research as well as academic writing in a Masters’ level professional learning program in the National Institute of Education, Singapore. Most, if not all, participants, who are also experienced educational professionals, expressed feelings of being under great pressure, and even fear, at the unfamiliarity of not only doing research, but also the having to write a paper based on their research. This ‘Critical Inquiry’ paper was the final piece of work they had to complete for graduation from the 3-year part-time Masters of Arts in Educational Management (MA(EM)) program. In order to help them overcome their prior negative assumptions about ‘doing research’ and ‘academic writing’, I as their course instructor focused on providing guided opportunities for active student engagement in their own learning, and the cumulative building on their previous work, as well as the encouragement of peer sharing. These guiding principles strategically supported participants in managing both the daunting research and writing tasks. Assessment of the effectiveness of this 6-session preparatory course is provided by an examination of selected students’ work as well as student feedback at the end of the short course. The theories of adult learning concur that adult learners direct their own learning based on a reservoir and repertoire of life experiences; they are focused on real-life problem-solving and applicability, and are internally motivated to learn as a result of role and contextual responsibilities. I used the classroom setting to inquire into my own practice and how I could better support mature students lacking an academic background to optimize their attempts to move into academic inquiry, within a tight time frame.

**Metacognition in the Disciplines: Interventions in Upper Level Writing**

*Deborah Meizlish (University of Michigan)*

There is much about disciplinary thinking and writing that students find challenging. Norms and conventions that are second nature to faculty may seem opaque, confusing, or without apparent reason to students. Drawing on the complementary fields of metacognition and reflective practice in writing (Flower (1994); Hacker, Dunlosky & Graesser (2009); Schraw (2001); Yancey (1998); Zohar and David (2008)) this project asked if students could become better disciplinary thinkers if they understood the nature and components of thinking and writing entailed by that discipline, and if explicit instructor focus on disciplinary reflection and metacognition would help them do so.
To answer these questions, this three-year iterative project worked with instructors in upper level writing courses in three disciplines (economics, psychology, and political theory). In each, the instructors incorporated a set of metacognitive strategies to support disciplinary writing. The strategies worked in conjunction with existing writing assignments, and were designed to accomplish three things: structure how students planned for and reflected on course assignments; make transparent student decisions during the assignment completion process; and foster better communication between faculty and their students about course assignments and student learning.

To evaluate these strategies, we draw on a mixed-method design (with both longitudinal and experimental/control features) and rich data sources (pre-post student surveys, instructor interviews, student work). We particularly focus on a metacognitive commenting strategy which asked students to insert comments while writing and served to explicitly open a dialogue with instructors about student writing choices and challenges. Our data reveal that instructors and students particularly valued this intervention. Moreover, through a qualitative coding scheme, we are able to describe exactly what features of student writing became more transparent to both students and instructors. Finally our data show that in total these interventions 1) enhanced student perceptions that writing assignments improved their disciplinary thinking and 2) increased student perceptions of the usefulness of instructor feedback.

In discussing and reflecting on this work, one additional issue is relevant for ISSOTL audiences. This project presents an interesting model for the development, implementation and dissemination of SOTL projects on large campuses. The research infrastructure for this project came from the collaborative efforts of a teaching center and a writing center; this collaborative team jointly recruited and then worked to support the project’s implementation in the courses of our collaborating faculty. This example highlights both the virtues and challenges of such an approach.

Convention Centre Albion B (2nd floor) 1:30-3:00pm

Transformative Learning Experiences

Longitudinal Research on the Application of Transformative Learning Theory in University Business School Education: An Integration of SOTL Research Results and Classroom Teaching Practices
Teal McAteer (McMaster University)

Transformative Learning Theory (Mezirow, 1978) has not significantly influenced the business education literature, despite the fact that management educators are increasingly pointing to the need for business programs to go beyond the transfer of pure intellectual knowledge and help students implement new ideas/thoughts and experiment with new behaviours (Kets de Vries & Korotov, 2007). In other words, opportunities for transformative learning may meet an important yet unmet need in business education. Transformative learning “occurs when individuals change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring out new ways of defining their worlds” (Mezirow, 2000). Such learning is often catalyzed by a “disorienting dilemma”, or an event or series of events that compel one to see their world, their relationships, and/or their life in a different way. This transformation develops over a series of stages beginning with one critically reflecting on existing assumptions and beliefs. With the support and encouragement of others, individuals may choose to challenge these existing structures and may explore new roles, patterns and behaviours. The psychological, behavioural, and convictional “perspective transformation” is the core of transformative learning theory (TLT) (Clarke, 1991). If business education components encouraged students’ understanding of self-thought and resultant behaviors, instructors using transformative learning experiences would help build more authentic managers and leaders for the future, and in so doing, redraw the boundaries in university business education.

This research paper describes how an innovative instruction technique (a Transformative Learning Experience or TLE) was used in a University Masters in Business Administration Leadership course, and in particular an instructor-staged “disorienting dilemma”. Longitudinal study findings emphasize the technique’s impact on students’ learning as well as personal and professional growth over time. Qualitative and quantitative data were collected from students in four separate offerings of the 13-week Leadership course (period 2009-2011). Qualitative self-reflections were gathered at multiple points; immediately following the original TLE embedded within the 13-week course schedule and then again at one and two year points following course completion. Qualitative results include descriptions of the experience as “life-altering”, “revealing”, “a
professional development opportunity leading to profound growth”, and “an individual leadership experience absolutely necessary before attempting to lead others”. More specifically, qualitative results through data coding techniques, produced four categories that best describe participant learning. Interestingly, the emergent categories of self-awareness, self-management, social awareness, and social management, mirror those that have been used to define emotional intelligence (Goleman, 2000). Quantitative results supported the ability of the Leadership course to provide students with an authentic TLE as well as revealed that the usefulness of the TLE technique and its impacts on students’ lives, increased over time. This research paper also discusses a number of methodological issues related to the use of the TLE including participant recruitment and consent, letter of information, confidentiality, and psychological risks of the instructional technique. Benefits of using the TLE are highlighted with specific focus on the how it can advance theory and practices in business management and general education.

The use of student feedback in reflection on teaching - A case study at Stellenbosch University
Melanie Petersen (Stellenbosch University)

Improving teaching is not only a matter of learning new teaching tricks, but requires lecturers to reflect on their teaching practices (Biggs, 2003). Brennan & Williams (2004) and Harvey (2001), amongst others, argue that student feedback remains a powerful tool to enhance the quality of teaching. Based on 10 interviews, this study focuses on how lecturers at Stellenbosch University engage in this process of reflection on and enhancing the quality of their teaching.

Brennan & Williams (2004), Harvey (2001), Biggs (2003), amongst others, argue that while student feedback should never be used in isolation, it remains a powerful tool that can be used to enhance the quality of teaching. Students are your best source of information to get an understanding of the effects of your teaching. Student feedback can thus serve as a powerful tool to improve reflection on teaching.

During 2006, 318 lecturers participated in a survey undertaken by the Centre for Teaching and Learning. While 74,8% felt that student feedback is supposed to stimulate reflective teaching and that they would like it to be used more to this end, only 37,4% perceived student feedback to actually do so. Having taken over the responsibility for the institutional student feedback system at Stellenbosch University in 2007, this sparked my interest. Why does only such a small proportion of lecturers actually use student feedback to reflect on their teaching? What motivates some lecturers to use student feedback and how do they do it? How can other lecturers be encouraged to make more effective use of student feedback? During October 2008 semi-structured interviews were held with 10 selected lecturers to further investigate this phenomenon.

This seminar will present the findings from this small-scale research by analysing information collected in these interviews with selected lecturers. Aspects that were explored include:

1. How did the lecturer use student feedback in reflecting upon his/her teaching within his/her particular teaching context?
2. What motivated the lecturer to make use of student feedback in this way?
3. Did the lecturer find the system of student feedback at Stellenbosch University helpful in reflecting on his/her teaching?
4. Further suggestions or recommendations.

This seminar will discuss how these lecturers appear to engage in the process of reflection by interpreting the data against Mezirow’s theory of transformative learning (Kreber, 2004). The findings from this preliminary study and the implications for providing support to lecturers within this reflection process, as well as streamlining the institutional student feedback system, will also be discussed.

Further data will also be collected during July and August 2012 by way of in-depth interviews with selected lecturers in order to shed more light on this phenomenon at this particular institution.

This seminar will share the tentative findings from this ongoing research project at Stellenbosch University, South Africa. The objective will be to discuss these preliminary findings in order to gain a better understanding of how lecturers engage in the reflection process and the role that student feedback plays in this process.
Transformative learning and discourse: Addressing cultural differences in knowing in higher education with an environmental focus

M.J. Barrett, Sheryl Mills (University of Saskatchewan)

Professionals regularly encounter complex dilemmas which demand openness to multiple perspectives, yet current educational approaches are often dominated by particular ways of knowing and knowledge systems which provide valuable, but incomplete perspectives. Contextualized within the literatures of transformative learning (e.g. Mezirow & Taylor, 2009) and the constitutive nature of discourse (e.g Foucault, 1988), this presentation will report the results of a research case study based on ENVS 811: Multiple Ways of Knowing in Environmental Decision-Making. The course supports students to appreciate, understand, and integrate multiple ways of knowing in their problem-solving processes related to environmental concerns. This course is particularly important given: (a) the need to approach complex decisions from a variety of perspectives and worldviews, and (b) the “duty to consult” with Aboriginal Peoples with respect to public lands, waters, and other resources.

Attentive to the role of discourse, together with technologies of self and power (Foucault, 1988), students are encouraged to grapple with their own resistances to what often appear to them as non-conventional teaching approaches, and ways of coming to know. Data sources include student assignments, post-course interviews, and two focus group discussions. The presentation will identify ways in which culturally shared narratives (discourses) can govern the way we can think, constrain our ability to be respectful of other cultures and their knowledge systems, and ultimately limit creativity with respect to environmental and other forms of problem-solving. In addition to experiences teaching the course, the session will also introduce and draw on the author’s multi-media doctoral dissertation.

In an integrated approach, the presenter will both talk about and demonstrate many of the pedagogical approaches which support students to engage with a variety of knowledge-making processes, including embodied and intuitive, trans-rational forms knowing. Similar to the course, the presentation will include significant participant involvement, intentionally drawing from both intuition and intellect. It will address a variety of theories of knowledge to explain student (and participant) experiences, including the role of the natural world in knowledge-making, and new research in intuitive knowing. Conclusions include that attending to discourse and its power in maintaining status quo thinking is just as significant as introduction to counter-narratives.

This presentation will be of interest to those who are looking for something different. The presentation will cover: (1) course aims and content; (2) analysis of student learning; and (3) critical reflection on the ways in which Euro-centrically designed academic structures and embedded assumptions about knowledge and knowing may make it particularly difficult to engage students from ‘other’ epistemological cultures. Although the course itself is grounded in the environmental field, the presentation will be framed within transformative learning literature and will be of interest to conference participants in a wide range of subject areas.
universities. For a typical college in Canada, class sizes, especially in first year, are typically much smaller than at universities and average admission grades are lower. Class size and student entering characteristics may be important determinants in how hybrid teaching affects learning outcomes so it is worthwhile to see if the effect of hybrid teaching on student success is similar or, possibly, different from that found at universities.

Approximately 1,600 students and 50 class sections from the fall 2011 and winter 2012 terms are included in the study. The quantitative analysis takes advantage of the quasi-experimental condition wherein the hybrid class is the test group and the non-hybrid course (taught by the same professor) serves as a control. The quasi-experimental nature arises from the fact that students were largely randomly assigned to be in a hybrid or non-hybrid class, though students could switch so this was not a true experiment. A regression model is used to control for observed correlates and to remove the potential small amount of selection bias that may be present.

The research is extended further into examining online activity. Some unpublished research has demonstrated that student behavioural data, such as login rates at the beginning of the term, is a strong predictor of student success when combined with other data. Due to their online nature, hybrid courses provide an opportunity to explore this effect. We have access to this data through the learning management system (LMS) data, and we investigate the importance of including student login activity in the regression analysis.

In addition to the quantitative analysis, qualitative analysis summarizes student survey responses and key themes that emerged from student focus groups held during the end of each term. The survey is designed to measure the student experience with hybrid learning formats. Where possible, and with student permission, survey results have been linked back to administrative data. Regression analysis is used to identify relationships between survey responses and students outcomes.

**D15**

**Large First Year Course Re-Design to Promote Student Engagement and Student Learning**

*Andy Leger, Anne Godlewska (Queen’s University)*

This session will present the findings of a research study on a complete course re-design of a large first year class which changed the learning environment and reduced boundaries to allow for more meaningful student engagement and improved student learning.

During the fall semester of the 2010 GPHY 101: Human Geography was taught as a traditional large lecture course of 450 students with three lectures of 50 minutes per week. In the following winter semester of 2011 students in GPHY 101 were offered a hybrid course. In this new offering to 180 students, the lectures that were captured during the fall semester were made available for students to view on-line. Instead of attending actual large lectures, students were required to view the three lectures of 50 minutes per week on their own time prior to attending an interactive class of 60 students for 90 minutes, once per week. In this weekly class with the professor, students were actively engaged in small group problem solving, discussion, debate and other forms of cooperative learning activities.

In the fall semester of the 2011 GPHY 101 was once again offered as a hybrid course to 360 students. Students were once again expected to watch recorded lectures on-line. Instead of weekly sessions for 90 minutes students attended four small group sessions of 60 students for 3 hours each during the course of the semester. Once again in these sessions students were actively engaged in small group problem solving, discussion, debate, presentations and other forms of cooperative learning activities.

With support from HEQCO, we assessed the impact of redesigning the structure, delivery and opportunities for engagement within a large class by comparing the traditional course offered in the fall of 2010 to the course offered in the winter of 2011 and the course offered in fall of 2011. This comparison included (1) the level of student engagement in the classroom using CLASSE, (2) students’ approaches to learning using a study process questionnaire, (3) academic performance, (4) students’ perception of their experience in the course through an on-line survey and focus groups after all three course completions.
The findings of this study will demonstrate that it is possible to re-think and re-design a large first year course to reduce the boundaries to student engagement and improve students’ approach to learning. By having students’ access lecture material on-line, this affords the opportunity and reduces the barriers for more interaction, more discussion during face to face class time. It takes advantage of students’ ability to use such technologies and provides flexibility for all students and their diversity of needs and approaches to learning. This new course design very specifically targets the challenges of teaching large classes which are traditionally didactic in nature, making it difficult to achieve meaningful student engagement, and often creating barriers to diverse perspectives and diverse ways of learning. This presentation on the comparison of the three different course offerings will help participants make decisions about such course re-designs and approaches in their own courses.

Blended Learning Promoting Geospatial Literacy

John Maclachlan, Jacob Tarkowski, Susan Vajoczki, Jeffrey Trzeciak, Kathryn Ball (McMaster University)

During summer 2011 a blended learning instructional module for geospatial literacy was designed, and developed. It was implemented during the 2011-12 academic year and made available to more than 2800 students taking introductory Environmental Sciences, Geography and Integrated Sciences courses. This blended learning module covered various topics, including: map elements, projection systems, and contour lines. Internal quality assurance work from within McMaster University indicated a lack of both student and instructor satisfaction with the previous instructional model used for these topics (i.e., one time, face-to-face instruction).

The module allowed for a blended learning approach, addressing students’ preferences for ‘just-in-time’ instruction and their desire for 24-7 access to instructional materials (Butler, 2010). The blended learning module allowed for increased pedagogical richness as it facilitated faculty the opportunity to change how they used class time, thus diversifying a their pedagogical options. Beyond providing pedagogical richness the blended learning modules provided broader access to the course knowledge; increased social interaction; increased personal agency; and a relatively easy system to update and revise (Osguthorpe & Graham, 2003).

The module was created using Articulate software with the input coming from a collaboration between staff, students and faculty from the McMaster University Lloyd Reeds Map Collection, the Centre for Leadership in Learning, and the School of Geography and Earth Sciences. This initiative represents collaboration amongst a large group of people (more than 20) including: faculty members; instructional support staff; library instructional staff; digital media technical staff; and pedagogical staff.

Data will be collected using student surveys, instructor and student focus groups, administrator interviews and analysis of key administrative documentation. The first phase (late March 2012) involves students completing an online survey instrument and participating in focus groups to self-report on learning approach (deep vs. surface), user satisfaction, perceptions of learning and general overall experience with the module. Instructor satisfaction with the module and instructor perceptions of student learning will be assessed through instructor interviews (May 2012). The second and third phases (June-July 2012) involve a cost-benefit analysis and mapping the module content to the principles of universal instructional design. During July-August 2012 the module will be updated based on the survey, interview and focus group data. Feedback from the first three phases informs the final phase (October 2012), in which the refined module and survey instruments are implemented with a new student body.

Inherent within this project are steps to ensure iterative and ongoing refinement and modifications of the module given feedback from all stakeholders. In addition, the cost-benefit analysis and mapping content to the principles of universal instructional design, will allow us to ensure an accessible learning tool that is explicitly costed. This module can further be modified for use across a variety of applications, such as different departments, faculties, or institutions. It is anticipated that knowledge gained from the assessment of the existing module can inform the development of additional modules (e.g., numerical literacy).

At time of presentation, only preliminary results will be available as evaluation continues through the 2012-2013 academic year.
**Supporting Early-Career Faculty**

**Certificate in College Teaching: A Case Study**  
*Ruth Rodgers (Durham College)*

In 2011, Durham College launched a College Certificate program for new faculty hires which prepares them for their new role as college professors. The first three credit courses are mandatory for all new full-time faculty hires, and must be successfully completed within the two-year probationary period. Two additional credit courses may be completed post-probation, in order to obtain the Certificate in College Teaching. It is the College’s intent to expand and develop the program in future to obtain approval of an Ontario College Graduate Certificate designation for the program. The effectiveness of the program is being evaluated through several means: first, informally through participant feedback and feedback from their academic administrators; and second, through a formal research project that is gathering information on the novice faculty’s developing self-efficacy and teaching philosophy (as measured by five tools, as follows), at the beginning of the program, at the end of probation, and upon completion of the certificate program.

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**The Role of New Faculty Orientations in Improving the Effectiveness of University Teaching**  
*Dragana Polovina-Vukovic, Julie Gregory, Margaret Cusson (Carleton University)*

Despite anecdotal evidence that new faculty members may gain important benefits from initial pedagogical training and often become leaders in teaching development in their departments (Brew and Ginns, 2010) and a belief that “engaging in initial training in university teaching leads to increased student satisfaction and an increase in the use of student-focussed approaches to teaching” (Brew and Ginns, 2010), the province of Ontario has no data available on how many institutions have new faculty programs, or data regarding the composition, strengths or challenges of the existing orientations. This project addresses this gap in the research by collecting data and providing a detailed inventory of the ways in which Ontario post-secondary institutions currently support their new faculty members at the beginning of their initial teaching appointments.

New Faculty Orientations (NFOs), an induction program for newly hired faculty members at the beginning of their academic careers, vary widely in the content delivered across different Ontario universities. Only in two Ontario universities is orientation mandatory for all newly hired faculty members. In addition to NFOs, all of the responding institutions organize programs for their new faculty members throughout the year, such as formal, scheduled workshops, individual consultations, and curriculum design/redesign assistance. Seven universities organize comprehensive teaching certificate programs, while nine of them also introduced mentorship programs for new faculty. None of the institutions have sessions on designing and teaching fully-online courses.

Among the most challenging issues for teaching and learning centres in supporting new faculty members with their teaching needs at the start of their academic careers are time constraints on the faculty members’ part, limited resources available to teaching and learning centres, and the perceived lower value of teaching compared to research.

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**Is it mentoring or is it research? A new approach to integrating leadership, academic development and SOTL in the first year of university teaching.**  
*Lin Norton, Bill Norton, David Evans, Olga Ververi, Kathrin Wagner, Tingting Yuan, Zoe Zontou (Liverpool Hope University)*

Research on the effects of university teaching programmes shows it takes some time before conceptual change is engendered (Postareff et al, 2007). Other research has suggested that certain ‘constraints’ might be operating for new faculty who sometimes found it difficult to put into practice what they had learned on such programmes (Norton et al, 2010).

The aim of the current research was to analyse how ‘new’ faculty actually experienced the day to day challenges of their first year of university teaching. It breaks away from the positivist paradigm by deliberately
blurring the boundaries of researcher with that of mentor so that a relationship is established which not only produces research outcomes but also offers on-going SoTL support to the faculty taking part. Instead of being a ‘neutral’ interviewer collecting data, the researcher capitalised on her years of experience of working in learning and teaching to actively mentor the participants by introducing SOTL concepts and approaches when it was appropriate.

Phase one reports on an interview study with five postdoctoral teaching fellows at the end of their first year of lecturing in which they were asked about their reactions to how future postdoctoral teachers might respond to this different approach of combining the role of researcher with mentor. To ensure an outside perspective on the findings a thematic analysis of the transcripts was carried out by another pedagogical researcher. This showed that all five post docs had found some things difficult e.g. balancing heavy demands on time, gaining confidence in the teaching situation, finding their place working in an institution after being used to life as a PHD student. Some concentrated their comments on the overall idea and what impact it could have on post docs in phase two; others had more to say about the actual research/mentoring process. In terms of their personal experience, all would have welcomed such a mentor and thought that other post docs would respond positively to such an approach.

Phase two, which is on-going, has involved a further five post-doctoral teachers, and consists of in-depth semi-structured interviews determined by their issues, face to face discussions and email exchanges. In this phase, the researcher/mentor has sought to actively introduce and involve each participant in on-going discussion about SoTL. Reflections from the researcher/mentor will be presented together with some emerging themes from these interview data, as well as the thematic analyses from phase one.

Audience engagement: The audience will be invited to discuss some of the issues that might hinder ‘new’ faculty from putting SoTL principles into practice, and consider how an ‘external mentor’ might help redress the balance.

Encouraging Persistence and Completion

**Gone But Not Forgotten: Helping the Non-Completing Student Avoid the Schubert Syndrome**
*Stephen Gareau (Buffalo State College)*

A master’s project is typically an extensive applied research effort, carried out by a graduate student, and aimed at solving some type of real-world problem related to the candidate’s field of study. Much research has been done that examines ways to help achieving students achieve at higher levels. Likewise, much research has been done examining ways to reduce rates of student dropout. But there is also a third category of student—i.e., the ‘non-completing student’—that may need more research attention. The non-completing student at the graduate level is the A.B.D. (All But Dissertation) student who never finishes their program; they complete all necessary program coursework, but never complete the final step—i.e., the successful completion a master’s project, master’s thesis, or doctoral dissertation research project.

This paper describes a research study that was conducted among master’s degree candidates in an educational technology program at a four-year comprehensive university in northeastern United States. The study concerned the problem of student non-completion in a 3-credit master’s project course, which is the capstone course in the program and a final requirement for graduation. The problem is sometimes referred to as the ‘Schubert Syndrome’, in reference to Franz Schubert and his unfinished Symphony No. 8. This problem can exist to varying degrees among various departments on a university campus. In many cases, non-completing students: (a) have completed all courses required to graduate with the exception of their master’s project; and (b) often have high GPA scores based on their previous courses.

The research was conducted between the fall of 2009 and spring 2012. The research approach was a qualitative, action research approach, with student observation, verbal and written feedback, and submitted master’s projects used as data for analysis.

The research question was as follows: ‘How might the completion rate of student master’s projects in an educational technology graduate program be increased?’ The sample used was a convenience sample, and
included 82 graduate master’s students in six graduate classes (i.e., one class per semester) of the master’s project course EDC 690.

Prior to the study, the master’s project was typically delivered in a self-directed, independent study format, with students meeting individually with their project supervisors no more than two-to-three times during the research process. In an attempt to address the research problem, the course approach was changed to a traditional, face-to-face, classroom format, with students attending master’s project classes six-to-seven times per semester, and being strongly encouraged to complete their master’s project in one semester.

The outcomes of the study are promising. Of the 82 students who participated in the study, only one student did not complete their master’s project in the allocated one-semester period (this student did, however, complete their project the following semester). At the completion of each course, many students commented that the traditional, face-to-face course approach taken had been very helpful to them; had provided them with valuable instructor and peer support; and had been instrumental in the successful completion of their projects in a timely fashion.

D21

Engaged persistence: students’ descriptions of staying the course
Julie Wintrup, Liz James (University of Southampton)

Introduction: This paper presents key findings from a three-year, longitudinal, qualitative study of mature learners studying for a health and care Foundation degree in a UK Higher Education Institution. As a group at risk of early departure from education, it is students’ descriptions of persisting which are of particular interest (Yorke, 1999). Themes relating to peer support as pivotal in engaged persistence will be presented and discussed using students’ words.

Background to study: Foundation degrees were designed to widen access, equip graduates for new, intermediate career opportunities and create progression to Honour’s degrees (HEFCE, 2000). Concerns about poor retention were reinforced by research (Harvey, 2010). The new programme, designed to open doors and increase opportunity, appeared to create new forms of alienation, reflecting seminal work on student engagement (Mann, 2001, 2008).

Methodology: The purpose of the research was to learn about the student experience over time. A cohort design allowed student journeys to be followed, through pathways and on into other programmes. Thirty seven students participated. Semi-structured interviews followed a schedule which was adapted for subsequent interviews.

Findings: First year interviews described a lack of information and preparation but learning was generally seen as positive and even life-changing. Several expressed a sense of anticipation, discovering new career possibilities. For all, the second year was more difficult; the novelty of being at University had worn off and pressure of study had increased. Several described considerable stress to the point of having wanted to leave. While transition into the programme appears not to have been particularly traumatic (for participants) the move from first to second year was found to be complicated and problematic. Common themes were the loss of social support (in new pathway groups) and frustration caused by inadequate information. Third year interviews enabled reflections upon the importance of peer support and the motivating force of a work or educational goal. Of those who talked of wanting to give up their studies, support from and for each other was identified as the single most important influence on their decision to continue.

Discussion: Themes to be discussed, in light of Mann’s (2008) enabling factors, are: the students’ use of peer support which plays a part in persisting in their studies and leads to collective action; the institutional barriers manifested in a lack efficient processes and the alienating effect on students; and the development of a critical stance and a renewed sense of self, expressed in hopes and plans for the future.
Facilitating Linkages Enhancing SoTL @ the “U”  
*Jeffrey Pellegrino, Sherry Schofield-Tomschin (Kent State University)*

This paper explores implications on faculty professional development for Linked courses based on results of an institutional study of first-time, first-year students inside and outside of Linked Courses. Linked Courses, a “high impact” practice for student success (Kuh, et al. 2005), promotes multiple factors of academics, socialization, and professional development in students. At the same time they foster stronger relationships between peer students and students and faculty members; curriculum (both within and across disciplines); and the university (persistence and retention). Tinto (1975) first proposed that integration between student relationships, expectation, and commitment converge in decisions to persist in higher education. Parallel, collegial relationships between faculty members also build coherence across the university in terms of General Education, esprit de corps, and interprofessional collaboration (Pellegrino, 2002).

Linked Courses, operationalized at this institution as two to three course sections in different disciplines with co-registered students, fostered collaboration between professional academic advisors, faculty members, and academic administrators. This initiative goes beyond co-registration because faculty members communicate before and during the semester; but does not extend to integrating courses, where faculty members teach in each other’s courses; and courses were evaluated independently. Course linkages brought together diverse curriculums, providing opportunity to faculty members and students to bridge concepts and content in new ways. For example, linked introductory courses in College Writing and Biology encouraged students to overlap topics of biology into writing exercises and assessments.

The study, conducted Fall 2011, examined student characteristics, expectations, commitment to course, degree, and institution, as well as Grade Point Average (GPA). All subjects were first-time, first-year students enrolled in introductory courses at a large research university in the U.S.A. Participants (n=136) were placed in linked courses by academic advisors based on availability in students’ schedules. The institutional research office matched a control group of first-time first-year students (n=106) in the same courses, but non-Linked sections. Both groups completed a Pre and Post survey. Statistically significant results showed variability in Fall GPA; Linked participants had a positive .3 GPA difference (p=.0019), higher agreement that the university met expectations, were more likely to engage peers within this specific course, and used information more between courses, with higher commitment to finishing a degree.

Study results provide evidence to modify, facilitate, and support faculty member development with Linked courses. A three step, facilitated, development process offers faculty opportunity to gain perspective and context: (1) Initial third party facilitation, by a faculty development professional or program administrator, works to bridge disciplinary culture and language and promotes mutual benefit between colleagues. (2) A larger workshop offers institutional support and perspective regarding importance of linkages in student development and academic achievement; workshop format helps solidify ideas and create summer action plans for linking course experiences. Step (3) sustains faculty member relationships with program administrators and faculty developers, extending resources and support throughout the semester. This SoTL work needs to continue by documenting faculty member experience and relationships to identify characteristics of successful Linked courses in terms of student and institutional goals.

Where Do We Begin to Change the Institutional Culture?: The Teacher Scholar Inquiry Group  
*Ellen Lynch (University of Cincinnati)*

In his foreword to Huber and Hutchings’ volume on the Teaching Commons, Lee Shulman (2005) stated that in order to cultivate the scholarship of teaching and learning in higher education, it may be necessary for campus leaders to “scale down” their efforts. In other words, the integration of SoTL into the institutional culture may initially require grass roots activities that include small numbers of faculty meeting with enthusiastic, like-minded peers. Shulman also stressed that these initiatives must include administrative support.

Certainly, one activity that has been cited as essential to the development of SoTL is the need for conversation among peers about teaching and student learning (Gillespie, 1989; Huber & Hutchings, 2005; Shulman, 2004.) The question that remains, however, is how do we create situations in which these discussions can
take place? What strategies can be used to empower individual faculty members who seek to become pedagogical scholars?

The Teacher Scholar Inquiry Group (TSIG) was established at the University of Cincinnati, a research-intensive institution, to address the challenge issued by Shulman, Huber and Hutchings and others. TSIG has provided its members with a supportive environment in which to discuss teaching, learning and our development as scholars of teaching and learning and has concomitantly presented us with the opportunity to systematically investigate those factors contributing to the success of our group.

In this presentation, results from a participatory action research project will be presented in which 10 faculty members from 9 different disciplines and two different campuses met monthly over a 3-year period to explore issues related to teaching and to seek answers to the following questions:

• How do we claim the time to engage in meaningful conversation about our teaching in a research intensive institution?
• How do we establish an effective forum that encourages self-reflection and discussion about our teaching and what factors contribute to the development of such an environment?
• What support is needed as we progress from good teaching to scholarly teaching to scholars of teaching and learning?

Details related to how the study was conceived and supported, the framework for our monthly meetings, the challenges we faced and the modifications that were made as we progressed will be shared. Additionally, data collection and analysis procedures and specific outcomes will be presented. In brief, the results of the study demonstrate that the success of the group has been significantly impacted by its democratic nature as well as by its same-sex and multidisciplinary composition. Participants will be given ample opportunities to ask questions. A bibliography and related materials will be provided.

D24 Learning Without Borders: building a scholarly teaching and learning community for internationalizing the curriculum
Teresa Dawson, Jim Anglin, Catherine Nutting, Anne Cirillo (University of Victoria)

This paper shares our findings regarding creating an environment in which a vibrant, spontaneous and utterly engaged interdisciplinary SOTL community can, not just emerge, but become a force for institutional transformation.

The University of Victoria’s strategic plan, as for many institutions, clearly emphasizes the goal of internationalizing the curriculum, as we prepare students for their roles as global citizens. To support this central goal, the Office of the Vice-President Academic and Provost, together with the Office of International Affairs and the Learning and Teaching Centre, collaborated to offer resources supporting faculty, instructors and academic units in integrating international elements into their curricula. Through the “Learning without Borders” (LWB) fund, proposals are made annually to redesign courses or components of programs by faculty member teams, with the understanding that their academic unit commits to permanently incorporate resulting innovations into curricula. Ten curricular re-design projects (including from Nursing, Electrical and Computer Engineering, Teacher Education and Intercultural Service Learning) were selected for 2011-2012 based on their potential to effect broad and deep change.

However, far beyond the initial intentions of the curricular grants, participants in fact chose to come together to form an interdisciplinary LWB SOTL community that now collaborates to research student learning outcomes from their very varied courses, and to use the research results to advocate for institutional change.

As advocates for SOTL, desirous of integrating it into institutional culture and to supporting diverse approaches to it, we became intrigued. We wanted to: 1. Investigate what combination of factors had made this vibrant SOTL community possible. 2. Identify the characteristics of an assessment plan that was integrated enough for all courses to use to determine collective learning outcomes, but flexible enough to encompass completely diverse disciplines, and 3. Determine how the LWB SOTL community was able to advocate at the institutional level where individuals had had less success.
We have drawn on a wide variety of frameworks and methods to investigate these questions, including those specific to the disciplines themselves, and literature in institutional change and internationalization, as well as work in SOTL and program assessment (including for example, Brennan and Shah, 2000; Blackmore and Sachs, 2007; Trahar, 2007; Anzoise, 2008; and Grayson, 2008 and 2012).

We found that participants began (with no additional incentives) to engage the SOTL literature, to pose inquiry questions about their students learning, to seek out and acquire the research and assessment skills required to do the research, and to disseminate their scholarly work as a group. The result has been nothing short of transformative both in terms of participants research lives but also in terms of what we are learning about student learning in courses dedicated to internationalization and its potential to change the academy.

We look forward to discussing these outcomes with session participants, hearing their perspectives and obtaining their feedback on our findings.

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**A Model Promoting the Scholarship of Teaching and Learning in Higher Education**

*Thomas Olsson, Torgny Roxå (Lund University)*

In this paper we present and analyse a model for pedagogical competence (Olsson et al., 2010), integrating theory and practice in the Scholarship of Teaching and Learning (SoTL). The model involves four essential aspects - pedagogical practice or actual teaching activities related to student learning; observation of teaching and student learning; theory or theoretical knowledge of teaching and student learning; and planning as a means for improved pedagogical practice. We argue for teachers’ observations of teaching and student learning, together with reflected theoretical reasoning, to be especially important factors to promote SoTL in higher education.

Our arguments are related to the theory of cognitive dissonance developed by Festinger (1957). In the case of teaching and learning an important dissonance may be between a teacher’s knowledge about teaching and learning and the actual teaching practice and its outcomes. Festinger (1957) argues that the tension between conflicting cognitions, the dissonance, is a driving force for change since people want to reduce or eliminate dissonance and achieve consonance. We support the view put forward by Sinatra and Pintrich (2003) that the teacher should to a large extent govern the process leading to development. Consequently we argue for teachers’ own observations of teaching and learning activities to be the single most important factor to disclose dissonance and promote a scholarly development.

Reflection is an essential characteristic of SoTL and integrated in all parts of our model. Mezirow (1991) discusses increasingly complex ways of reflection: content reflection, process reflection and premise reflection. Process and premise reflection increase the possibilities for teachers to transform their conceptual structures to become more complex. We argue that to reflect beyond content reflection it is necessary to go outside the pedagogical practice and include observation, theory and planning.

We also build on Argyris and Schön (1974) and their concepts of theories-in-use and espoused theories together with single-loop learning and double-loop learning. These concepts have significant consequences for teaching and learning, and they are especially fruitful in connection with cognitive dissonance and a scholarly development. Often theoretical knowledge of teaching and learning corresponds to espoused theories, and the teaching practice, the actual teaching activities, are more or less based on personal theories-in-use. If we want to promote SoTL we have to find ways to bring theory and practice together and we argue that high quality observations of teaching and student learning together with reflected theoretical reasoning have a strong developmental potential.

A very important feature in double-loop learning is the ability to draw conclusions from data, something consistent with the use of observations as exposed in our model. Teachers that teach without observing teaching and student learning, and without reflecting with the use of pedagogical theory, are likely to learn only through single-loop learning. Teachers that demonstrate pedagogical competence are much more likely to produce double-loop learning.

We build our arguments on a large amount of empirical data including more than 100 Teaching Portfolios written by teachers from different subjects, faculties and universities in Sweden, together with teachers’ SoTL papers from local Campus Conferences, and texts written for a campus News Letter about teaching and learning. At the session we will invite the participants to discuss relevant examples from our empirical database in relation to their own experiences.
Collaborative learning in a public speaking course: Who did it benefit?
Ann Liao (Buffalo State College)

It was found in the STEM disciplines that collaborative learning benefited students. Moreover, in the STEM literature, it was noted that minority students benefited the most from collaborative learning. Studies on the effects of collaborative learning in communication are limited. As a result, this study was designed to examine the effect of collaborative learning in the public speaking course.

Grounded in the social cognitive theory, the concept of self-efficacy in particular, this study sought to examine how collaborative learning affected students in the basic public speaking course. Variables investigated include student learning, speech efficacy, speech anxiety, and listening skills. Student learning was measured by students’ speech grades. Results show that collaborative learning contributed to student learning. Moreover, demographic analysis shows that African American students and students whose mother had no more than a high school education benefited the most from collaborative learning. In terms of efficacy measures, students in collaborative learning sessions did not feel more efficacious or less anxious about the speech they were to deliver. Efficacy measures failed to predict speech grades or course grades. Student grades were predicted by students’ self-reported college GPA and high school GPA. However, it was found that public speaking courses did increase speech efficacy and decrease speech anxiety over the course of the semester. Speech efficacy was found to inversely correlate with speech anxiety. Students’ listening skills did not improve significantly in a semester, but listening skills were found to positively correlate with speech efficacy.

Experience is the key to learning: Engaging students through project-based learning
Carol Hostetter (Indiana University)

Question: Student engagement is challenging in this day of PowerPoint, but is particularly difficult in a required research course. Engaging undergraduates in research through the use of teams and real-world projects provides an opportunity for students to apply the content they learn from the readings. The research paper examines one way SOTL inquiry used theory to transform teaching practices, and the impact the transformation had on students' learning and feelings of motivation.

Rationale: TBL uses a specific classroom structure to engage students through an active learning pedagogy. Content is covered through frequent individual and team tests on class readings, group and class discussion, and application of knowledge (Michaelsen and Sweet, 2008). Research on TBL found students are more accountable and learn valuable team-work skills with TBL than in a traditional classroom (Michaelsen and Sweet, 2008). In addition, involving undergraduate students in research has positive effects on retention and attendance at graduate school (Council on Undergraduate Research, 2007; Secret, Ford & Rompf, 2003).

Methods: Over a period of two semesters, students in undergraduate research classes were taught using TBL. Students were divided into teams responsible for completion of small research projects, while the entire class conducted interviews on the same topic. Students took tests on the readings for each unit, discussed these in class, and applied their research knowledge in scaffolded assignments that built towards the final product. The team approach allowed for close mentoring and feedback as each task was completed. Teams presented their findings through a poster session and a paper. Student learning and attitudes were evaluated using multiple measures including testing, student reflection papers, and final papers. Quantitatively, the effectiveness of the TBL method was measured on the pre- and post-tests, and the course tests and papers. Qualitatively, measures included reflection papers and course evaluations.

Outcomes: Project-based learning, conducted in teams, showed promising evidence for the two semesters in which data was collected. Students’ scores on the pre- and post-tests improved. Students’ scores on knowledge tests averaged 90% or better. Student reflections were strongly positive as to their perceptions of their learning and interest in the course. The social atmosphere in the classroom was also found to be positive and engaged, with most students arriving for class prepared. While students found it challenging to pass the
institution’s human ethics test and conduct professional-level interviews, they saw that they could rise to the
challenge. The students in the second year of the study were heartened by the fact that one article had already
been published from data their predecessors collected in the first year of the study. Examples of typical comments
are: “Experience is the key to learning for me. Actually conducting research is why I learned so much,” and, “It
made me more critical and skeptical of the research I read and use in my own research papers.” While this case
study of two courses cannot be generalized, it may add to the body of literature in SOTL.

**D28**

**The Hevruta Method and the College Classroom**

*Jeffrey Bernstein (Eastern Michigan University)*

This project uses the hevruta method, made popular in Eastern European higher institutes of Jewish learning,
to enhance learning in an introductory American government course. In the hevruta method, students pair off
and read through texts together, engaging in discussion as they do this. The texts consist of a series of articles,
videos and documents tied to hot issues in American politics (e.g., school prayer, affirmative action, Supreme Court
confirmation process, legislative term limits). During four occasions of the semester I give students time in class
to go through these readings in pairs, preparing for the larger class discussion on the issues. I am able to get
students to challenge each other in interpreting these texts, which are not straightforward. The texts argue with
one another and raise complicated issues with difficult implications. The conversations force students to engage
the texts, not merely read them.

Students work at the boundaries of what we know, evaluating arguments and creating their own knowledge
rather than merely absorbing others’ knowledge. They write summaries of the issues done before the hevruta as
well as longer essays after each of the hevruta exercises. I use these essays, as well as audiotaped recordings of
students engaging in hevruta, and surveys done at the beginning and end of the term, to assess student learning.

The goal, broadly speaking, is to assess the contributions this teaching method makes to student learning. This
work has implications for students as citizens, as they learn to engage in political conversations and to discuss
and debate their opinions. Through a mixed methods approach, I am able to document the significantly positive
effects of this approach.

**Sheraton Ballroom East (2nd floor) 1:30-3:00pm**

**Integrating Undergraduate Research into Curricula**

**D29**

**The dilemma: embedding for sustainability and the compromise to the learning environment**

*Sally Sandover, Lee Partridge, Jenna Mead, Wayne McGowen (University of Western Australia)*

Undergraduate Research (UR) programs are growing in popularity across the globe. Most UR programs are
designed as co-curricula activities, often with resource-intensive, one-on-one supervision. While this may
be an ideal model of education and development at the undergraduate level, it is overwhelmingly considered
to be unsustainable. The issue of ongoing funding, often in the form of grants, has resulted in the push to
mainstream the UR programs.

The major advantage of embedding an UR program is the opportunity and/or directive to increase student
numbers and make the program financially viable. The disadvantages however, occur when the principles that
make a co-curricular activity successful are potentially jeopardised. One of the most important aims on an UR
program is to develop research thinking skills in the individual and the community. ‘Thinking like a researcher’
takes time and ‘space’ within a program, with freedom to make mistakes and safety to discuss thought
processes as they are developing. The potential to lose this culture and the vital development of a community
of learners is high as soon as the UR program is embedded and university rules and regulations are abided.

The University of Western Australia (UWA) has conducted a successful co-curricular program in UR into
teaching and learning since 2009. The guiding principle of the Undergraduate Learning and Teaching Research
Internship Scheme (ULTRIS) program is to give students, in their second or third year of study, an authentic
research experience mirroring that of postgraduate students. The ULTRIS program was re-written as a unit
for credit, (Bachelor of Philosophy Undergraduate Research Training, (BURT)) within the flagship, Bachelor
of Philosophy in the new curriculum at UWA.
The major issues identified in embedding the program were:
1. The students were all school leavers (17 years of age) without any university experience. They were the highest achieving students in the state, individualistic and competitive by nature and environment.
2. There were 42 students, all work was completed in groups
3. University rules and regulations were implemented, the main one being assessment practices that recommended multiple components and student marks.

Our response to these structural issues was the introduction of:
1. Curriculum negotiations allowing students to chose assessment options.
2. Peer and self assessment to promote collaboration and reflection
3. Discussion boards to promote a sense of cohort and community
4. SPARK (a group evaluation tool) to assist in team building
5. Ongoing group presentations to promote a community of learners

Evaluations of the course structure and student learning were conducted throughout the semester and at the conclusion of the course. This was achieved through student blogs and reflective diaries, staff interviews and student surveys.

In this session we will discuss the differences between co-curricular and embedded UR programs and the benefits and barriers to success. The results of the student research projects and evaluations of the BURT program will be presented. We will discuss the choices the students and why, how it impacted their learning and curriculum changes identified for the future.

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**D30**

**Using the lens of SOTL to examine undergraduate research experiences: faculty have one vision but are students seeing something more?**

*Paula Myatt (University of Queensland), Susan Jones (University of Tasmania)*

Undergraduate research is widely used in the sciences to encourage student learning of scientific skills. This paper proposes that undergraduate research experiences play a large role in encouraging much broader learning gains and that faculty may have an unclear view of the benefits students gain. In this study a scholarship of teaching and learning (SOTL) lens was used to focus on the benefits of undergraduate research through the eyes of the faculty who design and implement the activities and the eyes of the students who undertake the activities and can reflect on their learning gains.

A ‘whole of department’ approach was taken to examine the extent to which undergraduate research experiences were used to encourage student learning in a research focussed, scientific discipline. The undergraduate research experiences were examined and the perspectives of both faculty and students were gathered to compare the “student benefits” as perceived by each group.

The study investigated active undergraduate research experiences using a framework devised by Healey (2005). It involved a mixed methods approach including staff interviews, a staff survey and an online student survey. The online survey was modified from a survey developed by Hunter, Weston, Laursen, and Thiry (2009), and analysis of interview transcripts drew on the themes identified by the same authors. The undergraduate research opportunities and associated learning gains were examined.

Interviews with eight staff revealed a strong culture of purposeful integration of research into teaching and the creation of student research opportunities. The academics interviewed showed an intention to provide authentic learning experiences for their students through research, and this continued into authentic assessment tasks. Analysis of interviews however revealed little evidence that staff saw the broader values of research experiences in providing learning gains outside of disciplinary skills and knowledge.

Through the online survey more than 80% (n=42) of students reported they had made good to great gains in areas of “thinking and working like a scientist” which included collecting data, understanding how research is done and problem-solving in general. Students also reported good to great gains in areas relating to personal and professional growth, such as increased confidence in research (71%) and comfort in working
These gains reported by students were not the gains that faculty focussed on in their interviews. This disconnect between faculty and students is in contrast to other studies in this field.

This research utilised SOTL to examine the effectiveness of a specific learning experience (undergraduate research) and utilised the student voice as an essential component of that investigation. Utilising a SOTL approach has added to our understanding of the value of a specific type of learning experience (student learning through research) and the results will be used to further encourage the integration of research activities and promote their broader student benefits.

**Research-teaching linkages: Beyond the divide in undergraduate Medicine**

*Margaret MacDougall (University of Edinburgh)*

This paper reports on published results arising from the second in a series of survey-based studies at the University of Edinburgh which emerged from a Higher Education Academy funded project aimed at investigating the plausibility of the existence of a research-teaching nexus specifically within the context of short-term senior undergraduate medical student research. (MacDougall & Riley, 2010; MacDougall, 2012)

This particular nexus is defined in terms of benefits to teaching arising a) directly, through the supervisor designing the research environment as a pedagogical tool to enhance student learning and b) indirectly, through curriculum revisions prompted by student research findings. The project, entitled ‘Research-based SSCs: a pragmatic approach to advancing the research-teaching nexus’, is motivated by the idea of uniting pedagogical theory as found in the educational literature with practise in the supervision of undergraduate medical student research. The current study challenged existing practise in medical education research through introducing models of pedagogical theory, not previously encountered in medical education, as a means of interpreting research supervisor response data. The evidence for learning enhancement through student research was explored extensively. This was achieved through consideration of opportunities for deep learning and for preparing students for a supercomplex world. As such, the work was informed by the writings of Baxter Magolda (Baxter Magolda, 1992) and Barnett (2000; 2007). Correspondingly, survey questions were designed to measure evidence for higher forms of learning and preparation for a supercomplex world while the relevance of supercomplexity to professional learning in Medicine was demonstrated for the benefit of Medical Educators. Supervisors were also invited to reflect on curriculum re-design as a by-product of student research. The study findings confirm the potential of supervised short-term student research as an effective pedagogical tool in medical education. As such, they support Brew’s perspective on student learning in higher education through challenging the polarity inherent in the traditional model of how research and teaching are situated. (Brew, 2006) Nevertheless, there is a lack of evidence that senior undergraduate medical student research is re-shaping curriculum content in other areas of the Edinburgh undergraduate medical curriculum. By way of informing the general educational debate concerning whether such activities enhance student learning (Bovill, Morss & Bulley, 2009), this finding provides an impetus for training research supervisors to design opportunities for undergraduate medical researchers to participate in curriculum design. There is also scope for developing a more cohesive research-teaching nexus through instructing Medical Educators about the rationale for mainstreaming student research within undergraduate medical curricula. In this regard, lessons should be learned from the recommendations of Healey and Jenkins, exemplars found within other disciplines relating to mainstreaming of undergraduate research within university curricula (Jenkins, Healey & Zetter 2007, Healey & Jenkins, 2009, UoG, 2011) and the well-established practise at McMaster University of mainstreaming problem-based learning in undergraduate Medicine (Healey & Jenkins, 2009). The audience will be encouraged to share experiences and perspectives from their own disciplines pertaining to the involvement of students in curriculum design or the mainstreaming of undergraduate research within the undergraduate curriculum.
Afternoon Break

**Convention Centre** 3rd Floor Lobby 3:00-3:30pm

Refreshments available

Session E – Concurrent Sessions

**Convention Centre** Albion B (2nd floor) 3:30-4:30pm

**Dialogue & Professional Development**

**E01**

**Instructional coaching at an East Asian university**

*Kent Lee (Korea University)*

New tenure-track professors at some universities may be required to undergo professional development programs such as micro-teaching or one-on-one instructional coaching sessions with an academic coach (i.e., an educational consultant). However, relatively little research exists on academic coaching at the university level. Also, few published coaching resources exist for helping coaches to better coach professors. Research on basic issues of university coaching would be informative to coaches and others in professional development, such as those at teaching and learning centers. Such basic issues include the types of issues and questions that typically arise in coaching sessions, and professors’ self-perceptions of their strengths and weaknesses.

As an exploratory study on this topic, the coaching sessions from one such university in Korea are examined, where professors are required to meet with an instructional coach for one session as a pre-requisite for contract renewal. The coaching sessions are analyzed, and discussion topics are examined and analyzed according to their frequency, the professors’ academic fields, and the amount of their teaching experience.

Coaching reports from about one hundred coaching sessions are analyzed, with the issues raised falling into categories such as lecture and presentation skills, instructional design, classroom activities, conveying information and concepts, teacher-student interaction, assessment, and instructors’ ability to teach in English. In addition to questions raised in the sessions about perceived weaknesses or how to improve their teaching, other related issues will be discussed, such as their self-perceived strengths in teaching, and research pressures that affects clients’ motivation and ability to focus on improving their teaching. Also, some professors teach in fields where teacher-centered lectures are the predominant teaching styles due to constraints and expectations of their fields, while other fields seem more amenable to interactive teaching methods.

The results will be informative for other coaches and others in professional development, administration, teacher training, and academic leadership. The results of such studies can help coaches and others to understand the needs of professors, how to advise them, and the types of pedagogical training and support services that newer professors need. The results can also be helpful to those coaching or training instructors with special needs, such those who teach in English as a second language, or medical faculty who rarely teach in regular classroom settings. Some recommendations can be made based on these findings to inform those who provide support services to university faculty members.

**E02**

**Peer dialogue, academic leadership and the development of academic practice.**

*Dilly Fung (University of Exeter)*

What does it mean for academic leaders in higher education to lead ‘effectively’? How can they lead in such a way that academics at all stages of their career are inspired to continue to develop themselves professionally and authentically, and to engage fully in the project of enhancing academic practice? Can setting up structures which promote and celebrate genuine peer dialogue help academics, throughout their career, to forge a productive path through the ‘supercomplexity’ (Barnett, 2000) of higher education in the twenty-first century? This paper uses the experiences of one research-led, English university as a case study through which these questions are addressed.
At the case study University, a new form of ‘Academic Lead’ (AL) role has been introduced; a research study (Floyd and Fung, forthcoming), funded by the Leadership Foundation, has set out to explore ways in which the Academic Leads - and the academics who are led - experience the purposes and practices of this relationship. What is the nature of the relationship, and does it provide genuine opportunities for peer dialogue which enable staff to develop themselves in relation to their teaching and other dimensions of academic practice?

At the same time, a new scheme has been developed at the University to accredit the continuing academic development of all staff with a teaching-related role. This scheme, ASPIRE (Accrediting Staff Professionalism in Research-led Education), is accredited by the UK Higher Education Academy, and enables the University to award Fellowships to staff at Associate, Fellow, Senior Fellow and Principal Fellow levels, in line with the Descriptors of the UK Professional Standards Framework (http://www.heacademy.ac.uk/assets/documents/ukpsf/ukpsf.pdf). The ASPIRE scheme is underpinned explicitly by the principle of practice enhancement through peer dialogue, and applicants for Fellowships are encouraged to show how they engage in productive dialogue with their peers - which includes, but moves beyond, traditional peer teaching observations (Gosling and Mason O’Connor, 2009) - to inform and inspire their own practices in relation to teaching and supporting students’ learning.

The common ground here is that of ‘peer dialogue’: my phrase draws upon the theoretical framing of social constructivist learning, upon the idea of learning through questioning, listening and probing in the Socratic manner, and upon Rowland’s notion that the ‘market place’ of higher education could be ‘more a conversational forum than a competitive sales pitch’ (Rowland, 2006:8). In an era in which there is a ‘proliferation of frameworks by which we might understand the world’ (Barnett, 2000: 409), I argue that institutions can and should create explicit spaces for genuine, critical peer dialogue, which can build bridges between those who lead and those who are led, between those who research and those who teach, and between those who teach and those who learn.

**E03**

**Perceived Learning Outcomes from Participation in a Registered Student Organization Sport Club**

*Kathleen McKinney, Erin Mikulec (Illinois State University)*

Theory and research exist on involvement in university life as a contributing factor for learning, development, and persistence. Proposed intervening variables include greater time on task, academic resources, exchange of ideas, social support, formation of relationships, and institutional commitment (for classic work, see Astin, 1984, 1996; Kuh, 1995; Terenzini, Pascarella, and Blimling, 1996; Tinto, 1993). As one type of involvement, researchers have studied participation in student organizations, especially student government, the Greek system, and formal athletics (e.g., Kimbrough and Hutcheson, 1998; Kuh and Lund, 1994; Mathiasen, 2005; Miles, 2011; Pike, 2000; Rishe, 2003). Not surprisingly, involvement experiences are not equally effective in promoting positive outcomes. Limited literature also exists on participation at the collegiate level in campus recreation programs or sport clubs (e.g., Bradley, Phillipi, and Bryant, 1992; Bryant, Banta, and Bradley, 1995; Haines, 2001; Hall, Forrester, and Borsz, 2008; Hall-Yannessa and Forrester, 2004). The purpose of this study is to report on students’ perceived learning outcomes from participation in one type of campus sport club, equestrian teams/clubs. The study helps to fill gaps in the ‘involvement’ literature in terms of type of student organization studied, more qualitative data, and data on differences by student club role, as well as in the SoTL literature which has focused on learning outcomes from courses/modules rather than out-of-class experiences. The methodology used was an anonymous, online survey with both closed- and open-ended questions. Questions focused on students’ perceptions of what they learned, beyond equestrian skills, from participation in the team/club. There are two sets of data: 1. descriptive, exploratory data from nine members (of about 30 members) of the Equestrian Team/Club at one institution from midyear and 2. survey responses from students from multiple institutions from the end of the academic year. In both instances, participants were obtained through club presidents and/or faculty/staff advisors at institutions with Equestrian Teams/Clubs in one region of the U. S. Intercollegiate Horse Show Association. They were asked to send an email to all team/club members. The email included a description of the study and the link to the survey. On the survey page was an informed consent statement (the research has IRB approval) and the survey questions. Preliminary results (final data collection is in April) include that a large majority of
respondents reported that their participation in the Equestrian team/club increased their development in terms of leadership, teamwork, conflict management, organization, event planning, tolerance of diversity, work ethic, oral communication, written communication, and critical thinking. Furthermore, three themes about what was learned emerged from qualitative responses: “developing relationships,” “becoming a professional,” and “working and interacting with others.” Finally, juniors, seniors, and executive board members appeared more reflective about learning than did other club members. Though there are limitations to the research (small number of all female participants, focus on only one type of student organization, and use of only one method), strengths include the multi-institutional sample, a focus on out-of-class learning, quantitative and qualitative data, and action research. The audience will engage in questions and discussion about the study and relevance to their institutions.

E04

Learning Outside the Classroom: The Academic Decision-Making Processes of Undergraduates
Heather Maldonado (Buffalo State College, State University of New York)

The importance of out-of-class learning for college students cannot be understated. It is in this context that students engage in co-curricular learning, mentoring relationships with faculty advisors, and self-guided inquiry. The advising activities faculty engage in are often deemed as “service” activities, but it can be argued that advising is primarily a teaching and learning activity (Appleby, 2008). It is through advisement that student learning outcomes related to navigating college systems, academic problem-solving, and life decision-making processes can be taught by college faculty. Such meaningful interactions between students and faculty have the potential to shape students’ life path and their success and satisfaction with the college experience.

Student engagement with faculty arguably improves persistence rates at institutions of higher education (Umbach and Wawrzynski, 2005). As such, conversations with faculty members contribute to retention rates and students’ academic decision-making processes as well as providing opportunities for learning outside the classroom. Moreover, Beggs, Bantham, and Taylor (2008) argue that college students’ choice of major is influenced by factors such as sources of information, job characteristics, fit and interest in subject, and characteristics of major/degree. While this research is useful in assisting faculty academic advisors understanding of the factors that influence students’ decisions, these findings need to be updated to account for differences in a new generation of college students. Knowing how current students make academic decisions - and the role that faculty play in these decisions - allows for the modification of the academic advising process to best support teaching and learning in this particular out-of-class context.

This project explores decision making patterns among forty sophomores at a public urban comprehensive college through in-depth individual interviews which allowed the students to voice factors that influenced their academic choices. This study creates evaluates the relevance of past academic advising “best practices” for contemporary students. After a review of the study and its findings, audience members will be asked to reflect on the ways in which their campuses view academic advising and how faculty academic advisors can use advisement sessions as out-of-class teaching opportunities.

Convention Centre Room 314 (3rd floor) 3:30-4:30pm

Studying Student Learning of Key Research Skills

E05

An assessment of students’ ability to evaluate sources using a scale
Ken Balusek, Jennifer Oliver (Rockhurst University)

Considering the wealth of information available to students through the Internet, it has become increasingly important for students to discriminate between sources that are appropriate scholarly sources and sources that lack academic integrity. Data suggest that if students evaluate Internet sources, they are doing so casually (Graham & Metaxas, 2003; Grimes & Boening, 2001). For example, Metzger (2007) reported on a series of studies in which participants either judged their usage of evaluation criteria or reported on how they evaluated the credibility of Internet information. Most respondents indicated that they used these criteria infrequently or only used two of the five criteria. However, few studies have empirically examined the
effectiveness of teaching the evaluation of Internet sources. Wiley et al. (2009) found that those students who were explicitly taught critical skills on an Internet research task not only had better performance than those who were not taught, but these skills were transferred to another Internet task.

This study incorporates a scale to score various sources. The scale ranges from a zero indicating a source devoid of any academic value to a score of five indicating a peer-reviewed academic journal article by an expert in the field. Research subjects consisted of students enrolled in criminology classes and in a psychology research methods class who were instructed on methods for evaluating various sources and in using the scale to score sources. Methods included PowerPoint slides and an online demonstration of how to find sources. Furthermore, students were presented examples of sources in class and were shown how to score the source according to the scale.

After instruction, students were given three sources to evaluate and score according to the scoring scale. The three sources were also scored by different faculty members. This presentation will provide results of the comparisons of students’ scores to those of the faculty evaluators. Significant differences in the mean score of the students compared to the mean score of the faculty evaluators will indicate that the students are still having difficulty in properly evaluating sources and would indicate that additional instructional methods may need to be considered.

This presentation embraces the conference thread of integrating research results and classroom teaching practices by using a scale developed for evaluating the quality of sources to evaluate students’ abilities to accurately discriminate between sources of varying degrees of quality. Evaluating the quality of sources is an important skill needed by students of all disciplines. All too often students do not accurately evaluate sources which results in the reliance on information that is not accurate or appropriate for academic papers.

While useful, the scale utilized in this project is in the early stages of development. Considering the variance in scores for one of the sources in this project, it is evident that further refinement of the scale is needed. Presentation of this research and the scoring scale at the ISSOTL conference will provide a good platform for feedback and possible incorporation of thoughts to make the scale appropriate to all disciplines.

E06 Seeing the Forest for the Trees: Understanding Data Visualization Among Students
Laurie Strangman, Taggert Brooks, Elizabeth Knowles (University of Wisconsin-La Crosse)

Students in an introductory business research methods course frequently struggle with data visualization, displaying data in charts or graphs. In both written research reports and oral presentations students poorly communicate the story within their data because they choose inappropriate graph types for the information they want to convey or enhance these visuals in such a way that distracts the audience and takes away from the message they want to share. Over the course of three semesters, the instructors of this course sought to discover the gaps in student knowledge in terms of data visualization and the characteristics of students who seem to struggle with this in order to develop learning tools to improve these skills.

In the first semester a survey was administered to students prior to the discussion of data visualization in class to measure the students’ ability to recognize some common data visualization issues. The results of this pretest indicated that students could recognize basic graph types and could also identify problems with different graphic representations of data. Where they were less successful, however, was in terms of selecting the appropriate graph type to display data. To further probe this problem, during the second and third semesters a task was given to students that required them to interpret a small data set and to create a visual by hand that conveyed the story in the data. A rubric was used to score the task on seven different traits, such as the ability to recognize hierarchy in the data, labeling axes, using meaningful labels on the axes, and the ability to convey the story in a graph. Regressions were also run using each of the individual traits within the rubric as the dependent variable, controlling for the following student-specific characteristics: most recent term GPA, math ACT score (or composite ACT score), gender, and high school class rank. The regressions also controlled for differences between instructors in the interpretation of the rubric. Initial results indicate that students have trouble discerning the story from data as well as the proper form to display it in. In terms of student characteristics the only variable that was consistently statistically significant was gender. Women were less likely to correctly complete certain aspects of the task than men. The implications of this in terms of classroom instruction are not clear; the research while shedding light on certain issues has raised further questions. Additional research is needed to increase student knowledge and understanding in the area of data visualization.
**Teaching & Learning Scientific Literacies**

**E07**

**Individual Paper**

**Toward a Multi-Dimensional Understanding in First Year: The Biology Literacy Initiative**

*Tom Haffie, Ken Meadows, Linda Dunn, Johnston Miller (Western University)*

Uno and Bybee (1994) proposed biological literacy as a continuum beginning at nominal literacy and progressing toward a multi-dimensional literacy characterized by an interconnected understanding of concepts, an appreciation of the nature of biological knowledge in relationship to self and wider society. Anecdotally, students in introductory biology courses typically recognize biological terms but their understanding of concepts is often superficial, based on memorization. Such students are generally unfamiliar with the origin and structure of the biological literature and the tentative nature of disciplinary knowledge.

In an effort to move students toward more multi-dimensional biological literacy, we revised the introductory biology curriculum to embed writing and information literacy lessons and exercises in the courses’ bi-weekly tutorials (hereafter referred to as the Biology Literacy Initiative; BLI). Writing within the discipline enables students to be active in the construction of their own knowledge, resulting in the deeper processing of discipline-specific information (McLeod, 1992). Information literacy skills support self-directed learning; enabling students to seek out, critically evaluate, and assimilate information into existing knowledge structures, ultimately, transforming their understanding of the discipline beyond their classroom learning (Association of College and Research Libraries, 2000).

To assess the potential impact of the BLI, students in the year previous to the revised curriculum (i.e., pre-BLI cohort) and those who received the revised curriculum (i.e., BLI cohort) completed an in-class survey assessing their perceived information literacy skills, writing ability, engagement in the course, and understanding of key biological concepts. A subset of students also completed an assessment of their actual information literacy skills, writing ability, and understanding of biological concepts. Both cohorts participated in a follow up survey assessing the extent to which they thought their introductory biology course prepared them for a subsequent course in their program.

The BLI cohort had significantly higher scores on actual and perceived information literacy than their pre-BLI counterparts. The two cohorts did not differ on their perceived writing ability or understanding of biological concepts, or ratings of their engagement in the course. The BLI cohort had a significantly higher rating of how well introductory biology had prepared them for their second year course than the pre-BLI cohort.

The BLI invited students to learn traditional course content while developing foundational skills and standards of behaviour characteristic of practitioners of the discipline. As students transition into the academic culture of university, increasing information literacy skills help them become more independent in their scholarship, more confidently fluent in the discourse of the discipline, and more aware of how new knowledge is generated, vetted, and communicated. These skills and perspectives lay the foundation for developing multi-dimensional literacy.

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**E08**

**Individual Paper**

**Evaluating the efficacy of an integrated science literacy component in a new undergraduate program**

*Sarah Symons, Andrew Colgoni (McMaster University)*

Science literacy is a central component of the Integrated Science Program (iSci) at McMaster University, providing a common thread through all four years of the undergraduate program. We define science literacy as the writing, reading, communication, and information skills required to practice science. Our science literacy course material is designed specifically for the iSci program, with the aim of preparing students to communicate as professional scientists both within academia and to the wider community. Science literacy is embedded within the core learning modules (“research projects”) in the iSci program. Each research project makes different demands of students’ research and communication skills, resulting in varied individually- and group-authored deliverables: academic posters, presentations, journal papers, popular science articles, and so on. Over the four-year program, we aim to provide iSci graduates with a formidable repertoire of skills and experiences which will be of value to them in their future education and careers.
After a brief introduction to the program and our teaching methods, this paper will describe an ongoing educational research study into the efficacy of science literacy activities in iSci. We survey students at the end of the academic year after one, two, or three years in the program. Our instrument aims to collect and track students’ attitudes to their developing science literacy skills throughout their undergraduate studies, focussing on the value they place on such skills and their confidence levels in their own abilities. The instrument used to collect data is an online questionnaire, but it also includes a novel set of questions which asks students to graph (by drawing on paper grids) their attitudes across their years of study. We also survey incoming students on entry to the iSci program to gather their expectations for the science literacy component. A modified version of the end-of-year questionnaire is used. Finally, exiting students will also be asked to complete a similar question set. These two instruments plus the in-course end-of-year questionnaires will, over annual iterations, enable us to trace in detail students’ expectations and feelings of competency longitudinally. We present preliminary results from the end-of-year and entry survey activities and will reflect on possible developments to iSci science literacy activities in light of our conclusions. We will conclude with a discussion of how we evaluated our survey instrument after the first iteration.

**Convention Centre**  
Albion A (2nd floor)  
3:30-4:30pm

**From Relativism to Resonance: Tracing Student Understandings and Epistemologies**

**E09**  
**Mapping Student Relativism**  
Gerald Erion (Medaille College)

According to Wilbert J. McKeachie’s classic ‘Teaching Tips’, “students who believe that everything is relative” can present challenges in a wide range of college and university courses. McKeachie’s discussion builds upon William G. Perry, Jr.’s well-known approach to student relativism, but instructors may also find it helpful to explore whether their *individual classroom environments* reflect (or fail to reflect) the general tendencies that McKeachie and Perry describe.

In two prior ISSOTL presentations, we have developed preliminary strategies for identifying, tracking, and responding to student relativism. Most recently, our interdisciplinary team has begun designing in-class surveys that map student perceptions of relativistic claims in undergraduate philosophy, anthropology, and other general education courses. These surveys can provide a sense of the depth and character of student relativism within an individual class. They can also ground valuable in-class discussions of epistemology and ethics, thereby creating a powerful space for student voices within a fundamental and important SOTL project.

So, this presentation will offer a brief overview of student relativism and its significance before outlining our latest pilot survey project. We can also report some initial findings as a way of opening a deeper conversation with our audience in Hamilton. In particular, our pilot survey responses suggest that the challenges of student relativism are more complex than they may first seem; for example, student relativism seems to bring together elements of relativist, subjectivist, and objectivist epistemologies in ways that are important for instructors to understand.

A primary goal of ours, then, is to help college and university teachers better understand the nature of student relativism in their classrooms, office-hour conversations, and so on. But we also aim to encourage effective *engagement* of student relativism during its most teachable moments. Finally, we will argue that these ideas have implications for teachers and learners in a wide range of fields, both within and beyond the humanities and social sciences.

**E10**  
**Assessing Higher Level Outcomes: Analysis of Resonant Concepts**  
Lorraine Gilpin (Georgia Southern University)

The United States, with its rapidly changing technologies and demographics, necessitates holistic development and assessment of higher level learning. The role of the teacher is to design and facilitate interactions through which students develop knowledge, skills, and dispositions that are personally, socio-politically, and pedagogically mediated. Students must unravel information, make sense of interactions, engage in critical reflection, and come to understandings upon which they act. This multidimensionality must be reflected in the assessment of learning.
This study, under girded in the Scholarship of Teaching and Learning (SoTL) conceptions of teaching as a form of inquiry into student learning (Huber & Morerale, 2002 and Huber & Hutchings, 2005), constructivism (Piaget, 1977 & Vygotsky, 1978), transformative SoTL (Kreber, 2006, Atkinson, 2001, and Gilpin & Liston 2009), and praxis (hooks, 1994 and Freire1970/1998) uses narrative analysis (Marshall & Rossman, 1999) to determine resonant concepts and the interactions that facilitate them, in a course, Cultural Issues: ESOL, for pre-service and in-service teachers.

Resonant concepts refer to level appropriate holistic understandings derived by learners as a result of interactions within a course or program of study. Interactions may be with instructors, peers, other individuals, or print and electronic sources. Resonant concepts are the results of how individuals relate to new information and others in the context of critical reflection and self and societal confrontations. They may be derived by analyzing course artifacts, including interview transcripts, written and oral assignments; performances; journals; and portfolios.

Cultural Issues: ESOL prepares pre-service and in-service teachers to work with Culturally and Linguistically Diverse Students (CLDS). Given the growing number of CLDS and the history and structure of US society, coupled with teachers’ lack of preparation to work with this population (Ballantyne, et al., 2008), courses such as Cultural Issues: ESOL is of paramount importance in teacher preparation. Yet, most teachers take only an isolated course, if any, related to working with CLDS in their program of study. Thus, those who teach such courses have a tremendous and urgent responsibility to maximize impact on student learning. SoTL affirms students as authors of their learning and instructors as facilitators of and inquirers into this authorship. Instructors provide inspiration and interactions and enhance learning through critical reflection and the use of systematic assessment to improve teaching and learning.

This presentation highlights the process and findings of an analysis of resonant concepts derived from an end of semester assignment. Narrative analysis of the assignment for 49 (32 undergrads & 17 grads) students: involved reviewing and coding responses; identifying emergent themes; creating interim text (Clandinin and Connelly, 2000); clustering themes; and creating a research text (Casey, 1995; Denzin & Lincoln, 1998, and Marshall & Rossman, 1999). The resonant concepts evidenced four clusters based on types of understandings and effort required with the highest cited concepts requiring the least amount of effort and the lowest requiring the greatest: Foundations, awareness, responsiveness, and advocacy. Analysis of resonant concepts also revealed where gaps in learning and teaching exist.

**Convention Centre Webster C (3rd floor) 3:30-4:30pm**

**Considering the Significance of Context**

**Tribes and territories in a supercomplex world: conceptualising lecturer conceptions of teaching**

Susan Lea (King’s College London), Lynne Callaghan (Plymouth University)

The prolific body of research examining students’ approaches to learning has been augmented more recently with similar research pertaining to lecturers’ approaches to teaching. Taxonomies of approach tend to dominate the literature with authors assuming different positions in relation to the influence of context on teaching approach (e.g. Biggs, 1999; Prosser and Trigwell, 1999; Sameulowicz and Bain, 2001).

This paper reports on two small, qualitative studies that aimed to understand how lecturers manage the competing and often contradictory demands of the current higher education context including: widening access to higher education; the tension between research and teaching; economic recession and the erosion of state funding for HE; perceived external control over curricula in some disciplines; and employability and the role of higher education. The paper uses these studies to springboard a set of questions and debates about the nature of higher education in the 21st century and the degree to which context impacts upon teaching approach.

Barnett’s (2000) concept of supercomplexity was utilized to interpret the findings from the first study and to inform the second. Supercomplexity involves situations in which there are multiple frameworks of understanding, action, and self-identity. The research took place in a single ‘post-1992 university’ in England: these universities are associated with a focus on teaching, rather than research. Both studies involved focus groups and interviews.
with lecturers and managers across a range of disciplines. In the first, 13 managers participated in three focus groups and nine lecturers participated in face-to-face interviews; while in the second, four managers and six lecturers took part in three homogenous focus groups. The data were transcribed and analysed using grounded theory.

The findings revealed the impact of the university, social, political and economic context on lecturers’ ability to deliver quality teaching and provided insight into how university lecturers and managers negotiate the demands of an increasingly complex world. Individuals adapted their approaches to teaching according to contextual demands and, overall, there was more commonality than difference across academic ‘tribes’ (Becher and Trowler, 2001). Thus while the limitations of these small studies need to be acknowledged, the importance of this preliminary work is in arguing for a greater appreciation of context when developing higher education theory and practice.

**Audience engagement:** Attendees will be asked to reflect on the perceived demands of their HE context and to consider the impact of these on teaching within their own institutions. This will inform discussion of the paper.

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**E12**

**New spaces, new technology, new identities: integrating collaborative learning spaces in Singapore**  
*Peter Looker (Nanyang Technological University)*

At Nanyang Technological University in Singapore old tutorial rooms are being converted to collaborative, technology-rich, learning spaces. By the end of 2012, over 80 rooms will have been converted. This sudden change has brought with it the need to encourage faculty to learn how to use the spaces in a meaningful way, particularly with regard to activities that foster student collaboration and invoke the feedback cycle. The new spaces offer the opportunity to make student work visible more of the time.

This paper will argue that a very positive aspect of the new spaces is that they are designed in such a way that they offer greater continuity between student learning behavior inside the classroom and behavior outside the classroom. Traditional learning spaces tend to be marked off from the outside world and if learning is at least in part context dependent, the new spaces assist with continuity of context.

This paper also looks at the process of introducing faculty to the new spaces, and at the reactions of students, and will argue that close attention to the types of resistance offered by faculty suggests that many are concerned about a loss of their customary academic identity as subject experts. The rooms were deliberately designed not to allow faculty to take up a single position in the front of the class. Concerns seem to cluster around the idea that more learner-centered collaborative learning will lessen their ability to reaffirm identity through the explicit reiteration of subject expertise that the design of the old classrooms encouraged. This paper explores this cluster of attitudes with reference to reactions in faculty development workshops.

Student focus groups indicate a number of interesting responses to the new spaces in the local context. South-East Asian students are often seen not to want to speak up in class, but a number of students have indicated that this is dependent on the kind of space they are in. Traditional spaces inhibit discussion while the configuration of collaborative learning spaces at NTU is seen to be more conducive to discussion. On the other hand, some classroom activities frequently used in Western universities, do not work here in Singapore.

Taking all this together, this paper uses the introduction of collaborative learning spaces at NTU to investigate a cluster of faculty and student attitudes in order to outline the importance of understanding context in the scholarship of teaching and learning. Faculty here argue that SoTL research coming out of the west does not apply here because the context is different. This paper explores some aspects of those differences.
**Navigating Resistances**

**Overcoming Faculty Resistance to Change: Broadening and Extending SoTL's Impact on Teaching and Learning**  
*Scott Simkins (North Carolina A&T State University)*

Recent books such as Academically Adrift, Declining by Degrees, and Our Underachieving Colleges provide compelling evidence that traditional teaching practices result in “limited learning” for large numbers of students in U.S. colleges and universities. At the same time, there is a deep and growing body of evidence positively linking research-based pedagogical practices to higher student learning. So why don’t more faculty members adopt these teaching practices in their classes, especially in the U.S.?

From the start, the scholarship of teaching and learning has been focused on inquiry about student learning and ways that faculty members can improve the teaching/learning process (Boyer, 1990). In recent years Huber and Hutchings (2005) have advocated for the development of a “teaching commons”, where SoTL scholars could contribute to a “growing body of knowledge about teaching and learning.” (p. 13) Hutchings, Huber, and Ciccone (2011) further expanded this vision, “see(ing) [the SoTL] as a set of principles and practices that are critical to achieving institutional goals for student learning and success.” (p. 3) Throughout, improvement of student learning has been a key SoTL focus. Also implicit is the notion that by sharing SoTL research with others, effective teaching practices might be replicated elsewhere, leading to gains in student learning that extend beyond a single instructor's classroom, university, or even discipline.

However, those advocating for pedagogical change in their institution or discipline regularly experience faculty resistance, even when substantial evidence supports such change. Why this resistance to change? What is required to overcome this resistance? Answers to these questions are critical to maintaining and building upon the substantial accomplishments of scholars of teaching and learning to date. Hutchings, Huber, and Ciccone (2011) argue that if the scholarship of teaching and learning is to expand its impact, it must advance core institutional agendas, including the design of effective learning environments, ongoing faculty development, and the assessment and improvement of student learning outcomes. Linking scholarship on teaching and learning to institutional goals is also likely to provide greater rewards for faculty members, potentially reducing resistance to change and increasing the probability of improving student learning more broadly.

What is the best way to promote this approach to the scholarship of teaching and learning and at the same time address faculty resistance to change? Is it best done by focusing on individual instructors, by supporting departmental leadership of teaching (Gibbs, Knapper, and Piccinin, 2009, Higher Education Academy), through discipline-based curricular change (Healey, Bradford, Roberts, and Knight, 2011; International Journal for Academic Development), faculty learning communities (Cox, 2004, New Directions for Teaching and Learning), or some combination of the above?

This presentation and participant discussion will explore these questions, making use of recent learning sciences research on resistance to change, empirical evidence positively linking departmental characteristics with ongoing teaching excellence, and session participants’ own experiences promoting pedagogical innovation (and overcoming faculty resistance).

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**From theory to practice: historical precedents for understanding contemporary resistance**  
*Robert Bernard (George Mason University)*

Over the last fifty years there has been an unprecedented surge in the dialog surrounding teaching in higher education. Centers of teaching excellence have appeared in the majority of colleges and universities, each attempting to move the theory produced by this dialog into classroom practices. This can be a difficult proposition, as entrenched teaching methodologies are often resistant to the encroachment of theoretical propositions. Resistance to the implementation of new ideas concerning good teaching practice is certainly not only a contemporary condition, and it is the contention of this paper that examining historical precedents of this resistance, especially where it is particularly acute, is useful in order to better understand the resilience of existing teaching structures to powerful theoretical movements.
At no time was this resilience more in evidence than during the Renaissance period. Art, architecture, philosophy and literature were being infused with the ideas of the ancient Greeks and the results were being both seen and heard. The invention of the printing press was making it possible for mass dissemination of ideas in multiple languages, not just the Latin derivations available only to elite scholars, clergymen and nobles. And perhaps most importantly, the ideas of humanism, influenced by ancient Greek thought, were making headway and beginning to re-place the human subject in the center of understanding. As Walter Rüegg emphatically states, “Humanism conquered the universities” (1996, p. 38). Humanism was not so much a movement as it was a process - a process of educating the whole person. The humanists believed that human beings had become alien to themselves, and the studia humanitatis made the analysis of language, specifically the language of antiquity, primary to the education, or re-education, of human beings. The belief was that through the study of alien texts (and to many, the texts of antiquity did seem that way), the individual would become less alien to himself.

Despite the wide-ranging changes in architecture, law, sciences and medicine, and the humanistic promise of knowledge becoming more closely aligned with the individual, classroom practices remained relatively unchanged. The approach that truth was singular was retained from the Middle Ages, and was wholly evident in teaching practices - a singular truth could only be effectively transmitted by those few who were trained and qualified to relay it. This paradigm was enforced by governing boards, administration, and even students who often forced the firing of faculty who deviated from the paradigm of truth dissemination, sometimes literally chasing faculty members out of town for straying from this entrenched expectation (Grafton, 1986; Grendler, 2004, 2006).

Research for this paper will be in part genealogical, examining primary and secondary sources that offer or investigate interpretations of “teaching” in higher education during the Renaissance period. Examining higher education teaching during the Renaissance reveals a resilience that is seemingly impervious given the drastic changes happening during this time. This paper will argue that understanding the different elements involved in this resistance to change has great utility for efforts to navigate it in modern contexts.

E15

Integrating SOTL Results Into Teaching Practices: Fostering Scholarly Teaching

Teaching-Teaching & Understanding-Understanding can Facilitate the Integration of SOTL into Teaching

Craig Nelson (Indiana University)

Claus Brabrand’s 2006 video Teaching-Teaching & Understanding-Understanding is based on the ideas of an Australian, John Biggs. The video can be a powerful tool for helping faculty understand why they need to base their pedagogy on SOTL results. Faculty often attribute the differences between student success and failure to differences between students in effort, preparation, motivation, ability, etc. (i.e. Good v Bad Students). Instead, we should ask how improved learning designs could make many more students successful. The core idea is that we need to discover what the more successful students are doing differently and then try to create designs to get the other students learn similarly. We can then assess the results and further modify the designs. And, SOTL overall is a very rich source hypotheses for what successful students are doing better.

The video focuses initially on the difference between surface and deep approaches to learning (ideas developed initially by Ramsden and others). Which approach students will take often can be modified by the way the course is designed. Specifically, many students will switch from a surface approach to a deep approach if the course goals are articulated as requiring deep understanding, the activities focus heavily on producing deep understanding and the assessments require exclusively or primarily the demonstration of deep understanding. Biggs emphasizes this alignment of outcomes, methods and assessment and, more generally, a constructivist approach to learning.

I will show a brief clip from the video and present summaries of two or three complimentary cases where SOTL results showed or suggested what the more successful students were doing. These results were used to create learning designs that resulted in massive increases in student achievement (e.g. from 40% to 96% success in calculus, from 3% to 60% for high scores (8, 9, 10) on natural selection, and to massively better exam scores in English).
Engagement and Critique: Participants will be asked to reflect, write and discuss. They also will be asked to cite further examples and critique the approach.

Higher-level goals (outcomes): Participants will understand how this approach facilitates a switch from blaming the students to SOTL-based learning designs subject to further revision. Although this seems rather obvious when stated so briefly, I have found that it has enabled me to better integrate across SOTL frameworks myself and has made it much easier to get faculty to quickly see the importance of particular results and their implications for their own teaching. I hope that it will help participants to better integrate across SOTL frameworks, to more easily see how work by other scholars can be applied in their own teaching and SOTL projects and to facilitate scholarly teaching by additional faculty.

Can We Extend Scholarly Teaching for More Strategic Impact on Students (and Institutions)?

Thomas Carey (Athabasca University)

Scholarly work in faculty teaching is often conceived in two related forms: Scholarly Teaching to mobilize research-based knowledge for more effective student learning, and Scholarship of Teaching and Learning which also advances the community’s body of knowledge. For individual scholars these activities continuously interact, as faculty allocate time to applying and adapting existing knowledge resources and to systematic inquiry where the existing knowledge base does not fully address students’ needs. These activities are also closely connected for communities of practice and of scholarship: Scholarly Teaching requires rigorous scholarship to provide insight for improving practice, Scholarship of Teaching and Learning must impact a community of practice to generate ongoing value and continuing support. Both activities thus need to advance together.

We focus in this session on extending our conception and practice of scholarly teaching, to better enable faculty success and also to make the impacts on students and institutions more strategic. Scaling up faculty activity in scholarly teaching - in depth for individuals and in breadth to engage more faculty - has been limited by constraints on faculty knowledge, workload time and professional identity. We will explore how these constraints can be addressed using key ideas from emerging research about, and practice in, professional knowledge communities.

“Scholarly teachers view teaching as a profession and the knowledge base on teaching and learning as a second discipline in which to develop expertise...and reflective practice.”[1] We will discuss in this session some current initiatives to position scholarly teaching more effectively within the work of professional communities for building [2] and mobilizing [3] knowledge. Session participants will be encouraged to share additional individual and institutional examples. As well as providing more effective models for improving teaching and learning, these collaborations are beginning to explore how scholarly teaching can fulfill the promise that "how we can teach is a key part of what we teach" [4].

Parallel developments are emerging in school systems around “teaching as a knowledge profession” [5]. However, only higher education has the opportunity to also use teachers’ work and identity in professional knowledge communities as a model for students’ current learning and for their future careers. Reframing scholarly teaching as a special instance of work in professional knowledge communities has the potential to broaden and deepen the effects on students and institutions: beyond success in single topics or courses to strategic impacts on program success, on students’ conceptions of learning and knowledge, and eventually on the strategic position of institutions emphasizing scholarly teaching as a key component of faculty activity.

The works-in-progress discussed in the session will illustrate the potential to extend scholarly teaching by documenting and demonstrating the process for our students, engaging them in similar activities in their own work as learners, and helping them to transfer their understanding and skills in knowledge-intensive work to their careers and their roles as community members and global citizens. We will also explore together the opportunity for institutions to leverage an emphasis on scholarly teaching in support of strategic positions of distinctive value to students and society.
**How student learning in four applied disciplines is influenced by faculty practitioner background**

Phyllis McCluskey-Titus (Illinois State University)

In my department students talk about faculty and their classes in two different ways: 1) faculty members who had been school or university administrators and how valuable the classes they taught were because they had done the work that students were also preparing for, and 2) faculty members who had been school or university administrators who only talked about their work in schools or on campus and shared “war” stories, but did not teach them anything. These mixed messages led to a research study about the value of faculty having practiced as a professional in their discipline and the influence it could have on teaching methods and student learning in classes in other applied subject areas.

This interactive session will share the research methods and report results of an exploratory study about how teaching and student learning are influenced in classes taught by faculty who had experience as professional practitioners in the applied subject areas of criminal justice, marketing, nursing, and social work. This research was conducted using individual interviews and classroom observations with both faculty who had and had not been practitioners in each subject/career area. In addition, students enrolled in these same classes were interviewed about their learning in the course to determine whether that learning was related to the faculty’s background as a professional practitioner in the field.

The researcher spent one month each on seven campuses and observed fifteen different classes including: 5 in criminal justice, 4 in marketing, 2 in nursing, and 4 in social work. Campuses where the research was conducted included two public research universities, two comprehensive universities (one public, one private), two community colleges, and one private liberal arts college all in the United States.

The following research questions guided the study:

1. How are classes taught by faculty-practitioners and non-practitioners in applied disciplines similar and different?
2. What do students report about the teaching methods and their learning in classes taught by faculty-practitioners and non-practitioners?

Although some similar research exists within single disciplines, this study fills a gap as it offers both a faculty and student perspective about the value of professional practice on teaching and student learning.

**Integrating theory into the practice of assessing prior experiential learning.**

Helen Pokorny (University of Westminster)

In 2007, the Higher Education Funding Council for England declared the Assessment of Prior Experiential Learning (APEL) a national priority area. However the take-up of the APEL process by students has been low across UK Higher Education. Scott (2010) notes that there has been little empirical exploration as to why this might be the case. Using tools from the field of academic literacies, Pokorny (2012) explored the experience of four students with significant professional experience in the workplace who undertook a process of APEL assessment. The study demonstrated that the tutors had different approaches to APEL which in turn influenced their students’ writing and experience of the process. Two students experienced a normative approach, had little agency through the process and felt that their identity as an expert in their professional context went unrecognised. In contrast the other two tutors modelled a transformative (Lillis and Scott, 2007) approach to negotiated meaning making. The latter approach had a positive impact on the students’ sense of agency and their identity as an expert in their own professional contexts.

This paper continues with the analysis of data in the form of the student/tutor interviews and the students’ assessed work. In providing a formalised claim for credit students are entering into a process of mediated (re)construction of identity via an APEL assessment, generally in a portfolio format (Merrifield et al 2000). Each of the students had commented specifically upon the importance of workplace documentation in compiling their claim. The genre theorist Gunther Kress, has developed an approach ‘less interested in classifying textual forms than...in the generative capacities and potentials of using certain kinds of text for certain social purposes’ (Cope and Kalantzis 1993:13). Kress (1993) concludes; “[A] newer way of thinking
may be that, within a general awareness of the range of genres, of their shapes, their contexts, speakers and writers newly make the generic forms out of available resources.’ (ibid:468)

From the data it seems that there is something about the multimodality potential of an APEL portfolio in HE that may have been overlooked. Kress and Van Leeuwen (2001) suggest that meaning is conveyed and interpreted through a range of resources including the genre, the material resources and the media. The students in this study conceptualised workplace material resources as a way to convey meaning. This is consistent with Lea and Stierers’ (2009) observation that ‘considerable ‘identity work’ is involved in producing and working with everyday documents - documents that have both a concrete significance and symbolic significance in relation to participants’ conceptions of their professional role and sense of self ‘(ibid: 426). Drawing on the work of genre theorists and research in the field of academic literacies this paper explores further the potential role of everyday and workplace documents in promoting the APEL guidance and assessment process within Higher Education.

**Sheraton MacNab Room (2nd floor)**

3:30-4:30pm

**Large Scale Initiatives to Transform the Assessment of Student Learning**

**E19**

**Individual Paper**

**Doing institutional change ‘the fourth way’: a whole institutional change programme for assessment and feedback**

*Shan Wareing (University of the Arts London)*

This paper explores the model of quality assurance and professional development articulated in Hargreaves and Shirley’s (2009) ‘The Fourth Way’ through its application to a case study of institutional changes to assessment, using the model as an explanation of the initial hostility of staff to the changes and their ultimate success.

The case study relates to an intervention to improve assessment practices at a large visual and creative arts university in London, where clarity around assessment standards and expectations, consistency of grading, usefulness of feedback, and turn-around time, were of concern.

The literature on assessment in art and design emphasises connoisseurship, and tacitly established shared standards, built up through community interactions (e.g. Orr 2006). However, this approach does not account for power imbalances between staff and students, nor the possibility of prejudice and bias in marking (Sabri 2011).

An ideal intervention to improve assessment might involve an extensive professional development programme, supporting all staff in acquiring a personal and scholarly understanding of assessment, to underpin personal and locally crafted assessment and marking practices. However, barriers to this approach included lack of resource to provide extensive professional development, logistical difficulties to ensuring sufficient participation by staff, and the delay in realising the benefits of the change programme to students.

It was therefore decided to impose a universal assessment system comprising three elements:

1. a grading matrix, of eight criteria with six descriptions of achievement for each criterion
2. a standard feedback form, including space for detailed feedback against each of the eight criteria and for feedback on how to improve work in future
3. a web-based version of the feedback form integrated into the student record system, minimising repetitive inputting of data and transcription errors.

The new system was pedagogically robust and underpinned by the scholarship of learning and teaching (particularly drawing on Bloom 1956, Kolb 1984, Perry 1970 and Biggs 2003, and taking account of the disciplinary needs of the visual arts).

Many academic staff initially saw the imposition of the assessment changes as compromising their autonomy, a managerial challenge to their professional judgement, and a blow to the educational value of their teaching via an inflexible, inappropriate set of standards. However, student feedback was positive, and scores for students’ perception of assessment and feedback in national surveys rose by 7% (undergraduates) and 10% (taught postgraduates). Over two years of implementation, staff feedback has improved dramatically: “The assessment tool
... speeded up the process of assessment and allowed ... staff to give better informed, critical and useful feedback to students."

Hargreaves and Shirley’s analysis of education over 60 years charts a shift from unquestioned professional autonomy, through a period of where transparency and students’ rights resulted in imposed and deprofessionalising standards. The most effective leadership and management processes balance support and accountability, freedom and consistency, the empowerment of staff and the empowerment of students. Reactions to the assessment change programme, and its ultimate success, can be explained through the lens of this model.

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**E20**

**Delivering a whole-of-Faculty assessment transformation**

Sean Brawley, Scott Denton, Shawn Ross (University of New South Wales)

How do you deliver a whole-of-enterprise transformation in teaching and learning? The SOTL literature and institutional case-studies tend to focus on change in teaching and learning delivered through processes where the work of exemplars is show-cased and “change agents” then seek to convert colleagues -- often one classroom at a time (see Nation and Evans, 2000; Dinga, 2006; Hyland in Damian, 2010). It is the overriding contention of this paper that this approach to change is slow and haphazard, and rarely secures change amongst the colleagues who most need to engage to improve their practice.

In late 2010 the University of New South Wales embarked on a bold whole-of-institution transformation of its assessment practices (assessment here defined as the tasks that students complete in the completion of their studies). Each of UNSW’s nine Faculties were tasked with two broad deliverables: (1) increasing efficiency (read staff and student time on task), and (2) improving the quality of assessment.

This paper explores how the Faculty of Arts and Social Sciences (FASS) approached the task, what it achieved and the lessons learned. In the last five years FASS has sought to implement change in Teaching and Learning through whole-of-faculty systems approaches that deliver both a Quality Assurance capacity and a Quality Improvement opportunity. Where possible, the Faculty has sought to find online/automated processes, thereby delivering administrative time and resource savings and ensuring data can be warehoused and is, therefore, easily assessable for compliance/audit purposes.

After an initial stocktaking and best practice benchmarking exercise, the main activity around quality saw the Faculty become the first non-British university to participate in the Transforming the Experience of Students through Assessment (TESTA) initiative (see Jessop, El Hakim and Gibbs, 2011). This process involved the conduct of student focus groups and the participation of over 1800 students of the Faculty in an online questionnaire (the Assessment Experience Questionnaire) regarding their experience of assessment within the Faculty. The process provided rich data that the Faculty was then able to use as it considered and designed its quality improvement response.

The main activity around efficiency was the design and trial of an online Faculty Assessment Tool that staff will use as part of a Faculty course/unit approval system. The aim was to design an online tool that had University policy requirements built-in to the metrics of the tool and was quick and easy for colleagues to use (thereby removing a possible brake on innovation). Importantly the tool was also designed to provide a quality improvement opportunity as well as the required quality assurance process.

The presentation will show what the Faculty learned from its students through the TESTA audit and demonstrate the operation of the tool and the outcomes achieved. It will focus on what was successful and what was less successful in the management and delivery of the innovation thereby providing other institutions with the opportunity to consider the benefits and pitfalls of a systems-based approach to assessment innovation.
E21
Individual Paper

Teaching ethical thinking and the disciplinary context: a comparative study of ethical understanding and issues in the arts, social and pure sciences
Ruth Healey (University of Chester)

This project researches the diverse disciplinary approaches to teaching and learning ethics at a post-1992 University in the UK. Barnett (2000: 257) argues that universities need to prepare students for ‘supercomplexity’, where “the very frameworks by which we orientate ourselves to the world are themselves contested”. Learning to think through ethical issues develops critical thinking skills for dealing with supercomplexity, as the frameworks the students use to consider ethical issues are contested and likely to change.

Yet, the nature of the ethical issues and ethical thinking required by graduates varies between disciplines. For example, the ethical issues pure scientists face when undertaking animal experiments are of a different nature from those dealt with by social scientists when interviewing or observing people, or those explored in literature when deciding whether a character made an appropriate ethical choice. Depending upon the nature of their discipline, for many students their contact with ethics relates primarily to the ethics of undertaking research (Boyd et al. 2008). Going through ethical clearance procedures has in many cases become relatively mechanistic, after which students may give ethics little further consideration. However, in terms of dealing with supercomplexity, ethics is more concerned with the broader skill of thinking ethically in all parts of their lives, not just in research.

This research compares the nature of the ethical issues in different disciplines and the understanding students studying different disciplines have of ethics. A questionnaire was disseminated at the beginning of the academic year with students in all three undergraduate years of their programme in English (art), Geography (social science) and Animal Behaviour and Welfare (pure science). The questionnaire explored students’ ethical understandings and assessed their level of ethical development by incorporating Clarkeburn et al.’s (2003) Meta-ethical Questionnaire (MEQ). 355 students responded. Alongside this, interviews with the programme leaders in each discipline discussed the nature of ethics within their discipline, how ethics was taught directly or indirectly, and what ethical thinking skills they wanted their students to have.

The MEQ asks students to position themselves between two statements in relation to which is closer to their view of ethics. Where students position themselves can be tallied to produce an ‘ethical score’ for each individual. Little difference was found in overall average ethical scores between disciplines in relation to the students’ understanding of ethics. However, with closer examination, the range of ethical scores is smallest for English, then Geography, and largest for Animal Behaviour and Welfare, suggesting that the nature of these disciplines may influence students’ understanding of ethics. The implications for how ethical complexities and thinking are taught within different disciplines are discussed.

E22
Individual Paper

Tackling Plagiarism in Higher Education
Gerri Hura, Reva Fish (Buffalo State College)

Plagiarism is a centuries-old issue (Blum, 2009) with a variety of causes and a wide range of potential solutions (McMahon, 2006; Park, 2003). Today, academic dishonesty occurs at all levels of education and in all types of educational institutions (Cizek, 1999). Given that the percentage of college students who admit to plagiarism has remained about 65% since 1963 (McCabe, Trevino & Butterfield, 2001), it is clear that efforts to reduce this widespread problem in higher education have been generally ineffective.

College students say they plagiarize for reasons ranging from being unwilling or unable to spend the time necessary to do an assignment, to simply being unaware of how to properly cite their sources (Angell, 2006; Blum, 2009; Salmons, 2007; Wang, 2008). The opportunity to represent another’s work as one’s own has increased in recent years through access to the internet, where the full text of many books and articles is available for download (Salmons, 2007; Scanlon, 2003; Wang, 2008). Companies that sell academic papers, as well as software that will electronically paraphrase copied text to reduce plagiarism detection, are widely
available on the internet (Talab, 2004). Institutional and instructional methods of curbing plagiarism range from honor codes to requiring in-class writing samples early in the semester so that student writing style is documented (McCabe et al., 2001).

To examine these issues, a study was conducted with data collected from 643 students and 133 course instructors. This session explores the scope and nature of plagiarism reported by students at a large urban college in order to determine how past institutional efforts to curb plagiarism are faring (e.g. implementation of an academic misconduct policy and plagiarism detection software), and the extent of the problem currently. In addition, this session explores faculty views and experiences regarding student plagiarism and how they respond to specific incidents.

**Participatory, Experiential Approaches and Social Justice**

**E23**

**Pedagogic Toolkit for Social Design Innovation**  
**Su Vernon (University College Falmouth)**

In a changing world how do we educate for equitable sustainability and embed design for social need within curricula? This paper presents a pedagogic process toolkit for student engagement with participative design projects, it considers associated assessment issues and analyses experiential learning that takes place. The pedagogic toolkit is a system designed to assist staff and students in the process of facilitating external project participation and assessment, it aims to facilitate student learning and staff organisation in planning and agreeing projects undertaken with multidisciplinary teams and stakeholders. The web based ‘People-Centred Project Platform’ provides a digital content resource for the clustering and sharing of information relating to community participative methods of working. It aims to facilitate connections and promote sharing of knowledge and ideas and networking amongst students and staff.

Manzini (2010) states that design schools can be ‘active agents of sustainable change’ and can ‘promote social innovation which is sensitive to cultural and social diversity’. Design students at University College Falmouth engage with user-centred, participative design methods and work on projects within the community, often relating to health, wellbeing and education. Learning through engagement with social innovation projects, students acquire multi-faceted, interdisciplinary skills. The question then arises of how these skills are assessed and the paper considers how we make the shift from assessing outcome to assessing process, inherent value gained and experiential learning.

Case study examples are surveyed and analysed, tracking a journey of honours degree students and graduates who engaged with DOTT Cornwall1 (Design Council2 initiative) projects over a three-year period (2009-2012). Projects as specific case studies are exemplified to correlate education for social responsibility and the development of personal professional skills. Elliott (2010) refers to the benefits of students’ participation in education for sustainable development (ESD) projects as ‘developing knowledge of the wider social and environmental implications that surround their future professions’. Students engaging with external communities experience multi-faceted roles such as designer, organiser, facilitator, communicator, and through a ‘learning by leading’ approach they develop enhanced professional skills. Research indicates that graduates engaging with community participative design projects have increased confidence and employability skills and the paper considers methods to prepare students for modes of collaborative working and the interlocking complexities of design and social behaviour. Whilst preparing students as future thinkers, innovators and leaders, the transformative learning that takes place is acknowledged through the enhancement of long-term, life and employability skills. In the CareerEdge model of employability (Dacre Pool and Sewell 2007), self-confidence is identified as key factors contributing to self-esteem and employability. The paper concludes by establishing a causal relationship between community engagement, learning by leading and students gaining ‘softer’ employability skills such as empathy and self-confidence alongside professional, organisational skills.
Participatory forms of research differ significantly in intentions, methods, and relationship to meaning-making from other research paradigms, especially in their explicit aim to improve the daily lives of people, the condition of their communities and the planet (Reason & Bradbury, 2001). Action research can also serve as a means by which teachers can reclaim a sense of empowerment and become reinvigorated to seek avenues for change in the form of personal transformation as well as within the larger systems in which they are functioning (Bonner, 2006; Lang 2004). This paper will explore how the implementation of action research in class design, as well as in the exploration of faculty’s own pedagogy and practice, can be of value in addressing issues of power and oppression in personal, social, and professional realms. In particular, data from four cohorts of students engaged in an action research course as part of a Masters degree in Ecological Teaching and Learning, as well as data from a cooperative faculty inquiry focused on Interbeing, will be shared and discussed with the intention of illuminating how incorporating diverse forms of action research into teaching and learning can invite deep collaboration, promote feelings of renewal, and cultivate authenticity and critical reflection.

Engaging Students as Collaborators within Professional Programs

Experiential international health electives are crucial formative experiences for many students in health disciplines. They are an opportunity for students to expand on their interests and explore areas of health and healthcare to which they might not otherwise be exposed. The rising interest in global health issues among young Canadians has led to increased participation in international electives, and with maternal mortality featured so prominently on Canada’s international health and development agenda, international midwifery education placements are in increasingly high demand. With the relatively recent development of formal midwifery education programs in the province of Ontario and in Canada, there is a perfect window of opportunity while program size is still limited, to build from a foundation of national and international best practices to design the comprehensive pre-departure and reintegration strategy for international midwifery education placements. In order to ensure that midwifery students are well prepared physically, emotionally and professionally for the experience of participating in an international midwifery education elective, it is imperative that formal, comprehensive pre-departure and re-integration training be made available.

This presentation will outline how student voices were integrated into the development of these preparatory modules. Students past and present were involved in focus groups and through online surveys to capture their thoughts related to international clinical placements and what they felt was important to include in an educational program. Their first-hand accounts provided information related to how they were prepared for their placements and what kind of information would have been most helpful. This lived experience provided insight into the phenomenon of preparation for international placements.

In conjunction with the body of literature, their input informed the development of pre-departure modules. The modules were mounted to an online course which also included pre-departure, in-placement and re-integration activities designed to promote thought about the country being visited and the social and political situations that the student may experience while in placement. Some of the activities were created to promote reflection on coping strategies and ways to modify them in a foreign country where social and physical resources may be limited. Ongoing evaluation includes re-integration focus groups and interviews to determine the effectiveness of the modules and activities in supporting students and promoting optimal learning experiences.

During this presentation we will share how these modules and materials were created and initial data related to how they are being evaluated by students. We will demonstrate aspects of the online course and direct those interested in creating a similar course to helpful resources.
The panel is a collaboration of diverse (diverse in country of origin and ethnicity) nursing faculty and students who saw their profession as aging, out of touch, and in need of revitalization. As the largest sector of the health professions in the United States, with three million registered nurses, nursing needs to hear student voices to formulate a new mission and vision in education and practice. The theory and practice of nursing is ever changing, warranting the way nursing is taught to change along with it. However, students in Bachelor of Science in Nursing (BSN) programs fail to see a connection or rationale in some of the courses they are required to take. Students are often left out of the decision making process in planning their curriculum. To work out their feelings of boredom, monotony, disconnect, and not belonging, the panel (comprised of a tenured faculty member who is a nurse and a lawyer, two Junior BSN students, and one Sophomore BSN student) examined some of the courses that they are taught and injected rhyme, reason, and proximate cause to nursing by defining three theories and integrating them into one Complex Synergistic System (CSS) theoretical framework.

**Purpose:** The purpose of this presentation is to discuss the integration of three theories toward understanding nursing as a complex synergistic system nursing. Through students’ voices and guidance from a faculty mentor, CSS was developed as a roadmap to evidence-based nursing education and practice.

**Three Theories:** The theories are the complexity theory, synergy theory, and general systems theory. Integrating these theories to form the Complex Synergistic System (CSS) help student nurses understand the multifaceted nature of nursing (complexity theory), its collaborative relationship with various disciplines (synergy theory), shedding light into the importance of taking other humanities and science courses that at first blush are unrelated to nursing, and the permeability of nursing’s boundaries (general systems theory). CSS as a theoretical framework clarifies, unifies, and amplifies the courses student nurses study in the BSN program and makes them feel confident that they have an important contribution to make in nursing. The first theory is Complexity Theory which is a collection of scientific theories that attempts to explain complex behavior occurring in dynamic, sometimes chaotic non-linear systems. Complexity theory exposes as it forces patterns of relationships, how they are sustained, organized, and how outcomes emerge. It reinforces student voices as having an impact on the entire system, by virtue of their influence, veracity and reverberation. Complexity theory orients students to nursing education and practice involving many different complex sources of knowledge that interrelate with nursing and other disciplines. Through CSS, the student nurse is reminded that one action removed from evidence base and theoretical framework could have a catastrophic effect on a patient’s overall health and well-being.

The second theory is Synergy Theory which is the study of groups (healthcare providers, consumers, and stakeholders) that form partnerships and collaborate with other groups to fulfill a unified mission, goal and vision. Synergy theory is exemplified in nursing’s formation of complex alliances, coalitions, collaboration, and partnerships within nursing’s areas of practice (medical-surgical, pediatrics, psychiatry, etc.) and with other professions. Nursing, as the healthcare provider who is with the patient 24-hours-a-day acts as a leader in interdisciplinary relationships based on the premise that today’s practice environment requires synergy among service providers, consumers and other professions to achieve desirable health outcomes. Synergy provides a roadmap that lays out pathways by which participatory collaborative processes create more effective nurse-patient problem-solving, empowerment, and positive outcomes. Synergy causes the creative blending of ideas; such ideas have a greater effect than do individual ideas that stand alone.

The third theory is General Systems Theory that unifies interacting parts to form a functioning whole with permeable boundaries receptive and conducive to input, feedback, output, reverberation, equifinality, and negentropy. Input is information and resources entering the system. Output is information and resources leaving the system, crossing its boundary, and entering the environment and other systems. Feedback occurs when output returns to the system as input, and it is used to regulate to cause systemic homeostasis. In reverberation, a change in one part of the system or the environment can spread or reverberate into both the system and the environment. Equifinality is a principle that describes an open system as having the capacity to achieve outcomes through various mechanisms and processes. Similar outcomes can be obtained by taking many different paths allowing nurses to achieve their goals through diverse and multidimensional activities and strategies. Negentropy is the opposite of entropy. Entropy is disorder and chaos, whereas negentropy, or negative entropy, maintains order and constant growth. Negentropy sustains nursing so that it survives and flourishes by transforming challenges into opportunities.
Conclusions: CSS as a theoretical framework grounds nursing students to withstand and transform challenges into opportunities for growth and positive outcomes. A theoretical framework such as CSS is a powerful tool that organizes shapes, and guides thinking, feeling, and behaving in nursing education and practice. It provides a lens through which ideas, vision, and mission come into focus. Using CSS in education and practice, alleviates students’ feelings of boredom, monotony, disconnect, and not belonging as they interact and their roles intersect with numerous professionals, systems, patients and their families. It is in the intersection with these professions, organizations, patients and families that CSS brings new depth and breadth to nursing education and practice.

Sheraton Ballroom Centre (2nd floor) 3:30-4:30pm

**Approaches to SOTL and Institutional Change**

**E27**

**Rethinking Teaching & Learning through a Community Development Lens**

_Susan Watt, Susan Vajoczki (McMaster University)_

The purpose of this paper is to provide a framework to describe and understand a process of bringing instructional change in a research-intensive university environment. Using our experience in introducing electronic supplementation (lecture capture, podcasting, vodcasting) into a face-to-face, lecture-driven environment of increasingly large classes, what lessons can be learned about the process of introducing these changes and their acceptance by faculty, students, and administration?

The authors will provide a community development perspective on these changes. They will discuss why the notions of both community and development (rather than organization and change) are central to the acceptance of change in an academic environment and why organizational change, although commonly used in this kind of exercise, misses central features of the academy within which the change must occur.

The paper used a mixed method approach to show how students, faculty, and administrators approached the introduction of electronically enhanced lectures. The processes of change will be described using historic administrative data and qualitative interviews with key informants (students/faculty/administrators). The impacts of the changes will be presented using both quantitative outcome data from students and qualitative, interview inputs from students and faculty.

The paper will summarize previously published research outcomes which evaluated the learning impact of the changes. New information will come from interviews that focused on the perceptions of the process of making these changes happen. Together, this information will form the basis of the analysis. The analysis provides an alternative approach to thinking about and making changes in the educational environment that affect both students and instructors. It provides points of entry for change instigation, a method of engaging the key constituency of the academy, and a mechanism for evaluating the impact of the changes on both teaching and learning.

The authors have been involved at every stage of this change process from its inception to its evaluation. This paper provides an opportunity to share their reflections on a five year process which crossed disciplines, organizational structures, and tackled administrative barriers. It will provide a critical analysis of what worked, what failed, and what could have been done differently (and better) in this process. It will describe how SoTL informed both administrative and financial decisions at the institutional level.

The audience will have the opportunity of learning about this process and discussing the “ups and downs” of leading a major SOTL change initiative. They should leave the presentation with a new perspective on SOTL change in the academy, on how a community development approach can be useful in fostering and navigating the change process in the often resistant environment of a university, and on the use of evidence as a tool to support change.

It is our opinion that this paper addresses three of the identified themes of the conference -- integrating SOTL into institutional cultures, integrating student voices in the theory and practice of SOTL, and integrating SOTL research results and classroom teaching practices.
This paper presents a study of developing microcultures in higher education. Through a socio-cultural perspective a number of academic contexts are investigated with a focus on internal and external relations, projected future, and the continuously constructed historical Saga. The aim is to describe how and why development happens in higher education.

Background: Cultural perspectives have gained interest as productive approaches while analysing academic practices. Norms and traditions as well as interpersonal climate have been shown to influence teaching practices and their outcomes. (Kezar 2007; Trowler 2008).

The question asked here is: How do members of a microculture describe and interpret a change to the better as it happens? The results are compared to a previous study on strong academic microcultures (Roxå and Mårtensson 2011).

Results: Preliminary results show that the type of change described above is related to
- a shift in the perception of the surrounding context (e.g. the external pressure)
- an initiative, that is, someone or a group stepping forward claiming a specific interpretation of the future (e.g. suggesting a new practice)
- a shift in the internal relationships, that is, the growth of trust among members
- a reinterpretation of the microculture’s Saga (the collective history as it is formulated by the members)

Through a cultural analysis (Schein 2004) we conclude that these aspects are linked together forming a cultural system (Senge 2006). Therefore, a displacement in one aspect alone may not be enough to create the kind of systemic change that in turn will gain momentum and result in detectable development. Rather, small changes in all aspects simultaneously are more likely to result in long term and productive advancement.

Having said this, we still want to claim trust to be the paramount aspect. Trust in itself does not produce the cultural artefacts that constitute a practice, but is a necessary component for a collective process where innovations produce detectable progress. The growth of trust creates the foundation for the scholarship of teaching and learning. Going public becomes possible locally and leads to opportunities to collectively capitalise on ideas generated by individuals. This relates to the individual SoTL trajectory 2. (Roxå, Olsson et al. 2008) where insights made through scholarly inquiry are being fed back to the local community.

**Session F: Posters & Reception**

**Convention Centre**  
**Chedoke BC (3rd floor)**  
**4:30-6:30pm**

All conference registrants are invited to take part in a reception that will accompany the conference posters. This event will also feature the launch of _Teaching & Learning Inquiry_, ISSOTL’s new journal. Refreshments available.

**F01**  
**Poster**  
**SoTL is happening but we need to shout about it**  
**Pam Parker (City University London)**

How can we integrate SOTL into institutional practice and enable this to be seen as equal to research? This poster will outline the range of opportunities we already provide for SoTL in the institution and the approaches we have used to raise the profile of SoTL. This is important at a time when the institution is very focused on research and, staff who have a record of teaching excellence feel they need to focus more on research and do not equate their teaching excellence activity to this.

The author of this paper is the Associate Director of Learning Development Centre (LDC) in a UK University in London. Over the last few years the LDC team have been trying to raise the profile of SoTL through the work of the Centre but this has taken time because we have been seen as a central service and not as a Centre who...
develops practice and has a sound evidence base for practice. This has changed now with the Director of the Centre having been promoted to professor and the Associate Director promoted to reader.

The approach we used and how does this develop the practice of SoTL? The Associate Director was aware that whilst there are a range of activities provided to support and enhance SoTL we were not very organised in how we promoted these as part of a framework or model nor did we articulate the progression through these activities. The activities ranged from our MA Academic Practice, our learning and teaching award scheme, the LDC Fellows scheme, our journal and research club, our annual learning and teaching conference and the learning journal.

Following some exploration of available models the approach we opted to use draw on the work of Boyer (1990), Shulman (1993) and Trigwell et al (2000). Our own modified model builds on the work of those mentioned and takes account of scholarly activity, reflection, peer learning and review, dissemination and teaching philosophy.

How Effective is our Approach? We are undertaking some research that explores the level of engagement with these activities as well as the evidence of outputs from this. In addition we are interviewing a sample of staff who engage with a large range of these and some who do not engage at all or only with a limited number of activities. It is planned to use the data to further develop the model and implement institutional change.

**Convention Centre**  
**Chedoke C (3rd floor)**  
**4:30-6:30pm**

**F02**  
**Poster**  
**Creating a culture to support the scholarship of teaching and learning; lessons learned**  
*Melanie Spence-Ariemma, Richard Finch (Sheridan College)*

Sheridan’s faculty development programming demonstrates the value and importance that is placed not only on teaching but also on personal growth and development as educators. The present learning environment for students is recognized for teaching and learning excellence and quality programming. In the fall of 2011, Sheridan began the journey to understand how the Scholarship of Teaching and Learning (SoTL) could be incorporated into the present culture. To create a culture of learning and community engagement, an open call went out for participation on a SoTL engagement team. Any member of the College community could participate on this team. The SoTL engagement team was established and consisted of 23 members including students, faculty, human resources, student services, the library and administration.

The mission of the Scholarship of Teaching and Learning engagement team was to understand how SoTL could shape a sustainable teaching and learning culture that would support Sheridan in becoming a top ranked under-graduate teaching university. Ultimately, the engagement teams research would help Sheridan to understand how to prepare outstanding educators, scholars, and researchers to advance undergraduate education through professional development and applied research focused on the scholarship of teaching and learning.

The engagement team was commissioned with writing a white paper to both educate the College community and support decision-making. To create new knowledge and a deeper understanding of SoTL, the engagement team used an Inquiry framework. The team formulated a central question and developed a series of themes, which provided the research agenda (Hudspith & Jenkins, 2001). The engagement team members self selected into one of four themes and further defined their research questions related to the central question. The groups also determined their research strategy and process.

This poster will describe the authors’ experiences using an Inquiry approach to understand the Scholarship of Teaching and Learning. It will include the central research question and the research themes. It will also describe the findings and will summarize the engagement teams recommendations in creating an institutional culture that supports the scholarship of teaching and learning.
Developing a scholarly approach to teaching and learning leadership through a Peer Professional Learning Program

Susan Jones, Jane Skalicky, Melody West, Sharon Fraser, Justin Walls, Brian Yates (University of Tasmania)

Recognising teaching excellence has been identified as a ‘progressive force’ in supporting academic professionalism (Skelton, 2007). However despite twenty years of scholarship embedded within the higher education learning and teaching domain, investigations into teaching excellence and the programs that promote it are few.

Mentoring in higher education has been commonly regarded as an important strategy through which to support staff in developing their teaching practice and fostering their career aspirations. Mentoring has been linked to career advancement, increased self-confidence, and personal satisfaction and growth, with these benefits being described for both mentors and mentees (Darwin & Palmer, 2009). However research related to the use of peer learning and mentoring for staff in higher education is limited (Zellers, Howard, & Barcic, 2010), and relates largely to faculty based programs or discipline-specific mentoring for staff that are new to the higher education sector.

We are piloting a Peer Professional Learning Program for Awards (PPLP for Awards) at our institution. This program aims to engage teaching award applicants in peer-led professional learning, whilst also providing them with peer leadership and mentoring opportunities in a group-supported environment. The PPLP for Awards model takes a cross-disciplinary and collaborative approach to mentoring, building on Gardiner’s (2005) recommendation to provide more inclusive and accessible mentoring opportunities. Unlike traditional one-to-one mentoring models, award applicants engage in peer-led professional learning groups that aim specifically to enhance the development of quality teaching award applications. In this pilot, four learning groups of four to six academics are being facilitated by four senior learning and teaching champions who were selected for their experience as mentors, engagement with the National teaching awards system and educational expertise.

This project presents a unique opportunity to undertake scholarship in the area of multidisciplinary peer mentoring to support staff to gather evidence of excellent practice for the purposes of recognition and reward in the learning and teaching domain. We are evaluating PPLP for Awards in terms its impact on learning and teaching understandings and attitudes of the academic staff participants and the peer mentors who lead the peer interactions, as well as outcomes of the teaching and learning award application process at the University of Tasmania. Through reflective journals and structured focus groups, we will capture the pre-existing understanding and attitudes, relating to teaching excellence and teaching awards, that the participants bring to the peer learning program. Utilizing the program as a longitudinal intervention, we will identify and describe how these understandings and attitudes change during the course of the program. This information will not only inform future development and refinement of the peer program in an iterative way, but will point to where improved teaching practice and improved student outcomes may evolve and offer suggestions for future practice.

An expected outcome of the process is that the participants in turn become mentors of future groups, thus developing leadership capacity in the scholarship of teaching and learning. This presentation is therefore aligned with the conference theme: Integrating leadership, academic development & SoTL.

The Australian Science and Mathematics network (SaMnet): implications for genuine SoTL partnerships between academic developers and science faculty

Kelly Matthews (University of Queensland), Will Rifkin (University of Sydney), Stephanie Beames (Queensland University of Technology), Andrea Crampton (Charles Sturt University), Sue Jones (University of Tasmania), Elizabeth Johnson (LaTrobe University), Simon Pike (University of Adelaide), Brian Yates (University of Tasmania), Marjan Zadnik (Curtin University), Manjula Sharma (University of Sydney), Cristina Varsavky (Monash University)

“The profession dedicated to helping colleges and universities function effectively as teaching and learning communities” offers a vision for academic development that is progressive and oriented toward scholarship of teaching and learning (SoTL) (Felten et al, 2007, p93-94). Further, the notion of such centres providing “critical leadership, creativity, and resourcefulness for SoTL” articulates the value for, and the role of, the
profession as expert collaborators for faculty endeavouring to engage in scholarly inquiry of student learning (Hutchings et al, 2011, p54). However, as Hutchings and colleagues acknowledge, academic development is continually portrayed as the “fixers” of poor academic teaching (2011). Indeed, the SoTL community is questioning how genuine partnerships can be created and sustained between teaching faculty and academic developers around a shared goal of enhancing student learning. Within the broader research agenda on collaboration, our poster aims to contribute insight by drawing on data from a national Australian leadership project funded from 2011-2013.

The initiative, Fostering institutional and cultural change through the Australian network of university science educators, is a multi-pronged effort that hinges on developing the capacity of effective teachers to influence policy and practice. An analogous national initiative to support the generation of innovations and leadership of change has been pursued in the US by Project Kaleidoscope (or PKAL) (2011). However, the Australian context is a much smaller academic arena, 40 universities. The Science and Mathematics Network (SaMnet) is raising the capacity to influence via two-year action-learning projects involving multi-specialty teams and SoTL support. Ideally, each project is pursued by a local team comprising: (1) an innovative lecturer; (2) a senior academic mentor; (3) the relevant associate dean (education); and (4) an academic developer. Each team is supported to achieve SoTL outputs via authoring and publishing scholarly works on educational and organisational aspects of their efforts, with editors of two Australian SoTL journals prepared to welcome these publications.

SaMnet is creating opportunities for genuine SoTL partnerships between science faculty and academic developers within a framework that resonates with the SoTL-oriented vision espoused by Hutchings, Felten and colleagues. To date, SaMnet has accepted proposals for 21 action-learning projects from 15 Australian universities involving approximately 80 faculty. Analysis of the applications suggests that the vision for genuine SoTL partnerships has a significant way to go before being realised, as only 12 of the 21 project teams include someone from the academic development profession. Further analysis of these project proposals reveals that this group of science faculty, who could reasonably be considered as favouring TL, demonstrates a limited understanding of the expertise of academic developers as collaborators for SoTL inquiry.

Detailed analysis and implications will be presented from this initial research along with plans for follow-up research. Future efforts will explore two areas: (1) the extent to which the action-learning projects contribute to the formation of what participants see as genuinely collaborative partnerships between academic developers and science faculty and (2) whether successful examples of collaboration in some teams expand the roles for academic developers in other teams.

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**F05**

**The World is Your Classroom: Mobilizing Learning in French through Experiential Education**

*Megan Wightman (McMaster University)*

This poster presents a reflection on the forthcoming integration of experiential learning (EL) in the undergraduate curriculum of the French Department at McMaster University. The research is conducted by an undergraduate researcher and stems from an Undergraduate Student Research Award (USRA). As such, this poster addresses the Conference thread of “Integrating student voices in the theory and practice of SOTL.” This research is done from a humanities perspective; it is not empirical but rather based on pertinent written documents (in standard French, the humanities are called les lettres, indicating a focus on reading, textual analysis as well as context-based interpretation and criticism of written documents).

Canadian educational policy makers have become increasingly aware that profession-specific skills are essential for a successful transition from higher education into the contemporary labour market in a bilingual country. According to the Office of the Commissioner of Official Languages in its 2009 document Two Languages, a World of Opportunities, “students are looking for more opportunities to study, live or work in their second-language environment.”

To provide students with such a possibility, the French Department at McMaster University is developing an experiential fourth-year undergraduate seminar based on Kolb’s model of experiential learning (EL). The seminar will be initially intended for students specializing in French and planning to become French teachers. The goal of the seminar is to create an enriched and diversified learning environment that will allow students to improve...
their French fluency while building the practical skills necessary for a future career in education in a bilingual country.

This research is organized into three tiers of documentary analysis. David Kolb’s model of EL as he presents it in his book Experiential Learning: Experience as the Source of Learning and Development will provide a theoretical base for all three tiers of analysis. The first two tiers consist of documents published by the federal and provincial governments respectively. These two documents underpin the significance of introducing EL to McMaster’s French Department. The first document, Two Languages, a World of Opportunities: Second Language Learning in Canada’s Universities (2009) was published by the federal Office of the Commissioner of Official Languages. This document examines the demands of the student clientele of Canadian universities for opportunities to learn in both official languages. The second document, issued by the Ontario Ministry of Education, is entitled Cooperative Education and Other Forms of Experiential Education; Policies and Procedures for Secondary Schools (2000). This document will yield an understanding of the EL principles, practices and evaluation methods that are currently used by the seminar’s prospective educational partners in Ontario secondary schools. The third tier comprises the analysis of selected scholarly articles that detail the integration and practices of EL in other institutions of higher education.

A critical close-reading of the three tiers of above-mentioned documents will contribute to reflection on the best practices in delivering EL courses in higher education. Based on the project’s findings, recommendations will be made concerning how to structure the French EL seminar in a way that will better prepare students to join the increasingly competitive work force in today’s knowledge-based economy.

Excerpts from a blog kept by the researcher over the course of the research period will be available alongside the poster in print and audio-visual formats. The blog aims to provide insight into an undergraduate perspective on humanities-based research in SOTL. The blog will allow the researcher to reflect on her own learning experience of going through the various stages of proposing, conducting and presenting the research. The blog will also allow the researcher to reflect on differences between empirical and humanities-based research in SOTL as well as the relationship between the basic and applied research in humanities.

1: USRA is an award granted to undergraduate students at McMaster University that gives them the opportunity to develop and conduct a research project over the summer term.

F06

F06

A Concept Inventory for Formative Assessment of Learning in Linguistics
Catherine Anderson (McMaster University)

One chief goal of undergraduate education is that students develop ways of thinking and practising (WTPs) that are specific to the discipline of their major (Anderson & Hounsell, 2007; Entwistle, 2009). We conducted a survey of 75 Linguistics professors to identify and prioritize undergraduate learning outcomes for the discipline of Linguistics. The professors were recruited via an open invitation posted on linguistlist.org, the primary communication hub for the field of Linguistics, and taught at universities in North America and Europe. 100% of the respondents agreed or strongly agreed that a primary learning outcome is that students should understand the principles of scientific reasoning as they apply to the study of Linguistics. This scientific WTP is often especially challenging for Linguistics undergraduates who come to university without a strong science background, and therefore warrants conscious and concerted attention from instructors.

While Linguistics professors agree about the importance of students developing this way of thinking, the field of Linguistics has rarely engaged in critical reflection on its own pedagogy. It is only recently (Kuipers, 2011) that the discipline has initiated public, systematic evaluation of the effectiveness of our teaching practices. The proposed poster presents the development and validation of a Linguistic Science Concept Inventory designed according to the principles presented by Adams & Wieman (2011). Such Concept Inventories are well known in the physical and life sciences (Libarkin, 2008) but few exist for Linguistics or indeed any social science. The LSCI will allow formative assessment of courses and instruction by providing diagnostic information to instructors about our students’ scientific reasoning. The LSCI will also support further research on teaching and learning in Linguistics by serving as a validated instrument for testing hypotheses about Linguistics pedagogy. By providing objective evidence about student learning, this instrument will not only allow individual instructors to implement evidence-based practices in our courses, but is also a crucial step in developing a culture of critical inquiry about pedagogical effectiveness in the field of Linguistics as a whole.
Re-shaping student engagement from small to large group while maintaining the essence of problem-based learning methodology  
Iris Mujica, Joanna Pierazzo (McMaster University)

Problem-Based Learning (PBL) has been implemented in nursing education at McMaster University since the early 1970’s. This methodology falls under a constructivist paradigm and in nursing education, PBL allows students to combine pre-conceived notions/interpretations along with information obtained within the group experience and to derive their own learning through inquiry. During this active learning process, students are able to create new knowledge, make meaning of this experience and transfer this knowledge to the practice setting (Barrows, 1996; Rogal & Snider, 2008; Royle, et.al. 2001; Savery & Duffy, 1995).

The value of a constructivist paradigm contributed to the development of a pilot project in support of a curricular change in our school, whereby students in the last two senior years would engage in learning within larger groups (20 students per group). The purpose of the pilot was to examine how fundamental principles of PBL methodology require careful discussion and modification in order to transition to a larger group size and to utilize student and tutor feedback about the pilot to support future students and faculty as they transition to larger groups.

The pilot was conducted before the implementation of large groups in the curriculum and consisted of two tutors (authors) and a randomized group of 20 second year BScN students in their second semester. A review of the literature was conducted prior to the pilot and a clear plan was developed to identify strategies to facilitate the large group. In addition both tutors engaged in purposeful reflection before and after each class. Our discussions entailed: implementation of the PBL process, facilitation methods, feedback, timing and sequencing of learning, division of the large group into sub-groups and planning for the following week. Although a specific research methodology was not used in the pilot, a systematic process was followed to conduct this project and to gather feedback from students. Both tutors requested anonymous student feedback and students also had the opportunity to share their perspectives with our curriculum lead. In this initiative, it was evident the clear difference between the small and large group in factors such as group facilitation, classroom management, flow of information, syntheses of ideas and student engagement in learning. Based on our observations and student feedback, we claim that having a clear understanding of the role of the learner and tutor in the larger group is imperative in order to have successful progression in the classroom as information about the case is discussed. Furthermore, a clear organization/structure within the group is needed in order for the PBL process to occur. This process will be successful provided that key elements such as self-directed learning, “four-way” feedback; problem solving, critical thinking and group process are carefully considered and adapted in the large group. The next step will be to evaluate the role of large group in student learning while using PBL one year after curricular implementation of large groups in the entire program. For this purpose a research proposal will be submitted for ethics approval in the fall of 2012.

Utilizing High Fidelity Simulation to Enhance the Problem Based Learning Experience  
Joanna Pierazzo, Iris Mujica (McMaster University)

Most recently, faculty in the baccalaureate nursing program at McMaster University have discussed the impact of high-fidelity simulation (HFS) within problem-based learning (PBL). As teachers of both theoretical and professional practice courses in the undergraduate Nursing program, we were interested in enhancing the student learning experience and bridging the gap between theory and practice. Purpose: The purpose of this project was to examine student and tutor perceptions of learning when HFS was offered as an educational tool to support PBL within the classroom. Students utilize person-centered scenarios in their theoretical courses to guide learning across the spectrum of health care. As students work through the care scenario using the PBL process, they eventually reach a point in learning where they request more information about the patient/family in the scenario. For over two decades, we have offered standardized patients as an educational tool to assist in this learning process. Today, with the introduction of human patient simulators, we can now re-create patient care situations to mimic our PBL acute care scenarios. Method: The use of HFS to support PBL within the classroom was piloted with second year nursing students. Tutors and students had an opportunity to use HFS for three acute care scenarios discussed in class: dehydrated child, acute bowel obstruction, and an elderly with delirium. Outcome: The feedback from both students and tutors was favorable. Students especially
welcomed the opportunity to create direct linkages between their theoretical and clinical courses. Tutors commented on how much students enjoyed becoming immersed in patient care particularly within a theoretical course. The findings supported the value of HFS in enhancing problem-solving and clinical reasoning within the PBL process. Conclusions: This project recognized the potential benefit of HFS as an educational tool to enhance the PBL experience in the classroom environment. The poster presentation will share a summary of the approach used to implement HFS within PBL and the findings will be presented.

**Convention Centre  Chedoke C (3rd floor)  4:30-6:30pm**

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<th>F09</th>
<th>Do Traditional Student Course Evaluations Capture the Development of a Scholarly Teaching Practice?</th>
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<td><strong>Poster</strong></td>
<td><strong>Leslie Reid (University of Calgary)</strong></td>
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The results of an in-depth case study found that integrating a scholarly teaching approach into classroom teaching practices and course design did not have an effect on the course evaluations. This preliminary study suggests that as faculty members are encouraged to develop scholarly approaches to teaching, universities must re-think how teaching is measured and rewarded.

For the past few decades, the concept of scholarly teaching has been promoted as a model for teaching development (Boyer, 1990; Kreber, 2002; Trigwell and Shale, 2004). One of the most common means of evaluating teaching at colleges and universities is through standardized course evaluation questionnaires (also referred to as student ratings of instruction). These questionnaires are administered to students near the end of a course in paper or online form and contain Likert-scale quantitative questions and open-ended written-response questions. The questions seek specific feedback on set measures of teaching effectiveness, as well as a general rating question on the students’ impression of the overall quality of instruction. Their aim is to gather students’ perceptions of the course organization (course outline, lectures being easy to follow, course activities consistent with course outline), assessment practices (timely feedback, fairness of assessment), and instructor characteristics (approachability and enthusiasm for the subject matter). Student ratings of instruction are a common tool relied on for decisions about merit, tenure and promotion. These ratings can strongly influence the direction and motivation for teaching development and growth at an institution.

Student ratings of instruction for two different courses taught by the same instructor were examined over an 8-year period. These courses were both large (>200 students) science courses taught to a diverse student population. Midway through the 8-year time period, the instructor made significant changes to her teaching practice, moving from a teacher-centered to a student-centered approach (Blumberg 2009; Akerlind, 2004). She also developed a scholarly approach to teaching that included incorporating education research into course design and classroom teaching. This included the collection, analysis, and dissemination of data on the impact of the modified course design on student learning and student engagement.

The changes in the instructor’s teaching practice resulted in substantial course design modifications such as replacing significant amounts of lecture time with active and collaborative learning activities and the increased frequency of formative assessments of student learning. Student evaluations for each course were compared across time. Despite major changes to the course content, activities, and design, there were no statistically significant changes on the course evaluation questionnaire. This suggests that the current course evaluation is not capturing the integration of scholarly teaching into classroom teaching practices. Developing institutional systems for teaching assessment that can capture these integrations is a key component in promoting, valuing, and rewarding scholarly teaching. If the development and implementation of these teaching practices is not captured in the teaching evaluation process, it can reduce the incentive for faculty to change their teaching as well as de-value scholarly teaching in higher education.

**Convention Centre  Chedoke C (3rd floor)  4:30-6:30pm**

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<th>Planting the seed of SoTL through lesson study teams</th>
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<td><strong>Poster</strong></td>
<td><strong>Piera Jung, Nona Brack, Leigh Blaney (Vancouver Island University)</strong></td>
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Lesson study focuses on the interactions between teaching and learning - the way in which students interpret the material and construct knowledge, and how the instructional activities support student learning throughout the lesson. Lesson study produces important changes in the ways that teachers understand teaching and learning (Atkinson & Bolt, 2010). In this poster presentation, the investigators will share their experiences of
lesson study, reflections on how research on teaching and learning changed their teaching practices. All members of the interdisciplinary faculty were invited to participate in the lesson study. Only nursing faculty responded hence the lesson study team consisted of one teacher, and two observers who have not taught the course. A lesson study was conducted in a nursing course designed to help students link healing concepts to case studies. The concepts of suffering, transitions, healing and decision making are often associated with medical illness. Yet, the abstract nature of these concepts makes them difficult for students to recognize. By bringing awareness to these concepts, students develop a deep understanding on how psychological responses to illness influence patient reaction to medical/nursing interventions. Two cycles of lesson study were completed. Cycle 1: The lesson study began in 2010 when the team met several times in development and discussion of the lesson plan. With learning objectives clearly identified, a learning activity was created by the team. Students worked in interactive groups. An observational protocol for data gathering was developed and adhered to in order to provide consistency of data collection. The team observed students’ interactions and paid particular attention to students’ engagement in uncovering the implications of concepts. Following the class, each team member reflected separately on the lesson. The team then met to explore individual and common findings, and to recommend changes for the next lesson in order to support students’ learning. It was surprising to note the amount of learning that occurred not only for the teacher in which the lesson was being studied but also learning through reflection that took place for the observers (Bell, 2002). Cycle 2: This lesson study team met again in 2012 and repeated the same process of lesson study. The same class was taught implementing cycle one recommendations. The revised activity for the second cycle was identified as outside the comfort zone of the teacher. However, by participating in this scholarship of teaching and learning, the teacher acknowledged the needs of the students and adapted teaching practices to better enable learning (Ahearn, 2011). Through inquiry of teaching and learning, practices in the classroom were critically examined and changed. Outcomes of lesson study included: provides a safe environment for teachers to develop a sense of learning community; provides opportunity for teachers to openly inquire and modify existing practices in the classroom resulting in enhanced student learning (Cerbin & Kopp, 2006; Lieberman, 2009); and makes teaching an area of study and dissemination.

F11
Designing a modern science teaching laboratory - an interdisciplinary approach
Russ Ellis, Chad Harvey, Sarah Robinson, Sarah Symons, Genevieve van Wersch, Carolyn Eyles (McMaster University)

With the emergence of a focus on active learning in higher education, new spaces must be designed that facilitate current trends in student-centred learning. The Integrated Science (iSci) Program at McMaster University is a four-year undergraduate program that attracts high-achieving students who want a more challenging, research-based educational experience. Existing campus space is currently being renovated to accommodate the laboratory component of the program.

This poster will describe some of the design challenges encountered during this process, and the resulting solutions intended to create an inquiry-based learning environment for today’s student.

A growing body of literature suggests a reshaping of the content and pedagogy of science learning and teaching (Hofstein & Mamlok-Naaman, 2007). The iSci curriculum includes inquiry-type laboratories that challenge students to design and conduct scientific experiments, analyze and explain results, communicate findings, and defend scientific hypotheses. The challenge was to create lab space to provide flexibility for both the current curriculum and the future program needs.

Project themes in iSci are continuously evolving to keep pace with current scientific findings, and the lab design includes multi-function equipment, furniture, and utilities suited to meet protocol changes. The design will permit activities which engage students individually or in small groups, in highly structured or open inquiry settings, and which can incorporate either a high level of instrumentation or little instrumentation for knowledge-based studies. This level of flexibility will make learning fun and engaging for the students while increasing mental participation in lab activities. Recent studies suggest it is more the mental participation than the physical participation that is the important ingredient to enduring understanding (Lord & Orkwiszewski, 2006).
Successful lab design also requires an understanding of emerging technology interfaces and integrating this component into the physical space (Milne, 2006). Learning technology encompasses a wide range of devices, software products, and user experiences such as SMART interactive technology and videoconferencing. Thus, technologies in the iSci lab have been co-designed to allow modern classroom learning methods to occur in a hands-on lab environment.

The iSci lab is designed to incorporate innovative styles of instruction in which knowledge from a range of scientific fields, research techniques and scientific communication skills can be taught. In order to determine the effectiveness of the lab as an interdisciplinary learning environment, a series of evaluation exercises will be conducted. Perceptions, attitudes, and interactions from all users will be variables for study.

**Convention Centre Chedoke C (3rd floor) 4:30-6:30pm**

**F12 Poster**

**Redesigning Geospatial Competency Instruction: The Process**

*John Maclachlan, Michael Mercier, Walter Peace, Carolyn Eyles, Jacob Tarkowski, Susan Vajoczki, Jeffrey Trzeciak, Kathryn Ball (McMaster University)*

During summer 2011 a blended learning instructional module for geospatial competency was designed, and developed. It was implemented in the fall of 2011 and made available to more than 2800 undergraduate students taking introductory Environmental Sciences, Human Geography and Integrated Sciences courses during the 2011-12 academic year. The blended learning module covered general topics such as map elements to more specific topics such as projection systems, contour lines, and historical maps. The module followed the principles of Universal Instructional Design (Johnson & Pliner, 2004) and involved a shift from small group tutorials that delivered lecture-based content to student-centred instruction (Dziuban et al., 2004) with integrated formative and summative assessment mechanisms for students (Dziuban et al., 2004). With the module being available through the course learning management system students could participate in 24-7, "just-in-time" learning. (Butler, 2010).

There is a growing recognition that being spatially proficient, is becoming more valuable and applicable to a range of discipline areas (Bednarz & Kemp, 2011). Research by teams of learning scientists is reaffirming this notion of importance as they confirm that spatial ability, measured by concrete two-dimensional and three-dimensional visualization and reasoning tasks, is a significant factor in science, technology, engineering and mathematics education (Bednarz & Kemp, 2011).

The geospatial competency initiative arose from: (1) an identified growth in demand for geospatial literacy; and, (2) a need within the library for a more adequate instructional approach. Prior to Fall 2011 approximately 40% of instruction provided by library staff at McMaster University was related to geospatial instruction. Students reported that although they valued geospatial literacy skills they disliked the current face-to-face instructional approach. This served as a catalyst for the development of the pilot geospatial blended learning module.

This initiative represents collaboration amongst a large group of people (more than 20) including: students, faculty members; instructional support staff; library instructional staff; digital media technical staff; and, pedagogical staff from the University’s instructional development office. The diverse nature and large size of this team impacts the module design, development, and implementation. The course instructors were key contributors of this team in order to ensure a high level of integration with course content.

The overall assessment of this initiative will include both qualitative and quantitative feedback from all the different team members and students.

In this poster we will briefly describe the creation of the geospatial module and summarize the results from instructor interviews. During these interviews, scheduled for May and October 2012, instructors will be asked about their perceptions of student learning, their experience in developing the module, and their satisfaction with the final product. It is anticipated that the results of these interviews will allow for the exploration of the many dimensions of a large-scale collaborative project. It is anticipated that we will uncover areas of strengths and weaknesses in the existing process in order to enhance the collaborative process for subsequent projects.
**F13**

**Poster**

**Transition experiences of high school chemistry students to university level chemistry**  
*Natasha Cunningham, Pippa Lock, Susan Vajoczki, Kris Knorr (McMaster University)*

The transition from high school to post-secondary level studies can be difficult for some students. A variety of transitional issues, including those related to academic performance (Parker et al., 2004), new learning environment, living situation and increased independence (Wintre & Yaffe, 2000; Friedlander et al., 2007; Wintre et al., 2008; Wintre et al., 2009) challenge many first year students. The objectives of this research project were to explore the student experience during the transition from high school chemistry to university level introductory level chemistry, and to identify any areas of misalignment between these two environments. Participants will be engaged in this poster presentation through the visuals provided on the poster and through interaction between the authors and participants who view the poster, particularly through discussion about integrating the student voice in SoTL work. The lead author is an undergraduate student and this research represents their thesis work.

In this three-staged mixed-methods research project, Chemistry 1A03 students were given an entry survey containing both qualitative and quantitative questions constructed to gain insight towards high school chemistry experiences and anticipations of Level 1 Chemistry. The second phase was a post-midterm exit survey asking students to reflect on their experience in introductory chemistry. The final phase included interview sessions with course instructors to understand their perceptions towards the curriculum and student transition.

Integration of data from each stage revealed that the transition from high school to university is not experienced uniformly by all students. Analysis of the data revealed areas of misalignment felt by the students, included: testing, in-class experience, lab experience, expectations on independent work and certain aspects of the curriculum. Students indicated that a change in workload, weighting of assessments, pace of lectures, and testing format, particularly in terms of concept integration were challenging. Despite the fact that there are some areas of misalignment there are areas of overlap in student’s chemistry skills, knowledge, and attitudes as they move from high school to their postsecondary level studies. Regardless, there is an overlying issue that when students arrive at the postsecondary level the disconnect they may experience may be more a result of the overall transition as a whole which then has an impact on their academic success.

Following interview sessions, instructors reported that they perceived the average student arriving to introductory chemistry to be generally academically prepared, despite the misalignments reported by students. Part of this survey revealed that introductory chemistry instructors recognize the high expectations for students to develop a solid work ethic and learn to be independent thinkers but that there needs to be a balance between guidance and independent study. If achieved, students can expect a smoother transition from the high school environment expectations to which they have become accustomed.

Consequently, this research about teaching and learning gathered data about the student experience and provided insight towards enhancing classroom teaching practices. By understanding the perspectives of students and their instructors, and the issues they face with the shift from high school to university chemistry, evidence-based recommendations can be made to facilitate this transition.

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**F14**

**Poster**

**Exploring Consistency in Undergraduate Nursing Education: Perspectives of Students and Faculty**  
*Tracey Jewiss, Janet Landeen, Susan Vajoczki, Michelle Vine (McMaster University)*

Educators have long known that variations are expected between the curriculum-as-lived and the curriculum-as-planned (Aoki 1986/1991). At McMaster University this variation may be increased as McMaster is known for the development of small-group, problem-based learning (PBL) curricula in its Health Sciences programs (Barrows & Tamblyn 1980). Based on constructivist learning theory, this student-centred, self-directed approach has been found to engage students in learning and promote life-long learning (Gijbels, Dochy, Van den Bossche & Segers 2005; Rideout 2001). However, adapting to this learning style can be challenging and students have complained of inconsistency across groups, which could be considered the antithesis of
student-centred approaches. Despite faculty attempts at making expectations more explicit, complaints of inconsistency have contributed to student dissatisfaction.

**Purpose:** This research aimed to identify and comprehend different perceptions of consistency among students and faculty within a PBL-based nursing program. The study used a qualitative descriptive design and a researcher not involved in the BScN Program conducted focus groups and individual interviews with 29 participants from a diverse mix of students and faculty. Data analysis was conducted using Morse & Field’s four intellectual processes of comprehending, synthesizing, theorizing, and recontextualizing (Morse & Field 1995). The analysis revealed students and faculty had differing perceptions of the meaning of consistency.

**Findings:** Inexperienced students were more likely to describe consistency in terms of sameness and fairness. More experienced students and faculty have a higher tolerance for ambiguity and value learning experiences adapted to students’ learning needs. All agreed that violating core expectations and academic regulations were problematic. Positive strategies for increasing consistency included clear communication and faculty development. This in-depth exploration of the meaning of consistency has provided an opportunity to increase student satisfaction earlier in the PBL learning process. Regardless of the educational approach used, this study suggests that satisfaction with consistency is promoted when teachers adhere to agreed-upon core elements within curricula and academic policies, and provide student-centred rationale for the variations across and within courses.

**The Nexen Scholars Program at Mount Royal University**

*Richard Gale, Deb Bennett (Mount Royal University)*

In 2008, Mount Royal made a unique commitment to the understanding and improvement of student learning through systematic scholarly inquiry by establishing the Institute for Scholarship of Teaching and Learning. This research centre was designed to “encourage, facilitate and support the engagement of Mount Royal University faculty in teaching-learning related scholarship, and to advance the existing body of research in this area ... to build a culture of scholarship related to teaching and learning, cultivate communities of practice, and encourage interdisciplinary collaboration in this area ... [and] assume a leadership role in building the profile of the scholarship of teaching and learning provincially and nationally.” Thanks to the work of the Institute and its Scholars, the scholarship of teaching and learning has become an integral part of the academic infrastructure of Mount Royal University.

The Institute for Scholarship of Teaching and Learning offers an annual research development program designed to encourage and support faculty committed to systematic scholarly inquiry into student learning. The Nexen Scholars Program brings together faculty from a range of academic disciplines committed to investigating and documenting significant issues and challenges in teaching and learning. The central work of the Nexen Scholars is to develop course-based inquiry projects, conduct research that sheds new light on a significant aspect of student learning, share evidence and findings publicly in an effort to influence practice in the field, and help build a culture of teaching and learning scholarship at Mount Royal University, within their own disciplines, and beyond. The program engages a diverse and dedicated community of scholars committed to building and sharing pedagogical knowledge, advancing post-secondary teaching and enhancing student learning beyond the individual classroom. In the pursuit of these goals, each Nexen Scholar designs and undertakes a research project aimed at improving practice in the teaching and learning of his/her discipline. Nexen Scholars are selected for a one-year term, participate in three multi-day off-site residencies (February, August, February), and engage in monthly collaborative activities. To date, almost forty faculty members from two universities have participated in the Nexen Scholars Program and thanks to a generous gift of $1 million from Nexen Inc. the future of this program is guaranteed for at least five years.

This poster will provide background for the Nexen Scholars Program, including the extent to which it has been able to integrate the needs of the institution into the work of the Scholars, as well as giving an indication of how the Program has also become integrated into the work of the university. It will offer demographic and disciplinary breakdowns of participation in the Program, as well as affiliated initiatives connected to the work of individual Scholars. It will give an assessment of strengths and weaknesses, and make projections about the possible futures that might be realized during the next five years. Perhaps most important, it will offer an access point for collaboration with other institutions interested in preparing faculty for systematic scholarly inquiry into student learning.
Data in Dialogue: Students’ Evidence of Student Learning

Richard Gale, Deb Bennett, Lee Wertzler (Mount Royal University)

All too often undergraduate students enter university without a clear sense of how to succeed, or even what skills are necessary to survive and thrive. Frequently we address this issue through innovative access strategies and dedicated scaffolding courses, but seldom do we examine these pedagogical support structures from an inquiry-based perspective, and rarely do we gather data on student learning collaboratively across courses. Furthermore, even when we do employ tools of disciplinary and trans-disciplinary research in the service of understanding and improving student learning, the voice of the student is almost never included as an analytical component. In this session participants will have an opportunity to learn from and engage with one promising approach to systematic scholarly inquiry into student learning at the first-year foundation-course level; an approach that combines collective inquiry, curricular and extra-curricular data gathering, and most significantly a student-generated dataset that includes evidence of learning at the cognitive and metacognitive levels.

Coordinated by Mount Royal University’s Institute for Scholarship of Teaching and Learning, this project began with the work of individual Scholars conducting research on student learning in an elective undergraduate studies course. It expanded to a cross-course investigation of student learning perceptions that yielded compelling evidence of students’ ability to identify and articulate their own learning within and beyond that individual course. The data gathered from this secondary study then led to a multi-faculty, multi-course, collective inquiry project designed to provide coordinated and comparable evidence of student learning in undergraduate studies. This coordinated effort between multiple access- and skills-oriented courses uses data gathered through scholarship of teaching and learning to gain insight into how students learn and what helps students succeed in a general education undergraduate studies curriculum. It will take place over two years (with the option to continue beyond that time frame), involve faculty from multiple disciplines (including education, social work, psychology, and more), and be coordinated through a research centre dedicated to scholarship of teaching and learning. It involves a series of learning questions, yielding a preliminary research question and pilot study, followed by a coordinated investigation in at least four sections of UGST 1001 using the same research question and data gathering protocols, and culminating in a collaborative and collective analysis of all data. Central to the project is the confluence of direct and oblique data gathering that provides a complementary lens on learning from both the investigators’ and the students’ perspectives. This is the second coordinated project initiated and sponsored by the Institute for Scholarship of Teaching and Learning; the first began in 2010 as the engaging departments initiative.

Richard Gale, Director of the Institute for Scholarship of Teaching and Learning, is a co-investigator for this project; he comes to Mount Royal University from the Carnegie Foundation for the Advancement of Teaching where he was a Senior Scholar and Director of the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) Higher Education Program. He has published and spoken widely on scholarship of teaching and learning.

Deb Bennett, Coordinator of the University Entrance Option, is one of the co-investigators; she was selected as a 2009 Nexen Scholar of Teaching and Learning and as such conducted a study of role play in the nursing curriculum. Her scholarship of teaching and learning work has continued and expanded; she is now working with the Institute for Scholarship of Teaching and Learning as a facilitator and co-coordinator of the Nexen Scholars Program.

Lee Wertzler, professor of Psychology, was another Nexen Scholar responsible for providing the impetus for this project, most especially with her work on learning artifacts; she is also a co-investigator a 2010 Nexen Scholar of Teaching and Learning whose research addresses the importance of developing a sense of self-as-learner for student success.
Relevance of Course Content and the Development of Ways of Thinking & Practicing in Film Studies
Beth Marquis (McMaster University)

Recent pedagogical scholarship has emphasized the importance of helping students to develop ‘ways of thinking and practicing’ (WTP) that are central to the disciplines they study (Kreber 2009, Entwistle 2005, Anderson & Day 2005, McCune & Hounsell (2005)). In film studies, fundamental WTP include an appreciation of the ways in which meanings are created by and through film texts, a willingness to explore cultural objects from multiple points of view, and an ability to conduct informed, persuasive and insightful analyses of media texts and products. (QAA 2008, McEntee 2007, Smith 2001). Means of fostering these WTP in students, however, are less well understood.

The strategy of utilizing content that students find relevant enters interestingly into this discussion. While much pedagogical writing suggests that relating content to students’ real lives can be a valuable learning tool (Stein et al. 2004, McCune 2007, Kember, Ho & Hong 2008), Meyer and Land (2005) point out that the relative efficacy of this technique needs to be tested in various learning contexts. At the same time, some film scholars argue the importance of helping students to connect their studies of films to their personal experiences (Projansky 2004), while others contend that a focus on texts in which students are not personally invested can positively influence learning of key disciplinary skills (Jacobs & Brooks 1999, McEntee 2007). This poster presents the results of an ongoing project that integrates the results of such previous scholarship into the teaching of an upper level film studies course and seeks to assess the results. In particular, the study in question was designed to investigate the extent to which studying personally relevant films and film-related texts affects students’ ongoing learning of central film studies WTP in an upper level course.

In order to address this research question, students enrolled in the course were required to conduct short written analyses of 2 personally relevant and 2 instructor-selected texts as part of their assigned work over the term. These were completed on an alternating basis, such that one half of the students submitted analyses of personally relevant texts on the 1st and 3rd assignment due dates, while the other half did so on the 2nd and 4th deadlines. All students also had to write a final essay, in which they engaged in comparative analysis of 1 text to which they had a personal connection and another to which they did not. The poster will present the results of close readings of these student assignments (Bass & Linkon 2008) that compare the extent to which students demonstrate the WTP outlined above when working with personally relevant texts and with texts that are not personally significant. While this method is not without its limitations (e.g. it does not acknowledge that students might be differently able to demonstrate WTP in non-written forms), it nonetheless does afford a direct and detailed examination of one piece of what Bass & Linkon call the “visible action’ of student learning” (2008, p258), and thus might begin to illuminate the ways in which that learning is affected by the type of text analysed.

Individualized Assessment and Feedback in a Group Performance Classroom
Victoria Furby (Buffalo State College, State University of New York)

The purpose of this project was to examine the effects of individualized assessment and instructional feedback sessions upon the preparation and performance of a sight-singing example. Twenty-nine students, enrolled in an intact aural perceptions course, performed a sight-singing pretest, received instruction in movable-do sight singing for a semester and then performed a sight-singing posttest. During the instructional portion of the experiment, students were randomly assigned to one of three treatment groups. Treatment Group A received traditional group instruction and feedback, Treatment Group B received individualized verbal instruction and feedback, and Treatment Group C received individualized written instruction and feedback in the form of electronic messages. All students were encouraged, through instruction and feedback, to prepare individual sight-singing examples according to a specific pattern of behaviors suggested to increase sight-singing success. Students were audio-recorded on both the pretest and posttest, and recordings were scored by independent evaluators. Students were also video-recorded during the preparation time period of the posttest to determine whether specific behaviors exhibited during preparation could be predictors of sight-singing success. Video-recordings were analyzed by the researcher using Scribe behavioral analysis software. The major findings of this project indicate that there is no significant difference between preparatory behaviors and/or performance on an evaluation between groups of students who have received group or individual instruction and feedback, in either written or verbal form.
Case Study Method in Teaching Anatomy: An Exploration of the Mental Self-Governmental Model
Jayanti Ray (Southeast Missouri State University)

Introduction and Purpose: According to the recent research on teaching and learning in the field of speech-language pathology, instructors often face various challenges in preparing future clinicians who can effectively identify and diagnose a plethora of speech and language disorders based on scientific rationales. The purpose of this project is to enhance undergraduate students’ cognitive milieu with learning styles such as “executive”, “legislative”, and “judiciary” according to the Mental Self-Governmental Model using a database of clinical pathways with various case scenarios. This study also aimed at accomplishing University Studies’ Learner Objectives, such as the ability to locate and gather information; the ability to perform critical thinking, reasoning, and analyzing while dealing with assigned case studies; the ability to integrate the breadth and diversity of knowledge and experience; and finally, the ability to make informed, intelligent value decisions while engaged in service learning.

It was hypothesized that the proposed case study database will help enhance student learning of various course objectives in anatomy pertaining to diagnoses of communication disorders (based on given anatomic/physiologic information) along with manifested signs and symptoms.

Methodology: The project was conducted through two semesters involving the undergraduate class on anatomy and physiology. Students enrolled during the first section served as the control group (N= 20), whereas students in the second section served as the control group (N= 19). The control group received case scenarios without the cognitive components. Students in both groups received 10 case scenarios throughout the semester; they worked in small groups and submitted their answers to specific questions based on the case studies.

Pre-and posttest consisting of 50 multiple-choice questions were administered to both groups. A variety of interactive group class assignments were also employed to ensure student learning of selected concepts.

Results: Results indicated that the experimental group performed significantly better in explicit problem solving than the control group on multiple-choice assignments since they were exposed to the cognitive learning components. No significant differences in class participation scores and group assignment scores were noted between the two groups. A qualitative analysis of class observation notes during class discussions indicated that students expressed their thoughts quite coherently as they focused on multiple facets of the given clinical problem simultaneously. This refers to “hierarchical thinking” according to Sternberg (1997). Hierarchical thinkers are excellent at allocating time, prioritizing, and organizing. These attributes are highly necessary to succeed in the class that requires self-motivation and active participation in learning. Presumably, a hierarchical thinker would excel in such an environment. Students also showed considerable amounts of enthusiasm toward deciphering the case problems.

Conclusions and Implications: Results indicated that the case study method employed for the experimental group was successful in promoting advanced and explicit clinical problem-solving skills in students. The students also learned about the anatomical and physiological underpinnings of various communication and swallowing disorders. The classroom discussion was more engaging using the case scenarios accompanied by clinical decision-making diagrams. Students were able to judge, evaluate, and apply their knowledge in formulating diagnoses and answering various clinical questions.

Enhancing Graduate Student Learning Outcomes with Portable Labs in Assistive Technology
Jayanti Ray (Southeast Missouri State University)

Introduction: Given the technological advances in Assistive Technology (AT) and Alternative and Augmentative Communication (AAC), students are required to keep abreast of current technology that can be useful for improving quality of life in individuals with disability. Though the AAC course theoretically covers a wide range of topics, the lab component continues to be a critical piece that contributes to effective clinical training. Research shows that effective learning takes place when students are engaged in programming an
AT/AAC device for a considerable amount of time; learning various applications in light of given clinical scenarios; and finally implementing the knowledge on clients (Marvin, Montano, Fusco, & Gould, 2003; Tillery, Cornett, & Currie, 2009).

The purpose of the study was to determine if there was a significant difference between the pre- and post-test scores obtained before and after AAC training labs respectively. The study also addressed major pedagogical concerns related to student success.

Methodology: The AAC course addresses therapeutic implications for individuals who require AT/AAC systems to function adequately in their environments. To access required technology and engage students in learning, a portable lab concept (with i-Pads) was promoted that not only served the students in classroom, but also encouraged them to develop mastery of clinical skills during practicum. The current project, involving 16 graduate students, compared student test scores before and after training with the AAC/AT software lab. The goal was to improve students’ conceptual and applied learning in the area of AAC/AT. Specifically, in this course, with the help of given software/technologies, the participants were expected to demonstrate competency in the given areas:
1. Describe AAC/speech technologies for various disabilities
2. Provide answers to a hierarchy of tasks pertaining to self-assessments, such as pre-posttests and brief surveys after completion of online tutorials
3. Apply decision-making and reasoning skills in clinic while treating a variety of communication disorders

Results: Results indicated that student performance increased significantly from the baseline data as measured with pre-post multiple-choice questionnaire, self-evaluations, and a narrative reports on the client treated in clinic. Also, student responses were collected from focus-group discussions (using a common set of open-ended questions) and minute-surveys to determine students’ attitude toward the concept of portable AAC/AT lab. Both quantitative and qualitative analysis of data indicated positive learning behaviors in students; and increased satisfaction of the faculty investigator teaching the class.

Implications: The current study, focused on experiential learning of graduate students in a clinical/professional area, refers to the SoTL thread of integrating professional education into higher level learning. The study addressed how courses might be offered more effectively by shifting to experiential and active learning from traditional learning formats. Overall, this project enhanced academic growth in the students by targeting specific AAC lab training modules both in classroom as well as clinical situations. Furthermore, the study helped enhance clinical competency and performance in graduate students regarding use of AAC/AT in community clinic assignments, such as advanced externships.

Consortium Centre Chedoke C (3rd floor) 4:30-6:30pm

F21 Approaches to professional quality online learning in Higher Education
Trine Fossland (University of Tromsø)

Faculty members and staff in the western world face great challenges in order to meet new demands in accordance to good quality online courses and SoTL. The situation in Norway is like many other countries - students are more enthusiastic and ready for online courses in higher education than teachers. This is a great challenge for faculty members and staff who cares about teaching and learning as serious intellectual work, but don’t manage the technical and online part of these processes of teaching and learning.

In this study we discuss the concept of quality in higher education in accordance to flexible learning when we ask: Can we identify some key elements for professional online learning? Based on findings from a Norwegian survey on the use of educational technology in Norwegian higher education, new challenges and possibilities for better quality in tomorrow’s online courses at the Universities in Norway are identified. The survey is a national study including all Universities that both focus on students, teachers and the Universities politics when it comes to how they work on solutions for good online quality learning. The survey was developed in close relation with statistic Norway.

The findings demonstrate that nearly all Universities in Norway use a digital learning platform, but there is a great discrepancy between the teachers and the student’s perspectives on professional online learning. Faculty and teaching development is needed to enhance the quality of online teaching and learning in Norwegian Universities. Engaged staff members are “lonely riders” and teachers require training that is not currently offered to produce quality teaching and learning.
Integrating Google Earth into undergraduate Geoscience instruction: Assessing effectiveness and evaluating module design

Jason Brodeur, William Morris (McMaster University)

Virtual globe (geobrowsing) software represents a relevant and emergent instructional technology in undergraduate Geoscience education, as it is aligned with the discipline’s strongly experiential and geospatial nature. With its ease-of-use, degree of interactivity, free distribution, and relatively straightforward integration with Web 2.0 content, Google Earth geobrowsing software has become widely popular in Geoscience education and research. Its ubiquity, flexibility and customization facilitates its use in a wide range of instructional configurations, ranging from teacher-centric dissemination of knowledge to student-centric problem- and inquiry-based learning activities (Johnson et al. 2011; see also Carleton College SERC, 2011).

Though the potential for Google Earth’s integration in Geoscience education is essentially limitless, its instructional incorporation does not inherently guarantee meaningful improvement on traditional instructional approaches. As discussed by Dittmer (2010), Google Earth-based activities may prove ineffective if they are not aligned with clear learning objectives and accompanied by appropriate assessment. Therefore, maximizing student learning in a Google Earth-based module requires careful consideration of the material, structure and objectives, as well as a thorough assessment and reflection of its effectiveness (Johnson et al., 2011).

During late-2011 and early-2012, a collection of Google Earth-based modules were developed for incorporation into a single assessment component in undergraduate Geoscience courses within the School of Geography and Earth Sciences at McMaster University. Throughout the 2012/2013 academic year, the modules will be introduced to courses spanning a range of levels (introductory, intermediate and advanced), as well as a variety of Geoscience disciplines - including atmospheric and biogeographical sciences, geomorphology and geology. The purpose of this initiative is to enhance student engagement in the Geosciences to encourage deeper and continued learning in education and careers in geospatial-specific fields.

The effectiveness of these modules will be primarily assessed through comparative means, whereby the developed modules will be introduced to one half of the lab sections in each course, while the original “paper” assignment is given to the other sections. Follow-up surveys will be used to quantify and qualify differences in students’ level of engagement, knowledge retention and time requirement between the original and the Google Earth-based modules. Student learning and retention will also be quantified by comparative performance on module-specific midterm and final examination questions. Surveys will also be distributed to the course instructors and instructional assistants, in order to document their perceptions of the modules and their experiences with its implementation.

To effectively convey the details and current state of this research, the proposed poster will: a) introduce the developed Google Earth modules and their pedagogical design bases, b) detail the methodological approaches of module implementation and assessment and, c) present initial results from early classroom trials.

Team Skill Dissensus in Student Teams - Delusion or Development?

Karen Druffel, T. Bridgett Perry-Galvin (Framingham State College)

Major corporations and Advisory Boards for Business programs at colleges and universities in the U.S. have emphasized not only that students learn content but they graduate with a specific skill set. One set of skills most often mentioned are the skills associated with group performances. Moreover, the specific skill set includes not only accurate assessment of others’ capabilities but also of one’s own abilities. One of the most difficult challenges faced by University professors is incorporating skill development and student awareness of those skills into the content of the discipline. In the current study, when asked to assess team member skills before and after completion of a team project, the majority of seniors in an undergraduate business and information technology program reported differences in their initial and final assessments of these skills. However, and more interestingly, a much lower number reported changes in their self-assessment for these same skills. Two university professors from different disciplines, psychology and information systems, explore
alternatives to explain the difference in student responses. Are perceived differences at the start and at the end of the project due to corrections of initial misperceptions, or evidence of growth and development? Why are students’ self-perceptions, in contrast, relatively unchanged?

Student teams in a project-based course were formed by a process in which each student completed a self-assessment for skills defined by the class as relevant to the project. The instructor randomly selected team leaders who then chose specific students for their teams based upon the self-assessment of skills provided by their peers. All students provided peer assessments for their team members at two points throughout the course. In addition, students presented their project twice, as a draft and a final version, to a panel of industry professionals who provided feedback. At the end of the course, students completed a survey which indicated whether the student’s evaluation of his/her team member’s skills had changed. Students were also asked if their self-assessment had changed.

Recent research (Gardner & Kwan, 2012) suggests expertise dissensus, the variance in team members’ perceptions of one another’s levels of expertise, can affect team effectiveness. Research on dissensus in student teams can inform that research as well as suggest methods for developing team skills in an undergraduate program. Our poster presents our findings to date, reflecting both a psychological and information systems approach to addressing the question of dissensus in student teams. In addition we discuss the issues that continue to challenge the development of accurate self-assessment of skill development in our students.

Convention Centre Chedoke C (3rd floor) 4:30-6:30pm

F24 Editing Student Writing: The Effects of Instructor versus Peer Feedback
Joseph D'Andrea, Deborah McMakin, Bridgett Galvin, Pamela Ludemann
(Framingham State University)

One of the most challenging aspects of teaching any discipline at the University level is how to assess learning of the content while also providing feedback that develops writing skills. The acquisition of knowledge is often assessed using a writing sample that requires the student to demonstrate some conceptual understanding of the material. Evaluating this writing sample and providing appropriate feedback for improvement and further skill development is the topic of this project. Traditionally, the course instructor has assumed responsibility for evaluating and providing feedback on writing samples. However, recent interest has arisen in the area of peer editing relative to the feedback process. As authors, students report increased effort for peer reviewed assignments than those read solely by the course instructor (Cathy, 2007). In addition, students identify the role of editor as a fruitful opportunity to view a peer example and articulate assignment evaluation criteria (Cathey, 2007; McMakin & Donohue, 2009). Paulus (1999) indicates that while the majority of revisions that students make are surface-level revisions, the changes they made as a result of peer and teacher feedback were more often meaning-level changes than those revisions they make on their own. Two forms of feedback are examined in this project. Instructors in an introductory philosophy course and an introductory developmental psychology course report on two different venues for providing feedback and assessing its effectiveness. This study examines the degree to which students perceptions of peer-editing as beneficial for understanding and meeting writing assignment expectations actually match their written work and the degree to which informing students of rubric based instructor feedback reduces errors in subsequent drafts, thereby improving final drafts.

Students in an introductory philosophy course received feedback based on a rubric completed by their instructor. Students were first instructed on the use of the rubric and the meaning of the comments in the margins so they could revise a second draft using those comments. This process was replicated on three successive writing assignments. The frequency of rubric based comments requiring change will be counted and compared across papers. It is expected that the use of the rubric based comments should result in a reduction of errors on subsequent papers and an increase in change in content as well. Students will complete a questionnaire at the end of the term to assess their perceptions about the effectiveness of the rubric and their understanding of comments based on the rubric. Alternatively, students in the introductory psychology course will receive and give feedback from peers on three drafts of a paper also based on rubric. In addition, students will complete a questionnaire assessing the degree to which they think they benefited from peer review and from serving as a peer reviewer. Previous findings (McMakin & Ludemann, 2011) suggest that peer editing fosters student self-assessment and self-monitoring as indicated by rating percentages by items and student comments on questionnaire assessments. Student ratings of the peer
review process and the skills they acquired will be compared with the actual changes in drafts of their papers over time. Results from the two classrooms will be discussed relative to the benefits of peer editing using writing rubrics versus instructor editing using writing rubrics. By understanding both students’ perceptions and the actual changes in writing samples instructors may respond to students’ unspoken question about feedback in general “How does this help me?”

**F25**

**The Gradual Reveal: Shifting Paradigms, Shifting Epistemologies**  
*M.J. Barrett, Sheryl Mills, Jerrod Dietrich, Molly Patterson, Michelle Flowers, Kirk Bors (University of Saskatchewan)*

Using Thomas Kuhn’s model of a paradigm shift, this presentation highlights the results of a transformative graduate course experience. The course aims to support students to more deeply understand the potential of multiple ways of knowing in resource management processes (e.g. Indigenous knowledges, intuition, embodied environmental knowing and trans-rational cognition). Beginning from their various social and epistemological locations, students were faced with experiences and supporting literature that provided an “accumulation of anomalies” which they brought to in-class discussion and written assignments. The resulting effects included an opening into alternative paradigms and a “revolutionary science” which included a deeper understanding of energy, Indigenous ways of knowing and being, and connections to the natural world. The presentation will not only include outcomes and conclusions; we will also provide ideas for practice as well as ways in which the learning in this course played out in a subsequent course in which four of the students enrolled.

**Methods:** Data draws from a focus group discussion, the instructor’s class notes, recorded peer-interviews and a survey of students enrolled in ENVS 811: Multiple Ways of Knowing in Environmental Decision-Making (a graduate course taught in the School of Environment and Sustainability, University of Saskatchewan). An appreciative inquiry framework was used for the focus group discussion and the survey asked students to be critical of the course content and activities. A narrative approach was taken to gather data from recorded peer-interviews in which students, in groups of three, interviewed one another to identify key experiences and changes in action, many which are continuing beyond the course.

**Outcomes and conclusions:** Students identified the critical role of experience as a complement to course readings and the need for guest speakers to provide examples of how to live differently. They also identified the need for a safe classroom space which included an intuitively determined “gradual reveal” of multiple ways of accessing knowing (“extra-ordinary science”, in Kuhn’s framework) as essential to supporting effective expression of personal experience and integration of concepts introduced in the readings. Several of the students noted that they were continuing to practice many of the techniques learned in the class even though it was completed two months previously. Others told stories of how they used alternative ways of knowing to write their final synthesis papers - which resulted in significantly higher grades for almost all of them.

**F26**

**Deconstructing ‘the Child’: Using visual analysis to defamiliarize the familiar**  
*Elisabeth Richards (Nipissing University)*

Arts educators have long held the importance of visual and performing arts in developing diverse ways of thinking. In Allan Synder’s paper “Breaking the Mindset,” he reminds us that “all of us our blinded by our mental paradigms--our mindsets...mindsets acquired from past experience (Synder, 1998, p. 2).” Although these schemes or “mindsets” have evolved to help us process information more efficiently, they also result in a prejudiced worldview. To break that mindset, the task of the critical arts-educator is to find ways of using arts-based mediums to allow students to re-imagine these concepts anew.

This project will examine the use of student drawings as a means of bringing these underlying mythologies/precepts to consciousness. Mitchell and Weber (1995) suggest that “drawings offer a different kind of glimpse into human sense-making than written/ spoken texts do, because they can express that which
is not easily put into words; the effable, the elusive, the not-yet-thought-through, the sub-conscious.”

(p. 304) By analyzing a series of student drawings of “the child” that were created in a second year Human Development class, what will be examined is the potential role such drawings might have in questioning foundational beliefs. Participants at this session will be asked to engage in a similar drawing exercise to gain experiential knowledge of this process.

**F27**

**Teaching and Learning innovations that motivate engineering and technology students: an International Study.**

*Peter Willmot (Loughborough University)*

Well motivated students are more likely to stay with and succeed on course (Martinez 2000), but what motivates some engineering and technology students to study and study hard while others prefer to drift? It is known that, in time, intrinsic motivation leads to increased retention and better prospects in degree related employment (National Skills Academy 2010), so it follows that university departments have a need to actively encourage strong engagement with their courses.

This poster presentation seeks to provoke discussion amongst conference delegates about the motivating factors on technically challenging courses and the extent to which improved motivation can be nurtured. At Loughborough University, many newly arrived students describe an instrumental approach to learning, which they develop during their secondary education; they gather marks from a collection of short-term intensive assignments and the marks are all important to them. Students increasingly arrive at university with the expectation of ‘teaching’ not ‘learning’ and naturally expect their learning will continue in a similar manner to their earlier experience (Cook & Leckey 1999), but this is often not well aligned with the expectations of their professors.

There is already a large body of literature on motivation, but a recent UK Higher Education Academy (HEA) report on student engagement (Trowler & Trowler) recommended cross-institution studies by discipline to gain a picture of student engagement and understand causation. This resulted in a one-year international research project that will concentrate on full-time, enrolled undergraduate students of engineering and related disciplines. The project will be in its formative phase at the time of the conference and it is hoped that this opportunity will enable the researchers to add to the growing worldwide network of technology based academics who wish to find answers to this problem.

This research is seeking specific examples of teaching and learning innovations that are proven to improve the intrinsic motivation to study, taking in examples of good pedagogical practices from North America, Europe and Australia. Being truly international, the research will benefit by including qualitative and quantitative data derived from staff and students who are the product of different pre-university education systems. The poster will briefly describe, as a basis for discussion, two innovations that have been successfully implemented by the author and verified by external evaluation to enhance learner autonomy in team projects. The innovations are an online peer mark moderation system that has been developed into an open-source software package and a group reporting method that involves audio-visual media. Both of these innovations are now in use outside the originating institution and have proven their value across a wide range of different disciplines.

**F28**

**Infusing Diversity Into The Sciences: Two Case Studies**

*Maleka Hashmi, Amanda Little (University of Wisconsin-Stout)*

Diversity awareness is a vital component to success in a global economy. America’s rapidly changing racial and ethnic composition necessitates the need for college students to be aware of diversity-related issues when they join the workforce. There is a perception that it is difficult to infuse diversity into a science curriculum without losing content. Another perception is that diversity-related content cannot be taught effectively within the context of a science course.

However, there are a wide variety of methods and levels of diversity infusion. Not every course in a student’s curriculum needs to accomplish all objectives toward true multicultural consciousness. Even infusing diversity and openness in small tangible ways into a course can bring the student part of the way toward the primary
end goal of the overall college education. It is also important that students recognize that science is a
cultural enterprise, subject to normative viewpoints.

Our strategies: Dedicated class sessions and finding natural points of entry within courses whose primary
goals are not diversity-related.

One project infuses multicultural diversity into an advanced physiology course with readings and a semester
long group project. Specific diversity related course goals and objectives are to 1) recognize the validity of
multiple perspectives and cultures, 2) explain how individuals from different cultures view medicine and their
approach to healthcare and 3) appreciate the need for multicultural awareness in Western healthcare. Along
with readings, students worked in groups to research the attitudes/practices of different racial cultures on
health and disease management. Students presented their projects at the end of the semester through a
20 min power-point presentation. Students then reflected upon their projects through a reflection activity. A
pre-post survey was also administered to evaluate student understanding and appreciation of multiculturalism
and its relevance within healthcare.

Another project infuses multicultural diversity into a plant biology course with readings, targeted discussion,
and Calibrated Peer Review (CPR). Specific diversity-related goals and objectives in the course are to 1)
recognize the validity of multiple perspectives and cultures, 2) explain how individuals from different cultures
are affected in different ways by environmental and scientific issues, and 3) understand the conventional
“Western” perspective of nature and land-ownership as culturally-influenced. A series of readings were
chosen to give voice to people from other cultures. Students were assigned rotating discussion roles in small,
permanent groups, and discussed the readings in class. Then, they used the web-based CPR program to write
a reflection that was anonymously graded by peers. A pre-post survey was administered and CPR reflections
were also evaluated by the instructor to identify student progress over the semester course.

We will examine the results of the two projects to determine student appreciation for diversity within their
fields and also determine the success of our methods in moving students further toward the learning goal of
multicultural consciousness or increased multicultural sensitivity, defined as helping learners question their
own cultural situation in the world, and being aware that other perspectives exist which have an impact on
the values and behaviors of others.

Convention Centre Chedoke C (3rd floor) 4:30-6:30pm

**F29**

**Poster**

**From Vision to Practice: Redesigning the First Year Experience**

*Lisa Dickson, Tracy Summerville, Angele Smith (University of Northern British Columbia)*

In 2012 the University of Northern British Columbia implements a first year foundation curriculum pilot
program. The cohort-based suite of interdisciplinary, integrated courses is designed to introduce first-year
students in the arts and social sciences to the university experience. The pilot aspect of the program aims to
allow faculty to explore the link between broader vision, new curriculum development, and on-the-ground
practice. The planning process has drawn on scholarship in the areas of Learning Outcomes (e.g. Peter Wolfe)
and curriculum development (e.g. Robert M. Diamond), and is illustrative of broad-based consultation and
collaborative participation among diverse stakeholders from the university community.

Historically, a disassociation of practice from vision and context has been a critical obstacle to institutional
attempts to design an effective first year experience at UNBC. Past programs focused on the breadth
requirement curriculum and suffered from a lack of integration and sustainable vision. Our poster gives an
account of a foundation year program that, as one of its core mandates, attempts to resolve these key
problems by articulating a broader vision grounded in learning outcomes and collaborative curriculum design.
The process described here is generalizable to other institutions attempting to address issues of recruitment
and retention, cohesive curriculum development and cohort-building. Therefore, the poster speaks directly
to the conference themes regarding the integration of theory and practice in SOTL, institutional culture, and
leadership and academic development.

As an initiating mechanism, an institution-wide reflective learning outcomes project provided the opportunity
for faculty to articulate the connection between their vision, core educational values and classroom practices.
Structured by Senate-defined University Learning Outcomes, the Learning Outcomes Workbook Project conducted an extensive department-level survey in which 18 programs, departments and professional schools articulated specific disciplinary learning outcomes and definitions of both the “ideal student” and the relationship between teaching and research. Analysis of the completed workbooks conducted by the Project Co-ordinator revealed a broadly based heretofore hidden consensus among seemingly disparate disciplinary programs. This consensus provided the context within which the foundation curriculum was developed by an interdisciplinary team of faculty, students, academic support staff and administrators.

Our poster will demonstrate the two-year planning process, mapping UNBC’s unique context and institutional culture, the committee’s extensive negotiation and consultation with stakeholders, and the identification of appropriate pedagogical practices and the development of curriculum. As the poster will show, what distinguishes the foundation curriculum from past attempts to reframe the first year experience is its grounding in and mobilization of the university-wide learning outcomes; a commitment to integrated themes and ongoing curriculum review and development; and, most importantly, the ability of faculty and stakeholders to see themselves and their educational values reflected in the program at the levels of both curriculum and classroom practice. The program’s six integrated courses will illustrate concretely the core aims and issues of our poster presentation. Broadly applicable as an example of institutional leadership for academic development and SOTL, this poster emphasizes the necessity of trust-building and of understanding and responding to multiple contexts, including not only institutional culture and goals but the wider culture of post-secondary education in the communities we serve.

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**F31**

**Collaborative Learning through Pair Programming in Introductory Programming Courses**

*Sarbani Banerjee (Buffalo State College, State University of New York)*

It is well-known that introductory programming courses suffer from low retention rates and fail to attract and engage diverse group of students especially women and minorities. Educators continue to use different teaching strategies to engage students in learning of programming languages and to provide a better learning experience for the students. Pair programming is a collaborative activity where two programmers work in one computer on a same programming task. The benefits of collaborative work such as pair programming in computer science courses especially in introductory programming courses are numerous (Williams 2000). Many researchers (Warner 2005, Howard 2007) show that pair programming holds promise for closing the gender gap that now exists in computer science. In industry the software development methodology called Extreme Programming utilizes the concept of pair programming which indicates that two programmers working collaboratively on the same design and development of software perform substantially better than the two would working alone (Bryant 2006; Wray 2010). Students who program in pair usually produce better programs, complete course at higher rates compared to solo programmers (Hannay 2009; McDowell 2002). Collaboration is an effective pedagogical tool to teach introductory programming (Nagappan 2003) and allows students to learn new languages faster and better than solitary learning (Williams 2000).

The purpose of this presentation is to explore the literature related to pair programming and to describe a planned research study that will examine the effectiveness of pair programming in an introductory programming course. The research will be conducted in two phases in a semester-long programming course. In the first half of the semester students will be engaged in pair programming and emphasis will be on individual programming in the second half of the semester. Current research will study the effects of pair programming related to students’ understanding of the programming concepts in the introductory programming course. Data will be collected from the students related to their perception and experience with individual programming and pair programming. A preliminary analysis of data will be presented.

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**F32**

**Learning Communities in Undergraduate Statistics: A Collaborative Problem-Solving Approach to Learning**

*Erin Curran, Dayius Turvold-Celotta (University of St. Thomas)*

Since the 1980s, there has been a continuous call to strengthen undergraduate science, technology, engineering, and mathematics (STEM) education in the United States. Institutions of higher education have been asked to consider strategies and programs designed to improve the depth and breadth of student learning in
introductory STEM courses, facilitate positive attitudes toward the content and discipline, encourage persistence through courses and programs, and enhance the academic experience for participating students. Collaborative and problem-based learning strategies have been theorized to be effective strategies for meeting these objectives in undergraduate STEM education. In an attempt to strengthen the undergraduate learning experience in STEM courses at a private, liberal arts university in the Midwestern United States, a peer-facilitated Learning Community (LC) program was initiated in the Fall of 2010.

In this specific program, LCs are offered in introductory biology, chemistry, calculus, and applied statistics courses. LCs are course-specific groups of eight to twelve students that work with a paid peer facilitator for 1.5 to 2.0 hours every week throughout a semester. Student enrollment in a LC is voluntary; however, students who enroll are asked to attend every scheduled session. Peer facilitators (PFs) are former course participants who have demonstrated both content mastery and an aptitude for collaborative engagement. Peer facilitators do not act as teachers or tutors, but as guides in collaborative, problem solving endeavors. To that end, PFs receive regular training on group facilitation techniques and collaborative problem solving strategies. Course-specific problem-based activities are typically designed by a faculty liaison to the STEM LC program. Each two-hour LC session starts with a team-building activity and includes opportunities for in-depth investigation, collaborative problem solving, and discussion of process and findings. The progress of each LC session is reviewed on a weekly basis by the peer facilitator and faculty liaison.

Collaborative, problem-based learning strategies have long been theorized to enhance learning outcomes, persistence through courses and programs, and student attitudes toward learning. Researchers examining the impacts of collaborative, problem-based learning in undergraduate STEM education have found results that are largely consistent with the theory underpinning the use of such learning strategies. However, the impact of collaborative, problem-based learning on the undergraduate student and experience have been found to depend heavily on programmatic structure and implementation. Moreover, very little of the research has been conducted with students participating in undergraduate applied statistics courses.

The emphasis of this research is to investigate the impact of the STEM LC experience on both content mastery and dispositions of students taking an introductory course in applied statistics. To uncover the impact of the LC experience on content mastery, LC participants in an undergraduate applied statistics course are compared to matched pairs on course outcomes. To better understand the impact of the LC experience on student attitudes toward the content and discipline, as well as feelings of competency with regard to the content, LC participants are compared to matched pairs on Candace Schau's SATS: Survey of Attitudes toward Statistics.

All course outcome and attitudinal data have been collected and data analysis is in progress. The results of this investigation will be compared with those of previous research on the use of collaborative, problem based learning in undergraduate STEM education. Additionally, results will be discussed in reference to the specific structure and implementation of the STEM LC program at this medium-sized, liberal arts institution in the Midwestern United States.

DSECT - Drug Safety & Effectiveness Cross-Disciplinary Training Program
Joanne Kehoe (McMaster University)

Drug therapy problems are common, largely preventable, clinically harmful and an ever increasing burden on our healthcare system. The Drug Safety & Effectiveness Cross-Disciplinary Training Program (DSECT) seeks to address this challenge by providing a training environment for students Canada-wide to integrate concepts and findings across the drug discovery, applied clinical practice and policy spectrum. DSECT is a one-year program based at McMaster University and funded by the Canadian Institute for Health Research. DSECT trainees are junior researchers, enrolled in graduate, post-doctoral or clinical fellowships, wishing to gain a broader perspective on drug safety and effectiveness through planned learning interactions with researchers from different domains of science: biosciences; clinical therapeutics; population health, epidemiology, and biostatistics; and health services and policy research.

Key program concepts and competencies were refined through iterative dialogue and consensus at a series of meetings among experienced investigators (known as mentors) representing the different scientific domains. Literature reviews were conducted to inform curriculum development and program components were piloted. A multifaceted evaluation process was instituted using a program logic model to track outcomes related to program fidelity, trainee achievement of program goals, and mentor and trainee satisfaction with program.
Now in its fourth year, the DSECT program provides interdisciplinary opportunities to augment knowledge and skills through exposure to concepts from multiple scientific domains while still encouraging specialization in the trainee’s focus domain. Program learning builds upon a thesis or other project the trainee is currently engaged in. Program curriculum includes a blend of face-to-face and online activities including: integrative sessions introducing concepts across the drug discovery-use spectrum; basic concepts sessions within the four scientific domains; research skill-building seminars fostering research skills; one-to-one mentorship across at least two scientific domains; group educational activities; an online book club; practicum/exposure opportunities; and a final knowledge translation activity. The DSECT curriculum exemplifies how the use of a multi-pronged approach using technology, subject matter experts and partnerships across a diverse student community can achieve shared and individual learning goals.

**F34**

**The Evolution of an Interprofessional Healthcare Learning Resource: From Clinical Practice to Tutorial Setting**

*Pat Miller, E. Lynne Geddes, Joan Southam (McMaster University)*

**Question and Rationale:** While academics regularly design learning resources, rarely do they report on the development or testing of these resources prior to implementation. This poster describes the development and pilot-testing of a new healthcare learning resource. The resource is designed for healthcare students in an interprofessional, problem-based learning (PBL) setting, with the goal of enhancing knowledge and clinical reasoning skills. The learning resource addresses older people living at home who are reluctant to adopt falls prevention strategies proposed by rehabilitation professionals. The resource includes defined learning objectives, healthcare problem, tutor’s guide and key references.

Falls are a major cause of injury among seniors and can result in significant personal and societal costs. Often, personal and social factors influence the older person’s willingness to adopt the health professional’s recommendations, and the person appears to be non-compliant. Real-life clinical examples shared by physiotherapists (PTs) were used to create this learning resource. Occupational therapists (OTs) and PTs working in homecare provided additional feedback to make the problem as realistic as possible.

The purpose of our study was to examine how closely the learning objectives generated by student PTs and OTs in mock tutorials aligned with the anticipated learning objectives, in order to modify the resource accordingly prior to curricular implementation.

**Methods/models:** Two mock tutorials were conducted, each with six students (3 OT, 3 PT) and one tutor. Qualitative methodology was used to review the transcribed tutorial discussions. This, along with tutor and student feedback, provided information to inform modifications to the learning resource.

This research embraces interprofessional education (IPE) and evidence-based practice (EBP). In the mock tutorials, students from two different health professions shared their knowledge and experience, and gained an improved understanding of their respective roles. The topic of this learning resource is relevant to many health professions; it has the potential to be used in professional programs beyond OT and PT. An EBP approach was used to develop and test the learning resource to optimize its utility and learning outcomes.

The methods also integrated student voices; students participated as subjects and two senior students assisted the research team in conducting the mock tutorials and analyzing the data.

**Outcomes:** The product of our study is an enhanced learning resource, based in clinical practice and tested in the tutorial setting. The rigour of the development process gives confidence in the learning resource’s realism and pedagogy and in its ability to raise students’ awareness of the intended learning objectives.

**Reflective Critique:** We were able to identify specific ways to improve our newly-developed learning resource and to integrate clinical and academic perspectives, in order to optimize student learning in an interprofessional context. Concurrently, the topic addresses a significant societal and health concern - elderly persons living at home and at risk of falling. As a result, our research may be of interest to faculty with similar interests.

**Audience Engagement:** Presenting our research as a poster will enable us to discuss with other conference participants the development of PBL resources for use in interprofessional education.
Integrating the belief systems and instructional practices of pre-service and in-service special education teachers
Linda Hensel (Concordia University Wisconsin)

**Rationale:** This presentation offers current research about teachers’ beliefs and practices which impact the classroom teaching practices in teacher education programs. As a result of this poster session, participants will engage with the researcher about: (a) current research about special education teachers’ beliefs and practices regarding reading instruction and (b) the implications of this research to teaching and learning in Higher Education.

This session will encourage participants to discuss the impact that research results from the field of K-12 education can have on the classroom teaching practices in Higher Education. The research results indicate that special education teachers are aware of research-based practices in reading for students with disabilities and want to implement them in their classrooms. However, they often do not put their beliefs into practice in the classroom. The challenge for IHE faculty is to integrate these results into teaching and learning at the post-secondary level so that students in teacher education programs are able to integrate theory and practice in the IHE classroom and in their future practice.

**Theory and Methods:** The study was informed by two decades of research in the area of teacher beliefs’ and practices, which was initially proposed by Clark and Peterson (1986). The related research questions were:

1. What are the stated beliefs and practices of elementary special education teachers regarding differentiated instruction, student feedback, and grouping practices during reading instruction?
2. What are the observed reading practices, including differentiated instruction, student feedback, and grouping practices of elementary special education teachers during reading instruction?
3. What is the convergence between the stated beliefs, stated practices, and observed instructional practices of elementary special education teachers during reading instruction?

The study employed the research methods of direct observation and survey research to collect data, and utilized qualitative analysis, and descriptive and nonparametric statistics to describe and compare the data.

Comparisons computed using the survey and observation data indicated significant differences between beliefs and practices. Significant differences were found between stated beliefs and stated practices, stated beliefs and observed practices, and stated practices and observed practices. Teachers rated their beliefs higher than their practices, and their stated practices were ranked higher than their observed practices.

**Outcomes and Critique:** The study has implications for teaching and learning in higher education, specifically in Schools of Education. Students graduating from teacher education programs must be equipped with both knowledge of the latest research-based practices and strategies for implementing those practices in their classrooms. Teacher education needs to do a better job of preparing future teachers to integrate theory and practice, and to bridge the gap between beliefs and practice. The research results must be integrated into classroom teaching practices so that students not only receive knowledge, but the tools to implement what they have learned once they enter the field. The current research does not address how this can be done, but identifies the need for it. This poster session will promote conversation around how to integrate theory and practice in this important area.

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Students learning in Japanese higher education:
From the perspective of communities of practice and learning bridging
Toru Kawai (Kyoto University)

In Japanese higher education since the 1990s, more and more emphasis has been put on experiential education, which includes service-learning, cooperative education and project-based learning. Likewise, student survey research has been conducted on the effects and benefits of experiential education in high expectations of good
scholastic results. These studies revealed that 70% of the students in Japanese higher education do not spend more than one hour everyday on out-of-class study; however, those who do study hard out-of-class feel that they are developing and acquiring knowledge and skills. Despite the interest in this field, some of the dynamics of students learning in experiential education are still not fully understood. In this study, I investigate the relationship between in-class studies and out-of-class studies in terms of the dynamics of students learning.

**Methods:** The Career Development Survey 2010 was administered and 2,362 students (1,036 male and 1,326 female) all over Japan participated in this study. From the data collected, the participants are classified into four groups. The characteristics in each group are as follows: Group 1 does not have out-of-class CoP (Communities of Practice), which includes student clubs (for example, baseball teams), social groups, study project groups and volunteer organizations; Group 2 has out-of-class CoP but these students do not study through the CoP; Group 3 studies through out-of-class CoP but these students do not bridge it to in-class study; and finally Group 4 studies through out-of-class CoP and bridges it to in-class study. I examined how these four student groups differ in their campus lives, daily satisfaction, acquisition of knowledge and skills, and future orientation.

**Results and Discussions:** First, Group 1 students are scored lower than the other 3 groups in every category. Participating in out-of-class CoP is an important factor for students’ “learning and development”. Second, there are no significant differences between Group 2 students’ scores and Group 3 students’ scores. Third, Group 4 students are engaged in well-balanced activities in their campus lives including studies, and scored significantly higher than the other three groups regarding daily satisfaction, future orientation, and acquisition of knowledge and skills. This study concludes that both participation and study in out-of-class CoP in addition to bridging those activities to in-class studies, are able to drive students’ “learning and development”.

These survey results suggest that many students do not only learn both in-class and out-of-class but also be able to bridge out-of-class studies to in-class studies. In the final part of this poster presentation, I will ask the audience how instructors can use this connection, which I call “learning bridging”, and what kind of pedagogy is effective in their classes and educational practices. During this poster presentation I hope to discuss with the audience.

**Get your hands dirty! Tactile connection encourages self-directed learning of sediment properties**

Janice Allen (Dalhousie University)

An intuitive understanding of the properties of sediments is integral to the study of many problems in environmental science, including transportation of contaminants in ground water. This poster describes the design and implementation of a new tutorial for the first year environmental science course at Dalhousie University. The primary aim was to improve student engagement in learning the fundamental properties of sediments. Preliminary, qualitative results are presented from the first year that this tutorial was implemented. This work is relevant to the subtheme on integrating diverse disciplinary approaches to teaching and learning.

Three strategies were employed to enhance student engagement. First, the subject matter was introduced in the context of a transdisciplinary case study style approach. Students were presented the following question: determine the extent and timing of dispersal of a contaminant leak through ground water. A schematic study area was used, and three underlying sediment types were considered. Students from the environmental science class were given data on the three sediment types (collected in the first year geology laboratory), as well as physical samples of gravel, sand, and glacial till. Second, experiential learning was encouraged through an experiment measuring one sediment property (porosity). Physical participation in a subset of the data collection provided a more meaningful connection to the data provided. Finally, an open-ended question was posed, concerning the shape of the area affected by contamination. This spawned a fruitful discussion of the assumptions and simplifications made in our analysis.

Effectiveness of the activity was evaluated through verbal questioning during the tutorial, written assignments, a ‘one minute essay’ administered the following week, and reflection by the teaching assistants. Essay responses indicated most students found the hands on exercise (experimental measurement of porosity) the most engaging aspect of the tutorial, and would like to know more about the other property measurements made by the geology students. Personal reflection by the teaching assistants revealed that an actual case study, rather than the schematic mapping exercise, could facilitate a deeper connection to the subject matter. The most striking observation was the tendency of tactile interaction with the samples to facilitate self-directed learning of sediment properties. Students were given a chance to get their hands dirty, feeling the three
sediment samples. Most students participated in this voluntary activity, after which they were able, almost without exception and without review of the lecture material, to derive and describe the defining physical characteristics of the three samples.

This exercise highlights the importance of tactile interaction in facilitating student engagement with the subject matter of sediment properties in particular, and geology in general. Implementation of this environmental science tutorial required experimental data and minimal equipment and supplies borrowed from the geology department. Additional tutorial time or specialized laboratory space was not required. The author recommends that, where such interdepartmental collaboration is feasible, all first year courses introducing basic principles of geology incorporate a hands-on exercise that allows direct contact with physical samples. In addition, quantitative data on the effectiveness of this approach should be collected.

**F38 Poster**

**Mathematics You Can Touch**

*Nick Rogers (McMaster University)*

Teaching methods that focus on learning styles such as visual, auditory, tactile/kinesthetic learning gained popularity in the 1970s (Dunn & Dunn 1978). It is clear that most people prefer specific and different types of learning (Pashler, McDaniel, Rohrer & Bjork 2008), though hard evidence for the benefits of incorporating this approach into teaching is rare (Leite, Svinicki & Shi 2009). In this poster, I will showcase simulations which were developed for use in an undergraduate mathematics course which focus specifically on one or more types of learning. Students called tutorials "a useful/well run part of the course" which made "math interesting."

Traditional teaching methods for advanced partial differential equations involve direct instruction methods: the teacher usually spends most of the time lecturing, or guiding students through a complex problem wrought with difficult calculations. For even the simplest of partial differential equations the computations involved in a single question often fill the entirety of a ninety-minute class - it is a challenge to keep students engaged as their attention, energy, and motivation deteriorate with time. I have developed fast, efficient simulations of many PDEs which can be interacted with in real time - imagine watching heat dissipate while adding source terms by touching an interactive screen, or pulling a virtual string up/down, and observing the vibrations. The intuition that students gain from effective, interactive visualization of these problems is absent from many upper year classes, yet would greatly benefit the students. After interacting with the heat equation simulation, identifying the long term behaviour of solutions (a mathematically difficult question) becomes straightforward - simply look at what happens. This tool is not a replacement for the traditional method - a rigorous mathematical justification of what can be observed is still important, but these methods can offer students an opportunity to become active, engaged learners who experiment and develop intuition far beyond what symbols on a page can convey. I hope this poster can spark discussions among fellow educators from other disciplines as well about how they engage specific types of learners.

**F39 Poster**

**Undergraduate research projects: a flexible wireframe for success**

*Martin Luck (University of Nottingham)*

The inclusion of a research project into undergraduate programmes turns the educational experience from passive to active. By undertaking their own research, students deepen their understanding, develop independence and gain subject ownership. They progress from studying what is already known to investigating something new. They penetrate their subject's boundaries, realise its limitations and potentially contribute to its development. Students often describe their research experience as transformative. But a positive outcome requires a secure, supportive and educationally risk-free setting. Research is by definition uncertain but each student has only one opportunity and will be assessed against demanding criteria. The academic challenge is to provide an egalitarian and productive environment despite diverse topics, varied styles of investigation and uneven facilities.

The educational literature is largely silent on how this can be achieved, nor is there agreement over the purpose or realism of student research. Goals and learning objectives tend to be set
locally, often by listing the generic and subject-related skills to be acquired, prescribing the balance between independence and guidance, and defining summative assessment criteria. It is much more difficult to define an environment for successful inquiry (Taraban & Blanton 2008; Kite et al 2012). Problems arise from the variety of research scenarios but principally from tensions between the research and educational purposes of the endeavour: the project must accommodate uncertainly and permit discovery but must also deliver sound education and fair assessment.

This presentation offers a solution to this dilemma. The author and others (Luck 2011; Healey 2012) have previously attempted to create universally valid lists of qualities for successful student research. However, these become vague and bland when applied to different fields of study and across institutions. The proposed alternative is a wireframe structure in which both student and supervisor can operate. Its overall purpose is to provide educational integrity, remove anxiety and allow concentration on the research itself. Fixed reference points provide security of study, but flexible interstices accommodate project individuality.

The fixed points align in two intersecting columns - one for the student and one for the academic supervisor. For the student, there are questions to ask before the project starts about clarity of purpose, the plan of investigation, expected inputs, supervisory structures and assessment criteria. Addressing these reassures the student that whatever the outcome, their research experience should be positive and their work will be objectively evaluated.

For the supervisor, there is a checklist of responsibilities: assuring project validity and integrity, accepting intellectual risks, providing resources and guidance, ensuring objective assessment, and guaranteeing cohort comparability.

The wireframe structure doesn’t artificially separate the educational and research goals of the project: it meshes them in a manner appropriate to the topic and circumstances. Assessment becomes focussed on process not outcome, greatly enhancing the likelihood of discovery and deep understanding.

Examples will be given of the wireframe’s application to projects in the biosciences. The author seeks interest from colleagues who could help to develop strategies and test its efficacy in other fields and within different academic environments.

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**F40**  
**Poster**

**Problem solving training as a means to enhance the delivery of supplemental instruction**  
*Michael deBraga, Shahad Abdulnour, Thomas Klubi (University of Toronto)*

Supplemental Instruction (SI) has been in place across the United States for over 30 years. This approach was developed to help support students registered in courses with high attrition rates and is generally regarded as a form of remediation. Over the course of the last 15 years the support of undergraduate programming has evolved and is now a staple at many Canadian Universities. In a recent publication of the Higher Education Quality Council of Ontario (HEQCO), Carleton University explored the model and proposed the hypothesis that (SI) not only supports those students taking part in the support sessions but also appears to have a very positive impact on the session leaders. The Robert Gillespie Academic Skills Centre (RGASC) of the University of Toronto - Mississauga (UTM) has undertaken an investigation of the SI benefit to Peer Facilitated Study Group Leaders (PSFGs) in order to test Carleton University’s assertion.

Our findings generally support the conclusions reached by Carleton University and outlined in the HEQCO publication. In an attempt to more fully quantify some of the key skills necessary for the training of PFSG leaders, The RGASC generated a set of guidelines designed to develop a problem-solving module in the training of its PFSG leaders. To assess the efficacy of the problem-solving module the RGASC examined the responses of over 60 randomly selected PFSG leaders to a qualitative questionnaire.

The questionnaire was designed to separate the respondents into two groups, those who had received problem solving training and those who had not. For those PFSG leaders who received problem-solving training we examined which aspect of the problem solving steps, delivered through their training module, were in the PFSG leaders’ estimation the most valuable in the delivery of their sessions. The second part of the analysis was designed to measure the perceived benefit to their own student experience as SI leaders. In this instance they were asked to respond to a series of questions that asked the students to reflect on their
problem solving training and then asked them to identify in what manner had this training impacted on their own personal experiences (i.e., has some aspect of the problem solving skills training contributed to your preparation for non-session related activities). Preliminary data supports the claim that students involved in the delivery of SI sessions benefit from being able to better understand the logical steps required to develop and then deliver problem solving skills. Sixty-six percent of respondents provided examples of how problem-solving training has helped them beyond the role of PFSG leader by providing guidance in their own course work as well as in non-academic scenarios. This investigation supports Carleton University’s claim that facilitated study group leaders benefit from their training and, therefore, enhance their own university experience. In addition, we provide direct evidence for the use of quantifiable problem solving strategies in the training of PFSG leaders and the leaders’ own recognition of what aspects of this training better prepared them to run their sessions and to enhance their own personal experiences.

**F41**

**Evaluation of an Innovative Hybrid Format Program**  
*Marilyn Ballantyne, Pamela Baxter (McMaster University)*

The Advanced Neonatal Nursing (ANN) graduate diploma is a specialty professional program designed to prepare nurse practitioners. The program has been offered at McMaster University since 1986 and has gained national and international recognition as a result of the extensive research that has been an integral part of its planning, development, and evaluation (DiCenso, A. et al., 2010; Mitchell-DiCenso, A. et al., 1996, 1995, and 1991). There is a growing demand for greater access to the ANN graduate diploma from a distance from within our region and across Canada as a result of: (1) newly funded neonatal nurse practitioner positions with expanded hospital bed capacity, (2) the recent closure of other Canadian education programs, and (3) an aging neonatal nurse practitioner work force, many of whom will retire over the next 5-to-10 years.

The 2011-2012 ANN program is being offered via distance for the first time in response to a formal request from within Ontario for access to education. The new hybrid format program is conducted synchronously to on-campus learners and off-campus distance learners using a problem-based learning format. Learners participate through web conferencing and three innovative 1-week residency periods. To ensure educational quality, a formative and summative evaluation of the hybrid ANN program is being conducted. A descriptive mixed methods research approach is being used to determine learners’, preceptors’, faculty’s and administrators’ experiences and perspectives on the quality of education and their levels of satisfaction with the ANN program. The aims of the evaluation are to provide essential information on the educational process and academic outcomes of the program, advance the scholarship of teaching and learning in hybrid format, problem based learning methods, and ultimately, to enhance access to high quality innovative nurse practitioner education across Canada. The findings of the evaluation research will be presented with particular emphasis on insights and lessons learned on the journey to advancing leadership in teaching practices and education.

**F42**

**The Efficacy of E-learning for Professional Development of Nurses**  
*Michelle Barnard (Hamilton Health Sciences)*

Hamilton Health Sciences is the largest academic health care centre in South Western Ontario comprising seven sites that provide acute, paediatric, cancer, ambulatory, and complex continuing care. The 10,000 employees, of whom 3,500 are nurses, serve a population of 2.3 million. Medical research and technology is perpetual, impacting the nurse’s need to keep acquiring new information for best patient care delivery. Traditional face to face learning, such as inservices, no longer fit as the primary teaching modality in healthcare today. Numerous barriers exist, such as increasing patient acuity, staff shortages, lack of time, and budget cuts, resulting in an apparent gap to meet the nurse’s need for professional development. Therefore, educators require knowledge about their learners, creativity, and diverse teaching strategies, such as e-learning, to educate, support, and nurture the nurses toward greater knowledge and evidence-based practice. E-learning (electronic learning) is becoming recognized as an efficacious alternate and adjunct education teaching option for professional development that enables interactive, timely learning. Access for e-learning can be made at one’s own pace, regardless of location and time, thereby enabling greater autonomy and flexibility for nurses to learn. The
efficacy of e-learning is debated in favour of professional development education of nurses within a tertiary hospital setting using adult learning theory (Gardner, 1983; Knowles, Holton & Swanson, 2005; Kolb, 1984), and constructivism with Engeström’s (1987) 4 questions of learning as a framework:

1. Who are the subjects of learning
2. Why do they learn
3. What do they learn
4. How do they learn (p.53)

A literature review on e-learning efficacy was compiled of common themes and categorized as a driver or restrainer. Engeström’s four questions are transferable as they provide the educator with a comprehensive view of learners. Here, the focus is the local nursing population, thereby providing the educator with greater understanding and insight into learner motivation and engagement; otherwise the delivery may not be inclusive. Awareness of multigenerational, culture, and ethnic influences, standards of practice, topic choice, and adult learning styles, ensures e-learning efficacy for professional development through appropriate education content building and delivery. Multiple Intelligences and learning styles compared with e-learning delivery satisfy the diverse learner. E-learning provides consistency in knowledge and practice expectations, promotes engagement, critical reflection, higher learning, and the potential for satisfaction in personal professional achievement. This is the preliminary work for further study and measuring using more context specific studies on sustainability and knowledge-seeking behaviour.

Convention Centre  Chedoke C (3rd floor)  4:30-6:30pm

F43  
Developing our academics: teaching in a research intensive university
Sue Morón-García (University of Birmingham)

Poster

Traditionally the academic role is considered to have a tripartite split (teaching, research and service) however in some types of university (HEIs) more value is perceived to be ascribed to the research role. At this time in the United Kingdom this is exacerbated by a predominant focus on success in the Research Excellence Framework (REF). However, changes in the context and operation of higher education (e.g. widening participation and higher fees in England), coupled to harsh economic circumstances make student investment in tertiary education more high stakes and have led to greater interest in the quality of teaching and support for learning. There is an expectation that lecturers will be “trained”, supported and incentivised to teach well (National Student Forum 2010 cited in HM Government, 2011) and data on teaching qualifications held will soon be used to compare institutions. Developing teaching and learning in this environment can be challenging: achieving engagement from academics with line managers for whom teaching is ancillary; that may have been coerced into attendance, as a probationary requirement; and for whom the critically reflective stance required is uncomfortable. While our institutions put performative measures in place (e.g. the institutional teaching survey) those who aim to encourage premise reflection (Kreber, 2004; from Mezirow, 1991) have to construct safe spaces (Taylor, 1997) in which peers can have conversations that allow them to articulate emerging ideas and to structure insights and feelings (Haigh, 2005). We know that these spaces are important to colleagues (Cleaver & Buckley, 2011; Morón-García, 2010) and as developmental tools (Viskovic, 2006; Warhurst, 2006), but initially they need convincing and it may take some time for them to realize their value. This poster will use feedback data (e.g. in class surveys, end of module questionnaire, course representative and facilitator comments) collected over the first year of operation as an initial way of exploring the ability of a redesigned academic development programme (a PGCert in Academic Practice) to support peer conversations around teaching in a research-intensive institution. Future research (year on, follow-up interviews and / or surveys with those who leave the course) will seek to investigate whether these conversations continue outside the course structure.

F44  
Using Course Embedded Assessment to Evaluate and Improve Student Scientific Writing
Steven Brown, Jennifer Oliver, Renee Michael (Rockhurst University)

Poster

Our project was a course embedded assessment designed to evaluate students’ ability to write a research manuscript based on a study conducted in a psychology research methods course. Expertise in scientific writing is an explicit goal of the American Psychological Association (APA) and is a foundational skill in all scientific disciplines. Research examining students’ scientific writing indicates a clearly delineated and specific rubric is needed in order to obtain reliable measures of student performance (Halonen, Bosack, Clay & McCarthy, 2003;
Prior to the Fall 2009 semester, the researchers jointly created a rubric for the APA manuscript in the methods courses. The specific criteria that were evaluated were organized according to the different section headings of an empirical report (abstract, introduction, method, results, discussion) and included all expected elements of a research study. There was some latitude to accommodate experimental versus survey projects. Students were also provided with an exemplar student paper and received written feedback on a draft of their study. After final papers were graded, the researchers adjusted the criteria for use the following semester by collapsing some criteria into one and including additional criteria. Instructors also developed new learning opportunities designed to help students write sections of the paper that they found most difficult. For example, in addition to providing an example paper, students were provided with manuscript sections that were either good or poor examples to critique and discuss. A content analysis of three semesters of papers was conducted in order to examine on which criteria students did well and where they still need instruction to improve. We will present results that indicate the quality of papers has improved since implementing the rubric and modifying our assignments, for example, students are demonstrating better ability to integrate and synthesize previous research. However, there are still areas for improvement, such as students’ understanding of the limitations of their studies.

Our project demonstrates how SOTL conducted within the context of program assessment can improve teaching strategies for individual instructors while also providing useful program assessment data. Our content analysis of the research papers helped shape our teaching practices across semesters as we attempted to improve student performance on the assignment. Our results also fostered discussions within the department about how other courses in the curriculum might be used to help develop students’ scientific writing ability.

While the results of examining student learning on this task have been used to inform our classroom teaching practices on scientific writing for empirical reports, the rubric needs to be implemented by all faculty who teach the methods courses in order to give consistency to writing expectations within the department and assure department expectations are consistent with the discipline of psychology.

Changes in Course Design: Turning on the Ignition in Applied Learning Programs?
Kathleen O’Brien (Buffalo State College)

A hands-on course with “real world” learning experiences has been offered at Buffalo State College since 2002. A Practicum in Hospitality Operations was developed as a core requirement in the Hospitality Administration curriculum, but it has evolved through “a cycle of action, reflection, and improvement” (Gentry, 2011). So “what changes in course design and teaching practices have been integrated to improve student learning outcomes over the past decade in the student learning lab?” “How have these changes ignited the curriculum?”

“A Model of The Scholarship of Teaching: Content, Process and Premise Reflection on Instructional, Pedagogical and Curricular Knowledge” (Gentry, 2011) is used to examine the changes in course design for the practicum. The instructional content expanded from a “Tripartite of Student Learning” to six essential outcomes for student learning. The process of measuring student lab performance transitioned from mostly demonstration and observation method to increased use of assessment tools by faculty. Also, streaming video, hand held POS devices; tablets and new technologies are part of new instructive methods. Curricular knowledge now incorporates leadership in the skill set in addition to teaching service proficiency, concepts and theories to students. These changes have moved the course from parked, with the brake on, to ignition key on and in full gear.

The findings of the study will be reported in an analysis which charts the changes in course design in the applied learning lab environment over a ten year period. It is believed that there is a strong correlation between emerging instructional technologies and significant changes in course design over time. Additional influences on changes in course content are the stakeholders in the community, diversity, globalization and the external environment. Institutional leadership and academic development have fueled the explosion of the applied learning program into full gear.

More in-depth longitudinal research in the applied learning environment as well as classroom teaching can be very informative to the scholarship of teaching and learning.
reflection on changes in course design, regardless of the nature of the discipline, may lead to a better understanding of which teaching practices are most effective in active and applied learning programs. This research may lead to a hybrid teaching model which is driven by improved teaching practices and documented success in student learning outcomes. A new age of change and growth in course design is upon us.

Cleared the Way for Intentional Learning:
The Use of Learning Plans in a Journalism Production Course
Sally Haney (Mount Royal University)

The study examines the role of student-authored learning plans on students’ development as intentional learners in a senior journalism masthead course delivered in the fall of 2012. The course requires students to take on senior editor roles associated with the ongoing management of a Calgary journalism website called www.calgaryjournal.ca.

Study Background: Production-based courses have potential to present pedagogical challenges as university teachers strive to develop positive learning environments that promote deep and intentional learning against a backdrop of heavy production demands. For example, in the first weeks of a senior journalism capstone course at Mount Royal University, senior editors are tasked with authoring their own learning plans, mastering an online content management system, meeting and mentoring contributors, editing contributor submissions, participating in editorial meetings, attending to online discussions, coming to lectures, and detailing plans for their own content deliverables. It would seem for all involved, there is potential for the process to feel chaotic, even stormy.

Instructors in production-based courses sometimes respond by giving students a list of required assignments, accompanied by associated rubrics, and strict deadlines. The literature on learning, however, makes a compelling case for creating an environment in which students exercise much more control over their learning. Supporting and empowering the learner to identify and set learning objectives, to construct plans for meeting those objectives, and also to reflect upon and revise objectives in response to change are critical to helping the learner achieve short- and long-term learning (Boud and Falchikov, 2007; Cholbi, 2007). The Carnegie Foundation for the Advancement of Teaching states intentional learners are the most “accomplished learners” who “set goals for themselves, monitor their progress toward those goals, understand and seek out the conditions in which they learn best, and actively make connections and meaning.”

Study Methods and Rationale: Data for the study are to be collected and analyzed through various course activities, assignments, and related deliverables, such as:
- Student-authored learning plans
- Results from student-professor meetings concerning learning plans and evaluation
- Pre-semester and end-of-semester questionnaires about how students view themselves as learners
- End-of-semester letters written by students to incoming editors
- Students’ contributions to CalgaryJournal.ca

In designing this study, it is my intention to create a rigorous investigation into the impacts of using learning plans in a senior production course. This research is expected to advance what we know about creating optimal conditions that support intentional learning in production-based environments. It is also expected to better support students as they carry forward some of what they discover about intentionally constructing, managing, revising, and reflecting on their learning. The research is further expected to translate into other disciplines that offer production-based courses.

Nascent data will be available by early October and will be incorporated in the proposed poster presentation. In terms of conference themes, this research relates directly to integrating SoTL research results and classroom teaching practices.
Preceptors Role Modelling of Senior BScN Students Explored Through Reflections of Faculty Tutors
Vanessa Cavalieri, E. Ann Mohide, Noori Akhtar-Danesh, Colleen McKey, Catherine Tompkins (McMaster University)

The overall objective of this cross-sectional survey is to examine senior nursing students’ opinions about role modelling by their preceptors (practicing Registered Nurses) during 12-week clinical practice courses. Role modelling is well recognized as a powerful teaching method, especially in the context of experiential learning. Within health sciences professional programs, role modelling is essential to both clinical learning and socialization into the chosen health discipline. Often, a ‘role model’ is viewed as a person who sets a positive example and is worthy of imitation. However, because role modelling, in any given situation, can be either positive or negative, adopting a more neutral definition, such as, ‘someone who is copied’ more accurately reflects this teaching-learning strategy.

By way of background, preceptorship is an experiential teaching-learning approach that relies heavily on role modelling. In nursing, a preceptored triad is comprised of a BScN (nursing) student, a faculty member, and a seasoned Registered Nurse (preceptor). Together, they collaborate so that the student meets the clinical practice course requirements. In this model, the preceptor not only acts as a clinical teacher, but also as a professional role model for the student.

Applying Fenton and Szala-Meneok’s (2010) exploration of the concepts of good teaching, scholarly teaching, and the scholarship of teaching and learning to role modelling in preceptored education, good teaching within the triad encourages positive role modelling of clinical practice and professionalism. However, role modelling is not formally assessed or evaluated by students, and little exists for faculty or clinical teachers to assess their role modelling performance or its impact on student learning. At present, the extent of scholarly teaching is limited by the available role modelling research. Most of the literature is anecdotal, and the studies are mainly descriptive, methodologically weak, and outdated.

In the spirit of advancing the scholarship of teaching and learning, this survey seeks to explore opinions about role modelling in health professional (nursing) education. Using convenience sampling, role modelling will be examined through the reflections of 30 or more faculty members’ educational experiences teaching senior students in preceptored professional practice courses. Data will be collected and analyzed using Q-methodology, a novel quantitative approach to measuring subjectivity (Thomas & Watson, 2002). In Q-methodology, the participants are presented with a set of statements, called a Q-sample. For this study, representative statements, generated from the research literature and student opinions were refined, yielding 34 concise statements as the finalized Q-sample. Participants then rank the Q-sample on a quasi-normal distribution, with ‘anchors’ of -4 (Strongly disagree) and 4 (Strongly agree) and gradations between the two extremes. By-person factor analysis will reveal groups of collective opinions about role modelling.

It is hoped that the study results will enhance scholarly teaching by increasing awareness about views of role modelling. Findings of this study also may help educators identify explicit ways of using role modelling more strategically in clinical education, and assist students in developing more comprehensive and analytical views of role modelling experiences in clinical settings.

A Hermeneutic Inquiry into Clinical Instructors’ Experiences of Evaluating Unsatisfactory Nursing Students
Maria Pratt (McMaster University)

The purpose of this study is to gain a deeper understanding of the experiences of clinical instructors evaluating unsatisfactory nursing students in clinical practice courses. Studies reported in the literature illustrate convincingly that there is a propensity for nurse educators to pass unsatisfactory nursing students for reasons such as the educator’s fear of being sued by a failed student, a lack of support from administrators, the educator’s inexperience in making adequate evaluative decisions, and sympathy for the student (Duffy, 2003; Luhanga et al., 2008; Rutkowski, 2007; Yonge et al., 2003). The failure-to-fail phenomenon is a common and serious issue in nursing and other higher education...
programs (Basnett & Sheffield, 2010; Dudek et al., 2005). The fact is, nurse educators who refuse to fail students deemed incompetent or unsafe, but pass them instead, are renouncing their role to their educational institutions and the nursing profession by failing to provide an honest evaluation of their students’ performance and neglecting their role to protect the safety of patients.

Despite the cases documenting the reasons for the nurse educators’ reluctance to fail an unsatisfactory student, the nursing education literature contains little information on the experiences of clinical instructors, particularly their thoughts, feelings, and perceptions related to the failure-to-fail phenomenon. Much of the research done to date has focused on the experiences of preceptors directly supervising students in the clinical practice settings rather than that of clinical instructors from the academic institutions assigned to supervise students in the clinical settings. The paucity of research on the experiences of clinical instructors evaluating unsatisfactory students has inspired this research proposal.

This study will use the hermeneutic phenomenological approach derived from the Heideggerian and Gadamerian philosophical and methodological framework; it will focus on the description and interpretation of the clinical instructors’ experiences of evaluating unsatisfactory students in clinical courses. Full- and part-time clinical instructors employed by a university or college who have taught at least one clinical course for one term in any undergraduate nursing program stream will be invited to participate in the study. The purposeful maximum variation sampling technique will be used to seek the participants’ broadest range of information and perspectives (Loiselle et al., 2007). Semi-structured face-to-face or telephone interviews will be used to facilitate an in-depth exploration of the research topic. Data collected from the interviews will be audio-taped and transcribed verbatim and will be interpreted using the Gadamerian approach described by Fleming et al. (2003).

The findings from this proposed study will provide valuable information to the educational institutions and the nursing profession, given that it will increase our understanding of the specific experiences of clinical instructors when dealing with unsatisfactory students as well as identify to what extent they exhibit the failure-to-fail phenomenon identified in the literature. Furthermore, this study has the potential to identify ways to develop strategies to assist the clinical instructors experiencing the challenging task of failing unsatisfactory students.

Although the proposed study integrates solely the voices of the clinical instructors experiencing this difficult aspect of their teaching practice, this presentation has the potential to add to the current Scholarship of Teaching and Learning (SOTL) conversations among teachers in other higher education programs, thereby relating to the conference theme of integrating professional learning and higher education.

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**F49**

**Publication patterns associated with doctoral dissertations at a leading African research university**

*Mathilde van der Merwe (University of Cape Town)*

The environment of doctoral education is changing from one mainly concerned with producing research outputs to one concerned with producing doctoral graduates who are well-rounded and prepared to contribute to the knowledge economy. Within this changing environment peer reviewed publication, despite its flaws, still plays a central role. It is an essential skill that doctoral students should acquire for integration into international research culture. However, current research suggests that publication rates of doctoral students remain inadequate worldwide. This can be seen as an obstacle in effective and high quality doctoral education. Limited data is available in terms of doctoral student publication metrics for African universities. One of the top-publishing departments of the leading research university in Africa, the University of Cape Town, was here used to gain an understanding of the publication patterns associated with doctoral studies. A thorough literature search was performed to find peer-reviewed journal articles relating to completed dissertations of 119 doctoral graduates. The number of publications per dissertation was recorded over a period of ten years and publication patterns were explored. Preliminary results indicate that the majority of students in the sample did publish in peer-reviewed journals, mainly in the years following graduation. These results are discussed in context with similar studies conducted in developing and developed countries, in a variety of disciplines. As a top-publishing department was used, the results are not necessarily indicative of the state of doctoral publication for the institution. This bibliometric analysis thus represents an initial step from where the following questions can be explored: firstly, are doctoral students in some disciplines more prolific publishers than their peers in other disciplines? Secondly, what are the obstacles and aids for doctoral students en route to publication? And lastly, what forms of support (i.e. teaching practices) would be effective to enhance publication and so facilitate better integration into research culture?
F50

**Learning Communities: A Professional Development Approach**
*Mary Walczak, Gary Muir, Diane Angell, David Schodt (St. Olaf College)*

As part of our program in teaching and learning, we have established Faculty/Staff Learning Communities to explore topics related to teaching and learning. These efforts have been possible through support from our Center for Innovation in the Liberal Arts. These Learning Communities consist of 8-12 faculty and staff and last a semester, meeting biweekly. Our original motivation for creating Learning Communities was to address a faculty development need. As we reviewed our faculty development program, we found that it takes longer than anticipated for faculty to conduct, analyze and disseminate their SoTL projects. Faculty conducting SoTL projects often need to become conversant with a body of literature on pedagogy that may be unfamiliar to them while also learning data analysis methods that are not part of their disciplinary training. The Learning Communities originally addressed topics specifically related to SoTL work (e.g., interdisciplinarity, ethical issues in software design), but have expanded to address general issues related to teaching (e.g., underprepared students, teaching with technology). This poster will present an overview of the structure of our Learning Communities and give examples of outcomes arising from participating in the conversation.

F51

**Teach Like a Champion: Reflections from University Faculty Members**
*Tim Brackenbury, Bonnie Fink, Susan Kleine, Mary Natvig, Nathan Richardson (Bowling Green State University)*

In his 2010 book Teach Like a Champion, Doug Lemov identified 49 teaching techniques used by highly successful K-12 teachers. These included “No Opt Out,” “Begin with the End,” “Circulate,” “Cold Calling,” and “Entry Routine.” While these techniques have received favorable reviews in the press (e.g., Green, 2010), it was unclear if/how they might apply to university education. This poster presents key themes uncovered by a group of faculty members at Bowling Green State University who attempted to apply Lemov’s techniques in their classrooms.

The participants in this study were 10 faculty, from 9 different departments, who participated in a learning community titled Making Great Teachers. The learning community was developed to examine published teaching techniques and apply them to courses being taught. Meeting biweekly, faculty discussed the techniques, brainstormed applications, and observed each other’s teaching. A qualitative analysis of notes taken during the group meetings, in-class observations, and personal reflections revealed five primary themes. Each theme is listed below, along with sample quotes from faculty members.

**Theme 1:** It was helpful to consciously identify and discuss the techniques, even though most of them resonated with current teaching practices. “Getting students to think critically has everything to do with how you ask questions and how you respond when they answer.”

**Theme 2:** The techniques initially appeared simplistic, but required effort and repeated practice before the faculty felt successful with their use. “At first glance this all sounds so simple, but it actually identifies some of the challenges I have encountered in the classroom that [I] recognize as frustrating but would not have been able to explain.”

**Theme 3:** The techniques were applicable to factual, application, and abstract forms of learning. “During class activities, I try to give students props by finding and identifying the “truth points” (the principled or logical underpinnings behind an individual’s response or point of view) in their statements and building the conversation from there.”

**Theme 4:** The physical design of the classroom directly impacted the application of some techniques. “Lemov’s “breaking the plane” can be challenging in some of our classrooms where the professor cannot move between the aisles very readily.”

**Theme 5:** Faculty demonstrated individual variability in how they applied the techniques but everyone found that the tools empowered both student and faculty achievement. “By using Cold Calling, for example, professors build expectations of participation... To decrease anxiety and increase the quality of contributions, I often ask students to write for a few minutes on a given prompt or key point from an assigned reading.”

Overall, faculty were able to apply Lemov’s techniques to their classes and found them to be helpful for student learning. As one member stated, “The techniques freed me to focus on learning by breaking the silent, ‘let’s be nice to each other’ contract, partly driven by student course evaluations that measure liking, not learning”.

issotl12
Exploring concepts of knowledge for a SOTL Doctorate
Ruth Pilkington, Yvon Appleby (University of Central Lancashire)

The application of SOTL is widespread within the national and international agenda to professionalise the academy. It aims to strengthen practice through progressive levels of engagement by practitioners with research, enhancing and informing teaching and learning (Healey, 2004; Yorke, 2000) whilst mirroring the status and process of research within disciplines. This has influenced our design and development of a series of programmes within a UK university, the object of our inquiry and explored in this poster. Providing staged progression and development of the practitioner in SOTL (Kreber, 1999, 2000 in Healey; Kreber, 2004), our programmes cover initial professional learning (postgraduate certificates) and use a staged engagement with Masters study (through postgraduate diploma and Masters in Education) consolidating research into practice. Completing the process through professional doctorate study (EdD), the practitioner is recognised for professional leadership and expertise, and their contribution to original professional knowledge.

The flexible structure of our programmes supports SOTL as CPD, focussing on the concept of ‘critical professionalism’. This concept emphasises for us, and develops at different stages, a number of components: criticality, inquiry, rigour, a reflective and reflexive stance, enhancement of practice, methods for researching practice, and professionalism.

An interesting challenge emerges for ourselves and for the students working at doctoral level within the EdD. The challenge centres in particular the nature of professional knowledge. Using the poster, we aim to explain this challenge and to prompt discussion among colleagues at ISSOTL on the nature of knowledge associated with SOTL within professional educational doctorates. Gibbons et al (1994) has clearly argued for notions of knowledge incorporating Mode 1 and Mode 2 knowledge, both of which apply the discipline of research to the subject or practice, however in exploring modes of knowledge more widely, we encounter Mode 3 and 4 which we regard as central to the nature of professional doctoral study (Scott et al, 2004).

In our inquiry into the professional doctorate using surveys undertaken with participants and analysing their assessed work, we exposed tensions around modes of knowledge. One tension is that institutions tend to default approaches for doctoral study relying on Mode 1 and Mode 2, which impacts on the processes, quality assurance and expectations of institutions for this level of study. The inquiry exposed similar tensions where tutors and supervisors are uncertain about the nature of professional doctorates. The demands of Mode 3 and 4 forms of knowledge, with their complex interfacing of the individual, learning, practice, applied research and influence, also appear difficult for participants to engage with because they challenge traditional and comfortable understandings of what knowledge is. This can be an unsettling and unnerving experience even for the most confident practitioner. This inquiry raised for us significant questions about the nature of professional knowledge, how this is viewed and given status both in the academy and also in a professional context. The inquiry into our professional doctorate experience, reported here, exposes several difficulties when developing critical professional and academic knowledge that supports teaching and learning through research.
Friday, October 26, 2012

Registration

Convention Centre  3rd floor foyer  7:30am-5:30pm

Breakfast

Convention Centre  Chedoke ABC (3rd floor)  7:30-8:30am

A breakfast buffet will be available for all registrants. Food can be picked up in Chedoke C, and dining tables are available in Chedoke AB.

Session G: Plenary Presentation

Convention Centre  Chedoke AB (3rd floor)  8:30-10:00am

G01 Integrating the scholarship of teaching and learning into the academy
Harvey P. Weingarten (Higher Education Quality Council of Ontario)

Most people believe that universities should strive to use the most effective teaching and learning practices in their programs and curricula. Yet, teaching and learning issues can get short shrift in university discussions and decisions. There is a general sense that we would benefit from more scholarly investigation of teaching and learning issues, and that we need to understand better effective means of incorporating documented best practices into our teaching programs. This talk examines the barriers to the better integration of teaching and learning issues into the fabric of the academy. Topics to be discussed include the state of scholarship on teaching and learning, incentives to promote the adoption of best teaching practices and the role of university administrations and governments in creating a culture where teaching and learning, and the scholarly investigation of them, is valued.

Morning Break

Convention Centre  3rd Floor Lobby  10:00-10:30am

Refreshments available

Exhibits

Convention Centre  3rd Floor Lobby  10:00am-5:00pm


Other publishers or organizations will have material in your registration package and/or at a ‘common table’ in the exhibits area. These include: The Althouse Press, The Council of Ontario Universities, The Higher Education Quality Council of Ontario, Indiana University Press, McGraw-Hill Canada, Sage Publications UK, Taylor & Francis Group UK.
**Revisiting a Call for the 5th Area of Scholarship: The Scholarship of Leading**

La Vonne Cornell-Swanson (University of Wisconsin System), Keith Trigwell (University of Sydney), Katarina Mårtensson (Lund University), Torgny Roxå (Lund University)

In recent years there has been a growing area of SoTL research on the relationship between academic leadership and student learning. In 2009 Keith Trigwell (University of Sydney) gave a provocative presentation on the scholarship of leadership as a 5th area of scholarship, encouraging those of us in attendance to recognize the need for Administrators of SoTL to increase their knowledge of SoTL and how to lead effectively in order to support the SoTL movement. During the same conference Torgny Roxå and Katarina Mårtensson (Lund University) presented their research on assessing academic leadership through a cultural lens, illustrating how academic leadership is highly situated, relational and unpredictable. Since 2009 the scholarship of academic leadership and educational development has seen a slow, steady increase of international colleagues offering results of studies on the scholarship of teaching and learning focused on academic development and leadership. The panel is designed to generate increased interest in the scholarship or leading that is rigorous and evidence based.

The panel membership includes International colleagues that serve in leadership roles and are recognized as scholars of academic development and leadership. Following their presentations, the panel will engage participants in an interactive discussion about the benefits of a new ISSoTL interest group on Academic Leadership. Keith Trigwell, Professor of Higher Education at the University of Sydney, Australia, and a former co-President of ISSoTL will present on why there remains a need for a scholarship of academic leadership and provides information on a process implemented with Associate Deans (Learning and Teaching) in 2007 that serves, in part, to provide university leaders with a forum for evidence-based leadership. Torgny Roxå and Katarina Mårtensson are academic developers at Lund University with a particular research interest in organizational development, leadership and academic professional development from a socio-cultural perspective. They will present on their research on scholarship of academic mid-level leadership, clearly indicating that leadership practice in academia so far is quite non-scholarly. More specifically observations show that leadership is conducted and described without references to scholarly knowledge about leadership; leaders do not collect, systematize and disseminate documented observations of leadership. Furthermore, if mid-level leaders are supported to develop a scholarship of leadership they find it difficult to do so. However, leaders show high appreciation of and need for networks for exchanging experiences of leadership, permeated by trust, context and emotional dimensions. La Vonne Cornell-Swanson, Director of the University of Wisconsin System’s Office of Professional and Instructional Development will facilitate the panel and interactive discussion on the call for members of the Academic Leadership Interest Group. She will provide a brief introduction of a new long term study in progress about the University of Wisconsin’s Teaching Fellows and Scholars Program and the influence SoTL has on emerging leaders.

**SoTL and Civic Engagement At Illinois State University (ISU): Producing a Digital Documentary Film through a Yearlong Interdisciplinary Community Of Students, Faculty and Administrators**

Maria Moore, Kathleen McKinney, Cody Meincke, Adam Kopp (Illinois State University)

Abstract and Project Description: Civic Engagement (CE) has been infused into the curriculum at Illinois State University (ISU) resulting in various project-based student experiences each semester. This SoTL study involved analysis of perceived learning via case studies using both video documentation and focus groups. During the 2011-12 academic year, we documented five ISU CE projects through digital film production. The video production team of scholar/technicians included a faculty executive producer, two graduate student producers, and three undergraduate videographer/editors who documented on-site the CE projects selected. The on-site footage recorded during the five project activities was edited into five short (2-3 minute) segments.

The documented civic engagement projects were interdisciplinary in nature, including a clothing drive conducted among the backdrop of a theatrical performance of The Women of Lockerbie; students workers building homes for Habitat for Humanity; a Social Issues Free Speech fair held on ISU’s quad; a Be the Change student exchange of key issues; and a baby supplies drive and healthy eating fair conducted by students for Head Start.
Student volunteers from each of the five documented projects participated in focus groups the following semester to discuss and describe the nature of their experiences in participating in a CE project. The focus groups were recorded through digital film techniques by the video production team. The raw footage of the focus group discussions was then edited into an integrated documentary (20-25 minutes in length) exploring five cases of CE and a reflective discussion from among student participants.

This SoTL (Scholarship of Teaching & Learning) project’s goal was to investigate the student CE experience. The impact of CE participation was explored through discussion with student participants about their self awareness, their understanding of diversity, their understanding of democracy, their ability to think critically about social issues, and their ideas about the integration of service, societal issues and coursework. We also explored the students’ perspective about the value of CE project participation, the experience of service-based learning, and what learning occurred for the student in the process.

Project Method: Using a qualitative research method of case study analysis coupled with focus group discussion and the technique of collaborative documentary production, this SoTL project uses film as a medium for communication rather than a traditional academic paper. The process of documentary production will be examined and graduate student producers will be among the presenters. The researchers selected this publication approach to more fully honor the rich and descriptive source material contributed by the participants during this research project and to capture the CE project experience more fully through sight, sound and motion. This project truly integrated the students’ authentic voice in the practice of SoTL.

Previous Research: Several scholars have persuasively argued that political disengagement among the youth of this country is an issue that should concern all of those in higher education (Beaumont, Colby, Ehrlich, & Torney-Purta, 2006; Hillygus, 2005; Spiezio, Baker, & Boland, 2005; Stanton, 2008). This is a problem worth addressing because, as Galston (2003) argues, the withdrawal of a cohort of citizens from our political system places democracy at risk. Unfortunately, the reality today is that few colleges and universities offer programs designed to intentionally develop students’ civic and political engagement (Beaumont et al., 2006). We agree with Beaumont et al. (2006) that this lack of interest represents a missed opportunity to the extent that such institutions are “well positioned to promote democratic competencies and participation” (p. 250). Three years ago ISU met this challenge and began a systematic strategy to infuse CE where possible throughout the campus. Faculty were trained through workshops, curriculum was changed, student-learning outcomes were assessed, and a new interdisciplinary minor of Civic Engagement and Responsibility was created.

This project builds upon the research of CE and upon the service learning, community based projects strategically created by the ISU CE team; giving voice to student reflection about their experiences gained while participating in CE projects.

Implications for Others: While this digital documentary film specifically follows a variety of student participants in Civic Engagement projects at ISU, this model of inquiry may be practical or inspirational to others who wish to infuse their institution with a different campus-wide interdisciplinary concept or to document student voice through documentary filmmaking techniques.

Universal Design across the Curriculum: Lessons Learned from Hands-on Applications
Renee Howarton, Kitrina Carlson, Deb Stanislawski, Kevin Tharp (University of Wisconsin-Stout)

Universal Design (UD) is often defined as a concept whose roots are grounded in three areas, design of physical environments (residential and commercial space), web development, and most recently, the field of teaching and learning (Universal Design of Learning, UDL). In response to the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA) and emerging from the disciplines of Universal Design and Web Publishing, Universal Design for Learning is a series of principles that provide for the greatest physical and cognitive access to course content. According to the Center for Applied Special Technology (CAST), those learner centric principles are: present information and content in different ways, differentiate the ways that students can express what they know, and stimulate interest for motivation for learning. The intent of the principles is to create barrier-free environments that enable today’s teachers to apply universal design concepts in ways that support the needs of the widest range of learner differences.
At the University of Wisconsin-Stout, ten faculty members from diverse disciplines and different approaches to teaching, committed to exploring what UDL could and should look like within their specific courses and disciplines. They participated in a year-long, multi-phase research project designed to infuse Universal Design concepts throughout their curriculum. The project included attending a summer workshop, planning and developing UDL teaching and learning activities during the fall, and implementing and assessing student learning outcomes in their spring semester courses. This faculty journey incorporated the blending of curiosity with research and creative application with assessment and reflection in an effort to answer the following questions:

1. How does the application of Universal Design principles differ from “just good teaching” in the classroom and across the curriculum? How could specific assignment design be utilized to enhance accessibility and improve student learning?
2. What would different UDI based course assignments look like coming from diverse disciplines?
3. How can UDI be applied and assessed in ways that positively impact student learning and enhance the quality of the teaching environment for both students and faculty?

During the presentation, project mechanics will be summarized along with results from overarching questionnaires distributed during spring semester. The pre-survey consisted of 15 questions that assessed students’ perceptions of how effectively previous instructors accommodated their sensory, learning and communication needs in previous courses as well as collected basic demographic data. A post-survey comprised of 10 questions was administered to the same students to assess how well faculty participants in the current UD research project satisfactorily met their educational needs and how accessible their course was to the broadest range of students.

Panel presenters will also share the perceived accessibility challenges they faced in one or more of their courses, the UD assignments or projects they created, and the assessment tools they used to gather evidence about the use and/or effectiveness of their course materials. Collectively these presentations will reveal a glimpse into the diverse thinking and approaches that were utilized under the premise of improving accessibility of course content and gathering evidence about those practices that could produce continual curricular improvement across the university. Attendees will receive handouts descriptive of faculty UD projects and engage in a discussion regarding the application of Universal Design into their own teaching and learning environment.

The outcomes of this study compliment the ISSOTL Conference themes by actively incorporating student voices captured through assignments and assessment practices. By integrating the study’s results, teaching and learning is being reenergized within the participants’ classrooms and with a variety of disciplines being represented in the study, the participants are producing long range applications that will support the continuation of this project within even more courses and disciplines.

**Cultivating Sustainable SoTL in the Community College Setting**

*Joseph Ortiz (Scottsdale Community College), Darien Ripple (Chandler-Gilbert Community College), Robin Ozz (Phoenix College), Jacqui Ormiston (Mesa Community College), Maria Herrera-Bill (Phoenix College)*

The Maricopa Institute for Learning (MIL) is a SoTL-based fellowship for faculty at the Maricopa County Community College District (MCCCD). MCCCD consists of 10 independently accredited colleges, two skill centers, and several education centers throughout metropolitan Phoenix, Arizona. Modeled after the Carnegie Scholars Program, the MIL was established in 1999, and is now in its thirteenth year of providing a cohort of 5-6 faculty annually with release time to develop SoTL-based projects and foster a professional learning community.

Panel Chair- Joe Ortiz presently serves as the MIL coordinator, and will describe the program structure, activities, resources, and outcomes of the MIL fellowship. Additionally, four examples of faculty projects will be presented.

**Darien Ripple: Experiential Learning and Environmental Sustainability**

The intent of the research was to better understand the process of experiential education by observing the comments and actions of students interacting in nature-based learning in an environmental ethics course.
The research is based on the premise that students who develop a moral awareness of nature will better understand the core conceptual components of environmental sustainability.

**Maria Herrera-Bill: Investigating the Effectiveness of an Inverted Classroom in Developmental Mathematics Courses**

Existing studies show the inverted classroom model as a promising tool, but much of the work examines university-level students in which a remedial course is College Algebra and/or Calculus. The premise of this presentation is to show the effectiveness of the inverted classroom in a truly developmental course where students are starting the math course sequence at well below the university entrance track. The project presents data to show the effects of the inverted classroom and the tools used in a community college setting.

**Jacqui Ormiston: Metacognition in Introductory Algebra**

This project integrated learning activities and assessments to support metacognitive thinking and self-reflection in an introductory algebra courses. Data from math placement exam, test performance, and attitudinal/confidence surveys were analyzed to examine the impact of metacognitive activities on student learning.

**Robin Ozz: Researching an Accelerated Learning Course for Developmental English Students**

This project investigated the efficacy of an accelerated learning model for under-prepared English students. Twelve students who tested into the highest level of developmental English were mainstreamed into a first semester freshman composition course. Comparisons are drawn between the cohort and a control group in terms of retention and successful course completion.

Project panelist also will reflect on their fellowship year in terms of professional development, impact on teaching and learning assessment practice, and next steps with their research on teaching and learning.

Finally, the panel will encourage discussion among the audience about similar institutional-based SoTL learning communities and ways of fostering collaborative work with other community college and university faculty and students.

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**Kinesthetic Learning in the College Classroom**

Joy Guarino (Buffalo State College, State University of New York)

The visual and auditory learning modalities are used frequently for teaching and learning in the college classroom. The kinesthetic/tactile modality, however, is rarely used as a methodology for teaching academic subjects. Studies in neurophysiology have shown when students participate in a physical activity, the two hemispheres of the brain are simultaneously engaged. The cerebellum, an area commonly linked to movement, is a virtual switchboard to cognitive activity (S. Richardson, 1996). Research on brain compatible learning has emphasized that the relationship between movement and learning continues throughout life. Because it forms a powerful pattern called a mental model, researchers believe that implicit learning is, in fact, much more reliable at retaining knowledge than reading textbooks and memorizing facts (Reber, 1993). Yet, higher education remains resistant to investing physically and philosophically to kinesthetic learning as a teaching style. Teacher attitude and preferred teaching methodology emerged as a theory for resistance. It is probable that classroom teachers are personally uncomfortable with the physicality, distrustful of the success of movement as a means of differentiated instruction, and/or unfamiliar through their own education. In the educational system, acknowledging movement as a teaching methodology is disconcerting for most adults and movement in general is not only discouraged but often times punished. This way of instruction is teacher rather than learner centered. In spring 2012, the presenter began investigating student and faculty interest/resistance to movement, a kinesthetic/tactile learning modality, as a meaningful methodology for learning and active engagement in a variety of academic subjects in the Buffalo State classroom.

Seven colleagues of varying ranks and across disciplines were asked to participate. The courses selected were from the College's required general education program. Students were randomly selected through computer generated lists to create treatment and control groups. The following was implemented in each of the classes: To assess their personal learning style each student completed the
Building Excellence Survey, which is based on the Dunn and Dunn Model. These results will assess a students’ predisposition toward movement and kinesthetic methods. Prior to visiting the classroom, the presenter discovered from each instructor cognitive concepts taught in their course and devised movement ideas that speak to those concepts. Following this meeting, a concrete movement activity that corresponds to the concept was shared with the participating faculty member prior to engaging the students. These tactile or kinesthetic exercises were delivered only to the treatment group during the final 15 minutes of a class period. After the movement exercise, the faculty were asked a set of post-questions to learn more about their experience with the exercise and their perception on its effectiveness. Although the study was designed to focus on attitude, student learning was also evaluated by coordinating the treatment to content assessment methods. These results were compared to the BE survey results.

At the conclusion of the study, data regarding faculty and student perceptions and impressions will be analyzed to determine whether or not participating in the implementation of movement activity to teach cognitive skills helps to change attitude on its credibility and value as a learning method.

**H06**  
**The game is afoot! - Playing the sleuth in a creative Problem-solving performance pedagogy for Business Economics Students**  
Marian McCarthy, Daniel Blackshields (University College Cork)

This paper highlights the pedagogical use of the Teaching for Understanding (TfU) framework (Wiske, 1998) in a Business Economics setting. TfU developed from research at the Harvard Graduate School of Education as a tool to enable teachers design pedagogies to help learners to develop ‘deep and flexible practice’ (McCarthy 2008: 102). The investigative strategies of the fictional detective Sherlock Holmes are effective ways of developing such practice for Business Economics students. The SoTL impact and implications of such a problem solving approach rest in the students’ naming and charting of the stages of inquiry foregrounded in such detective work. The paper draws on the work of Shulman, Hutchings and others in the SoTL literature to make student learning visible through framing it as on-going investigation (Bass, 1998) and as a reflective process (Schon, 1993).

The National Strategy for Higher Education to 2030 (Ireland) explicitly foregrounds pedagogies whose design, enactment and assessment encourage the development of generic skills such as ‘analytic reasoning, critical thinking, and the ability to generate fresh ideas (2011: 57). It is this context that this paper is framed. It reports on the principles and practice of the design, enactment and assessment of a performance-focused pedagogy scaffolding the development of a creative problem-solving mentality in Business Economics students. Specifically, it reports on the use of an Arts-based pedagogical strategy wherein fiction is embedded into the learners’ performances as a form of simulation through which they explore and reflect on the design of complex and creative solutions to complex and competing individual, institutional and social problems.

The SoTL thrust of the paper lies in giving the students voice in the construction of their own learning and in positioning them as researchers investigating and reflecting on a real disciplinary problem.

**H07**  
**The Art of Praxis: Connecting Research and Practice through Arts Integration**  
Nicola Simmons, Shauna Daley (Brock University)

Arts integration in higher education pedagogy establishes an experiential paradigm centered on cultivating rich ideas and high-level thinking, one that capitalizes on the creativity that every student already possesses and uses (Livingston, 2010). Giving right brain thinking (problem-solving, synthesis, artistic and creative expression, and passion) equal importance to left brain thinking (analysis, logic, and computational literacy) (Bolte-Taylor, 2006) can sustain a high level of student engagement (Sloan & Nathan, 2005) and result in integrated approaches (Doidge, 2007) to thinking and scholarship.

In this session, we present findings from two pilot studies: one examining scholars’ identity construction (as SoTL scholars, educators, educational developers, and graduate students); and a second exploring graduate students’ process of conceptualizing theory and future research questions. We wanted to understand how arts-based activities can support meaning-making in these contexts: The data collected for analysis include arts-based data (in this case, magazine collages created by participants) and the participants’ written responses to brief questions about the support of the collage making to their thinking processes.
We draw on arts-based inquiry as a means of accessing, exploring, and making explicit various aspects of unconscious, embodied knowledge (Leitch, 2006). We look at visual images as research data: As described by Finson & Pederson (2011), in order for something to be visual data, we must be able to record and analyze and manipulate the information and derive some reasonable meaning from it. Understanding this, and through an analysis of the collages, we show how recurrent themes, interpretations, and symbolism are employed through artistic visual images and indicate how these elements can be seen as data for aspects of experience (Leitch, 2006).

Our session is thus about integration - of research, of teaching, of creativity, of research methods, and of SoTL in that it explores supports to students’ and colleagues’ learning. In it, we outline resulting implications and challenges raised by our findings to arts-integrated teaching and learning environments, and map future directions for teaching and research. We invite colleagues to contribute by creating collages and engaging in discussion about implications for their own teaching and research along with next steps in this research process.
been adopted in several forms across the institution over the past three decades. At Gloucestershire, the
curriculum innovation was active learning (particularly through inquiry), a more recent initiative that was in
the process of adoption across the university.

Data were collected from interviews and focus groups with academics and managers, as well as policy
documents and reports. In the first phase of data analysis, we used an inductive approach to determine
themes that were located within the three levels of social organisation (i.e., individual, departmental
and institutional levels). Curriculum change was described by six emergent themes which promoted and
inhibited change at different levels of social organization. The six themes were conceptual ownership,
access to resources, academic identity, leadership orientation, student role, and quality assurance. Five of
the themes were located at one or more levels of social organisation in both universities, whereas quality
assurance was a theme unique to Gloucestershire and evident in all levels of social organisation. Nested
within each theme were subthemes that were further classified according to their magnitude and polarity
(strongly promoting, promoting, inhibiting, or strongly inhibiting) regarding curriculum change.

In the second phase of analysis we invoked cultural-historical activity theory (CHAT) as a theoretical
framework to examine how the information expressed by the participants could be reconceptualised as
dialectical activities instead of oppositional forces. These new classifications allowed us to compare tensions
located within and across universities. The most distinctive similarity between the two universities was
located within the level of the individual and contradictions were evident in the ‘motivation for change’
subtheme within the theme of conceptual ownership. Distinctive differences at the individual and institutional
levels were found for the quality assurance theme at Gloucestershire. There were also contradictions
reported about ‘funding’ and ‘professional development support’ subthemes in the access to resources
theme and ‘collegiality’ subtheme in the conceptual ownership theme at McMaster.

Members of higher education institutions can use the findings of this study to help inform the integration
of curriculum change across their institutions. Moreover, the use of CHAT as a theoretical framework is one
which has wider application in higher education research, beyond considerations of curriculum change.

Leadership and Process for Student-Focused Curriculum Change in a Research-Intensive
University
Ranga Venkatachary, Fred Cutler (University of British Columbia)

This is a temporal study of a departmental micro-culture in the context of curriculum change and renewal.
The authors are part of the departmental collegial group and our findings form an insider’s perspective at this
stage of our work.

Previous phenomenographic research on teaching-research nexus in university teaching shows that instructors
and departments that adopt conceptual change as the principal driver in their curriculum and teaching have
higher quality learning outcomes. Conceptual change in disciplinary contexts results from offering students
well sequenced learning paths at the curricular level as well as enriched learning experience through
excellent teaching practice. (Trigwell et al. 1999; Prosser et al 2005). Our work builds on this research.

What are the motivators in a department for colleagues to create sequenced, structured learning trajectory
for undergraduate students? This paper offers a closer look at our priorities and approach for curriculum
change process outlined in our earlier work (Cutler & Venkatachary 2011) and situates it in the discussion
of academic micro-cultures (Roxa & Martenson 2009, 2011). Our research questions are: What are the
foundations for success in leading academic change in a bottom-up model of leadership? What are the
characteristics of an academic micro-culture that facilitate collegial action for program level curriculum
change? At the departmental level, the initial push for change was from the recognition that the lower
level courses are largely teacher-focused survey courses with an aim to introduce the sub-fields of political
science. The structure and orientation of these courses promote surface rather than deep learning. In the
last two years, the lower level courses in the undergraduate program have been revised and restructured
with changes to curricular content, orientation, program prerequisites and student learning. We surveyed 30
colleagues in the department to study their perceptions on what mattered the most for them in this process
of change. In this paper, we present a mid stream evaluation and reflections on the departmental curriculum
change through descriptive statistics and analysis of open-ended data from the survey responses.
**H11**

**Integrating Undergraduate Research Posters in the Humanities Classroom**  
*Karen Manarin (Mount Royal University)*

In Fall 2011 and Winter 2012, I gathered data from two senior English classes, exploring scaffolded undergraduate research. This presentation focuses on one element of that scaffold: the research poster intended to disseminate preliminary findings to peers. The Council for Undergraduate Research (2012) defines it as “An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline,” and undergraduate research has been identified as one of the high-impact educational practices, leading to gains in critical thinking skills, information literacy and communication skills (Lopatto 2010). While Science and Technology disciplines have a long tradition of explicitly fostering skills needed for independent research, the Humanities have been much slower to move beyond the traditional research paper synthesizing other people’s insights. But while there are many calls to engage English students in undergraduate research (see Behling 2009; Kinkead and Grobman 2010), there are few explorations if, let alone how, these practices affect student learning. This project examines the student learning that may occur in scaffolded undergraduate research in the humanities classroom. One element of this scaffold unfamiliar to many humanities scholars is the research poster though Chick (2011) has argued that it is a viable form for dissemination especially when humanities students are allowed to experiment with format.

This presentation briefly describes the larger project which involved examining the written work produced by students for evidence of close reading and integration; artifacts include posters, two reflective pieces on the poster process—one completed at the time of the poster presentation and one when the final paper was handed in—and the final research papers. I also conducted semi-structured interviews to probe what, if any, effect posters had on student learning in a discipline that does not typically use posters for dissemination.

There are many reasons to include poster presentations in the humanities classroom—practical, social, and political. There are also indications that posters impact students’ ability to integrate information in final papers. Decisions of what to include and what to exclude also seemed positively affected by the poster experience. Peer critique, though a factor, seems to be less important than the students’ opportunity to visualize structure, distill the main points, and rehearse the main claim of their own argument. Posters also seemed to increase levels of engagement with the research projects.

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**H12**

**The Undergraduate Research Paper: Assessing Student Learning in Introductory History Courses**  
*Elizabeth Belanger, Amy Houston (Stonehill College)*

In March 2004, scholar Richard Rothstein argued “we are not ready to assess history performance.” His critique of assessment tools and methods emerged at a time when higher education was just beginning to feel the pressure from a national push to define and document what they do and how they do it. In the years since, issues of assessment have dominated both national and local discussions. Departments of history have not been overlooked in these discussions. As Indian University’s recent study to “decode” the discipline suggests, in a decade when “history is under attack” historians have responded by looking to the scholarship of teaching and learning for guidance. Our paper chronicles our experience integrating the SOTL into department and university wide assessment plans. It argues that assessment initiatives can be viewed as a powerful way to integrate the scholarship of teaching and learning into institutional culture.

Last year, Stonehill’s History Department adopted a new assessment plan. A central element of the plan was a required research paper assignment done in the student’s freshman year. The features of our assessment plan were by no means unique. In fact, many of our peer and aspirant institutions require their freshmen to complete a research paper. Despite the overwhelming acceptance of the freshman research paper as an assessment tool, scholars of teaching and learning have yet to address some of the key research question associated with assessing student learning and research in introductory history courses. Our paper discusses the findings from our study of the freshman research paper as an assessment tool. Our initial results, collected from over 100 surveys and samples of student work suggest 3 major trends: (1.) that a significant disconnect exists between student preparation and attitudes, and instructor assumptions/expectations,
(2.) that available technologies influence student attitudes towards historical research and knowledge, (3.) that students often enter the classroom with misconceptions particular to history about what constitutes historical knowledge and how historical knowledge is created. These three trends emerge most visibly in the research paper assignment. Our findings suggest the need for in-class exercises designed to emphasize source criticism, close reading skills, and encourage students explicitly to doubt, critique or attempt to correct accepted historical narratives.

**H13**

**Designs on Learning: the role of the cross university collaborative undergraduate research symposium**

*Kirsten Hardie, Annie Grove-White (Arts University College at Bournemouth)*

Research networks and events for postgraduate students are common and help students disseminate and test their research amongst their peers. Research events for undergraduate students are rare but such opportunities are important to advance students’ research and to enhance the links between teaching and research. This paper will disseminate research findings and share ideas and opportunities regarding the value and potential of an undergraduate research symposium as an annual cross-institutional initiative. It provides a model that can easily be applied to other disciplines, in a single or cross-disciplinary manner.

The paper discusses collaborative cross-institution Graphic Design undergraduate symposia, involving three UK universities, that are staged annually to give the dissertation greater credence and presence - to avoid the lone piece written for few to read; to make more meaningful the work’s process towards completion. Through problem-based learning (Barrows, 1996) and collaborative learning methodologies (Dillenbourg, 1999), peer interaction and verbal exchanges (Daniel, 1995), students work independently and collaboratively, though ‘structured interactions’ (Dillenbourg, 2002) to produce research poster shows, presentations and group designs involving industry professionals.

The paper considers our quantative and qualitative research that interrogates how the symposia progresses dissertations and how staff can provide more pertinent support for students’ research. It utilises Healey’s Research-Teaching Nexus research (2009) and analyses student and staff questionnaires, dissertation results data and unit evaluations to assess the symposia outcomes. It discusses wider postgraduate symposia to provide comparative analysis of event types and outcomes. The paper builds upon established research of students’ academic writing experiences (Orr, Blythman and Mullin, 2005; Clarke 2007; Cunliffe-Charlesworth; Writing Pad) and considers the tensions that often exist in relation to students’ perceptions of and engagement in research and the dissertation (Cunliffe-Charlesworth; Writing Pad). It offers a model to help address such tensions.

The paper presents key research findings: that staff can work collaboratively to develop and apply their pedagogic practice and research to enhance student research work - through an event which operates as a dynamic learning experience and teaching approach and research method and outcome: where students are co-partners and feed from and into a unique creative experience. It evidences the benefits for students and staff as a Community of Practice (Wenger 1998), and the methods that enhance interaction through rapport-building in collaborative learning (Murphy and Valdéz) - where the integration of SOTL and teaching practices are braided with each successive year’s results. The paper evidences that symposia help disseminate and celebrate the dissertation through different communication channels at a midpoint in the work’s development and that students and staff progress work more effectively accordingly. Our research evidences that students’ engagement, work and their shared understanding is advanced through such collaborative work.

The paper offers new contribution to established literature and pedagogic practice through its consideration of students’ symposia work and how this can play a powerful role in learning, teaching and research. It will showcase student posters and will explore how other forms of ‘presentation’ could operate. Participants will be invited to join in collaborative developments and opportunities.
Assessment of Teaching Skills - experiences from a national course for prospective assessors of pedagogical qualifications

Thomas Olsson (Lund University), Katarina Winck (Umeå University), Åsa Ryegård (Uppsala University), Fredrik Oldsjö (Stockholm University), Karin Apelgren (Uppsala University)

Appointment and promotion of academic teachers in Sweden is regulated by the Higher Education Ordinance, together with local appointment rules at University level, and complementary instructions at Faculty level. Universities have local definitions of pedagogical qualifications and local assessment criteria. External experts are used more or less regularly in the assessment procedure but the routines, and therefore the prerequisites for assessment, vary considerably between universities.

Similar to most European universities the autonomy of Swedish universities has increased considerably during recent years. During the process of writing new local appointment rules, quality assurance of the procedure for assessing pedagogical qualifications has been much debated. The role of external experts, and how teacher appointment committees use expert assessments, has been debated in a report from Uppsala University (Ris, Hartman & Levander, 2011). Education of external experts, especially assessors of pedagogical qualifications, is highlighted as a priority.

We present a national course for assessors of pedagogical qualifications that has been given on two occasions at Uppsala University, with Umeå University as the course manager. The aim of the course is to enhance the potential to assess pedagogical qualifications at universities locally by offering support and education at a national level. Assessments by experts could potentially act as drivers for quality enhancement if they contain constructive developmental feedback. This aspect is a fundamental part of the course.

The course was developed as cooperation between universities that previously have collaborated in a major project about the Scholarship of Teaching and Learning in Swedish Higher Education (Ryegård, Apelgren & Olsson, 2010). During the course, corresponding to one week of full-time work, each participant assesses five teaching portfolios and writes two assessments. The course work is both performed on an individual basis, and carried out in groups. Experienced assessors serve as mentors during the entire process. It is important to point out that completion of the course does not mean any authorisation as a potential external expert. This is a process entirely governed by each individual university.

During the session we will discuss our experiences from local arenas and the national Swedish perspective, and also broaden our discussions, together with session participants, to an international level. Although local definitions and assessment criteria seem to differ a great deal, a common perspective based in the Scholarship of Teaching and Learning is evident.

A Discipline-Based Learnings Outcomes Assessment Accreditation System for History in Australian Universities: Trials and Tribulations

Sean Brawley (University of New South Wales), Chris Dixon (University of Queensland), Jennifer Clark (University of New England), Lisa Ford (University of New South Wales), Shawn Ross (University of New South Wales), Erik Nielsen (University of New South Wales)

The History “After Standards” Project is an Australian Office of Learning and Teaching funded project examining national standards in History (see Brawley et al, 2011). It has the support of all Australian universities with a history major and the Australian Historical Association. At ISSOTL 2011 project members shared their work during the first year of the project. This work centred on building a discipline community of practice, engaging with international best-practice and designing national Threshold Learning Outcomes (minimum standards).

Heiland and Rosenthal have observed that Learning Outcomes Assessment is “reshaping the academic landscape” (Heiland and Rosenthal, 2011, 9). This has certainly been the case in Australia where a “fitness for purpose” approach to quality assurance in teaching and learning has been replaced by a new paradigm known as “excellence and standards”. (Bradley et al, 2008, 128-131) This transformation is being driven not by
Australia’s universities (who see a challenge to their self-accrediting status) but by the Federal Government which holds funding responsibilities for Australia’s 39 public universities.

The After Standards Project Team return to ISSOTL in 2012 to report back on the project’s second year where the design and trial of an LOA accreditation system has been the major undertaking. Learning Outcomes Assessment can be seen as a three-step process. The first step is outcomes focused and involves defining what a student is expected to take away from their academic experience in a specific discipline/program of study. Step One therefore sets the standards. The second step is assessment driven and entails evaluating whether students are meeting the learning goals set for them. Step Two, therefore, evaluates whether a specific program is delivering on the standards. The first two steps are concerned with Quality Assurance. The third step relates to Quality Improvement and involves the utilization of the results from the second step to improve the student experience. Step Three seeks to close the feedback loop and improve an individual program’s ability to meet the standards and/or the compliance requirements.

As well as discussing the design and SOTL underpinnings of the model (engaging for example with the work of Banta et al 2009, Ewell, 2009, Provezis, 2010 and Hutchins, 2010), the paper will discuss the experience of the three Australian universities which participated in the trial and the broad reception of the trial by the discipline community after its findings were presented to the discipline community at a second national workshop of the discipline in July 2012. The paper will serve as either an exemplar approach or a cautionary tale for disciplines in many countries who now confront standards-based audit and compliance cultures. The project ultimately asks: “Who do you want creating the processes by which your teaching and learning is judged against national standards? Your discipline community or national regulator?”

H16 Session withdrawn
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| **H17**           | **Finding the Evidence for the Scholarship of Teaching and Learning**
|                   | Richard Wiggers, Susan Elgie (Higher Education Quality Council of Ontario) |

Fenton & Szala-Meneok, (2010) present a conceptualization of the Scholarship of Teaching and Learning (SoTL) that involves five practices: identifying topics of interest, framing questions, gathering and analyzing evidence, trying out and refining new ideas in the classroom, and going public. Implementation of these practices requires a multitude of skills and resources. The skills of reflection and thoughtful teaching are required for all the practices (Bass, 1999). The need for excellent communication is evident, and reasonable to expect from postsecondary teachers. The specialized skills required for gathering and analyzing evidence, however, may be problematic, since those required to produce evidence about applied postsecondary education are often quite different than those required in scholars’ fields of specialization (Brew, 2011; Dewar, 2008).

Hubball and Clarke (2010) list a wide range of methods that might be used in SoTL research including: “experimental design, action research, self-study, case study research, grounded theory research, classroom ethnography, implementation analysis, phenomenological study, program development/evaluation research, survey research, longitudinal study research…” (p. 3). The skills required by any one or two of these methods are substantial. Moreover, SoTL scholars are exhorted to produce rigorous scholarship that is embedded within the scholar’s principal discipline (Healey, 2000). In addition, the ethics requirements of doing research with human subjects may be unfamiliar to many SoTL researchers (Fenton & Szala-Meneok, 2010).

We found it intriguing that, while institutional supports for SoTL through funding and academic progression are often discussed in the SoTL literature (e.g. Bass, 1999; Brew, 2011; Fenton & Szala-Meneok, 2010), institutional support for scholars’ learning and proficient use of research methods and tools is relatively seldom discussed.
The focus of this presentation will be recent experiences of HEQCO in launching dozens of teaching and learning research projects and developing and publishing a manual for faculty, student service providers and SoTL scholars across Canada (Researching Teaching and Student Outcomes in Postsecondary Education: A Guide), combined with a pilot study we have conducted to explore the following questions:

- How do post-secondary institutions provide support to SoTL scholars with regard to research methods and analysis?
- What approaches have been found successful?
- What challenges are there?
- Are there commonalities by type of institution or discipline?

We will report on HEQCO’s recent experiences, especially in creating the new role of “Research Consultant” and developing and releasing the research methods manual, and draw from our qualitative analyses of websites of teaching and learning centres or offices of universities and colleges in Ontario, as well as a sample of interviews.

**H18**
**Scholarship Enhanced at the John A Burns School of Medicine: Process, Outcomes, Analysis**
*Marcel D’Eon (University of Saskatchewan), Damon Sakai (University of Hawaii), Krista Trinder (University of Saskatchewan), Sheri Fong (University of Hawaii), Kalyani Premkumar (University of Saskatchewan)*

**Background:** The John A. Burns School of Medicine (JABSOM) at the University of Hawaii has a high quality medical education program staffed by dedicated and skilled faculty teachers trained in various clinical and basic sciences who, as a part of their educational responsibilities, also engage in the scholarship of teaching and learning (SoTL). Nevertheless, administrators and teaching faculty both recognized that for several reasons they needed more and higher quality SoTL. First and foremost, they wanted to be able to continue improving their educational program. The evidence generated from SoTL would help them make more informed curricular and teaching decisions. Second, they needed concrete data to better advocate best practices to their international audience to whom they provide faculty development and educational support. Third, as university professors, promotion and tenure decisions were at least partly tied to scholarly productivity. Fourth and finally, accreditation standards stipulate that faculty be regularly involved in SoTL.

**Process:** Previous initiatives to enhance the quantity and quality of SoTL at JABSOM have had limited and short-term success. Beginning in January 2010 they engaged the support of an experienced researcher in medical education from another university who decided to take a sabbatical leave at JABSOM. This researcher worked with faculty members on individual and small group scholarly/research projects and began to involve other experienced colleagues at his home institution. In addition, JABSOM initiated a number of programs to support SoTL among the faculty. In our presentation we will provide more details about the support from the experienced researchers and the steps taken by JABSOM to engage faculty and sustain their efforts in SoTL.

**Outcomes:** We compared the scholarly work begun and underway prior to January 1, 2010 to that begun or underway after January 1, 2010 for teaching faculty with the Office of Medical Education, about 12 individuals. For data we recorded the following events in the life of each project: (1) the date the research team was established as a marker of the official start of a research project, (2) the date the data collection was completed as a marker of progress on the project, (3) resultant conference presentation(s) as one marker of completion and success, (4) publications as another marker of completion and success, and (5) any further research in the area indicating a productive line of inquiry. We used non-parametric analysis within each category to determine that there was a significant increase in scholarly activity after January 1, 2010.

**Conclusions:** We will present our analysis showing increased SoTL activity and that two main factors contributed to the increase in scholarly activity (motivation both intrinsic and extrinsic and support both human and financial). We will also compare our own experience with the literature, and make suggestions for other units wanting to increase scholarly activity. We will end by describing our suggestions for further work and research in this area such as developing capacity among JABSOM faculty and sustaining productivity in the long-term.
How Can Higher Education Leaders Effectively Prepare and Support Faculty for SoTL Work?
Let’s Ask the Faculty!
Marilyn Cohn, Shirley Aschauer, Robyn Otty (Maryville University)

Question/Rationale: Hutchings, Huber, and Ciccone (2011), leaders of the decade-long Carnegie Academy for the Scholarship of Teaching and Learning program, make a strong case for a connection between the practices and principles of the Scholarship of Teaching and Learning and increased student learning and success. However, they also argue that institutionalization of innovations like SoTL requires “levels of preparation, imagination, collaboration and support that are not always a good fit (to say the least) with the inherited routines of academic life.” (p. 6)

Addressing the “integrating SoTL into institutional culture” thread, this proposal asks, how can higher education leaders prepare and support faculty for SoTL work in an imaginative and collaborative way?

As the facilitator of a SoTL Seminar Program at a small, private Midwestern university, I am exploring this question collaboratively with five faculty participants in year one of a two-year seminar expressly designed to prepare and support them for classroom inquiry. This question and approach are important because if SoTL is to become integrated into institutional culture, we must first understand faculty perspectives on what constitutes effective preparation and support. Our overarching goals are to learn how our particular collaborative, interdisciplinary seminar approach affects the making of committed SoTL researchers and to share our findings with others.

Methods: The faculty members comprise the 7th cohort to volunteer to participate in our seminar program. Although we have collected positive data after each of the first five cohorts “graduated,” this effort aims to capture the evolution of faculty thinking during the seminar. We have chosen the method of Participatory Action Research, so that the subjects of the study will also be its researchers. (Kemmis & McTaggart, 2005; Stringer, 2008; Reason & Bradbury, 2006; Werder & Otis, 2010.) This method was chosen because it fits the collaborative seminar format and the goal of understanding deeply personal perspectives. As active participants in the seminar, faculty should be active participants in the research. Faculty data include open-ended surveys, interviews, written reflections on seminar activities, and a collaboratively developed analysis. Facilitator data include “lesson plans” and written reflections and observations.

Outcomes: We will analyze the data together in June, and our paper will describe the activities of the seminar, the faculty’s evolving perceptions of the seminar’s impact throughout the year, and our overall assessment of how faculty can be effectively prepared and supported for SoTL work in a collaborative and imaginative way. This assessment should be beneficial to others in search of models to build faculty commitment toward the integration of SoTL into institutional culture.

Critique/Reflection: The entire study will be a reflection and critique of our shared responsibility/joint contributions to the effectiveness of the seminar; the findings will significantly influence the design of future programs.

Audience Engagement Plan: Introductory Audience Question: How can higher education leaders prepare and support faculty for SoTL work in an imaginative and collaborative way? 5 minutes. Findings from Our Study: 20 minutes. Concluding Audience Question: How do our findings expand upon your initial ideas? 5 minutes
Voices of Change: Student Opinions and Online Course Changes
Lynn Akin (Texas Woman’s University)

Whether a course is face-to-face or online, seeking student opinions about process, procedure, and content changes should be part of any instructor’s toolkit. The fluid environment of an online course lends itself to changes that can be made almost immediately upon discovery of a problem but a professor should not make those changes in a vacuum. Student voices can be powerful indicators of whether and what changes should be made. Listening and engaging in dialogue together creates a sense of online community. If students know that you respect and seek out their opinions, then you can move to create a ‘learning’ community of practice.

Using the theoretical approach of Lave and Wenger’s 1998 Communities of practice (CoP) gives the researcher a structure in which the opinions of the learners is crucial to the health of the learning community. Communities of practice are groups of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly (Smith 2009, Wenger 2006). CoP has three critical elements: mutual engagement, joint enterprise, and shared repertoires of words, actions, or concepts (Wenger 1998). If the instructor opens a dialogue to seek out student opinions, then mutual engagement can take place. Joint enterprise is the learning activity the instructor and students find themselves engaged in for a period of time. Shared repertoires would be the concepts, process, and procedure of the actual course during the term. Smith states that the idea that learning involves a deepening process of in a community of practice has gained ground (Smith 2003).

The methodologies involved in this research included pre- and post-tests, and anecdotal student comments on a dedicated forum. The pre- and post-tests included both qualitative and quantitative sections. Finally, the students evaluated the course at the end of the term.

Students were very responsive to sharing their opinions about changing fundamental aspects of the course and more than willing to provide suggestions. Results from the pre- and post-test were used to make changes to the course. In addition, the instructor had an opportunity to learn how the students viewed the course.

The research described in this study was expressly used to evaluate changes to an existing online course. CoP postulates that regular interaction creates a better sense of community and improves learning. If we (the students and the professor) inhabit this learning community together, then we should begin to communicate in ways more substantial than typical discussions. In general, the student comments provided a new way of evaluating the course, offered new ideas, and shared perspectives that caused me to reflect on this experience.

Suggestions for Further Research: Additional research should evaluate differences and similarities between instructor and student perspectives. In addition, research should examine the assessment successes as linked to the student perspectives.

Collaborative Interdisciplinary Assessment Design: Rapid Campus Response to Emerging Educational Technologies
Diane Sieber, Mark Werner, Caroline Sinkinson (University of Colorado at Boulder)

This session presents multidisciplinary methods for identifying and evaluating technology-based instructional innovations; it also reports findings from a campus-wide study of effective social network adoption (assessments include: GoingOn.com, Google Apps for Education, Google, Microsoft 365, Drupal Commons). Traditionally, educational technologies on university campuses have either been adopted organically (unsupported by central IT organizations until a critical mass of adoption has been reached), or they have been centrally supported and launched on university campuses with hopes that they would be widely adopted. This presentation articulates a third path--both collaborative and multidisciplinary--which is more scalable.
across institutions of higher learning. A Rapid Technology Assessment partnership at CU Boulder comprises a faculty member/administrator who is an early adopter of technologies and a SoTL practitioner, a Libraries faculty member leveraging technologies to bridge teaching and the Libraries, and the campus-level IT administrator/educational technology researcher. Research scope includes undergraduate/graduate-level classes across several colleges on the same University campus.

As universities grapple with the need to more rapidly adopt effective teaching and learning technologies, we must learn to become more immediately responsive to new opportunities presented by emergent technology applications. This requires:

1. identifying new grass-roots educational technology adoption by leveraging the insights of risk-taking instructors and students. One tool is a campus-wide “Prof to Prof” social network that debuts successful IT applications by faculty and IT professionals.
2. forming just-in-time partnerships among faculty, IT professionals and educational researchers. Soliciting institutional support and identifying committed research teams are two of the challenges addressed.
3. designing versatile and effective tools for assessing teaching and learning in the process of IT implementation. Includes examples of successful IRB submissions and analysis of our strategy and design methods.
4. disseminating research findings to a community of faculty practitioners. Research results are rapidly output back to the online community of practice. This session provides concrete examples of all four process components, suggests best practices, and presents research-based evidence of success.

As a result of participating in the session, attendees will know:

1. How to create and leverage a practitioner network that alerts IT organizations to emergent technologies for teaching and learning, particularly in the social media space.
2. How--and why--to form just-in-time partnerships among faculty, IT professionals and educational researchers.
3. How to support interdisciplinary teams in their design of effective research projects and present them for IRB scrutiny.
4. How to balance a new culture of rapid response to emergent technologies with a methodologically sound research scaffolding.
5. How to quickly and broadly disseminate research findings in order to support innovative social media-based teaching and effective student learning.

**Session active learning strategies.** During this session, participants will:

1. Access and interact within a social networking tool that is the subject of our research study and part of our emerging IT alert system. The site URL will be provided prior to the conference.
2. Discuss with our interdisciplinary team methods to form just-in-time partnerships among faculty, IT professionals, and educational researchers at their own institutions. Identify desired characteristics of a Rapid IT Assessment Team.
3. Identify, with the support of our research panel, multiple methods to track and leverage new educational technology trends on their campuses. Further, they will strategize together methods to identify “expert” instructors in particular emerging educational IT applications.
4. Engage in conversation about the types of institutional and methodological support required for interdisciplinary teams to integrate discipline-based research methods and design effective research projects.

**H22 Session withdrawn**

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Using SoTL to Inform Course Redesign
Brenda Refaei, Rita Kumar (University of Cincinnati)

We designed a SoTL project to understand the effectiveness of using Problem-Based Learning in our Intermediate Composition courses. Intermediate Composition is a second-year writing course that is required by all programs at our University. PBL is a pedagogical approach that is based on the social construction of knowledge. Although professors have much to offer students, students can also learn important lessons through interactions with their peers. The PBL approach emphasizes those important interactions. Amador et al. (2006, p. 131), propose that PBL “allows both us and our students to see the purpose of higher education: informed, thoughtful, and engaged citizens working together to solve problems that people really care about.” In our SoTL project, we collected data on student perceptions of PBL as well as student writing samples. This data was analyzed to understand how this pedagogy impacted students’ critical thinking skills. We used Elder and Paul’s definition of critical thinking which defines it as “self-directed, self-disciplined, self-monitored, and self-corrective thinking.” This definition integrated well with our goal of preparing students to independently assess their writing situations in order to craft an appropriate response to the situation. PBL has been found to promote students’ critical thinking in other settings. In a study of PBL in business writing, Pennell and Miles (2009, p. 393) assert “through PBL students are experiencing deep rhetorical learning, developing, organizational sensitivity, learning to respect the local, and practice an ethic of change, and even some suggest that they are working really hard.” We used a SoTL project to determine if our students also experience “deep rhetorical learning.” Our results showed that in some areas they were, but in other areas, the course needed further refinement. This presentation will demonstrate how the SoTL results were instrumental to the redesign of the course. One of the major revisions made to the course was the clarification in the rubrics used to assess student work. The data suggested that the scenario for the first problem needed revision. The original scenario was too abstract, so we worked to ground it in current events related to the course theme of human rights. In addition, we changed the problem product in the second scenario from letter to report to allow for a more authentic use of sources. Our results also indicated that students needed more scaffolding in evaluating the information they use to support their points in their writing. We redesigned the problem scenario to provide the needed scaffolding. We believe the SoTL project has helped us to refine the course so it better promotes students mastery of the student learning outcomes. We will continue to collect data to ensure that our modifications truly support student learning.

Enhancing students’ understanding of values in practice: Integrating theory & practice in SoTL
Caroline Wong (University of Queensland)

This paper investigates the findings of an educational intervention that seeks to enhance students’ understanding of an organization behavior concept such that students’ learning between theory and practice can be improved. The intervention explored the use of problem-based learning (PBL) in management to help students understand the topic of values in practice. It took the form of a written essay in which students had to identify a personal problem to a value conflict and generate an action plan to the problem. The intervention made use of a real-world problem to provide the context within which students develop an understanding of a management concept such as values and develop skills and techniques in diagnosis and problem solving. Part of the action plan required students to use a self-assessment generated based on feedback given by their significant others. Students became committed to the problem because they were one of the stakeholders in the situation. Such form of self-directed learning aims at creating learning experiences that are as close as possible to experiences that students encounter in real life and it requires analytical and interpretative skills to do so.

Traditionally case study method has long been used by business schools as the most powerful pedagogic approach to developing managers yet it has been denounced as a futile exercise as students are often placed in a manager or consultant’s seat in deciding outcomes for a well-structured problem. Such an
approach indicates a didactic and deductive way of applying a theory to practice and the focus is basically on cognitive learning (Bonomia, 1989; Shapiro, 1984; Whetten & Clark, 1996).

In the dynamic global workplace today, managers often have to deal with problems that are most often ill structured and ambiguous. This is where problem-based learning (PBL) as an educational approach allows students to use unstructured real-life problems as the starting point of the learning process to help link their world of experiences to the principles and theories learned in the classroom (Graaff & Kolmos, 2003). Students are actively engaged in constructing their own knowledge and practice using new skills and concepts and re-examining past learning based on their actual experience (Argyris, 1980; Barrows, 1986; Bigelow et al., 1999).

While PBL has been used successfully in many disciplines such as medical schools, engineering, architecture, social work, law and nursing to develop students’ problem solving skills specific to the discipline (Barrows, 1994; Gerald, 2005), there has been very limited research in the management field that provides examples and engaging problems for PBL (Miller, 2004) apart from a few good examples provided for web-delivered PBL (Waters & Johnston, 2004) and using PBL to diagnose organizational problems affecting survivors of natural disasters (Jayawardana & O’Donnell, 2007). This paper attempts to build on existing literature in this area.

Qualitative and quantitative evidence in the form of perception and performance data were collected to examine the level of confidence and competence that students have in using problem solving to understand values in practice. The quantitative data included responses from survey questions in the form of rating scales (likert-scales) as well as student summative performance in the assigned essay assignment. The qualitative data included open-ended survey responses, informal chats with students and students’ reflections about their experiences in the essay assignment and focus group interviews. In this way, the breadth and depth of data could be collected through using perception and performance data. The qualitative data were analysed to provide insights for interpreting the quantitative data.

The findings supported that the essay assignment intervention did result in enhanced learning of the concept of values in practice as students derived confidence and competence to voice their values in relation to a conflict. Such a problem solving approach to learning allows students to generate relevant rules or principles from their experiences and empower students’ learning to be authentic, contextual and goes beyond teaching of content to making learning more meaningful. Critical reflection and feedback on the intervention suggested further refinement and improvement be made to the essay assignment with the aim to improve students’ learning experience.

This intervention was carried out based on student feedback for more engagement with the course activities. As a result of introducing this intervention and researching on the pedagogies related to this, I have become more aware of the underpinning philosophy of constructivism in problem solving that enables students to engage deeply with the subject matter. The intervention has enabled me to take an active approach to the development of course materials as I try out new ideas and look at teaching and learning from a different perspective. It has helped me to take a relational view of learning and seeing it from the perspective of the learner as well as of the teacher. Such an exercise provided a platform for me to reflect on the continuing professional development that is expected of teaching faculty in higher education where one learns from experiences of others (including feedback and comments), personal practice and training. It has also given me the opportunity to revisit my previous teaching and use different educational techniques and tools to bring about deeper learning for students.
Social work faculties are challenged to prepare students to respond with a range of explanations and interventions involving complex problems. MSW students arrive to graduate schools, often without a BSW, and with diverse backgrounds and learning needs. Problem based learning (PBL), with its emphasis on situated knowledge and self-directed learning, holds considerable promise in preparing MSW students for practice. Empirical evidence of PBL learning outcomes in social work education is limited and mixed. One concern has been that students learn less in a PBL environment than in more traditional teaching environments.

Does a PBL approach have a more positive impact on learning outcomes than the active and didactic approaches currently used?

**Method:** Data were gathered through a quasi-experimental, pre-post design with two follow-up points using scales that measure student confidence, deep learning and student satisfaction (n= 20 PBL and 28 non-PBL at Time 1). Qualitative data were gathered through focus groups at 3 time points which provided insight into students’ learning experiences. 18 of 22 PBL students participated in at least one focus group.

**Findings:**
1. Regardless of whether students received instruction in a PBL or non-PBL learning format they made significant gains in social work learning and confidence. The concern that students may learn less in a PBL environment was not supported.

2. No significant differences in approach to learning were observed until the end of the program when PBL students reported making significant gains in a deep approach to learning, while the non-PBL students reported significant gains in both surface and deep approaches to learning.

3. PBL students expressed a desire for lecture content.

4. PBL appreciated the process skills inherent in the PBL (i.e. leadership, initiative, collaboration, relationship skills development, independence, flexibility, research skills, self-reflection, critical analysis, communication).

PBL students appeared to strengthen their commitment to deep learning while non-PBL strengthened their commitment to deeper and surface learning suggesting a more situational approach to learning. In demanding social work practice environments, the pragmatism and skills inherent in choosing deeper and surface approaches should not be undervalued.

In this study learning approaches appeared to be relatively ‘fixed’ until the second year of graduate school. A gradual transition from didactic to PBL learning approaches, rather than complete immersion, may be desirable for students to fully embrace the possibilities of PBL.

In sum, this study raises questions about the extent to which schools of social work should value a more situational approach to learning that blends deeper and surface learning. On the other hand, it raises questions about the extent to which PBL learning approaches should be encouraged for their capacity to enhance and reinforce critical social work process skills.

It is our intention to engage the audience in discussion about the challenges and prospects of PBL by raising questions that assist audience members to reflect on how students learn within their disciplines.
**Enhancing Professional Learning**

**Improving work-integrated learning through developing the leadership capacities of workplace supervisors: the Leadership and Clinical Education (LaCE) initiative.**

Robyn Nash *(Queensland University of Technology)*

This paper reports on the development, implementation and evaluation of a capacity-building model for workplace supervisors. Despite the importance of work-integrated learning within higher education, experience in the real world does not automatically lead to positive student learning experiences or guarantee that development of required competencies will occur. From the body of literature regarding clinical education it is clear that, unless the cultural milieu which surrounds students’ clinical experience is supportive of their learning and underpinned by strong clinical leadership, quality clinical learning may remain problematic (Smedley & Morey 2010). There is a plethora of literature describing the reality of workplace experience for undergraduate students and difficulties surrounding the actuality of initiating and sustaining workplace environments that are conducive to learning. This Australian Learning and Teaching Council funded initiative aimed to enhance the quality of student learning in the clinical/health care setting through strengthening the leadership capacity of staff involved in the clinical supervision of undergraduate nursing students.

**Methods:** Working in partnership with three major metropolitan hospitals in Brisbane, Queensland, a leadership framework of clinical education (Leadership and Clinical Education or LaCE) was developed and operationalised through a purpose-built program (the LaCE Program) which has three interconnected components: workshops, personal development projects and an online LaCE toolkit. The framework, program and accompanying resources were informed by critical iterative feedback from academic and industry stakeholders to ensure that project outcomes had the potential for broad application across the sector. In 2011, the original nursing context was broadened to encompass a multidisciplinary audience. Since 2010, approximately 120 staff with workplace supervisory responsibilities have undertaken the program and, by request, a further two LaCE iterations are being conducted during 2012.

**Results:** Quantitative and qualitative methods were used to evaluate project outcomes. Survey results indicate that participants’ confidence in providing clear direction, promoting clinical learning, facilitating working relationships and further developing their supervisory role were significantly increased. These results were supported by focus group and interview data from participants and industry partners.

**Conclusions:** Facilitating student learning in the clinical setting is complex and challenging. Findings from this project indicate that leadership capacity building for clinical educators can lead to strengthened commitment to the role, increased innovation regarding clinical learning and teaching and greater confidence to be proactive with students and staff. We believe initiatives such as LaCE have the potential to facilitate ongoing progress toward the achievement of quality learning and teaching in the clinical setting.

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**Preliminary Results of an Intervention to Reduce Apprenticeship Attrition in Ontario**

Catharine Dishke Hondzel, Ronald Hansen *(Western University)*

Apprentice attrition is a critical issue in Ontario. It is estimated that up to 30% of apprenticeships are terminated in the first six months, owing to personal, social, and employment-related pressures. Prior research has indicated that apprentices cite lack of support, discrimination, unrealistic expectations, and employer behaviours as reasons for leaving the training program early (Canadian Apprenticeship Forum, 2004). This intervention uses as its foundation the clear evidence that this new generation of apprentices does not have enough, nor the right kinds of support, to be successful in the workplace. By providing resources, training, and coaching through the apprenticeship program, we expect to see an increase in completion rates as well as a corresponding influence in the self-efficacy and problem-solving skills of the participating apprentices. This intervention has been designed to directly address some of the most common reasons that apprentices leave their training program, through a series of 12 resilience-building workshops as well as facilitating access to community and social support resources. Using an experimental design, 50 apprentices will be enrolled in the intervention workshops, randomly selected from a pool of 100. The 50 apprentices not participating in the resilience workshops will be followed for the first year of their apprenticeship program. All apprentices will be contacted 12 months after beginning the program to discuss the challenges they have faced as part of the apprentice training program in Ontario in order to inform future program design and recommendations.
By the fall of 2012 intake interviews will be completed and workshops will have begun. Preliminary data will be available to judge the apprentice perception of individual workshops, but not to evaluate the program as a whole. At the time of writing, community stakeholders, including employers and past apprentices have provided a qualitative assessment of the program goals, and indicated that the kinds of support apprentices will be receiving through the workshop sessions is appropriate and much-needed.

H28  
Individual Paper  
Promoting independent learning: evaluation of an action learning project utilising coaching approaches to support learning and personal development for students in classroom and placement settings on a health programme  
Dawne Gurbutt (Higher Education Academy), Russell Gurbutt (Leeds University)  

Within the context of the changing landscape of Higher Education in the UK and the significant increase in tuition fees for undergraduate students, and the publication of the Government White Paper (2011) which focuses on student experience, there is an interest in the sector in developing and evaluating initiatives which engage the learner and enhance the learning process. The White Paper charges institutions with delivering a better student experience, improvements in teaching and feedback and enhanced preparation for employment. Coaching within this context is identified as a ‘non-directive’ approach which evokes excellence, focuses on intrinsic learning and contains an element of creativity, learning and achievement of identified goals. These elements resonate positively with the aims of personal development planning within HE as coaching offers an approach which seeks to enable and empower learners and thereby has the potential to contribute to the personal development and facilitation of solution focused approaches. These are skills which are transferable to the workplace and thereby have the potential to enhance employability.

Support for this development involved key staff in the institution being offered training in coaching techniques and encouragement to utilise this skill within a range of settings, to facilitate student engagement and enhance the student experience. Alongside this there was established an institution wide coaching network to support and enable these staff to develop both a ‘coaching solutions-focused culture’ and maintain and enhance their acquired coaching skills and identify potential new applications for coaching.

This paper focuses on one initiative from a group of initiatives across disciplines, which comprised a small scale project using action learning to implement and evaluate the use of coaching techniques to enhance the learning experiences of a pilot group of level 6 health students in a classroom setting. The project aim was to utilise these approaches within an identified programme for one semester (three months) and then evaluate students’ initial response to the adoption of coaching elements. The purpose was to enhance the student experience via offering a tool to facilitate self-motivation for learning, personal development planning and encourage students to adopt and develop solution-focused approaches within their learning experience. The project also considered the usefulness of coaching approaches in placements and work-based learning, as a means of identifying the potential usefulness of wider applications of coaching in supporting teaching and learning. The methods involved a selection of coaching applications employed in the context of personal tutorials, staff-student liaison activities, student initiated learning modules and with workbased mentors to facilitate and manage the issues arising in the organisational management of placements.

Sheraton Ballroom South (2nd floor) 10:30am-12:00pm  
Teaching, Learning & SOTL in STEM: Research & Researchers  

H29 Individual Paper  
The Illustrated Novel Mastery Project in Biology Enhances Critical Thinking and Student Engagement in a General Education Course  
Jennifer Grant (University of Wisconsin-Stout)  

Undergraduate students often feel intimidated while enrolled in general education science courses. These students self-report that they find science course content foreign, difficult, and dis-attached from their daily experience. The Illustrated Novel Mastery Project (INMP) in Biology was invented as a tool to directly address performance anxiety and help students relate to course content. At the very heart of this project is the requirement that students author a fifteen to twenty-page novel that highlights course content.
This is the third year this innovative teaching technique has been implemented in the author’s courses, which include Human Biology as well as Introductory Biology at the author’s home institution. As this project has evolved, the nature of the INMP has changed as activities and requirements of the project were refined to meet the needs of the students. Key findings include:

I. Evidence will be presented that the Illustrated Novel Mastery Project increased student engagement in the course. Furthermore, there was a decrease in students’ perceived performance anxiety. Data include reflections, improved exam scores, and a newly devised set of survey questions that addresses students’ anxieties towards the course.

II. Many students typically labeled ‘non-performers’ based on multiple choice exam scores have benefitted from the opportunity to showcase their mastery of human biology topics through their Illustrated Novel. This is true for students often considered ‘reluctant readers’. Evidence speaking to this includes increased scoring on exam sections related to each individual student’s novel.

III. The Illustrated Novel Mastery Project was deployed in a linked learning community (LLC) of freshmen Vocational Rehabilitation majors jointly enrolled in the course “Introduction to Vocational Rehabilitation”. The novels authored by these LLC students demonstrated the use of higher-order thinking skills to a greater degree than those of a non-LLC cohort. Measures included increased scientific depth compared to novels prepared by the control cohort, and increased integration of multiple complex topics into the novels.

IV. Survey data indicated that students enrolled in these courses had strong desire to know how biology topics relate to their everyday life. This realization has led to a change in the implementation of the project. Students now pursue topics that strongly relate to their careers. Indeed, students included their novels in their professional portfolio to demonstrate mastery of a scientific concept or of their creative potential, and many plan to use these novels in their future roles as allied health professionals, educators, graphic artists, etc.

Does Term Project Format affect its effectiveness in helping students to connect Theory with Practice or Not?

Israel Dunmade (Mount Royal University)

Term project is a component of student centered project-based instruction model or strategy in which students apply concepts learned in the class to plan, implement, and evaluate projects that have real-world applications beyond the classroom. The intent is to facilitate students’ development of cognitive skills and skills of high value to the workplace where they will apply the knowledge acquired after graduation. This approach is premised on constructivism views that students learn by constructing new ideas or concepts based on their current and previous knowledge. The most important benefit of this approach is that students find projects fun, motivating, and challenging because they play an active role in choosing the project and in the entire planning process. In addition, research indicates that engagement and motivation does not only lead to high achievement but promotes long term retention of what is learned.

However, Term projects format vary from one course to another according to the nature of the course and what the instructor wants students to learn from the project. Consequently, this study was aimed at determining whether the format of a term project affect its effectiveness in helping students to connect theory with practice or not. This study compared students’ perception of the effectiveness of term projects in ENVS 4413 and in ENVS 3303. The term projects in ENVS 4413 involve students working with companies to find solutions to their problems while the term projects in ENVS 3303 involve the assessment of potential environmental impacts of products in the laboratory with the aid of a software. 90% of the students that took ENVS 4413 in the Fall 2010 also took ENVS 3303 in the Winter 2011. Grounded theory approach was used in this study. The data used for the analysis were from students’ reflective journals and their term project reports.

Results of the data analysis from the two courses’ reflective journals and term project reports revealed that term projects’ format does not affect its effectiveness in helping students’ connection of theory with practice.
From STEM (science, technology, engineering and math) to SoTL: Could Pragmatism help?
Carolyn Oliver, Niamh Kelly, Susan Nesbit (University of British Columbia)

Last year, a chemical engineer and a medical microbiologist presented the barriers and the bridges they faced on their journey from STEM (science, technology, engineering and math) to SoTL. This year, the social worker who witnessed their process considers what helped them move beyond their positivist academic training and deeply held disciplinary attitudes to embrace SoTL’s non-positivist language, tools and threshold concepts.

Over the course of a reflective SoTL study in which their conversations were captured on audiotape and blog and analysed using qualitative description methodology, these STEM/SoTL scholars concluded that engaging with SoTL was no simple intellectual exercise. We will discuss how acknowledging the social and emotional nature of the transition from one type of research to the other helped them in the journey. It was one in which they found themselves balancing the desire to reach out to others with the need to manage the very real sense of vulnerability that came with embracing subjectivity. They were able to move forward when they found metaphors that allowed them to dissolve troubling dualisms, incorporate their understanding of SoTL research into familiar conceptual frameworks and access pre-existing strategies for managing transition and uncertainty.

And then there was the question of epistemology. The qualitative research literature is replete with warnings that “no inquirer...ought to go about the business of inquiry without being clear about just what paradigm informs and guides his or her approach” (Guba & Lincoln, 1994, p. 116). Qualitative scholars have dedicated so much attention to epistemology on the basis that it dictates the ways in which data should be managed, research relationships conducted and truth and credibility defined (Guba & Lincoln, 2005; O’Connor, 2001). But what happens when researchers recognize positivism as ill-suited to their SoTL needs but are not yet ready to commit to an alternative epistemology?

Without a pre-existing plan to guide them, these STEM/SoTL scholars negotiated how an emerging commitment to perspectival knowledge affected issues like the accuracy of data transcription and “voicing” the findings far later than is typical in non-positivist qualitative research. In doing so their actions were highly compatible with the epistemology of pragmatism. Through interactive discussion we will consider what pragmatism is and how it can support qualitative studies. Together we will assess the value of pragmatism as a bridging framework for the growing number of STEM scholars engaging with SoTL inquiry for the first time.

Triangulating the analysis of student products from the Graduate Seminar in University Teaching (GSUT).
Arshad Ahmad, David Price, Rosemary Reilly, Robert Cassidy (Concordia University)

For several years we have been involved in providing graduate students across disciplines a 10-week or 5-day intensive GSUT. We triangulate and discuss data derived from some of the seminar’s learning outcomes. These outcomes include (1) the Approaches to Teaching Inventory-Revised (ATI-R) questionnaire (Trigwell, Prosser & Ginns, 2005); (2) the qualitative analysis of students’ teaching philosophy statements (TPS); and (3) concept maps generated in conceiving a new course participants plan to teach.

With the ATI, we examine data from 105 students to determine whether a relatively short professional development program such as our GSUT promotes meaningful and enduring changes in approaches to teaching within higher education. Quantitative analysis was performed on the ATI-R scales including pre/post comparisons as well as group comparisons among 6 disciplines (Business, Science, Social Science, Humanities, Fine Arts and Engineering). Confirmatory and exploratory factor analyses were conducted to examine and compare the internal structure of students’ responses.

With the TPS, we share the results of a coding scheme that discerns the quality of teaching philosophies to corroborate with quantitative analyses highlighting whether these are student centered, use generic
or disciplinary approaches to teaching and promote deep learning (Lindblom-Ylanne, Trigwell, Nevgi, & Ashwin, 2006). With the concept maps, using the spoke and network designations proposed by Hay, Kinchin and Lygo-Baker (2008), we reveal the influence of different disciplines on the construction of concept maps and how facilitator instructions impact on participant’s concept map design.

Quantitative analyses from the ATI will be used to corroborate qualitative analysis resulting from the coding of the TPS and concept maps. For example, some of the TPS coding attributes are indicative of the two major dimensions of the ATI-R [information transfer/teacher focus (ITTF) and a conceptual change/student focus (CCSF)].

Pre/post comparisons of ITTF and CCSF scores as well as of the internal structure of students’ responses revealed various patterns of change that are discussed in terms of the student reactions to and conceptual changes associated with participation in the seminar. Results are placed in the context of previous findings, critically interpreted and discussed in terms of their implications on the design of professional development programs for those who aim to teach within post-secondary settings.

Triangulation helps us to identify the intersections where issues of disciplinarity emerge. Our method will be to briefly present our empirical findings and then invite an open discussion for participants to share their own experiences, interpretations and views on the implications of our research findings in promoting good teaching practices in similar professional development programs. Our research methodology demonstrates how teachers and students from different disciplines can cross the boundaries of discovery within research and SoTL.

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**H33**

### Studying Graduate Students Studying Teaching

**Jessica Deshler (West Virginia University)**

The course that is the focus of this investigation is a Teaching Seminar required for all new Graduate Teaching Assistants (GTAs) in a Mathematics Department at a large research university. The course is designed to be the first professional development experience that these GTAs encounter as they become instructors of collegiate mathematics in preparation for academic careers. The goal of this course is to create a seminar environment where these students (GTAs) can discuss issues about teaching in general, and specifically about teaching mathematics, and study this profession.

Researchers estimated that 37% of undergraduates will have a graduate student as a mathematics instructor sometime during their program, probably early on (Speer, Murphy, and Gutmann, 2009) and that Novice instructors play a critical role in undergraduate mathematics education: graduate students are instructor of record for as many as a half-million undergraduates each year in the U.S. (Lutzer, Rodi, Kirkman, & Maxwell, 2005). That is, not only do many inexperienced college teachers interact with many mathematics learners early in the college-level experience, these new instructors may influence undergraduates’ feelings and decisions regarding mathematics.

This paper describes an effort on the part of seven GTAs to work together to develop, implement and critique two lessons for a Calculus I course. The GTAs were asked to develop lessons for a fifty minute Calculus I class on topics of their choice. As a group, the GTAs decided to focus their lessons on procedural topics as opposed to conceptual ones. GTAs were chosen randomly to teach the group-developed lessons during a calculus class while the other GTAs observed. Upon either teaching or observing each lesson, GTAs were asked to provide a short reflective statement about what they saw during the lesson, and about the overall experience of planning the lesson and either implementing or observing it. Their written responses were analyzed using an open and axial coding method (Corbin & Strauss, 2008). A preliminary analysis reveals the reflections of the GTAs be focused superficially, supporting previous work on K12 pre-service teacher reflective abilities. GTAs can be considered pre-service faculty with the same low level of reflective abilities. The specific topics of the reflections will be discussed as well as possible ways to improve the reflective abilities of the GTAs.
SoTL Professional Development for Doctoral Students

Steven Freeman, Holly Bender, Ann Marie VanDerZanden (Iowa State University)

Iowa State University (ISU) implemented a change in our promotion and tenure policies in 1999 based on Boyer’s expanded definition of scholarship. This policy change allows faculty to include scholarship of teaching and learning (SoTL) work as part of their scholarship/research requirements for promotion and/or tenure (P&T). Promotion of SoTL work has traditionally been addressed through faculty development opportunities and an ongoing partnership between the Center for Excellence in Learning and Teaching (CELT), the Office of the Provost, and the ISU Faculty Senate to institutionalize SoTL work as part of the ISU P&T process. Prior to 2012, graduate students were welcome to participate in CELT workshops regarding SoTL work, but were not considered a target audience for this work and were not eligible to participate in CELT sponsored funding opportunities to support SoTL work unless they were part of a team led by a faculty member. More recently, CELT has expanded SoTL programming efforts to include graduate students from across campus who are involved in our undergraduate classrooms. This presentation will discuss the ongoing efforts of Iowa State University (ISU) to promote SoTL among doctoral students via ISU’s Preparing Future Faculty Program (PFF) and to graduate students across campus who will participate in the Center for Integration of Research Teaching and Learning (CIRTL) Network as part of their professional development. CELT will be connecting graduate students with current faculty in three levels of SoTL activities: (1) Low engagement instructional reforms, such as future faculty helping current faculty with technical solutions to instructional problems; (2) medium engagement inquiry, such as a SoTL project to refine a pedagogical intervention, evaluate impact, and present results to the ISU campus; and (3) high engagement research, such as completion of an intensive SoTL project that leads to opportunities for national presentations and peer-reviewed publications. Future and current faculty interested in high-engagement SoTL experiences can join cohort teams as part of the ISU SoTL Institute. Outcomes for low engagement and medium engagement projects will involve tracking the number of graduate student participants, their academic programs, the types of projects they complete, and the outcomes of those projects. Outcomes for high engagement projects will also include the venues and types of national/international dissemination of project results. The presentation will focus on the types of activities designed to infuse interest in SoTL among doctoral students (at ISU and at the institutions present represented in the audience) as well as the support provided by CELT to those students who take on SoTL projects. The presentation will conclude with what ISU is learning about involving doctoral students in SoTL activities and ongoing assessment activities to gauge the impact of this work across the campus and on the graduate students themselves.

Lunch

Convention Centre Chedoke ABC (3rd floor) 12:00-1:30pm

Lunch will be available for all registrants. Food can be picked in Chedoke C, and dining tables are available in Chedoke AB.

ISSOTL Membership Meeting

Convention Centre Webster C (3rd floor) 12:15-1:00pm

All Conference delegates are encouraged to attend the annual ISSOTL membership meeting to hear about ISSOTL news, committees and activities. Pick up your lunch in Chedoke C, and then head to Webster C for the meeting.
There’s long been agreement that disciplines are key to the scholarship of teaching and learning. In part, this has had to do with the work’s focus on questions about teaching and learning in particular courses and programs, and in part, with the effort to make teaching “community property,” as Lee Shulman put it, in ways that one’s colleagues can use and build on, with the goal of bringing teaching and learning more fully into the intellectual life—and strife—of the field. Indeed, as Sue Clegg reminded us in her keynote address at ISSOTL 2008, “The way SoTL has approached making connections between scholarship and practice has been through the glue of disciplinarity. I think this is the most distinctive aspect of SoTL, which distinguishes it from the action research and teacher research traditions.” (2008, p.3).

Over the years, the scholarship of teaching and learning community has paid careful attention to disciplinary dimensions of the work, especially to the kinds of intellectual and epistemological homes the various disciplines provided for practitioner inquiry and pedagogical debate. Yet it was also evident early on that there was much to be gained by exchange among fields. Indeed, anyone who takes up the work today—especially if they do so in the company of colleagues and mentors—will soon hear about a whole range of theoretical, methodological, pedagogical ideas that circulate in this new “teaching commons” (Huber and Hutchings, 2005). As Kathleen McKinney points out in the introductory essay to a new volume, what began as a discipline-based movement (enlivened by occasional cross-disciplinary ventures) has been transformed into a lively interdisciplinary field. For many humanists, however, the increasingly interdisciplinary nature of the scholarship of teaching and learning is a mixed blessing. To experienced practitioners, this emergent commons offers a rich array of resources, colleagues, and inspiration, but (it appears) at some cost to their ability to address disciplinary colleagues and attract newcomers to the conversation. And, of course, the humanities fields differ among as well as within themselves in regard to these effects.

This panel will examine humanists’ varying response to what some feel as the “heavy hand” of the social sciences in the dominant definitions, methods, and genres of the scholarship of teaching and learning today. While many practitioners see these dominant features as flexible enough to accommodate all comers, they do function, in some cases, as negative “boundary objects,” inhibiting rather than facilitating the flow of the scholarship of teaching and learning across disciplinary borders. Mary Huber and Nancy Chick will begin by introducing these challenges faced by humanist SoTL practitioners, and then the panel will shift to specific examples of humanist SoTL editors and their work in the field.

Mary Huber (Arts and Humanities in Higher Education US editor) will discuss the journal’s experience with humanities SoTL contributions and the journal’s policies on what is and isn’t considered publishable in this area—and why. These standards from this well-regarded journal will help the panel define even more concretely what strong humanities SoTL can look like, as well as what it can contribute to the broader field of SoTL.

Next, careful consideration of submissions to Teaching Theology and Religion over the last decade, done from the perspectives of past and current editors (Patricia Killen and Eugene Gallagher), reveals a set of organic entry points into the scholarship of teaching and learning—a “what is?” analysis of existing SoTL in the field—that also suggest public criteria for judgments of quality that are relevant to this scholarship in the fields of theology and religious studies and the humanities more broadly.

Finally, Chick (co-editor of ISSOTL’s upcoming journal) will discuss the ISSOTL journal’s response to this tension in the field and draw on some of the most applicable methodologies of literary study, as well as its fundamental principles about texts, to illustrate a “what’s possible?” analysis of what SoTL would look like from an authentic approach from this humanist perspective.
Mentoring the ethical steward: how may a SoTL approach help faculty to foster habits of ethical stewardship in the formation of junior faculty members?

James Cronin, Marian McCarthy, Bettie Higgs, Jacinta McKeon (University College Cork)

The Panel: James Cronin (chair) has research interests in teacher education; Marian McCarthy has research interests in Teaching for Understanding (TfU); Bettie Higgs has research interests in integrative learning; Jacinta McKeon has research interests in language education and teacher education.

Discussion Question: This panel revisits the In-at-the-deep-end project at University College Cork to ask: how may a SoTL approach, to integrated curriculum design, help faculty to mentor habits of ethical stewardship in the formation of junior faculty members?

Framework: A global economic crisis has given new impetus to ethical debates in higher education and teaching for the professions.

In their analysis of emerging issues in contemporary doctoral education, Chris M. Golde, George E. Walker and associates argue that a “steward of the discipline” is a scholar in the fullest sense of the term - someone who can imaginatively formulate new knowledge, critically conserve valuable ideas and responsibly transform those understandings through teaching, writing and application (Golde and Walker, 2006). Here, responsibility equates with an ethical approach to a discipline or body of knowledge. Lee S. Shulman’s classic paper on signature pedagogies in the professions (2005), implicitly owes a debt to the work of Donald Schön (1983; 1987) on the “reflective practitioner” or the processes of thinking on action: the point when an ethical dilemma may occur. For Shulman, signature pedagogies are composed of three elements: 1.) surface structures, 2.) deep structures and 3.) implicit structures. The surface structure, applies to the acts of teaching and learning. The deep structure refers to the values of the discipline (e.g., what makes a lawyer or a doctor?). The implicit structure or hidden curriculum is revealed through performances of student understanding. Ideally, an ethical education should enfold all three levels. In professional life, when tensions occur, these may reveal contradictions between professional codes of conduct and working practice.

This panel’s emphasis will be on the processes involved in mentoring graduate teaching assistants engaged in the In-at-the-deep-end university-wide module at University College Cork. In this process, graduates are encouraged to tackle a central question or problem emerging from their teaching practice, to formulate strategies for student engagement, and to critically analyze the effects of applying these strategies from the vantage point of their own emerging teaching and learning philosophies. Through this module, ethical stances are played out from multiple disciplinary perspectives grounded in action research and subject to the vigilance of “critical friendship” mentoring and peer review. In-at-the-deep-end highlights the authentic voices of graduate teaching assistants engaged in the process of reflective practice. Such intentional awareness is central to the process of becoming professional.

Methods: Aristotelian virtue ethics will be used as the critical lens. Virtue ethics places emphasis on the character of the moral agent, rather than rules or consequences, as the key element of responsible thinking. “Virtues are dispositions to moral conduct that are no less affective than cognitive” (Bondi, Carr, Clark and Clegg, 2011, p.3). Virtue ethics, within education and the social sciences, has recently been considered by the following: Thomas Alured Faunce (2004); Justin Oakley and Dean Cocking (2006); Deirdre McCloskey (2007); James Page (2008); Nancy J. Obermeyer (2009); Sarah Banks (2010). These studies are not only concerned with mapping attitudes to responsible behavior in professional practice, but also stress the need for faculty to educate students with competencies to negotiate the fault lines between theory and practice as these are precisely the points where ethical dilemmas occur in action. Project Zero’s Good Work and Good Play Projects, at the Harvard Graduate School of Education, examine ethics as phenomenological experiences as enacted through human interactions initially at play, then at school, and through work. Educating for complexity is an ethical positioning.

Narrative is useful in representing data requiring rich, complex or “thick” descriptions of the social and cultural lives being observed. Through discourse analysis a substantial concern is attached to what the narrative actually ‘represents’. Using audio samples, the panel will introduce a discourse analysis of teacher narrative in order to demonstrate how a community of practice co-creates discourses through an organic grounded approach in practice.
Outcomes: Most recently, Kristjan Kristjansson has argued that teacher education literature has become saddled with what he calls the “constructivist-cognitive” paradigm, according to which agents, including teachers and other professionals, have multiple identities but no actual selves, and emotions are understood either as non-cognitive thrusts or as exercises of social power (see Bondi, Carr, Clark and Clegg, 2011). This panel will discuss how research-led teaching offers opportunities for mentors to model right thinking and right practice grounded in the complexities of action.

Reflection and Engagement: In this context, the contributors listen, though the audio clips, for the processes in professional formation to reveal the ethical stances in becoming professional through the following threshold moments in the module:

- engagement with an authentic research question grounded in the complexity of ethical positioning and action;
- the processes involved in conducting authentic and ethical SoTL research within the tutorial setting or laboratory space;
- acts of making SoTL research public through symposium by examining the ethical responsibility of peer review.

Contributors and audience will be asked to imagine what principles a vocabulary of ethical consciousness would encapsulate (for example, empathy, selfhood, community, wise judgment) and how this could work in practice.

The scholarship of teaching democratic thinking and facilitating diversity learning
Christopher Price (The College at Brockport, State University of New York), Yael Harlap (University of Bergen), Lorraine M Gutierrez (University of Michigan), Elizabeth Meier (University of Michigan)

In its 2012 report, A Crucible Moment, the Association of American Colleges and Universities’ National Task Force on Civic Learning and Democratic Engagement “calls on the higher education community--its constituents and stakeholders--to embrace civic learning and democratic engagement as an undisputed educational priority for all of higher education, public and private, two-year and four-year.” The four papers featured in this panel take up this call though applying the scholarship of teaching and learning to understand better how to teach democratic thinking and facilitate diversity learning. Following Weimer’s (2006) assertion that SOTL should allow for diverse research methods, the panel features four very different papers on this topic. The different SOTL methods include: surveys and focus groups; a thematic analysis of written reflections before and after an educational experience; a quantitative analysis of classroom video data; and a theoretical analysis of the relationship between institutional and classroom practice. The panel also brings together papers that explore SOTL at different levels of analysis - institutional/organizational, educational/faculty development, and classroom practices across multiple classrooms and institutions. Diverse methods are especially relevant given the theme of the panel since the facilitation of democratic and inclusive values and habits of mind cannot be accomplished in a one-size-fits-all or authoritarian fashion. To this end, these papers show that the researcher and the object of her research should exist in what Freire (1970) would call a dialogic relationship. The goal of such research is to improve understanding in partnership and dialogue with those who hopefully will benefit from the research. The research discussed in this panel is also aligned with goals of SOTL since the researchers’ ultimate aim is to improve practice and more specifically to make educational practices more inclusive and democratic.

The papers include:

“The diversity learning of university educators: Using interactive theatre for educational development about difference, power and privilege”
- Yael Harlap, Associate Professor, Department of Education, University of Bergen, Norway

This study analyzed short reflections written by university educators on their beliefs about whether instructors should take social group differences among students into account in their teaching, both at the start and the end of an educational development workshop using interactive theatre to explore hot moments in the classroom.
This study looked at the impact of three different diversity learning courses on the critical consciousness and civic engagement of university undergraduates. The data allows us to look at the differential impact of three different pedagogies (service learning, intergroup dialogue, and lecture) in addition to previous life experiences and values.

This study examined the impact of different facilitation styles on student sharing and participation levels in both gender and race/ethnicity intergroup dialogues. Facilitator advocacy was associated with decreased student openness and engagement, while facilitator reflection/redirection and facilitator listening/support were associated with increased student openness and engagement.

This paper discusses the theoretical connection between progressive educational institutional policies and practices, such as no grades or opportunities for students to create their own programs of study, with students' democratic ways of thinking and acting, using concrete examples of how progressive educational practices help achieve democratic learning outcomes.

After the individual presentations we will engage the audience to discuss the commonalities and differences across theories, research methods, and research findings in order to further explore how the findings and theoretical analysis of the papers can inform each other.

Students as Knowledge Makers: A Collaborative Inquiry across Disciplines
Mahatapa Palit, Jason Schneiderman, Cynthia Wiseman, Lane Glisson, Michelle Wang, Lyle Yorks, Katherine Kavanagh, Claire Wladis, Shane McConnell
(Borough of Manhattan Community College, City University of New York)

This proposal for a panel presentation at the ISSOTL 2012, addresses two of the conference threads for this year: integrating SOTL into institutional culture and integrating diverse disciplinary approaches to teaching, learning and SOTL. The panel will present an overview of a Collaborative Inquiry project conducted by faculty and staff at a community college focusing on the question of what does it mean for students to become knowledge makers and how to facilitate this process. The panel will present three different approaches to “Students as Knowledge Makers:” Collaborative Learning, Games for Problem Solving, and Creating a Meaningful Research Experience through Sense-Making Activities.

The research participants adopted a Collaborative Inquiry (CI) (Bray, Lee, Smith, and Yorks, 2000; Yorks and Kasl, 2002) method for their SOTL. CI is an organized process of repeated cycles of dialogue, action, and reflective meaning making on the results or consequences of that action through which a group of peers strives to answer a question of importance to them (Bray, et.al., 2000; p. 6). The focus is doing research with people rather than on people (Heron and Reason, 2001). Using the CI process, the question that emerged as important to the participants in their SOTL was how students could become knowledge-makers: taking agency for the creative process of making knowledge, being fearless in their quest for knowledge, and eventually developing their identity as knowledge-makers?

Methodology: Stemming from the over-all inquiry question of “How can our students become creators of their own knowledge” which emerged from the initial CI meetings, three sub-groups emerged, each with two to
three members. Each of the sub-groups focused on a particular aspect of knowledge making that was of interest to them, inquiring into the application of innovative pedagogical methodologies in their diverse disciplinary settings. Their experiences and data drawn from their classes were then brought back to the broader CI. In this respect, the current project utilizes a federated design process.

As co-researchers, the sub-groups designed research plans identifying the data they are going to collect (e.g., images that capture the experience of those they are working with, observations, reflective interviews) and agreed on actions they were going take. The participants took action, and reconvened at agreed upon intervals to share experiences, data, and create meaning making frameworks that provided the coherence among the diverse experiences. In this sense CI is a process of convergence, divergence, and convergence of experiences.

The focus of the inquiry undertaken by each of the sub-groups is summarized below. The results of the CI project will be discussed at the conference.

**Sub-group Inquiry A. Collaborative Learning:** Students often resist learning in teams because it can be uncomfortable and sometimes unproductive. The roots of this resistance may be cognitive, affective or motivational. The goal of this research is to understand not only the nature of this resistance but to find ways to increase students’ self-awareness of their resistance, thereby enabling them to develop adaptive strategies to make their collaborative learning experience more fruitful and satisfying.

**B. Games for Problem Solving:** This sub-group will present a model for the conceptualization and development of a game for student problem-solving in the context of the college experience. Presenters will describe the process whereby students identified common problems in the college experience, explored options, and solutions, and translated those experiences into a game experience that might provide a virtual learning opportunity for freshmen and sophomores as they begin their journeys through their own college career.

**C. Creating a Meaningful Research Experience through Sense-Making Activities:** To address the difficulty that students often experience in the process that begins with research and ends with a paper, the researchers have created a series of sense-making activities, in the form of a game that can be used in a classroom or workshop to demystify the process of research and the synthesis of ideas. The tasks include focusing a topic, analyzing the sources of information, and synthesizing the ideas gathered in the course of researching a paper. The goal is to help students make meaning of their topic, understand the research sources that they find, and gain a greater ability to assess the pertinence of those sources to the chosen topic. In the process of playing the game, students will reflect on their new found knowledge and learn to create meaning from a diverse array of research sources.

**Conclusion:** The real value of the CI inquiry process is to unfold multiple layers of relationship: relationship between faculty and student, faculty and their own teaching, faculty and the college, and more importantly the relationship within members of the CI group. How teachers relate to their students, discipline, colleagues, department, and the institution impact teaching and learning. The purpose of this panel proposal is twofold: (1) to share diverse disciplinary approaches to support students’ knowledge creation process; and (2) to introduce the model of collaborative inquiry and the impact of the CI model on teaching and learning.
Evolution incorporating knowledge of results (KR). Fourth year student-interns (n=160), and 23 faculty-clinicians were surveyed regarding perceptions of student skills upon entering clinical internship. Each group completed a 100 mm visual analogue scale (VAS) reporting perception of student: a) competence and b) confidence. Open ended commentary was gathered and evaluated by centering resonance text analysis (Crawdad ?). VAS scores (%) were compared by unpaired t-test. Faculty-clinician confidence in student-intern skills was significantly lower than student ratings. Likewise, faculty-clinician rating of competence was lower, while student ratings were higher by a similar margin. Analysis of the open ended commentary indicated that the language network context for student-interns was retrospectively focused toward undergraduate learning while faculty-clinicians were oriented toward patient care. Perceptions of performance of manual treatments upon entering internship significantly differ between students and faculty. This disparity may reflect an instructional focus on choreography of technique (i.e., lower order skill acquisition) versus the sought-after therapeutic components (i.e., higher order application to patient care). Curricular implications include incorporating quantitative interventions to enhance student confidence and competence in skill acquisition and qualitative strategies to increase application to patient care.

Communication, Pedagogy and Conceptual Consistency: High School to University Transition
Emily Charbonneau, Chad Harvey (McMaster University)

Transitioning from high school to university requires students adapt to new expectations, responsibilities, and freedoms. For most students, this change comes with some level of difficulty, whether it is on an individual, community or institutional basis (e.g. Eggens et al 2007). In the past few decades, the high school to university transition has received an increasing amount of academic research and media attention (e.g. Krause et al., 2005) Much of this research has focused upon the student perspective in this transition, and what characters, such as student preparedness and expectations, may determine post-secondary success. First-year undergraduates anticipate increased independence yet, tend to be less aware of the time commitment for academics, coupled with decreased contact with instructors (Crisp et al., 2009).

Student success should be a student-based metric; it should not be a result of teaching pedagogies, inconsistent expectations, and communication gaps among educators in the high school and university sectors. With this study, we sought to identify possible sources for these apparent inconsistencies in order to establish clearer criteria by which suitable students are defined.

We evaluate the results from an online survey of biology educators from across Ontario, assessing communication between high school and university educators, the emphasis on particular concepts, and extent they teach quality of coverage versus quantity of coverage. Our main research questions include: 1) Is there significant difference between teaching pedagogies in high school and undergraduate biology classes? 2) Do biology educators base their topic/concept coverage upon depth of understanding or on breadth of coverage? 3) Are students perceived to be prepared, conceptually, for university? Are they actually? 4) Are high school and undergraduate biology educators aware of the concepts emphasized and pedagogies applied by one another?

Results identify a communication void between university and high school educators based upon pedagogical methods, what curriculum topics were ranked most important, as well as the desire to communicate with educators in the other sector. Overall, the differences in perceived areas (e.g. writing abilities, critical thinking and test taking skills), in which students are prepared, will generate an interesting foundation for discussion.

This research will improve the student experience in university biology courses, investigating the apparent divide between biology teaching pedagogies in the high school and university sectors. A better understanding of the perceptions for important concepts and pedagogies across educational sectors will increase incentive to improve communication and pedagogical policy for all disciplines and improve the educational experience for both teachers and learners alike.
Teaching in large undergraduate lectures: What you say you will do versus what you actually do  
*Barbara Kensington-Miller (University of Auckland)*

Research has shown that passive learning and transmission teaching are disempowering for students and can lead to low levels of attention and understanding (Boaler, 2000). Nevertheless, the use of transmission style lectures in undergraduate courses is remarkably intransigent with many lecturers believing in the effectiveness of such pedagogy. This is often attributed to the reluctance of many academic staff to change their ways of lecturing due to tradition and ease.

A lecturer’s espoused and enacted beliefs about their teaching practice, what they say they do versus what they actually do, are often in conflict. Changing the beliefs about how a subject should be taught, is not a simple process and can often be extremely uncomfortable (Johnson et al., 2009; Yackel, Rasmussen, & King, 2000; Yoon, Kensington-Miller, Sneddon, & Bartholomew, 2011). However, research suggests this process can become easier through collaborative reflection (Paterson, Thomas, & Taylor, 2011).

In our research, using the discipline of mathematics, we describe the journey of a mathematician as he accepted the challenge to ask students to work interactively on questions in very large undergraduate lectures. His espoused and enacted beliefs about lecturing were confronted through a repeated process of developing questions, testing them in lectures, and refining them in collaboration with a research group.

Initially, the study showed that what the mathematician said he would do and what he actually did were at odds, but over time the gap between his beliefs decreased. From the interviews, he described his beliefs and how he acted on them in his lectures: by encouraging students to think more about mathematics in lectures; by using open-ended questions for class discussion; and by rejecting the tyranny of content. The change in the mathematician's enacted beliefs was seen against a backdrop of changing emotions, and after repeated testing out and reflection he developed a confidence to apply the new teaching practice.

Our study demonstrates that working within a team of educators, as a community of practice, can be a source of encouragement for a lecturer to engage scientifically with his/her teaching beliefs. It also illustrates that when a lecturer’s espoused and enacted beliefs about their teaching practice are in conflict, these beliefs can be modified through a cyclical process of implementing, testing, reflecting and revising one's teaching practice.

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**Diverse Approaches to Developing Future Teachers**

Professional Development: Advancing ECE and Generic Skills through Advocacy  
*Theresa Steger, Lisa Teskey (Humber College ITAL)*

While research emphasizes the need for Early Childhood Education (ECE) and other professionals to assume the role of advocate for children, families and the profession, research examining the development of such advocacy skills is lacking. This paper reports on a project that advances current understandings, by exploring students’ perceptions of their own knowledge and skill development, in a program which has specified learning outcomes related to advocacy.

This work recognizes that, while faculty may design assignments and other course learning experiences with particular learning outcomes in mind, student perception of the learning that occurs may, or may not, be consistent with faculty expectations.

This study provides insight into the teaching and learning process in relation to advocacy to inform pedagogy and course design within and beyond ECE. Participants will be invited to actively contribute their own perceptions of how this work applies to advocacy and generic skill development across a range of disciplines.

With the establishment of the College of ECE in Ontario (which will eventually accredit pre-service training programs for Early Childhood (EC) professionals) and the increased expectations placed on the EC professional, it is paramount that pre-service training programs address the very important role of EC professional, as advocate. Doherty and her colleagues (2000) found that many early childhood educators fear or lack understanding about the government and political processes. Additionally, Kagan (1998) found that EC professionals are cynical, believing that political action is useless and that their main responsibility is
programming. However, as Chandler (2006) correctly points out, “It is essential to incorporate advocacy into [early childhood educators’] professional self-image” (p. 246). Group advocacy learning experiences, such as those made available to students in Humber College Institute of Technology and Applied Learning’s 2-year ECE diploma program, where students are required to complete a group assignment focused on advocacy and leadership in the field, have a unique potential to support efforts to enhance quality. The assignments include components related to the six steps to effective child advocacy described by Jaffe (2001), including “knowing the issue, researching for background and impact, [and] preparing a summary” (p.35). While these skills are specific to advocacy, their alignment to college generic learning outcomes and their transferability to a range of academic, professional and personal behaviours is also explored.

The approach taken in this study adhered to social constructionist and post-modernist principles. In the post-modernist perspective, Weedon (1987) explains that “[w]hat an event means to an individual depends on the ways of interpreting the world, on the discourses available to her [or him] at any particular moment” (p. 79). Open-ended surveys and focus-group discussions were used to explore ECE diploma and degree students’ perceptions of their professional understandings and behaviours before and after having participated in pre-service coursework and programs designed to develop advocacy knowledge and skills. The co-investigators analyzed the data using qualitative data analysis techniques. Through detailed and repeated reading (Wood and Kroger, 1998) and an on-going process of fluid movement between the different stages of coding, analysis, validation, and writing (Potter & Wetherell, 1987), data analysis identified patterns in the student responses. The patterns will be linked to student learning about the varied role of the ECE, advocacy and more generic professional practices such as reflective practice, working on a team, communicating effectively and using research to inform practice. The value of including student voice in the evaluation of learning and learning outcomes will be discussed. By sharing these responses, the researchers hope to contribute to both ECE and SoTL learning communities.

**Innovative Practicum Models in Teacher Education**

**Arlene Gierson, Maria Cantalini-Williams, Mary Lynn Tessaro, Nancy Maynes (Nipissing University)**

Consistent with many other professional preparation programs, teacher education programs generally include a combination of course-based and field-based learning experiences. Most commonly, teacher candidates in Canadian teacher education programs complete their field-based practicum experiences in provincial classrooms, where they are placed individually under the mentorship of an experienced classroom teacher (Falkenberg & Smits, 2010).

Recent research had documented that modifying traditional field placements to place a dyad of two teacher candidates at the same stage of program completion in the same classroom, may be beneficial (Gardiner & Robinson, 2009; Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009; Walsh & Elmslie, 2005). However, the effects of practicum peer mentorship between teacher candidates at different stages of program completion, was unexplored. Additionally, while research had identified the importance of teacher candidates’ intercultural understandings (Jordi, 2007; Roose, 2001), the effects of international placements undertaken with faculty support appeared to be uninvestigated. As well, limited research had explored the effects of teacher education practicum experiences, that are representative of liberatory service learning models (Chambers, 2009).

This session will present an overview of innovative field-based learning experiences that are being investigated in a five-year concurrent Bachelor of Education program at an Ontario university. The innovative practicum models are:

1. **Practicum Peer Mentorship**: Placing two teacher candidates at different stages of program completion in the same practicum classroom, with the same experienced associate teacher, thereby creating reciprocal learning mentorship pairings between novice (first year) and mentor (second or third year) concurrent education students, in addition to the traditional apprenticeship mentorship between these teacher candidates and their associate teachers.

2. **Alternative ‘Service Learning’ Placements**: Placing fourth or fifth year teacher candidates in education-related community agencies (e.g., museums, hospitals, libraries) and
international school settings (Italy, Kenya) for the purpose of providing community service, while simultaneously enhancing the teaching skills of participating teacher candidates.

Developed within a social constructivist theoretical framework (Bandura, 1997, Vygotsky, 1986), this mixed methods investigation gathered quantitative and qualitative data documenting teacher candidates’ perceptions of the effects of these innovative practicum models. Data sources included Likert ordinal and anecdotal responses to surveys, individual participant interviews, written reflections, and focus group sessions. Quantitative data were analyzed through descriptive statistics. Qualitative data were analyzed through coding and categorizing of recurring themes as described by Creswell (2007).

The preliminary findings are very promising and document how these field-based learning experiences assisted teacher education students in becoming more knowledgeable, culturally aware, collaborative, resilient, and resourceful professionals. As these skills and dispositions are important for teachers (Loughran, 2006), they will assist participants as they pursue careers related to education, and potentially, will enhance their employability. The preliminary findings also reveal the complexities of implementing innovative practicum experiences, particularly the need for contextual supports and ongoing communication with field-based partners, as well as the importance of candidate compatibility within the placement setting. These findings will provide direction for others with respect to the design and structure of innovative models of field-based professional learning.

I10

Collaborative classrooms: Examining the learning outcomes of students, pre-service teachers and instructors in a clinical experience at an alternative education setting

Erin Mikulec (Illinois State University), Adam Herrmann (YouthBuild of McLean County)

An integral part of any teacher education program is the early field experience component. These early field experiences must be meaningful rather than simply another requirement to complete. As Caprano, Caprano and Heffledt (2010) state, “teacher preparation programs must recognize that more systematically structured intensive field experiences involving reflection and inquiry that link theories with personal learning experiences are necessary” (p. 134). Teacher educators must develop field experiences that challenge pre-service teachers to think more about the needs and nature of their students in lieu of their own. Meaningful early field experiences can have a significant impact on the transition from student to teacher. Hughes (2009) asserts that “involvement in structured field experiences with an integrated reflective component will enhance the preparation of students as they enter into their teaching experience” (p. 256). Such involvement not only provides meaningful experience, but can also impact how pre-service teachers imagine their future classrooms and the types of schools in which they might like to work. Teacher educators can facilitate this by working with a variety of alternative educational settings and agencies, defined as non-traditional school environments serving specific populations of students. What makes these experiences even more meaningful is a working relationship between the clinical site and the institution. By fostering and developing relationships, field experiences can become an integral part of the classroom discourse, delving into and connecting theory and practice.

Institutions can work with community partners in order to facilitate the SoTL process, and not simply the product, into all classrooms. Otis and Hammond (2010) describe participatory action research as a means of including students as co-researchers. They state that as participant researchers, they “draw upon on their understandings of personal and social realities to construct new group knowledge” (p. 33). In this sense, the pre-service teachers and the YouthBuild students are reconstructing their ideas about teaching and learning through their interactions during the course of the semester. Their input in the process shapes the clinical experience and relationship between the University and the YouthBuild for future students.

This session will discuss the findings of pre-service secondary teachers completing their clinical experiences at an alternative educational setting, YouthBuild. Both the pre-service teachers and the YouthBuild students participated in a survey of their experiences working with one another during the course of two semesters. We will discuss the expectations, experiences and learning outcomes of pre-service secondary teachers completing their early field experience at YouthBuild, as well as the same expectations, experiences and learning outcomes of the students at YouthBuild. In order to examine experiences of the pre-service teachers and YouthBuild students, we followed the data coding procedures of constant comparative analysis (Glaser & Strauss, 1967), which allows for a potentially deeper understanding of the experience of the pre-service teachers and students, as well as revealing their differences (Patton, 2002).
They’re engaged but are they learning?
Exploring the use of social media as a learning tool in a sociology of physical education course
Karen Sirna (Douglas College)

In recent years social media has filtered from ubiquitous use in North American society into higher education classrooms as a teaching and learning tool (Junco et al., 2010; Moran et al., 2011). It is considered a means to connect with today’s learners, many of whom were born into a world where the Internet always existed (Junco & Mastrodicasa, 2007). Drawing students’ interest in social media into classroom settings seems reasonable given the research showing an association between student engagement and learning (Kinzie, 2010; Carini, Kuh, & Klein, 2006). Interestingly, despite this widespread and growing use of social media in classroom settings, less is known regarding its impact on student engagement and learning.

The research presented in this session is based on a study that explored the use of social media as a learning tool within a second year higher education course at a large College in British Columbia. The course focused on the socio-cultural aspects of sport, health, and the body. I questioned if social media might support students’ learning of them.

The participants were 113 students from multiple sections of a second year university-transfer course. As part of the course, students conducted small group research projects using social media (Facebook, Youtube, Discussion Forums, & Twitter) to explore knowledge (re)production of sports, health, and bodies, within the social context.

The data were students’ pre-project and post-project surveys as well as instructor project evaluations. The project surveys focused on students’ perceived level of comfort and engagement with social media, its effectiveness as a learning tool, and their use of it when seeking information related to health, the body, and sport. These data were considered in relation to instructor project evaluations.

Preliminary findings reveal most students use social media as a reliable information source pertaining to health, the body, and sport. All students reported they enjoyed using social media; however, there was variability in the extent to which it was considered helpful for learning. Despite these mixed perspectives, all students overwhelmingly recommended keeping the assignment in the course. Some reasons provided were that it was different than typical assignments, contemporary, and fun.

These results suggest further investigation is needed regarding the use of social media as a learning tool. At a time when faculty are encouraged to utilize innovative modes such as social media in order to engage students and promote learning, this research suggests there may be complex aspects of engaging with these innovative modes as tools for learning that require further investigation. These questions include when and in what ways social media might best serve student learning.

Engaging students and faculty in a video conferencing environment
Ilana Bayer, Karen McAssey, Kimberly Babin, Devon Mordell (McMaster University)

Video conferencing solutions are being used in higher education institutions to bring students and instructors together for learning opportunities. Research indicates that students feel most engaged in video conference sessions when there are elements of interaction, such as active student participation and building rapport (Gillies 2008; Gill, Parker & Richardson 2005). Establishing effective interaction for learning, however, can be challenging especially when using multi-site video conferencing (Gillies 2008; Koeber & Wright 2008).

This session will examine the case study of a program that switched from web conferencing to video conferencing to deliver academic classes to students located at multiple sites. The primary reasons for the change in the technology were: (1) the lack of student engagement; and, (2) the audio quality of the web conferencing tool. This program had multiple student groups and instructors rotating through the sessions every 6 weeks. The classes were run with an instructor in one location with a group of students (presenting site) and...
additional students at multiple sites (non-presenting sites). To facilitate this initiative the educational technologies division (RIVET - Research, Instruction and InnoVation in Educational Technologies) in the Program for Faculty Development, FHS was brought in to provide consultations, faculty development sessions, student orientation sessions, evaluation of the videoconference experience and ongoing support to the program.

An anonymous online survey, comprised of mostly open-ended questions, was developed to assess the student experience with videoconferencing. The survey was administered to the students at the non-presenting sites (N=30) at the end-point of the 6 weeks period. Content from the open-ended survey was analyzed by first coding the responses into themes followed by examining the sorted data for emergent patterns and trends (Morse & Richards 2002).

The results were grouped into two themes: (1) the technology’s influence on learning; and, (2) the instructor’s influence on learning. With respect to the technology, while it was generally reported to be of good and reliable quality, students also reported that audio and video quality sometimes made it difficult to interact, as one student at one location couldn’t hear or see a student at another location. With respect to the instructor, it appears that the students were most engaged through the use of a lecture-style, question and answer, or purposeful interaction approach. It was also noted that instructor approach to using the technology was not homogenous.

Key challenges ahead include gaining buy-in and participation in the faculty development sessions from the multiple instructors to help them advance their teaching practices in a video conferencing environment. The findings from this study are being used to inform further faculty development initiatives to help instructors refine their pedagogical approaches and use of technology in a video conferencing environment to improve students’ learning experience.

This session is designed as an interactive learning opportunity for participants. Components of the case study will be the basis for paired and small group discussions. Audience contribution will also be encouraged through the use of interactive question and answers.

I13  
Individual Paper  
Cancel classes or find an alternative solution?  
The impact of one week of web-based conferencing on student learning  
Terence Day (Okanagan College)

Courses taught using web-based technologies are widely recognized to be effective, but do they work when students expect face-to-face delivery? A personal situation caused a physical geography professor’s absence from the classroom for one week in January 2012. Web-based conferencing from home was undertaken by Skype, with classes from sixteen to twenty eight students.

The classes occurred in the same room and schedule as regular face-to-face lectures. Students were previously informed of the reasons for web-based conferencing which replicated the face-to-face experience as much as possible. Powerpoint slides were used with interludes of the professor being visible and speaking directly to the class. A high resolution camera/microphone was used by the professor, with a single camera/microphone in the classroom.

Weekly multiple-choice quiz scores following web-conferencing were compared to scores after face-to-face instruction in previous and subsequent weeks, together with quiz scores from previous years. Students also answered a bonus question that invited reflection on their experience with web-based conferencing. The professor and Educational Technology Coordinator (present during the classes) recorded observations of their experience.

Examination of test scores showed no obvious negative impact on learning that week. Of the 61 students who reflected on their learning, 21 students unequivocally liked the approach, 6 students unequivocally disliked it, and 34 students thought that it worked, with reservations.

Common sources of student concern included student focus and concentration during the lecture, sometimes associated with student noise in the classroom. Related issues included the relatively low level of student-professor interaction and the importance of the physical presence of the professor, especially the
use of body movement to convey enthusiasm and explanations during the lecture. Occasional concerns were also expressed about the technology, such as not wishing to appear on camera and feeling intimidated by the professor’s “giant face” on the screen. Technical issues included the clarity of the slides on the screen, the difficulty of the professor hearing the students, and minor delays.

The professor observed that students were more likely to respond to questions when they could see him instead of the slides, but responses were generally fewer than in face-to-face lectures. Some students suggested that human-technology interaction and associated learner engagement could have been enhanced by body language associated with more than a head and shoulders view, and fewer Powerpoint slides. Other student suggestions included more microphones to enable the professor to better hear the students, a better sound system in the classroom, better screen positioning to avoid neck strain, and clearer Powerpoint slides. Many comments made unsolicited comparisons with the traditional lecture format. This suggests that the context for teaching and learning, and student’s previous experience of different teaching approaches, may merit more discussion in online learning studies.

It is concluded that learning measured by test scores was unimpeded by web-based conferencing for one week. However, there was reduced and unsustainable student engagement. Implementation of student suggestions may improve student engagement. This brief interlude of online learning in a conventional lecture course provided a low-risk opportunity for students and faculty to experience online teaching and learning.

**Contemplative Practices in Higher Education**

In the last several decades two initiatives in higher education have changed our colleges and universities in substantive and important ways. Both the Scholarship of Teaching and Learning (SoTL) and Contemplative Mind in Higher Education (CMHE) have called for the careful and systematic exploration of the learning process in higher education. To a certain extent they share a common denominator (emphasis on methods of inquiry critical to learning, demonstration of the effectiveness of these methods, and public dissemination of such effectiveness) as well as a common rhetoric (“reflection,” “collaboration,” “inquiry,” “insight,” and “awareness”). In both similar and different ways each has struggled with finding identity and legitimacy in higher education primarily due to their insistence on radical change in educational systems. Yet, in spite of these commonalities each has developed a path that runs parallel to the other with little to no integration. Interestingly, the contemplative pedagogies emphasized by CMHE foreground critical elements in many of the SoTL initiated programs such as engaged learning, service learning, problem based learning, inquiry based learning, etc. Contemplative practices are grounded in the belief that “a fully democratic society requires a system of higher education that trains students for reflective insight as well as critical thinking...the cultivation of mindfulness, introspection, and wisdom that complement intellectual and analytic undertakings.” (Center for Contemplative Mind in Society, 2012). SoTL scholars have been slow to acknowledge and attend to the role that contemplative pedagogies play. Conversely, while contemplative pedagogies lead us to an understanding of the role that stillness, awareness, reflection, and mindfulness play in meaning making, there is a dearth of research that assesses these factors in classroom learning. While compelling and provocative in theory and description, little attention has been given to the evaluation of these inner dimensions of teaching.

This paper will offer a way to bridge the gap between the contemplative mind and scholarship of teaching and learning initiatives. I will begin by defining contemplative practices in the context of SoTL. In an effort to demonstrate how the contemplative might be integrated into the classroom both the audience and I will engage in several contemplative practices as we explore the following questions: How might SoTL’s emphasis on the transformation of the culture of college teaching intersect and “dance” with contemplative work in the classroom? How can both contemplative pedagogies and the SoTL “model” inform, critique and support the other in a systematic manner? In what ways might the SoTL framework facilitate and expand the assessment of contemplative practices in higher education and how might contemplative practices offer new ways to think about methodology, epistemology, and pedagogy? How does this integration further promote scholarly work and deeper learning? Finally, exemplary practices of the contemplative approach in various disciplines in college classrooms will be offered for audience reflection and critique.
An Interdisciplinary Study of Mindfulness: Reflections from Novice to Experienced Students Shape a Collaborative Learning Environment

Paul Galvin, Deborah McMakin, Vandana Singh, Bridgett Galvin (Framingham State University)

The concept of integrating mindfulness into college classes is not a new one. As Bush (2012) documents, college professors have been focusing on aspects of contemplative education in a variety of disciplines ranging from Chemistry to Religious Studies. However, many of these courses have focused on the practice of mindfulness as a core element of the curriculum including its historical development and contemporary applications. The current interdisciplinary approach is aimed at integrating the skill of focused attention, one aspect of mindfulness, into the daily practice of engaging in learning in the college classroom. Langer (1997) described mindfulness as having three primary traits as: the creation of new categories, an openness to new information and an implicit awareness of more than one perspective, all leading to the development of the skill of flexible thinking. O’Reilly (1998) suggests that the practice of mindfulness reflects a stage of “being awake and present”. Moreover, when students are mindful they can listen and create a space for “learning. The current study highlights the use of mindfulness training using the concept of “focusing on the breath” to increase student self-awareness and focused attention during a traditional college classroom experience. The hope is that students will develop the ability to focus their attention and enhance their openness to exploring information in new and different ways. In addition, the intent of practicing “focused breathing” as a learning skill is to enable students to gain control over their own thoughts and perhaps reduce any anxiety that often accompanies learning new and difficult information.

The current study is an extension of a pilot program conducted in the Spring and Fall of 2010. The original study included only students enrolled in a Psychological Research Methods I course. This study expands the pilot by investigating the effects of focused meditation in the classroom from an interdisciplinary and longitudinal perspective. Students from physics, education, psychological research methods, and Senior Psychology Thesis courses participated in a semester long experience. In addition students from 2 education courses and 2 physics courses began the spring 2012 as “novice meditators” with no formal practice in the college classroom. The Research Methods course students began the term as one semester meditators, and the Thesis students began with two terms of experience with focused breathing practice in the college classrooms. Instructors of all students began each class session with 5 minutes of instructor led “focused breathing”. At the beginning of the term, all novice students (Physics and Education) completed a questionnaire assessing their level of experience with any form of meditation. The students with one and two semesters of practice completed a survey that assessed their previous experiences and their “feelings or attitudes” toward the practice. By the end of the Spring term, students will have responded to two open ended questions regarding their immediate experiences at four intervals during the term. Finally all students will complete a final measure of their use and perceptions of mindfulness techniques in their daily lives.

Discussion of the results will include identification of potential barriers to the practice in the different disciplines as well as pathways by which instructors provided students for understanding the use of this new skill. In addition, instructors will discuss how including skill development in “focused breathing” contributes to building a more mindful and collaborative learning community within the college classroom. Feedback from students will be discussed with respect as to how the focused breathing can be better utilized as a tool in the classroom and in other life experiences as well.

Exploring Health, Attitudes and Behaviours through Multi-disciplinary, Experiential Pedagogy

Hartley Jafine, Margaret Secord, Parmjit Singh (McMaster University)

This presentation from the Bachelor of Health Sciences (Honours) Program at McMaster University will explore the evolution and facilitation of ZJO3 Health, Attitude and Behaviour (HABits), a course with a multi-disciplinary, experiential approach.

The course, facilitated by three BHSc facilitators with undergraduate teaching assistants, examines health, attitude and behaviour through three pathways of experiential knowledge - Physical Activity, Daily Living (meditation), and Applied Drama (play). Initially, the course was offered as a traditional lecture-based course entitled Health Psychology, however, due to faculty changes and the timeliness of a provincial program review, which identified second year as the most stressful of the four years, the current instructors decided to offer the students opportunities to learn and find personally relevant ways of reducing and coping with stress.
Eisenberg, Golberstein, & Gollust (2007) states that “initiatives to improve access to mental health care for students have the potential to produce substantial benefits in terms of mental health and related outcomes” (p.594).

The design of the course embodies recent findings on brain research, which argues exercise, meditation and play can provide a way for students to enhance cognitive performance (Dyke, 2012). In the unique course structure, students rotate through each pathway for three weeks while engaging with course material through lecture, experiential tutorials (ET) and theoretical application tutorials (TAT). ETs provide students the opportunity to actively engage and participate in exercises of each pathway. Within TATs, small problem-based learning groups, students integrate theory and practice by applying their knowledge to generate and investigate questions in each of the pathways and based on four central topics: stress, depression, anxiety and addiction. We chose these issues because it has been shown that students are increasingly becoming vulnerable to mental health issues (Givin, Eisenberg, Gollust & Golberstein, 2009), stress & depression (Dixon & Kurpius, 2008, Dyson & Renk, 2006), addiction (Gill, 2002, Young & Rogers, 2011).

The course is rooted in several different theoretical approaches, each specific to the respective pathways, including play theory (Brown, 2010; Qian & Yarnell, 2011) and BoxWhatBox (Devine, 2011), neuroplasticity (Urry et al., 2004, Davidson, 2004, Pascual Leone, Amedi, Fregni, & Merabet, 2005, Lazar et al., 2005), meditation (Gardner, 2008; Grossman, 2004, Rosenkranz et al., 2003, Holzel et al., 2011) and exercise and nutrition (Praag, 2009; Baran et al., 2005)

This presentation will identify how an innovative approach to health science education allows students to explore and understand the self and others within the context of wellness while establishing routines/habits, which can contribute to healthy lifestyles. We, facilitators and undergraduate Teaching Assistants, will discuss the type of experiential knowledge students encounter and demonstrate the benefits for health science students in engaging with physical activity, meditation and play.

The design of the course allows for students to continue their engagement with at least one of the three pathways (or a hybridization of two or all three) after the course has officially concluded. Each student is required to complete a portfolio, which allows students to continue their commitment to growth by establishing a routine that contributes to a healthy lifestyle. The portfolios, in addition to course evaluation and student feedback sessions, act as evidence of the success of the course and learning outcomes.

We will share the history and continuous evolution of this unique course within the program. The instructional design and redesign of the course has been annually influenced by feedback collected through several different methods including course evaluations, informal feedback sessions with the students currently enrolled in the course and formal feedback sessions with undergraduate TAs (past students in the course). The facilitators have developed a small, interdisciplinary community of practice and continually modified the course throughout the semester based on facilitator reflection, student response and TA feedback.

Lastly, participants will gain an understanding of the student perspective on their experiences in the course and how the course has allowed them to apply theoretical knowledge within the classroom setting to help them build and maintain healthy habits.
academic development activities is increasingly recognised in the UK and there are examples of bringing the student voice into discussions about learning and teaching (Healey et al., 2010; Bovill et al., 2011), partnerships between students and faculty in the inquiry into student learning remain under-utilised in pedagogic research. This paper will present a case study of student participation in the data collection, data analysis, the development of pedagogic recommendations and wider dissemination of research. Focus groups with the students will be used to evaluate the project with the aim to collect in-depth qualitative data about the students’ experiences, feelings and perceptions of their role as participant-researchers in collaborative research.

The rise in the incidence of reported student plagiarism is a significant pedagogic challenge for UK higher education. Whilst there is limited empirical evidence to suggest international students are more likely to plagiarise, it is now recognised that a student’s cultural background can significantly inform their literacy practices. In particular, non-native English speakers with less expertise in the language may be at greater risk of engaging in certain reading and writing practices that can lead to potentially plagiarised work without the intention to defraud. Although reading in a second language is recognised as a significant challenge for international students, the general “invisibility of reading” for student learning (van Pletzen, 2006: 106) has resulted in the neglect of a key site for student plagiarism education. This study seeks to provide an insight into international students’ reading practices by engaging 12 international students in collecting and interpreting data about their reading approaches in a range of disciplines.

In line with more participatory approaches to evaluation that aim to integrate participants’ voices into policy and practice (Saunders, 2006), focus groups will be used in the final evaluation phase of the project to explore the students’ experiences as co-researchers. Focus groups are used as a data collection method that seeks to resist the over-emphasis of the faculty-researcher’s “expertise” as has been acknowledged in other collaborative approaches (Mihans et al., 2008). Focus groups instead promote the “dynamic aspects of interaction within the group” (Parker & Tritter, 2006: 34) with the faculty-researcher acting as facilitator and the students as legitimate contributors to a community of pedagogic scholarship. The focus groups will be transcribed and analysed to identify themes in relation to student perceptions of their co-researcher identity and voice. This paper will present the outcomes of that analysis as the basis for critical discussion about student agency in the conducting of SOTL.
recommendations and suggestions from student and staff perspectives of how employability skills could be further embedded in the curriculum and developed in activities outside of academic studies. Finally we have produced a set of specific guidelines to develop and improve the ways in which employability skills can be embedded within the curriculum.

Throughout the project sharing of skills and research training within the diverse team took place. The main outcome of the project is new guidelines for the University in relation to employability skills and optimising opportunities for their acquisition. These guidelines may be transferable to other institutions but also, in recognition of the autonomy and individuality of each institution, the resource of the methodology, utilising a student-staff partnership approach to capture the student voice, itself may enable other institutions to develop their own policies and practices to fit in with their specific strategic plans.

Working in partnership with students:
undergraduate research and the scholarship of academic practice
Angela Brew, Ademir Hajdarpasic, Evan Jewell (Macquarie University)

How can students’ voices be heard in the scholarship of teaching and learning? This paper argues that there is a need to move students from being its respondents and recipients, to being fully involved in carrying it out. The paper further suggests that undergraduates need to be involved not only in the scholarship of teaching and learning but also in the scholarship of academic practice more generally.

The paper draws on the example of a series of projects where faculty have worked with undergraduate students to research and bring about change in Australian higher education. From 2009 we have worked to understand and to develop undergraduate research at a national and an institutional level. This work has involved investigations of current practice and development of strategies to move practice forward. Undergraduate scholars have worked as full members of the team, carrying out surveys, writing and presenting reports and working on journal publications and conference presentations. Undergraduates’ experiences of research go beyond notions of teaching and learning. They take place both within the curriculum and outside of it in special programs (often called vacation scholarship programs or internships) where undergraduates work on research alongside faculty. In Australia, undergraduate research experience programs are a relatively new phenomenon and academic research is carried out, by and large without the involvement of undergraduates. Therefore, a key question for us has been how to change academic practice and attitudes to involve undergraduates more fully in the academic project of the university. Our own project is an example of this.

In a paper published in 2010, Brew argued that the challenges of academic practice need to become questions for investigation. She suggested how this could happen using Kreber and Cranton’s (2000) three levels of reflection which they called the content, process and premise levels. The theoretical framing for this paper is located in these ideas of the scholarship of academic practice. The paper will briefly explain the overall focus of the series of projects. It will then provide a specific example of work to develop understanding of students’ awareness and experiences of research at one Australian university. At the content level, an investigation has been carried out by an undergraduate scholar into students’ awareness of research. At the process level, we are working with a cross-university working group to explore why the situation has arisen and how to change; and at a premise level we are working in the project team to understand why the situation is as it is and how to bring about wider institutional change. The paper will explore the wider implications of the work for the integration of undergraduates in the scholarship of teaching and learning and the scholarship of academic practice.

Relatively little has been written in the literature on teaching sociology about improving courses from one semester to the next. In this paper, I describe a method for continual teaching improvement that is based on the well-established practice of teacher reflection and is informed by classical sociological principles.
Teacher reflection refers to the practice of reflecting on one’s teaching analytically and critically, with an eye toward improving and guiding future efforts (Brookfield 1995; Larrivee 2006). Generally, this literature focuses on the teacher autobiography and pedagogical choices, and events that occur inside the classroom, such as problem students or difficult incidents. Yet, as my method developed, the influence of many forces outside of the confines of the classroom was clear. Factors such as the weather, time of the semester, and national events (e.g., a Presidential election) seemed to affect entire classes or parts of lectures. As such, the methods described in the teacher reflection literature seemed too narrow.

I applied classic sociological theory to the teacher reflection literature, beginning by placing my reflective practice within the sociological imagination. Drawing from Mills (1959), I analyzed my courses in terms of “the vivid awareness of the relationship between experience and the wider society,” and using his work to distinguish between individual and structural class issues. I also used symbolic interactionism, which focuses on how people work together to define situations and appropriately respond to them (Blumer 1969; Reynolds 2003). It is worth examining the definitions that various groups bring to the classroom: e.g., the clash of definitions of the situation that commonly occurs on the first day of class, when many students assume they will receive the syllabus and get out early, while instructors recognize the importance of a full first day of class. Further, my practice benefited from the symbolic interactionist emphasis on understanding social phenomena from the perspectives and roles of others.

This method was developed through the analysis of nine semesters of autoethnographic data in the form of daily reflective notes. I wrote the notes after each class period in my sociology courses at a public doctoral-granting university. After the first year of note-taking, I coded my data for categories and emerging themes. At each semester’s end, I compare my latest notes with the extant data to revise the list of themes that guide my reflection. Consequently, these themes are both a priori and emergent, and result from analyzing notes across all courses.

The method includes three main components: (1) identifying contextual and environmental variables that affected the class (e.g., attendance, weather, time of the semester); (2) evaluating the effectiveness of the class period (e.g., did the class meet the learning objectives for the day?); and (3) suggesting revisions for the next course (e.g., revising specific classes or the structure of course). The benefits of this sociologically-informed reflective practice include grounding evaluations of individual class periods and entire courses in empirical data, becoming more efficient with course preparation, and providing one with a stronger sense of mastery as a teacher.

Documenting the development of a ‘sociological imagination’ in students taking a first year sociology course.

Alison Thomas (Douglas College)

Introductory courses in post-secondary education offer students a taste of a new discipline which may either become the foundation for subsequent subject-specialisation, or may prove to be the only exposure they ever have to that subject. As a college professor teaching an Introductory Sociology course, I find that the majority of students who take it do so either to meet requirements for another programme of study or as an elective, and relatively few go on to take more courses in Sociology.

Student motivation for engaging with the course is therefore often limited to the desire to pass it, coupled with the perception that this should be easy, thanks to Sociology’s reputation for being based on ‘common sense’ (LeMoyne and Davis, 2011). However, thinking sociologically actually involves questioning much of what we typically take for granted about human society and everyday life, which means that for many students this course becomes not only not ‘easy’, but even potentially threatening to the worldview to which they are accustomed. One specific concept that is considered fundamental for students of Sociology to acquire (Persell et al, 2007) is that of the so-called ‘sociological imagination’ (Mills, 1959). This entails recognising that our individual agency is constrained to varying degrees by the sociocultural structures that surround us. The students taking my course typically enter it with an individualistic orientation which leads them to attribute people’s actions primarily to their own personal qualities, and so the acquisition of a sociological imagination - which necessitates relinquishing this perspective - involves coming up against a ‘threshold concept’ within the discipline (Meyer and Land, 2003). Since these are theorized to be both transformative and generally irreversible, I have
become curious to explore both the process whereby students come to grasp this core sociological concept and the extent to which it sticks with them - i.e. results in ‘deep’ learning (Marton and Saljo, 1976).

Whereas McKinney (2003, 2004) has investigated what students have learned as they complete a Sociology major, I am specifically focusing on what is or is not achieved by students starting out in Sociology. Using a variety of Classroom Assessment Techniques (CATs), such as concept maps and ‘minute papers’, I am documenting changes in the ways in which students view the relationship between the individual and society over the duration of the course and beyond, using this as an indicator of their ability to exercise their ‘sociological imagination’. This research is ongoing, so in my presentation I will report on my research findings to date and explain how these are already prompting me to rethink my approach to teaching Introductory Sociology.

However, this kind of research has potential relevance for all who teach courses at the introductory level: it highlights the benefits of going beyond traditional methods of assessing what our students have learned in order to identify those foundational aspects of our disciplinary knowledge that students find most challenging - and to explore how they grapple with them. I will therefore invite audience members to consider how they might similarly explore students’ experiences when encountering the ‘threshold concepts’ that exist in their own field.

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### 'If people don’t turn up… there is a reason':
#### A sociological exploration of student absence from university classes

**Sara O’Sullivan (University College Dublin)**

Student non-attendance has been identified as a problem internationally (see for example Gump 2004; Crede et al 2010; Ghenghesh and Nakha 2011; Massingham and Herrington 2006; Wyatt 1992), although the extent of the problem and definitions of acceptable attendance rates vary. Concern about attendance is primarily related to evidence from the pedagogical literature that for learning to take place, the most important student behaviour is attending class (Howard 2005; Prince 2004). This has led SoTL scholars to develop a range of pedagogic strategies to improve attendance and student learning (see for example Wright and Ransom 2005; Molborn and Hoeksta 2010). A key finding from this work is that faculty can impact student attendance and student learning at the local level.

This paper draws on a 2010-11 mixed methods study on student attendance at University College Dublin sociology seminars. The study followed the implementation of changes in the grading system, where marks for student attendance and participation at seminars were withdrawn. The paper examines low attendance from the student perspective, aiming to better understand how students both make sense of attendance and non-attendance, and conceptualise the links between attendance and learning. The analysis advances the discussion of attendance beyond the individual level, and a normative model of ‘good’ (i.e. disciplined) and ‘bad’ (i.e unruly) students and behaviours, by examining contextual and collective aspects. It uses a sociological lens to highlight a complex web of macro, meso and micro level factors that impact on student attendance. It seeks to build on the existing SoTL research on attendance, and pay particular attention to factors outside of the classroom.

For the majority of respondents in the study, attendance behaviour varied considerably across modules and over time. The prevailing norm was selective and (at least) occasional attendance. There was broad acceptance within UCD student culture of both the ‘optional’ nature of seminar attendance, and the extensive range of excuses and justifications used to explain absence. The findings suggest that student behavior is not fixed, but is influenced by the cues given by peers, UCD student culture and faculty. The paper concludes by outlining a number of departmental and institutional strategies that could usefully support faculty in their efforts to reverse the trend of increasing student absence, as well as some of the likely challenges.
Active Learning in Introductory Financial Accounting
Barb Bloemhof, Julia Christensen Hughes (University of Guelph)

What can the Classroom Survey of Student Engagement (CLASSE) tell us about our teaching practice? In this interactive workshop, participants will be encouraged to create their own action research questions, utilizing the strengths of the CLASSE and the Lancaster approaches to studying inventory which informs on students’ deep and surface learning approach. To help contextualize the exercise, we will be presenting the questions asked, some of the data gathered and preliminary analysis from three introductory financial accounting courses, of varying sizes (small, medium and large) taught at three Ontario institutions. In each of these courses first-year students experienced strongly analytical content containing a significant number of threshold concepts. The faculty - all experienced instructors - ranked making abstract concepts more concrete as the top priority in their action research. One tried closing each class with a written open-ended question relating to the day’s material. Another found ways to link the course material to current events for timely discussion in class. And the third found ways to personalize the learning experience, by calling on students by name. One key finding of the research was that despite constraints, such as class size or multiple sections with a common assessment approach, there are a number of ways that faculty can create learning contexts that invite students to engage in deep learning. Instructor rapport and clearly communicated expectations emerged as particularly important course attributes. Finally, we will share some lessons learnt about appropriate statistical methods for getting the most from the CLASSE instrument. This project has benefitted from funding from the Higher Education Quality Council of Ontario (HEQCO).

Understanding student voices: using cognitive interviews in the development of an institution-wide student engagement survey
Abigail Flint (Higher Education Academy)

The use of cognitive interviews is now widespread within centres and agencies specialising in survey research, as part of their routine questionnaire development processes (Beatty and Willis, 2007). Despite the fact that cognitive interviews have been shown to improve the reliability and validity of survey items, and provide access to otherwise invisible information on survey participants’ response processes, they are not universally used in the development of surveys of Higher Education (Ouimet et al, 2004). This paper will describe how this technique has been used in the development of an institution-wide student engagement survey at a large urban University in the UK.

In 2009 the University piloted a new approach to their internal survey rooted in student engagement rather than student satisfaction. The survey was inspired by and drew on scholarship underpinning the National Survey of Student Engagement (Kuh, 2001) used in the USA, Canada and Australia, but employed different questions - tailored to the specific national and institutional context. Two rounds of cognitive interviews were conducted in 2010 and 2011, as part of a participatory approach to the development and evaluation of the survey. The interviews used a probing paradigm (Beatty and Willis, 2007) and prompted students from a range of disciplines to verbalise their thought processes when answering the survey and to articulate what they understood by certain terms, questions and scales. The aim was to shed light on how students interpreted survey items, reviewed their experiences to select a response, and how they used the response scale to represent their views. The findings from the interviews were used to refine questionnaire items and contextualise the interpretation of results. The findings not only provided insight into ambiguous or inappropriate survey items, but surfaced staff assumptions about the student learning experience and provided valuable qualitative data on the nuances of how that experience was experienced and conceptualised by students from varied disciplines.

This paper will be of particular interest to colleagues working with student surveys data to enhance the quality of the student experience, and highlights the importance of ensuring the validity and reliability of information sources used in evidence-informed change. The presentation will be in two parts: an explanation of the model and process used for the cognitive interviews; and, exploration of the insights and findings from this research. This will allow delegates to reflect on how they could employ this technique within their own context as well as considering how the insights from this research may be applicable across institutional cultures.
Development of a scale to measure clinical educators’ capacity to engage in clinical education
Sally Abey (Plymouth University)

The aim was to develop an on-line instrument to measure the capacity of clinical educators to engage in clinical education of podiatry students and to evaluate the utility of such an instrument for use in a larger scale survey. The rationale for developing a scale to measure attitudes to mentoring podiatry students was generated from the initial ‘diagnosis phase’ of a collaborative action research project between Plymouth University (PU) and clinical educators from a local practice placement area. There is currently a paucity of research in the area of practice placements in podiatry, and the profession is principally reliant upon other health professions’ research literature to inform practice.

The pilot study was designed to provide profession specific information regarding the attitudes of the placement clinical educators who currently support podiatry students from Plymouth University and their capacity to undertake the role. The target population consisted of podiatrists from an urban area, who mentor podiatry students. This represented 25 National Health Service (NHS) Podiatry Departments where podiatry care is provided to patients free at the point of delivery. They were selected because the other universities that teach podiatry in the United Kingdom do not undertake their placements within the NHS for such extended periods, relying instead on in-house training clinics or training clinics that are within the NHS, but where academic staff work alongside clinical staff. The University of East London (UEL) and PU offer the closest match in terms of length of placement, although students at UEL travel within a 40-mile radius, whereas PU students travel up to 200 miles away. The action research team, comprised of podiatry clinical educators, a nursing clinical educator and academic staff, brainstormed their experiences of the barriers and challenges to delivering clinical education. Research literature concerned with mentorship in the clinical environment was consulted. The attitudes identified were operationalised through specific questions designed to access the dimensions that determine the overarching concept. A self-administered online questionnaire with 123 items was developed.

The response rate was 66%. Item analysis was used to identify the items that form an internally consistent scale by calculating the item-total correlations with the coefficient threshold set at .5. The number of items was thereby reduced from 123 to 74. Nine subscales were developed which together form the overarching instrument for measuring clinical educator capacity to engage with clinical education. Cronbach’s alpha for these nine scales ranged from .782-.951, which demonstrates good reliability.

Following the development of the capacity to engage in clinical education scale (CECE), the survey will be issued to all podiatry clinical educators across the South West of England where PU students currently attend placement. The data will then be analysed to identify the key variables that predict capacity to engage in clinical education. This is an important contribution to the profession and will add substantially to understanding of the factors that impact upon the practitioner who is tasked with undertaking the role of clinical education in such a complex and dynamic environment. This should lead to enhanced learning experiences for students. The items within the scale may have relevance to healthcare practitioners across different disciplines and the potential for further research in these areas will be discussed.

Integrating SOTL into Institutional Cultures

Using teaching and learning projects as a way to integrate SoTL into an institutional culture
Maria Larsson, Katarina Mårtensson (Lund University)

In this study we investigate in what way SoTL projects originating from teacher training programmes at a research-intensive Swedish university have been integrated into different institutional cultures. 200 academics that over the past two years have conducted SoTL -projects within teaching and learning programmes are included in the study. They belong to four different faculties: Faculty of medicine, social sciences, economics, and humanities.

University teachers increasingly engage in the scholarship of teaching and learning. The idea of systematically observing and analyzing processes of teaching and learning, relating this to theoretical understanding, and sharing and disseminating the results seems to have resonated well with general and recognized academic approach.
One way to support the development of SOTL in Swedish universities is through teacher training programmes for academics (Lindberg-Sand & Sonesson, 2008; Mårtensson et al 2011). In such programmes, participants conduct a SOTL-project (scopes may differ between programmes), and report it in writing to the course group. They are also encouraged to present it in other forums, such as departmental seminars and local teaching and learning conferences. Projects typically deal with a question concerned with potential teaching and learning development within the participant’s disciplinary field.

Effects from teacher training programmes have been investigated previously (Gibbs & Coffey, 2004; Gran, 2006; Prosser et al, 2006). Although it might be difficult to compare the effects between programmes, one common conclusion from such investigations is that the result largely depends on the local context in which the academic teacher works. If the knowledge that can be gained from such programmes is valued in the local context, the effect and the appreciation seem higher. The contrary also applies: if the local context does not value the potential development originated from teacher training programmes, the effects are reported as more negative (Gran, 2006; Prosser et al 2006). Other studies have confirmed a strong relationship between local teaching and learning cultures, teaching approaches and the development of teaching and learning (Jawitz, 2009; Knight & Trowler, 2000; Lindblom-Ylänne et al, 2006).

The results of the study are currently being collected and will be analyzed during late spring 2012. The presentation will show the results in terms of successful factors and possible obstacles with regard to integration of SoTL into an institutional culture. Moreover, we will discuss the role of teacher training programmes in promoting Scholarship of Teaching and Learning in the development of institutional culture.

Examining the Impact of Integrating SOTL through Faculty Teaching Awards
Laurel Willingham-McLain (Duquesne University)

The primary criterion of the Creative Teaching Award at Duquesne University is evidence of student learning. The award was established in 1992 soon after Scholarship Reconsidered was published. Faculty submit their own award applications using a SOTL model. They identify a learning gap, articulate learning goals, describe innovative teaching/learning strategies, benchmark the uniqueness, and present multiple kinds of student-learning evidence relevant to the goals.

This presentation examines these questions, the first two primarily via a research summary, and the third through participant interaction:

1. What is the perceived impact of this award by faculty recipients on their
   a) Teaching confidence and practices in ensuing years?
   b) Understanding of SOTL and engagement in it
   c) Success in faculty careers (promotion and tenure, or success in nontenure track positions)?
   d) Teaching-related leadership among faculty peers and graduate students, both at Duquesne University and beyond?

2. What is the perceived impact of the Creative Teaching Award on faculty, students, and the institution by campus leaders: the provost, deans, department chairs, and university promotion and tenure committee members?

3. What role can faculty awards play in integrating SOTL into institutional culture?

The research methods include questionnaires, interviews, and documentation of career advancement, peer-reviewed SOTL presentations and publications, and leadership through the teaching center (as faculty, not center staff). It focuses on 39 recipients (2000-2011) who are still faculty at Duquesne University. The data have not yet been analyzed.

Though limited to one award and institution, the study includes recipients from the humanities, education, health sciences, natural sciences, social sciences, and music. Clearly, one-time awards cannot replace continuing compensation and promotion, but preliminary findings suggest the award helps faculty obtain promotion and tenure. Indeed, “Selection for a university, college, or professional society’s outstanding teaching award” is an indicator of teaching excellence in the faculty handbook.
This study builds on a review of faculty teaching awards (Chism, 2006) and recognition of SOTL in evaluating faculty (Chalmers, 2011). The award uses a SOTL model as a framework for faculty to present their teaching practices. Chism’s review of US teaching awards reports impact on student learning as the second most frequent award criterion, but does not report any example of analyzing and presenting student learning outcomes as evidence.

Drawing on the 21 year history of the Creative Teaching Award, with a research focus on the perceived impact of the award on recipients and campus leaders from 2000-2011, this study will address awards as one way of integrating SOTL into institutional culture; faculty articulation of classroom teaching and learning using a SOTL model; and faculty development through a process in which faculty are highly motivated to apply sound teaching, learning, and assessment practices.

Integrating the Scholarship of Teaching and Learning into Higher Education Quality Enhancement in Canada
Nicola Simmons (Brock University), Gary Poole (University of British Columbia)

While higher education sectors the world over grapple with definitions and measures of quality, governments and others are establishing major initiatives to assess this quality. Exploring relationships between Scholarship of Teaching and Learning (SoTL) and institutional quality navigates a complex and abstract pattern of factors, with conclusions regarding causality tenuous at best and relationships between factors and outcomes often distal.

Mindful of these challenges, we undertook an international survey, adapted from the Making Teaching Count survey (Rogers, 1997), to further understand relationships between the nature of SoTL work, its dissemination, and institutional quality. We asked questions about academic position and involvement with SoTL, as well as how SoTL work was communicated. We also asked about SoTL’s influence on practice, policy, and student learning. In addition to these Likert-type items, we included four open-ended questions concerning institutional culture, quality education, and personal SoTL work and its intended outcomes.

Qualitative data were analyzed inductively using constant comparison (Leedy & Ormrod, 2001). Descriptive statistics were calculated for quantitative data, as well as Pearson correlations among beliefs regarding SoTL impact, institutional culture, and means of communicating SoTL work. Chi square analyses were performed to ascertain differences in perceptions of institutional culture according to respondents’ locations, academic position, and methods of communicating SoTL work.

In this session, we present findings from the survey to attempt to chart a path connecting SoTL with institutional quality. We offer a model to identify common elements along this path and propose relationships among these elements. We find these relationships are “web-like, multidirectional, cascading connections” (Hutchings, Huber, & Ciccone, 2011, p. 39), but ultimately demonstrate a broad causal pathway with SoTL work at one end and manifestations of quality at the other. In particular, we discuss to what extent the results of SoTL research are applied to classroom teaching and policy decisions and how they affect overall teaching and learning quality.

We found many factors affect institutional quality, especially as measured by typical ranking systems (Finnie and Usher, 2005). Secondly, it is difficult to operationalize ‘SoTL activity.’ SoTL research takes many forms, as do the ways SoTL results are communicated. This communication has emerged from our survey as a key concept, bridging SoTL and institutional quality.

We conceptualize the path between SoTL and institutional quality passing through three levels -- from the microsocial to the mesosocial to the macrosocial. It concerns individual instructors (microsocial), instructors working collaboratively (mesosocial), and senior administrators governing the entire institution (macrosocial). High quality teaching and learning is the ultimate goal, spanning all three levels.

We invite you to participate in a discussion to explore how SoTL is perceived to contribute to higher education quality enhancement in Canada and, with us, offer recommendations for understanding and furthering SoTL’s impact.
**Researching Educational Development Initiatives**

**I29**

**Individual Paper**

**How can the development of SoTL at the individual level be linked to the educational development of institutions?**

*Marit Allern, Trine Fossland (University of Tromsoe)*

Over the years the concept of “Scholarship of Teaching” (SoTL) has expanded and Learning has been added to the concept. The ongoing discussion about how people comprehend and develop SoTL is multifaceted and definitions may vary from continent to continent and even from institution to institution. SoTL has been introduced as representing ‘authentic practice’. This understanding presupposes that the academics teaching are responsible for the alignment between the subject taught, the students and themselves and also how students and the subject connect. This idea, however, is very much linked to the individual scholar. One essential question is how the development of individuals might ensure and enhance the scholarship of teaching and learning when talking about organizational levels as departments or faculties and what is the relevance of educational development when talking about SoTL?

In this paper we discuss individual faculty SoTL development versus educational development as a holistic approach at institutional level. An important question is to what extent the achievements of individuals might result in educational development and SoTL at organizational levels? We report from an evaluation of a program for basic pedagogical competence in higher education through development of Teaching Portfolios. This program introduces SoTL and organizes the activities based on the idea of sharing experiences and working with peer collaboration while developing the portfolio. One of the angles is to evaluate if this program for individuals gains the pedagogical discourse and thereby enhances the educational development for departments and institution.

The University Board evaluated the Teaching Portfolio program in October 2011. The evaluation was based on surveys from participants in the program, interviews of academics that have submitted portfolios, evaluations from the university Faculties and self-evaluation from the program unit. One of the questions asked was to what extent the development of individual Teaching Portfolios meant a positive contribution to the general educational development for the department and ultimately the university.

The findings concluded that development of Teaching Portfolios function satisfactory for the individual academic and in some cases for small groups at department levels; whereas there are few signs of general educational development. The paper will discuss strategies to enrich the Teaching Portfolio program aiming to support both development of SoTL for the individual academics and educational development of the institution.

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**Researching the Significance of a Long-Term Professional Development Program on Faculty from Palestinian universities**

*Rima Dabdoub (Bethlehem University)*

This research project investigates the impact of an innovative, international long-term faculty development program on a group of faculty from several Palestinian universities.

Teachers’ main responsibility is now to create an empowering learning environment (De Corte, 1990) and to act as a coach, guiding students in their learning process (e.g. Marton, Hounsell, & Entwistle, 1997). Based on the changing contexts of faculty roles and responsibilities, it is necessary to offer support for teachers through faculty development programs. These programs are planned to enhance instructional development for teachers in higher education so that student learning is supported (Taylor & Rege Colet, 2010). Also, Instructional training can increase the extent to which teachers adopt a student focus (Postareff et al. 2007).

The Master Trainers were six regular university faculty engaging on three years of learning about the field of educational development and research into teaching and learning. In this paper I will summarize and discuss the impact of the multi year long term professional development program on participants’ professional identity, and teaching and leadership practices at their department and university.
The researcher aims to uncover the changes in the professional identity of the participants and the change in their perceived work roles as they are asked to help to contribute to the improvement of teaching and learning at their respective universities.

Most evaluations conducted are dealing with the participants’ satisfaction of the program in terms of the new teaching skills acquired so far. This study is different as it takes a more holistic and in-depth view of changes in the participants’ identity and practice. Examining the relation between faculty development programs and effective teaching (and better student learning) could help in understanding the skills and practices required in the university context and at the same time contribute to reviewing the definition of effective teaching and student approach to learning.

Two sets of interviews were conducted. Data is analyzed in a qualitative manner in order to get descriptive information about the participants’ new identity affecting their skills and practices. The researcher will use the artifact/documents provided by the Master Trainers as evidence of the changes they have undergone during the program, and will highlight examples of the effect of teacher development on institution-level cultural change.

The paper is relevant to the conference and to SOTL in several ways:
1. Long term professional development programs, if successful should lead to individual transformation followed by institutional change. This study aims to look at the results obtained after completion of one in-depth professional development program. It aims to look at how the participants perceive their new identity, whether this new identity allows for change in their practice, for local and global connections and for creating collaborations and learning communities with students and among their colleagues, in relation to teaching and learning.

2. Little is known about the personal and professional impact of faculty development on teaching practices in different, particularly non-western university contexts, and what conditions would motivate faculty to change roles and responsibilities. The research project will help us understand the participants’ new identity, and whether they are prepared to assume the new role with meeting future challenges facing them. It will also help us realize and identify new directions for the continuation of faculty development at the universities through the centers for teaching and learning.

3. Furthermore, the interviews will help the interviewees become reflective on the new skills acquired and on their teaching practices. Similarly, the presentation will stimulate reflective thinking of the audience about the impact of programs they have designed or participated in themselves.

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**An exploration of teaching and learning development needs, and factors associated with faculty participation**

*Kris Knorr (McMaster University)*

Formal programs of faculty development have existed in Canada for more than 40 years (Wilcox, 1997). As new innovations in teaching and learning emerge over time, the focus on faculty development topics continue to evolve. At McMaster University (a medium sized, research-intensive post-secondary institution in southern Ontario, Canada), recent evidence has indicated that we should revisit the professional development opportunities to ensure we are offering content that is aligned to faculty member needs (McMaster University, 2003 & 2008).

Current offerings at other successful institutions have been beneficial in determining best practices in terms of faculty development structure and content delivery; however these practices are not always generalizable across all contexts (Gibbs, 2010). At McMaster, a problematic issue has been generating widespread participation from faculty members in professional development opportunities to improve teaching and learning. We suspect that this problem is not specific to our institution, and we feel the research which is gathered and analyzed will provide beneficial suggestions to other institutions that face similar problems.

Thus, the aim of this qualitative research project is to explore the factors that motivate or prevent faculty members from participating in professional development. The research objectives examined in this project are i) to investigate the perceptions and experiences of faculty members regarding their motivation to participate in...
faculty development activities, and ii) to document the perceptions and experiences of faculty members of the necessary steps to optimize the teaching and learning development needs of university faculty. In-depth interviews with McMaster University faculty members were chosen as the data collection tool as a means to gather rich, detailed information.

Participants who attend this session will learn about the themes uncovered through this study. Through small group discussions, we will use these results to generate ideas on how to remove barriers associated with faculty development. Participants will leave the session with a variety of evidence-based practices to put into place at their own institutions.

By better understanding factors that motivate and/or impede faculty from participating in professional development, we hope to establish novel methods that will i) increase faculty participation in teaching and learning workshops, ii) expose faculty to SoTL literature and research, and iii) enable them to critically reflect on their own teaching practices.

Sheraton Heritage Room (Concourse level) 1:30-3:00pm

**Strategies for Developing Critical Thinking & Problem Solving-Skills**

**Creating Connections to Critical Thinking through mind mapping and video based cases teaching and learning strategies**

*Catherine Maher, Genevieve Pinto-Zipp (Seton Hall University)*

Faculty are faced with the responsibility to provide healthcare students with learning experiences to develop their critical thinking process for complex decisions making for patients/clients. Critical thinking is a metacognitive, nonlinear process of purposeful judgment that includes self-directed learning and self-assessment (Bodner, 1986, Daley et al., 1999). Willingham (2007) stated that critical thinking occurs when students possess domain knowledge and the capacity to penetrate below the surface structure of a problem to recognize how the problem can be solved. Teaching and learning strategies should engage the learner with authentic activities that foster this connection between knowledge acquisition and the ability to engage in complex decisions. Mind mapping and video based cases are teaching/learning strategies that support the development of these connections.

Mind Mapping uses a non-linear approach to learning that forces the learner to think curvilinear using visuospatial relationships flowing from a central theme to peripheral branches (Buzan & Buzan1993). Students actively connect information as they develop their mind map. This is similar to integrating data from diverse sources used in the clinical decision making process associated with patient care. This non-linear approach to learning aids one’s ability to critically reflect upon and analyze the necessary information, to not only develop but modify a patient’s plan of care (Mueller et al 2001). Studies on the usefulness and challenges of mind mapping for health care students have recently emerged in the literature (Mueller et al, 2001, 2002). Mind mapping has been utilized clinically for developing innovative care plans for nursing and dietetic interns. Faculty and students within these programs support mind mapping as an educational tool that assists in developing critical thinking in patient care (Kern et al., 2006 & Molaison et al., 2009).

Video based cases are a teaching/learning strategy which provides the visually unfolding case experience of a patient/therapist scenario to students within the classroom environment (Kamin, 2003, Van Den Berg et al., 2004). Students are taught to use the information obtained from their video observation to organize and prioritize patient care information and design plans of care (Romanonv and Nevg, 2007, Chan, et al. 2010, Pinto-Zipp & Maher 2010). The ‘faculty’ role in visually unfolding cases is to assist students in creating connections between previously acquired knowledge and presently acquired information to effectively and efficiently engage in evidenced based patient care (Van Den Berg et al., 2004, Schaber, 2005). The student’s active learning required in the video based cases learning activities further supports the development of critical thinking skills (Chan, et al 2010).

This presentation will offer a model for infusion and assessment of mind mapping and video based cases that have been utilized in a graduate physical therapy curriculum for 6 years. The authors will present their data from a descriptive, explorative survey research design methodology of students’ perceptions of mind mapping and video based cases as a teaching and learning strategy and faculty utilization of mind mapping in graduate health care education.
Use of Think Alouds and Lesson study to tackle Calculus bottlenecks
Kavita Bhatia (University of Wisconsin Marshfield/Wood County),
Kirthi Premadasa (University of Wisconsin Marathon County),
Paul Martin (University of Wisconsin Marathon County)

Of the different integration applications taught in a calculus course, students consistently find work integrals involving pumping fluids difficult. Solving ‘work’ problems is a two step process. The first is the conceptual step of identifying and setting up the differential work element and the second is to integrate to determine the total work. In most of the other integral calculations in a traditional freshman calculus sequence, the setting up of the differential quantity is by a set formula such as ds= sqrt(1+(y')^2)dx which students often prefer from their viewpoint of mathematics as a collection of algorithmic procedures (Dreyfus, 1990; Schoenfeld, 1994; Silver & Marshall, 1990). In “work problems”, as the shape of the tank changes, students have to actually set up the differential problem from scratch for each different shape. Students find this process of setting up the small problem with the intent of accumulation difficult. Research suggests that a key reason for this has to do with the fact that the mental image that students have of accumulation from the small problem to the big problem is not seamlessly linked to the mental image they have of the integral, which tends to be associated primarily with area computation (Thompson, P. W., & Silverman, J. 2008). To identify the student bottlenecks attached to solving “work” problems, a think aloud experiment was carried out in 2010 at two University of Wisconsin campuses. Six students were videotaped as they completed the think aloud and solved three “work” problems. Transcripts were made of the recordings and these were coded using Polya’s problem solving steps as the basis. The codings were used to compare the student thought process with that of a professional mathematician. The results showed that students tend to memorize the “slice” in comparison to understanding the logic behind setting up a Riemann Sum. Results also showed that some students did not seem to understand the basic definition of work or understand the three dimensional nature of the problem, often falling back to a two dimensional area concept. In order to resolve some of these bottlenecks a lesson study was planned that utilized manipulatives. This was motivated by research which recommends using examples other than area to motivate integral applications. An application where water is pumped from a lake to a high reservoir for storing off-peak electricity was modeled. A glass bowl filled with wood slices to represent the small work elements was used. Students used the wooden manipulatives to estimate the work done in lifting the water. Students were then assessed through a quiz and compared to standard non-treatment sections. The talk will demonstrate how the think alouds and the lesson study were carried out as well as showcase some of the existing research on student problems with integral applications.

Use of exemplar-based interventions to promote structure-based learning
Faria Sana, Christopher Teeter, Joseph Kim (McMaster University)

In many domains of science, an important goal is to understand abstract rules and principles. For decades, psychologists have explored how complex concepts can be learned effectively and in a way that influences learning and recall performance at a later time. For example, how can a Physics student learn principles of wind flow in a manner that he can later apply to operate a sailboat. A common way to get such a concept across is through the use of examples. This method of instruction and learning is referred to as exemplar-based transfer. It involves using familiar (or source) problems to solve novel (or target) problems of the same type. It is an effective pedagogical technique used in problem solving. Once the source problem is retrieved from memory, it can be used to guide the application of strategies for solving the target problem. Exploring conditions under which exemplar-based learning can be facilitated is of great importance as this can allow instructors to develop models that help novices acquire adaptive or transferable expertise.

Examining differences in the cognitive processes underlying expert and novice problem solving can further our understanding of how individuals make use of source problems to successfully solve target problems. Previous research in this area has demonstrated that experts focus on the structure of a problem, which remains constant across similar problems (i.e. underlying concepts), whereas novices focus on surface features, which are likely to change across problems (i.e. superficial details). Despite this robust difference, novices can learn to employ expert-like problem solving strategies after exposure to a variety of example problems in which their attention is directed to the structural (rather than surface) features of a problem. Moreover, this process can be augmented through teaching practices that promote active learning such as self-explanation and corrective feedback. The purpose of our study was to use exemplar-based interventions to foster structure-based
learning of three statistical concepts, each illustrated with three example word problems. Specifically, we explored the effectiveness of different instructional techniques, namely self-explanations and corrective feedback during learning, for facilitating accurate application of source examples to target problems.

Findings from this study will be discussed in the context of the effective use of examples, self-explanation, and feedback for successful problem-recognition of statistical tests. We predicted that prompting learners to generate explanations of commonalities among examples of a given concept would focus their attention on the underlying structure and conceptual relationships necessary for later application. Additionally, feedback on their explanations would be helpful for correcting any inaccuracies in their comprehension. Together these practices would allow learners to decontextualize superficial features from structural features of problems. Our findings have significant practical and theoretical implications for mechanisms of learning and classroom instruction. If learning conditions facilitate initial understanding of complex concepts, individuals can allocate working memory resources to identifying and making inferences between source and target problems, rather than on the surface details of the novel problem.

Afternoon Break

**Session J: Concurrent Sessions**

<table>
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<th>Convention Centre</th>
<th>3rd Floor Lobby</th>
<th>3:00-3:30pm</th>
<th>Refreshments available</th>
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**J01**

**The ISSOTL Humanities Interest Group Project: Illustrating Humanist SoTL**

Nancy Chick (Vanderbilt University), Pat Michaelson (University of Texas at Dallas), Sherry Linkon (Youngstown State University), David Pace (Indiana University)

In this interactive panel, Nancy Chick, Pat Michaelson, Sherry Linkon, and David Pace—founding members of the ISSOTL Humanities Interest Group—will share their work on one of the IG’s projects in which each selected a specific SoTL publication that illustrates effective humanist approaches to SoTL. Each will share their selected text and carefully analyze the humanist elements of the question, method, overall style, and/or product, offering samples from their selections to illustrate. Then, together, they will lead participants in a discussion of additional characteristics of humanist SoTL to include a broader array of disciplines and to enlist additional contributions to the project.

**J02**

**Exploring the Relationship Between SoTL and General Education**

Lisa Hunter (Buffalo State College, State University of New York), Karen Manarin (Mount Royal University), Sue McMillen (Buffalo State College, State University of New York), John Draeger (Buffalo State College, State University of New York)

Panel Overview: SoTL seeks to transform the academy (Gilpin & Liston, 2009). In order to achieve such transformation, all types of curricula and programs must be considered viable and important to study. General education has a significant place in higher education in the United States and is becoming more and more common across the world. However, general education is underrepresented in SoTL literature.

After a brief introduction and overview of general education in higher education, this panel will consider the relationship between SoTL and general education through two international perspectives. Each panelist will provide examples of their SoTL work in general education. Presenters will also engage the participants to consider the following: (1) Are there generalizable elements of general education programs and, if so, how do they impact SoTL about general education? (2) How should SoTL be used to address the complexities of teaching and/or learning in general education courses? (3) What is the role of the student voice in SoTL about general education and in subsequent professional development aimed at instructors of general education courses?
**General Education as a Site for SoTL**  
*(Karen Manarin, Mount Royal University, Calgary, AB, Canada)*

Theorists of the scholarship of teaching and learning have identified disciplinary styles and practices as grounding what Huber and Morreale (2002) call a “cross-disciplinary conversation.” But where does a cross-disciplinary area like general education fit into this conversation? This presentation examines the popularity of SoTL in general education at Mount Royal University, a Canadian public undergraduate institution, before offering some speculations on why general education seems to be such a fertile location for this work. Unusual for Canada, Mount Royal has a Department of General Education and an Institute for Scholarship of Teaching and Learning. The Department of General Education has the highest proportion of Nexen Teaching and Learning Scholars in the institution; their SoTL projects have included investigations into reading strategies, integration and intentionality, critical thinking, academic writing, website evaluation, and science and math anxiety. I suggest the popularity of general education as a site for SoTL is a combination of several factors. Nelson Laird, Niskodé-Dossett, and Kuh (2009) have argued that faculty engaged in teaching general education courses are more likely to emphasize deep learning and the development of skills, areas of inquiry ripe for SoTL investigation. General education must often justify, or in less fraught terms explain, its existence to other stakeholders, including students, which perhaps leads to a greater interest in outcomes and assessment, tools for SoTL investigation. And finally, as a cross-disciplinary space, general education provides more room for scholarship that may not fit the disciplinary moulds.

**Using SoTL to Map the Terrain of General Education: A Campus Story**  
*(Lisa Hunter, John Draeger, and Sue McMillen, Buffalo State College, Buffalo, NY, USA)*

According to Gaston (2010), general education in American colleges and universities is under critical examination. Many institutions find it difficult to maintain standards amid economic pressures to increase class sizes (Cope & Staehr, 2005) and a growing commitment to increase access (Exley, 2002). Moreover, traditional programs are confronted with an increasing number of for profit institutions that offer students low cost alternatives through online learning and open-course software. Additionally, many institutions are exploring ways to accelerate degree completion by decreasing the number of credits required, often at the expense of required general education offerings.

Few scholars have used SoTL to explore the nature of teaching and learning in the general education classroom. Olson’s (2009) study on assessing student learning in an upper level general education course provides an example of some of the benefits of including SoTL in general education design and reform At ISSoTL 2011, the authors asserted that SoTL must be explored in the professional development landscape of general education programs in order to have a greater impact on student learning in general education courses in addition to advancing SoTL in higher education and within institutions.

This presentation will use the results of the authors’ present campus SoTL study designed to map the terrain of general education at their institution as a springboard for discussion. Preliminary findings address the need to adjust teaching strategies or content (Leskes & Miller, 2006; Leskes & Wright, 2005) and support that claim that faculty and student attitudes also seem to be significant factors in the general education landscape (American Federation of Teachers, 2011).

**The Matariki Undergraduate Research Network (MURN): The challenges of a global classroom**  
*Sally Sandover (University of Western Australia), Lee Partridge (University of Western Australia), Rachel Sprokken-Smith (University of Otago), Victoria Remenda (Queen’s University), Elizabeth Burd (Durham University)*

The Matariki Undergraduate Research Network (MURN) is an innovative and exciting project connecting undergraduate researchers in four universities spread across four countries: University of Western Australia (UWJA); University of Otago, NZ; Durham University, UK; and Queens University, Canada. The universities are part of the Matariki Network, a partnership of seven universities of similar size and philosophy. The MURN initiative has grown out the Undergraduate Learning and Teaching Research Internship Scheme (ULTRIS), which has been trialled and evaluated over two years at UWJA. This scheme has provided students with an authentic research experience whose outcomes included the development of transferable research skills.
and improved communication skills (both written and oral). Students also reported enhanced levels of confidence and a stronger sense of belonging to their institution.

The rationale driving MURN is the unique opportunity to connect students engaging in undergraduate research (UR) programs in a global classroom. Research by all students is conducted in a teaching and learning topic of strategic importance to all four universities. In 2012, this topic is Internationalisation. Students in each university can choose their own research question within this umbrella topic. During the program the students share their experiences of personal growth and development as they conduct their research and deliver their findings. Sharing the experiences and discussing the similarities and differences between universities provides an exciting opportunity for the students and offers universities the prospect of internationalising their UR programs. It also allows staff to gain an insight into the workings of the partner universities.

Negotiations and organisation by five staff from the four universities involved in the MURN project commenced in October 2011, with a start date for the students of June/July 2012. Between six and nine students from a variety of disciplines, have been selected at each university to participate in the program. Student selection into MURN in all universities is by committee, based on an identical set of criteria. The UR conducted by the students is not for credit, but students in all universities are provided a stipend to complete the internship as an alternative to outside employment. The guiding principle of the program is to give students, in their second or third year of study, an authentic research experience (that mirrors that of postgraduate students) within a well supported and scaffolded program. Support is provided to the students by a supervisor and a series of compulsory preparatory workshops. The workshops are delivered to all students either in a synchronised process via online delivery or facilitated by staff in the respective universities. A timeline of activities and events throughout the six month project is used to ensure that students in all universities are experiencing the same program at the same time and are able to meet online to discuss developments, progress, challenges and achievements. At the completion of the project, students will produce an academic paper and present their findings locally or at an external conference.

This panel will consist of the five staff members involved in the development and implementation of the MURN program in the four universities. In this session we will outline the MURN project and the structure of the program. Each panel member will discuss the culture and climate at their own university, including the obstacles and support provided to introducing the UR program into teaching and learning. The logistics and challenges of communicating and developing an international online program will be discussed along with the implementation of the program from the student perspective. The panel will introduce the various student research projects and the findings to date. Future plans will also be discussed. This session will be of particular interest to those who are looking at undertaking an international project in undergraduate research and wish to learn from the experience of others.

Sheraton Ballroom West (2nd floor) 3:30-5:00pm

J04
Panel Presentation

Change Academies: a flexible approach to providing support and professional development for facilitating change at the national, institutional and discipline level.
Abigail Flint, Steve Outram, John Stockwell, Natasha Taylor (Higher Education Academy)

In the United Kingdom, the Higher Education Academy (HEA) and the Leadership Foundation for Higher Education have been co-leading a very successful series of Change Academy programmes annually since 2004 (Bradford et al, 2009). The broad aim of these programmes is to help institutional teams to identify, understand and resolve key issues affecting the quality and effectiveness of the student learning experience. It supports both rapid innovation and capacity-building for longer-term change. At a practical level, Change Academy provides valuable space, time, techniques and professional support for understanding and implementing a change initiative.

In the past few years the Change Academy model has been successfully adapted to provide support and professional development for colleagues facilitating and leading change at the intra-institutional (Flint and Oxley, 2009; Dandy, 2009) and the discipline level (Healey et al, 2013). Since 2010 the HEA has expanded its portfolio of Change Programmes, offering a range of thematic programmes focused on key strategic priorities for Higher Education in the UK. These were followed in 2012 by discipline based programmes aimed at supporting change at the academic department level.
This panel session provides a unique overview of the successes and challenges of using Change Academies at these multiple levels to support and facilitate change in the student learning experience.

The first section, led by Steve Outram, will focus on the national inter-institutional and thematic change programmes. The national Change Academy started in 2004 based on the American Association for Higher Education Summer School program. The programme has had demonstrable impact within over 70% of HEIs across the UK. Institutions have used their participation in the programme to facilitate transformational institutional change on a range of topics including:

- developing an internationalist culture across a research-led institution
- changing an entire undergraduate curriculum
- enabling a university to develop its ‘creative campus’ initiative

Based on an ‘explore, challenge and apply’ model of change and predicated on a complexity model of organisations, it has been extremely successful with all types of institutions. Feedback has been extremely positive and the lessons learned from our evaluations will be shared with participants.

The second section, led by Abbi Flint, builds on previous qualitative research into intra-institutional change programmes (Flint and Oxley, 2009) which explored the how the change academy model has been tailored and used by universities to support change internally. Institutions who participated in the original research were interviewed to explore how approaches to professional development and support for change have developed over the last four years and the longer term impact of these programmes on institutional culture. The presentation will focus on a range of aspects of internal change academies including: organisation and management; scholarly underpinning; student involvement; alignment with institutional culture; and, impact on the development of learning and teaching. In particular, the research highlights the importance of institutional culture and leadership in embedding and sustaining change academies.

The third section, led by Natasha Taylor and John Stockwell, reports on research into the HEA’s new departmental change programme. This programme foregrounds the academic department as the locus for change, the key organisational unit within which the core teaching and learning experiences of most students are designed and implemented. Departments from different institutions were specifically invited to submit projects which responded to key issues identified through the National Student Survey (NSS), the main themes of which include: student perceptions of teaching /teachers, assessment and feedback, course organisation and management, student support, personal development and learning resources. The first iteration of this programme involved 11 teams across 4 discipline clusters (Social Sciences, Arts and Humanities, Health Sciences and Science, Technology, Engineering and Maths), from 4 countries in the UK (England, Wales, Scotland and Northern Ireland). The programme incorporated four days of intensive workshops, including a two day residential retreat, during which teams planned, designed, implemented and evaluated their initiatives. Each team was allocated a Supporter who acted as a critical friend throughout the programme. This research draws on interviews, reflections and observations conducted with participants (team members, Supporters and programme leaders) at key stages during the programme.

The panel session will integrate the research on each of these different programmes to provide a unique comparative insight into the efficacy and impact of using Change Academies to provide professional development and support around change facilitation. The common strengths and challenges in using this approach will be explored, as well as differences in the way the approach has been successfully adapted and tailored for the different loci, cultural context and level of change it is supporting.

Participants will have ample time for reflection on the applicability of this model to their own contexts through short discussion activities during and following the presentations. This session will be of interest to any colleagues working with change in learning and teaching or supporting colleagues in making improvements to the student experience at the institutional, department or team level.
Chemical education is an important area of research as it directly impacts upon the production of capable scientists. Education in Chemistry involves both lecture room and laboratory instruction, with the later occupying approximately 40% of the course. Due to the importance of laboratory training, a study was conducted into the evaluation and redevelopment of first year general chemistry laboratory experiments in the unit, KRA114 - Chemistry 1B, within the Chemistry, at UTAS, with respect to various learning styles implemented. This honours project focussed on three different literature-based learning styles, namely recipe style learning (cookbook method), guided inquiry (students generated procedures), and problem solving learning (students developing solutions to proposed problems) (Lagowski 1990; Sandi-Urena, Cooper, Gatlin & Bhattacharyya 2011; Ricci & Ditzler 1991; Pickering 1989), and these were applied to two experiments, along with the original format, thus extending the work published in this area by Domin (1999). The aims of this study included the investigation into the physical engagement and input of both students and laboratory demonstrators (both faculty staff members and sessional staff selected from graduate students), the understanding achieved by students through completion of the laboratory experiment, and the enjoyment of participating and completing the laboratory experiment. The underlying goal was the construction of a foundation for further research into the differences between learning and teaching styles when applied to laboratory courses in the chemical sciences.

The research involved selecting three groups of 20 randomly students to undertake each of the experiments written to resemble the three different learning styles, while the remainder of the students undertook the experiment in the traditional form. The students were evaluated in terms of their performance and understanding resulting from each style with pre- and post-laboratory quizzes which aimed to assess the student’s understanding of the concepts before and after completing the experiment, open format questions where the students were able to comment on the workload and appropriateness of the format, and evaluations by the demonstrators on the student performance, participation and understanding. All data was anonymous and collected by the demonstrators and was analysed employing several statistical tests which included F-tests, Student’s t-tests, and Bonferroni’s correction was utilised before power analysis to estimate the required number of further observations required to produce statistically conclusive results.

The major outcomes of this study found that both problem solving and guided inquiry had greater success than recipe style in areas such as the engagement of students with the laboratory environment, and the students gaining a deeper understanding of the chemical concepts. In addition, recipe style learning and problem solving were found to have more acceptable workloads than guided inquiry. The greatest contribution of this study was the foundation for further research to be continued into this interesting area, which currently the focus of a doctorate project.

In 2010, Kent State University (KSU) administration converged on Distance Learning (DL) as a means to broaden the accessibility of courses and entire programs to place-bound and time-bound students. There were several obstacles to overcome, in particular, the offering of a General Education Science “Lab” course. Like most universities, all KSU undergraduate students must complete a suite of general education courses including a science laboratory offered by one of six science departments (Anthropology, Biological Sciences, Chemistry, Geography, Geology, and Physics). Mandated by the Ohio Board of Regents, the use of simulated data is strictly forbidden and general education science labs must involve “experimentation, including the manipulation, observation and measurement of physical objects and phenomena” (Ohio Board of Regents, 2006).

An interdisciplinary group of professors in the Sciences brought together their ideas, resources, and also stereotypes regarding DL labs. In searching SoTL literature for evidence of effectiveness and efficiency in DL science labs, many studies were identified on DL (24) and another group of studies on science labs (>100). However, most of these studies discussed implementation, compared grades in DL versus face to face (f2f)
Researching the use of virtual environments in order to overcome limitations in laboratory teaching

Annette Cashmore, Suzanne Lavelle, Paul Rudman (University of Leicester)

Effective teaching in the laboratory aims not only for the acquisition of practical abilities but also for a range of other skills including the linking of practical and theoretical knowledge, strategic experimental design, evaluation of data and teamwork. These aims are, however, often constrained by limitations of the teaching laboratory space, time and resources (DebBurman. 2002; Scott, 2005; Yeoman and Zamorski, 2008). To address some of these issues we have created virtual genetics laboratories using the 3D multi user virtual environment of Second Life® (SL). Virtual worlds are computer-based simulated environments intended for users to ‘inhabit’ and interact via motional avatars. Avatars are computer-users’ 3D representations of themselves. The virtual laboratories enable students to explore, experiment and evaluate situations in risk-free ways. The plan is that such virtual laboratories will not replace real laboratory teaching but rather enhance its scope and effectiveness. It had been reported in the literature that students like virtual worlds such as SL (Bainbridge 2007; Lucia et al. 2009.), but there is little evidence that they actually work effectively as educational tools. Therefore, we carried out research to determine if SL could be used to improve students’ knowledge and their experience of practical classroom teaching. Depending on the outcome of the research the aim is to integrate SL into on-going programmes, and continue evaluation into the ways in which virtual worlds are used. We have developed three virtual laboratories for sequentially different activities; health and safety; genetic testing and, experimental design. We have tested the effectiveness of the activities in improving knowledge and also the overall experience of the laboratory for students and staff. Our methodology involved formative and summative tests before and after the virtual world activities to test for knowledge gain, and questionnaires, focus group discussions as well as one to one interviews for staff and students after the activities to obtain experiential data. 511 students and 15 staff were involved. We have shown that the virtual activities do improve the students’ knowledge and have been valuable in helping students gain confidence in working in a real laboratory. Moreover, the genetic testing labs and group work activities to develop experimental strategies were successful in providing a virtual laboratory environment where experiments could actually be carried out where that was not possible in the real labs. Once it was shown that the virtual laboratories were not only fun but also educationally useful, we integrated them into first and second year Biological Science, second year Medicine and first year Interdisciplinary Science programmes. Our research is not only relevant for the biomedical sciences but also for a range of science practical classes. This is a prime example of where research into teaching and learning has been integrated and resulted in changes in classroom teaching especially because, the types of tutor/student interactions are less formal in virtual worlds, necessitating different teaching styles.
Further Perspectives on Experiential Education & Social Justice

Learning together: Pre-service teachers and their professors participating in a radical field experience
Erin Mikulec (Illinois State University), Paul Chamness Miller (Purdue University North Central)

One of the challenges in preparing teachers for the 21st-century classroom is providing the necessary skills and background to effectively educate diverse populations of students (Sleeter, 2001). In order to address this challenge, the researchers provided pre-service teachers, whose own understanding of diversity is often narrowly framed by their homogenous background, with a one-day immersion experience in a unique school setting. We will discuss the outcomes of providing pre-service teachers with an experience in a school where the student population is largely LGBT, of racial/ethnic under-represented groups, and largely impoverished. This school aims to meet the needs of these students through non-traditional philosophies and approaches to education, modeling itself after A. S. Neill’s Summerhill School. The researchers participated in the experience as well and facilitated post-experience debriefing and discussions in order to help the pre-service teachers make sense of their experiences.

The literature calls for teachers “to learn about and respect themselves, one another, and all other people in honor of their many diverse cultural characteristics” (Gallavan, 2005, p. 36). Being engaged in mindful explorations affords pre-service teachers with the opportunity to begin “dismantling constructs such as privilege and power while overcoming some of the barriers and resistance to using effective multicultural education practices” (Gallavan, 2005, p. 36).

Research has shown that field experiences are an important means for achieving this goal with pre-service teachers (Lee, Eckrich, Lackey & Showalter, 2010). In order to lead pre-service teachers to change their “cultural map” it is important to provide “guided discourse about the beliefs, assumptions, dispositions, and concerns that they bring with them” (p. 102), as well as opportunities to apply knowledge to practice (He & Cooper, 2009).

Hughes (2006) found that “when both the teacher educator and prospective teachers are actively involved in both the college class and the K-12 environment, the ability for everyone to teach and learn simultaneously was enhanced” (p. 114). In a SoTL study of teacher education examining issues of homophobia, classicism, racism and sexism, Pattee and Lo Guidice (2011) found that “deliberate instruction makes a significant difference in the way students react to discriminatory actions” (p. 6). Since both professors participated in the experience by modeling interaction and engagement with the school’s students, the pre-service teachers were encouraged to participate, interact and connect with the students on a deeper level than if they had simply observed from the back of the room.

Using an adapted version of the Teacher Multicultural Attitude Survey (Ponterotto, Utsey, & Pederson, 2006), as well as open-ended self-reflective questions in a pre- and post-assessment format, the researchers will discuss how the attitudes and beliefs of pre-service teachers shift as a result of participating in the immersion field experience in this non-traditional school.

This session will be an interactive lecture, where audience participation and discussion are encouraged. Participants will be invited to ask questions, share their own stories with field experiences related to our topic and a group activity where participants will develop strategies for engaging their pre-service teachers in reflective discourse.

Radical Curriculum: Making Meaningful Changes in the Classroom and Community.
Maleka Hashmi, Kitrina Carlson (University of Wisconsin-Stout)

Research has shown that students are more engaged and become aware of problems faced by members of their own community after taking part in service-learning based classroom activity. These types of quality learning opportunities engage and retain groups at risk of dropping out of STEM programs. Creating service-learning experiences that are meaningful to the students, community and community stakeholders can be challenging however. Food security makes an ideal framework for creating interdisciplinary service learning and research opportunities that are tightly woven to the larger food security stakeholder network. Here we
present an interdisciplinary, comprehensive and immersive model for integrating service-learning and research into the STEM classroom by addressing the four key components of food security; availability, stability, access and utilization.

Food security related activities were integrated into two different courses: Botany and Advanced Physiology. Botany students addressed availability by empowering the community to grow their own food through the establishment of four-season growing facilities at a community garden. Botany students also addressed stability by researching season extension strategies to improve yield of local food in cold climates. Advanced Physiology students were directed in the establishment of a health clinic at a local food pantry to increase access to health care and provide a holistic understanding of food utilization. To ensure curricular experiences were the most likely to result in effective and transformational pedagogy and significant outcome for the community, four key principles were applied to the design and implementation of the work:
1. Projects were carefully aligned with course learning objectives and goals
2. Projects were interdisciplinary in nature
3. Projects made a tangible and overt connection to a food security stakeholder
4. Project outcomes were aligned with the needs of community Food Security Stakeholder

All botany students participating in the four season growing garden were able to communicate their growing successes and failures and provide suggested strategies for successful season extension. Approximately 25 percent of groups were able to successfully harvest edible or otherwise useable plants from their season extension efforts, while all students were able to create reports to present to the community garden board detailing their four season growing project and describing strategies for improving future crop yields. Results obtained from the reflection activity post-health clinic demonstrated that advanced physiology students understood how course concepts directly related to the service learning activity; that they were better citizens for having participated in the service learning activity; that they felt positively about the impact of the service learning activity on the community; and that the overwhelming majority of them understood the underlying factors that necessitated the need for the health clinic within the community.

These results demonstrate that aligning service learning and curricular goals to the needs of food security stakeholders in the local community results in transformational curricular experiences, and that these tangibly impactful experiences are very important motivating factor for students to master STEM learning objectives that have been integrated into the framework of the associated curricular activity.

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**J10**

**A Comparative Analysis of Experiential Education and Student Learning Outcomes: Does the Type of Service Matter?**

*Loretta Simons, Lawrence Fehr (Widener University)*

Educators propose that experiential education is a transformative pedagogy that illuminates the racial, economic and social disparities in the community and engages students in service activities designed to address these problems (Mitchell, 2010). Experiential education refers to a broad range of academic endeavors, from service-learning and community service, to practica, and internships (Association for Experiential Education, 2011). Academic-based service-learning (ABSL) combines academic study with community service (Eyler, 2002), while cultural-based service-learning (CBSL) integrates race, culture, and class concepts with both discipline content and service activities (Sperling, 2007). Service-learning differs from practica and internships (i.e., career-related work for academic credit) in that service activities are designed to benefit both students and recipients (Sigmon, 1996). The goal of this study is to disentangle the effects from the different types of experiential activities on student learning. Two research questions were used to guide this study.

1. Do student interns make greater improvements in their civic, diversity, racial, and social justice attitudes, and multicultural awareness, knowledge, and skills than academic- and cultural-based service-learners from the beginning to the end of the term?
2. Do field supervisors make higher ratings of attitudes and skills for student interns compared to service-learners?

A comparative analysis was conducted on student attitudes and skills from 101 undergraduate students enrolled in (ABSL) (n =45), (CBSL) (n = 17), and practicum/internship (n = 39) courses.
Students completed an informed consent form and pretest survey that included three questionnaires: The Civic Attitudes and Skills Questionnaire (CASQ) (Moely et al., 2002), the Modern Racism Scale (McConahay, 1983), and the Multicultural Counseling Inventory (MCI) (Sodowsky et al., 1994). Students completed this survey again after their hours of service. Field supervisors also completed an assessment on each student with whom they were paired for the academic semester.

A repeated measures analyses of variance with planned orthogonal contrasts were conducted to evaluate student learning among academic-based service-learners (ABSL), cultural-based service-learners (CBSL), and student interns from the beginning to the end of the semester. The pretest and posttest scores for CASQ, MRS, and MCI were used as dependent variables, and the type of service was the independent variable. There was significant Group x Time interaction effects for the CASQ, MRS, and MCI. Students did not differ in scores at the beginning of the semester, but by the end of the term student interns had higher multicultural awareness and intercultural relationship scores and lower racial and civic attitude scores than did cultural-based service-learners.

An independent t-test was conducted to measure differences on field supervisors’ views of student interns (n = 34) and service-learners (n = 40). Field supervisors appraised students interns as having a better ability to develop relationships with coworkers than service-learner.

The consistency of data from field supervisors and students suggest that the alignment between the course content and service activity is associated with student learning. Student interns utilized helping skills with diverse recipients diagnosed with a range of psychological, learning, and physical disorders at public schools, community-based counseling centers and physical therapy clinics. Exposure to extensive work with diverse recipients provided students with an opportunity to increase their multicultural awareness and develop intercultural relationships, which in turn, challenged them to rethink their racial assumptions of recipients and interests in service. Field supervisors further appraised student interns as having a better ability to form relationships than service-learners. Student interns were juniors and seniors who spent a considerable amount of time at placement sites. It is possible that the amount of time is a necessary component for fostering intercultural interactions that counter student assumptions. The findings from this study point to experiential education as a potentially transformative pedagogy that assists students to achieve social justice and multicultural education goals, but only when these are explicit course objectives and outcomes.
work-in-progress, soliciting individual and group reflections, and videotaping team sessions, this study sought to answer:

- What are the characteristics of successful multi-institutional projects?
- What facilitates the generation of multi-institutional research synergies?
- What structures and/or processes need to be in place to foster success?
- What are potential roadblocks to success?
- What are the roles of institutions and organizations in motivating and supporting multi-institutional research?
- How might multi-institutional research spark new developments - or even paradigm shifts - in theory building or practices?

While data analysis will be completed in July 2012, preliminary results suggest that multi-institutional projects are most successful when researchers establish clear, shared goals; use context-flexible research methods; and establish strong interpersonal working relationships. Successful projects also lead to more generalizable findings, greater awareness of disciplinary teaching and learning in other institutional and geographic contexts, and dynamic networks for future collaboration.

The presenter therefore advocates stretching “big tent” SoTL to include not only small-scale class-based studies and large-scale institutional studies, but also systematic multi-institutional studies. The tent already encompasses some multi-institutional projects, but extending these initiatives enables scholars to test and build disciplinary and interdisciplinary theories and practices across a wider range of educational contexts.

To facilitate audience engagement, the speaker will integrate reflective activities throughout the presentation. For instance, an early activity will ask those present to brainstorm teaching and learning questions they wish to investigate before tweeting (or sharing on an index card) one potential question. Using the supplemented twitter stream, the speaker will facilitate a brief discussion about possible multi-institutional partnerships. Other planned activities include a prompted concept map and a context sketch.

SoTL, the American Community College and the Big Tent
Kimberly Burns (Middlesex Community College)

Community colleges in the US are continually faced with questions of how best to meet the learning needs of their diverse students, many who are “nontraditional” and are often ill-prepared for college level work. These institutions are respected as furthering democracy through their commitment to access and criticized for falling short in supporting students’ educational attainment. A study of thirteen community college faculty explored the extent to which SoTL can support professors, who are neither trained nor rewarded for engagement in scholarship, to improve student learning and success.

The findings of this case study point to faculty gains in teaching and learning knowledge leading to 1) further understanding of their practice and their students’ learning, and 2) changes in their pedagogy. The theoretical and conceptual framework guiding this study was the idea that SoTL is a process of sensemaking (Weick, 2001; Weick et al., 2005) and transformative learning (Mezirow, 1994) for community college faculty, resulting in the development of new knowledge as outlined by Kreber and Cranton’s (2000) scholarship of teaching model.

The faculty in this study participated in meaningful SoTL experiences sponsored by the Carnegie Foundation for the Advancement of Teaching. SoTL provided these faculty with an opportunity to isolate, problematize and pursue inquiry into a teaching and learning issue. All of the faculty experienced a disorienting dilemma (Mezirow, 1994), bracketed an aspect of the classroom environment (Weick, 2001; Weick et al., 2005) to try to pinpoint the problem, and researched the educational problem in their SoTL projects. Their research was connected to their roles as teachers rather than a career-long research agenda, and the new knowledge generated from their projects was applied to their classroom teaching. Some participants dramatically changed how they taught their courses as a result of their SoTL projects and others received validation that the pedagogical strategies they were already using in the classroom were effective.

The results of this study beg the question of how SoTL fits with the American community college’s pursuit of improved teaching and improved student learning.
As community colleges address the shifting conditions of the external environment such as demands for accountability and limited resources, SoTL can provide rich professional development to the faculty on the front lines. The front lines are crowded, however, with heavy teaching and administrative loads leaving little time for reflection.

The added layer of what Huber, et al. (2011) refer to as the “big tent debate” further muddies the waters of how SoTL fits into the culture of the community college. Research-oriented models of SoTL are certainly not the answer for community college faculty. Bernstein's (2010) form of SoTL where faculty situate their projects on a continuum of rigor can certainly open up some space under the tent for community college faculty. The presentation of this paper will present an overview of the study and its findings, which includes a framework that places community college faculty on the SoTL continuum allowing them to make valuable contributions to higher education teaching and learning in authentic ways.

New Teacher Perspectives: Acknowledging the Gap Between Knowledge and Practice (Via Creative Expression)
Shauna Daley (Hamilton Wentworth District School Board), Maria Cosentino (Town of Markham)

While current tendencies in higher education may facilitate a greater inclusion of the Scholarship of Teaching and Learning (McKinney, 2007), the distance between scholar and teacher remains divided in the elementary and secondary levels of education.

This session offers our perspective as K-12 qualified teachers in the classroom looking for ways to improve our pedagogical practice through the integration of first hand research into real-time beneficial interactions in our classrooms. We come from different academic disciplines/domains and from different qualifications. Yet, we both see the value of SoTL work in our practices, especially for our own professional development that ultimately enhances our students’ learning. We are inspired by Lee Shulman’s (2000) 3 P’s: Professional, Pragmatism, and Policy. Although intended for the encouragement of SoTL in higher education, we are interested in using them as a foundation for supporting the scholarship of teaching and learning at all levels of education. The fact is, we already see ourselves in the interconnecting realms of educator, researcher, and scholar at the elementary and secondary level.

Through the use of a creative performance, that involves dance and spoken word poetry, a first-hand visual dialogue (words mapped to actions) will be shared with the audience to express our personal perspectives on the importance of SoTL practices at all levels of education. This visual expression is our unique way of transforming our experiences and opinions into something much more. We are educators, but also learners. As our students have their own learning preferences, so too, do we. As Marshall McLuhan coined, “The Medium is the Message”. Therefore our presentation encompasses a captivating, interdisciplinary approach as a way to help individuals take notice of SoTL understandings and practices.

Hubball and Clarke (2010) indicate that “making the Scholarship of Teaching and Learning community property by collaborating with colleagues is key to high quality, shared and meaningful projects” (p. 1). We see this as an imperative initiative in order for teachers to be able to reap the benefits of research in their classrooms and to provide a seamless transition of data from the scholar to the practitioner.

Integrating gender and security studies: a report of a collaborative SOTL inquiry in an international, graduate seminar course
Joanna Renc-Roe, Paul R Roe, Mariana Budjeryn (Central European University)

In this paper we will summarise and discuss the results of a first year of a collaborative inquiry into student learning in a graduate seminar course, dealing with the process of integrating gender/feminist critiques into students’ understanding of the discipline of International Relations and, more specifically, Security Studies. Our paper reports findings of a project involving an ethnographic inquiry (systematic classroom observation), systematic reflective writing and verbal feedback on part of the students (using a classroom assessment technique and a focus group interview) and an analysis of student work in the course (final papers).
In contemporary International Relations (IR) research, feminist and/or gender approaches have increasingly come to be recognized as powerful critiques of traditional Security Studies scholarship (Tickner 2007, Smith 1998, Keohane, 1998), which have privileged the state and its threat and use of military means. Set against this, feminist approaches have sought to reveal the profoundly gendered assumptions concerning the nature of the individual, the state, and the international system and their implications for international relations as both an academic discipline and an area of practice. This project is about the advances and the struggles between traditional and feminist approaches to security in the graduate university classroom as experienced by the students. Our SOTL inquiry concerns the extent and the ways in which graduate students (in a one-year taught MA program at an international graduate university) engage with or resist the challenge gender scholarship poses to their discipline, their world view and their emerging academic/professional identity. Whilst the study is firmly situated in the specific disciplinary context of feminist critiques of mainstream IR and security studies, it also engages with and has implications for other SOTL areas of inquiry in several ways:

1. It represents an attempt to introduce SOTL as a field of inquiry into IR as a discipline, which up to date has a minimal, not to say non-existent, history of this sort of inquiry.
2. It directly answers recent calls for gendering the work of SOTL and providing an explicitly feminist strand of inquiry (McKinney and Chick, 2010, Hassel et al., 2011, Bloch-Shulman et al., 2011)
3. It builds on and variously engages with several strands of SOTL research such as threshold concept theory (Meyer and Land, 2006), elements of the decoding the disciplines model (Díaz et al., 2008), and the studies of development of critical thinking or student learning in seminar contexts (Feito, 2007)

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J15
SOTL in Political Science: Trends and Patterns
John Craig (Higher Education Academy)

It is ten years since Kehl (2002) identified the increasing number of SOTL papers being produced by political scientists. As noted by Hamann et al (2009) and Whitman and Richlin (2007) this trend has developed further, with increasing levels of research and publishing activity in political science education being observed in a number of national contexts. This is reflected in the content of the International Political Education Database (IPED), hosted by the UK Political Studies Association Teaching and Learning Group, which includes over a thousand journal articles on teaching and learning in politics. The paper aims to provide an up-to-date survey of the scope of this literature, exploring the key themes which have emerged as the focus of study as well as patterns of what is being published where. The paper argues that through the analysis of this SOTL produced at a discipline level we can develop our understanding of the diversity of teaching and learning environments and experiences within higher education.

IPED is located at: https://sites.google.com/site/psatlg/Home/resources/journal-articles

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J16
Session withdrawn

Please feel free to move to one of the other session rooms to join in the third paper scheduled there.

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J17
Developing Undergraduates’ Creativity through Reconstituted Teaching
Teboho Pitsa (Vaal University of Technology)

In this presentation, I briefly provide some background on TRIZ as the theory of inventive problem-solving (Altshuller 1989, Rantanen 2000) which formed the basis of the creativity model (Pitsa 2011) that I developed to encourage undergraduates’ creativity. The presentation will focus on explaining the TRIZ-Based Creativity Model and how it facilitated reflective critique on the teacher which assisted in changing his teaching conditions such that these conditions encouraged undergraduates to also use the model to develop their creative abilities. The presentation will also demonstrate how this model can be used to impact entrenched institutional and classroom culture. I also share results of the six-month study that used the model to develop
undergraduates’ creativity under teaching conditions that constituted an invitation for them to create safe conversational spaces where they had a sense that they could try out new things without the burden of failure or fear. The Torrance’s Tests of Creative Thinking (TTCT) were used as the pre- and post-test measures of undergraduates’ creativity. These TTCT scores were compared and assessed for significance through the t-test which showed statistical significance and thus improvement on undergraduates’ creative abilities as the result of exposure to the reconstituted teaching conditions.

**J18**  
**Integrating Research and Practice: Using Adaptive Dramaturgy to Link Creative and Critical Thinking**  
James McKinnon, Ralph Upton (Victoria University of Wellington)

This presentation discusses a teaching and learning experiment that integrates scholarship on dramatic adaptation into English and Theatre courses at Victoria University of Wellington (NZ). This ongoing experiment seeks to improve creative and critical thinking skills (which are among Victoria University’s desired “graduate attributes”) by developing activities and content inspired by the principal investigator’s research on dramatic adaptation (McKinnon 2010). Other objectives include improving the integration of theory and practice in coursework, and providing more opportunities for students to develop autonomous learning habits and practical creative skills. This presentation will outline our motives, methods, and discoveries to date.

Although many liberal and creative arts programs claim to develop creative and critical thinking skills (Marquis & Vajoczki 2012: 1-2), this objective often clashes with cultural myths about creativity - and institutional practices that reflect them. Many people conceive of creativity as an innate talent, which resides in individuals, manifests in spontaneous bursts of insight, and is incompatible with critical inquiry (Boden 2003: 12-15; Sawyer 2006: 16-26). Drama and theatre programs implicitly reinforce such notions by dividing coursework into “practical” and “academic” streams characterized by different formats, learning environments, and assumptions. Students who identify as creatively gifted often regard critical theory as useless, boring, or even potentially dangerous to their creative process; at the same time, those who do not identify as creative come to regard art as something that others make, a feeling reinforced by coursework that treats artworks as examples of individual originality without considering the collaborative, adaptive nature of creative process.

While conducting my PhD research, I realized that adaptation exemplifies the productive convergence of creative and critical practice: well-known dramatic adaptations of Shakespeare such as Harlem Duet or Goodnight Desdemona/Good Morning Juliet put critical investigations into creative forms, literally performing feminist or post-colonial readings of the canon. Exploring adaptation dispels the intimidating mystique around creative process by revealing its motives and strategies (Jonas 1997). It also reveals that creative acts stem from critical inquiry, and that both creative and critical processes consist of skills that anyone can learn and practice.

The investigator, a research assistant, and students in several English and Theatre courses at VUW are attempting to integrate these findings into Theatre and English coursework at VUW. Following the “plan-act-observe-reflect” cycle of action research (MacIsaac 1995), we use insights from adaptive dramaturgy to devise assessment and instruction methods which attempt to improve skills and confidence in creative and critical thinking. Students who responded to surveys and focus groups during the first cycle of research reported high overall satisfaction and stated that participating in collaborative practice-based research improved their confidence in their collaborative, creative, and critical abilities. This presentation will discuss and model our strategies, our methods, the lessons we have learned from 3 cycles of research, and implications for colleagues in other disciplines.

**J19**  
**Students’ Perceptions of Design Process, Play, and Reflecting on Creation: Creative Work Impacts Learning Experiences**  
Bernie Murray (University of Toronto)

The purpose of this qualitative study was to gain an understanding of design process, playful learning, and meaningful experiences in studio classes of a fashion design program. The participants were second year undergraduate students who experienced an alternative design process as a means of creating a product. Experimentation in the studio class meant an evolution of design throughout the creative process and an investigation into design concepts. Dansky (1999) links play and creative activities describing the individuals
as intrinsically motivated and narrowly focused on accomplishing a specific goal. Learning in the design studio happened when students attended demonstrations, lectures, and critiques. The participants developed skills to assist them in the design process. Critiques are a component of studio-based classes when students and teachers reflect as a group on the working process (Hetland et al, 2007). Communicating information in the class, envisioning design possibilities, and expressing creative ideas were common practice.

The participants were sixty students who experienced design culture and studio classes in a fashion program. The focus of the class was to teach principles and creative techniques of design on the three-dimensional form. Students were encouraged to explore options, design problems, and search for solutions. They shared ideas and solutions with peers demonstrating the social nature of creativity. Creative experiences engaged and motivated learners who developed innovative products. Csikszentmihalyi (1996) agrees that interaction between individuals in the environment causes creative activities to occur. The studio environment provided opportunities for interaction with students sharing concepts with peers and the instructor. Individual and group critiques provided opportunities to exchange design ideas, problems, and solutions with peers or industry professionals.

Data were collected from surveys that contained ten questions about creativity, design process, play, and reflection. The surveys were distributed after participants experienced the design process and presented their designs. The data was coded and analyzed searching for common themes that reflect the textual data. Themes were adjusted and redefined in the analysis of the data. Results of the study revealed that participants in the design challenge were tested on their conventional way of thinking. Participants explored innovative fashion using color, shape, pattern, and texture. Cultural and historic aspects of dress resulted in the final outcomes. The participants felt creative because there were no restrictions on designs. Playful learning contributed to a new understanding of design process, learning experiences, and identity as a designer. The participants felt creative using an alternative process for design since they had no awareness of the product until completion. Findings from this study may impact the curriculum in art and design programs. Students’ experiences, innovative teaching methods to ensure success, and challenges faced during the creation of the project were documented. This study contributes to practice recognizing important aspects of support and development for creativity in artistic disciplines. The information from this study may be used in any discipline to document process, creation of a product, or developing an understanding of creativity. This research may provide insight into strategies used to enhance learning and motivate students.

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**Researching Student Experiences & Student Support Initiatives**

**Understanding and promoting student engagement: Integrating theory and practice.**

*Andrea Jackson, Katie Livesey (University of Leeds)*

The term ‘student engagement’ is used as a catch-all term to describe a compendium of behaviours characterising students who are said to be more involved with their university community than their less engaged peers, and is linked to positive learning outcomes such as retention, satisfaction, achievement and academic success. Although student engagement is a complex interplay of factors, the many models of understanding and enhancing learning are based on the premise that learning is influenced and enhanced by how an individual participates in educationally purposeful activities and that students should be included as partners in a learning community (Astin, 1985; Bransford, 1999; Chickering and Gamson, 1987; Krause, 2005).

This presentation outlines a UK Higher Education Academy funded research project within the School of Earth and Environment at the University of Leeds that builds on the recommendations of the Higher Education Funding Council for England (HEFCE) (Little, 2009) to understand:

- the enablers and barriers to the engagement of students as ‘partners in a learning community’ from the perspective of students and staff; and
- effective practice across institutions and learner constituencies (e.g. part-time, international, mature).

The project has explored student engagement in the context of behaviours, activities, and opportunities that facilitate involvement in, and enhance the sense of belonging to a learning community, recognising that social
interaction as well as involvement in academic and research oriented activities all contribute to the student experience.

A key element of this research over the past two years has been to qualitatively and quantitatively measure student engagement through a combination of focus groups, interviews and surveys (based on the North American Survey of Student Engagement, NSSE) amongst earth and environmental science undergraduate students. The research has provided information about the level and nature of student and staff interactions, the support within their learning environment, and the extent to which they are making use of educational opportunities and learning enhancement activities. This methodology is in contrast to the UK’s National Student Survey (NSS) which is based around a measure of student ‘satisfaction’ as opposed to student ‘experience’. Results have helped identify, target, promote and evaluate the effectiveness of interventions (student and staff led) to build academic community and enhance engagement, examples of which will be presented. A staff survey has also helped identify gaps between student engagement and staff expectations, as well as providing a forum to engage staff in discussions about student engagement.

The project has culminated in the integration of theory with practice through staff and students working together to develop a strategic framework for enhancing student engagement within the School.

**J21 Individual Paper**

**Student sense of belonging: understanding identity and belonging through student narratives.**

Helen Pokorny (University of Westminster), D Holley (Anglia Ruskin University), Suzanne Kane (London Metropolitan University)

This research focuses on how students narrate their experiences of belonging at University, the meanings they ascribe to their narrations, and the insights these can offer our emerging understanding into the factors impacting on student expectations of university life and their sense of belonging. This research utilises the Biographic Narrative Interpretive Method (BNIM) (Wengraf 2007).

This is an exploration of the first year undergraduate learning experience, and aspects of sense of belonging of students studying at three London universities. A survey of first year students at each of the universities suggested that:

- There was no statistically significant difference between the average measure for sense of belonging across the three London universities
- There was no evidence to suggest that the distribution of sense of belonging differs across ethnic groups
- 10-15% of the students in each institution seem to find it difficult to settle in, fit in, or be accepted

For the next stage of the project, in-depth interviews were arranged to capture student narratives via the Biographic Narrative Interpretive Method (BNIM). The project team elected to use the BNIM interview method because it allows interviewees to construct their own lived experience as free as possible from any researcher-influenced bias, and offers rich descriptions of the participant experience. The method utilises a Single Question aimed at Inducing Narrative (SQUIN), the question used here was:

‘Can you tell me about the events in your life when you felt that you really belonged (and did not belong)? This might include university experiences, or not.’

This question avoids limiting the spoken responses by allowing relationships to any part of the individual’s narrative, not just that which is related to the university experience.

Each interview was transcribed and analysed using text structure sequinization (Wengraf 2007) via the DARNE (Descriptive, Argument, Report, Narrative) framework. The narratives were further analysed for key themes and concepts arising from the narratives of the lived experience and the socio-cultural context in relation to the extensive literature on student sense of belonging.

Initial analysis suggests a mismatch of some first year students’ expectations and the reality of their university experiences. It can be seen that students originally had great expectations in relation to: university surroundings, the first year learning experience, and immediate acceptance into the student body. However, many of their original expectations have not been met and, in some cases, this causes much distress.
Implications for students’ sense of belonging in UK Higher Education are considered through the rich descriptions related to the ‘sense of belonging’ phenomenon. A review of the literature suggests a range of relationships; individual culture and self-perception (Chow & Healy 2008), the physical environment (Dixon & Durrhiem 2004), induction and transition (Vinson et al 2010), teaching and group belonging (Levett-Jones & Lathlean 2008).

The presentation of this research will provide the audience with a novel and original view of first year student expectations through the lens of ‘student belonging’ and how it impacts on the first year student learning experience.

Integrated Vocational Project (IVP), a pathway to level key competences in first year technical study programs
André Beaujanot, Hugo Nervi, Carol Halal (INACAP)

Background: The University of Technology Chile INACAP (Instituto Nacional de Capacitación) is the largest private not for profit high education institution in Chile, with 110,000 students in two, four and five year programs, all distributed in 25 campus from North to South. It is an inclusive University, non-selective, that receives students with different socioeconomic, cultural and educational backgrounds. One of the major challenges that INACAP faces is to continuously provide excellent education to all students, in every campus in all study programs.

Purpose: First year students’ success is a priority for high education institutions, as it improves student’s motivation, retention rates and better learning outcomes. In order to support and be responsible for students’ success, INACAP searches, through its Integrated Vocational Project (IVP), to strengthen and equal key competences among first year students. Specifically, IVP focuses in three strategic learning areas; mathematics, language, and personal skills.

Methodology: As part of the IVP, a preliminary research process was conducted during second semester of 2011. Gaps and weaknesses in our target student population were recognized in all three strategic learning areas. As a result, a specific and customized placement test was developed, pre-tested and validated. By the end of 2011 a group of faculty tutors were carefully recruited and finally selected to be part of a training program in the use of teaching technology as well as in specific teaching practices and methodologies. These tutors will be in charge to customize learning strategies and focus on students specific needs. A group of first year students enrolled in March 2012, in designated technical study programs at INACAP, were invited to do a placement test covering each three strategic learning areas. The results served as the base to categorize the students. A specific support strategy was defined and implemented by tutors through online and face to face interactions.

Preliminary results: Preliminary research processes have been successful. First, the placement test was successfully applied to the target audience and specific students’ needs; gaps were identified. Second, specific learning support strategies were defined for each student, and tutors began its support through online and face to face environments. Third, the motivation strategy applied to persuade students to do the placement test has been highly successful. This is especially significant as it is not compulsory for students to do the test. Fourth, most of the students that are part of the IVP do not leave; the quality, commitment, and empathy shown by the group of tutors as well as the commitment shown by Campus Student Support have been major drivers for success. As a result, during first semester 2012 an implementation phase will be applied. Qualitative and quantitative results will guide a future decision about how INACAP could capitalize and improve IVP.
Exploring think aloud as a strategy to assist clinical decision making by undergraduate nursing students within the context of high fidelity case-based simulation.

Robyn Nash, Pauline Calleja, Vivienne Tippett, Theresa Harvey, Naomi Malouf, Lisa Wirihana
(Queensland University of Technology)

Aim: This paper reports on a research project that explored the effectiveness of think aloud as a strategy to improve nursing students’ clinical reasoning and active critical thinking in simulated practice settings.

Background: Nurses are required to apply and utilise critical thinking skills to enable clinical reasoning for problem solving in the clinical setting (Lasater, 2007). Nursing students are expected to display clinical reasoning skills in practice, but often struggle to articulate reasons behind patient care decisions. High fidelity simulation is a contemporary pedagogic approach that has rapidly gained popularity as a ‘proxy’ for clinical practice in ‘real world’ environments. The think aloud approach is an innovative learning/teaching method which has been used to develop clinical reasoning skills in students (Banning, 2008).

Methods: In Semester 2, 2011 at a large metropolitan University, third year nursing students were recruited to participate in this project. The ‘think aloud’ strategy was described to students during a class briefing with time allowed for clarification. Those who agreed to participate were randomly allocated to intervention or think aloud groups, and control groups. The selected high-fidelity case-based simulations were the same for both groups, eg. resource materials, session duration, size of groups etc. Focus groups were used to collect qualitative data from students and teachers about how decisions were made and factors that influenced this process. All simulations were recorded and observed using a piloted tool, for key decisions made and factors that impeded or promoted decision making.

Results: Findings derived from the focus group discussions demonstrate the complexity of clinical decision making for undergraduate students. The opportunity to participate in high fidelity simulation was regarded positively by all participants. Uncertainty about making the ‘right’ decision and feeling pressured by the time constraints related to the scenario were also common. Factors that influenced decision making included prior clinical knowledge and skills, clinical experience, simulation experience and, importantly, the ability to work effectively in teams.

Conclusion: In an environment of increasingly constrained clinical placement opportunities, exploration of alternate strategies to improve critical thinking skills, and develop clinical reasoning and problem solving for nursing students is imperative in preparing nurses to respond to patient needs. The results from this study highlight several issues that further inform pedagogical approaches to the development of clinical decision making within nursing curricula.
**Using a Professional Learning Community Simulation in a Pre-Service Education Class**

*Kristen Ferguson (Nipissing University)*

In a Professional Learning Community (PLC), educators work collaboratively to improve student achievement by engaging in discussions about teaching and learning. PLCs are a common form of professional development in schools in Ontario, Canada and pre-service education students are likely to observe or participate in PLCs while on practicum. While the theory of PLCs can be taught, it is difficult to teach the collaboration and teamwork that occurs during an actual PLC. The guiding question of this research is: would a PLC simulation be a learning experience that would benefit pre-service teachers while on placement?

A PLC simulation was created in three pre-service language arts classes. Teacher candidates worked in small groups developing a unit based on a reading comprehension strategy. A few weeks after practicum, students were asked to complete a voluntary, anonymous, and confidential open-ended reflection question that asked whether the simulation experience was beneficial for them on placement and why or why not.

Ninety-eight out of 113 students completed the reflection (87% response rate). Seventy-eight students (80%) believed that the simulation benefited them while on placement. Students felt they knew what to expect, were familiar with the language used at PLCs, and could actively participate. In addition, many students appreciated the hands-on learning experience and felt they learned more through the simulation than they would through a lecture. Conversely 20 students (20%) felt the simulation was not a benefit, but 15 of these students indicated that they did not participate in a PLC on placement but thought the simulation experience would likely benefit them in the future. The five students who stated the PLC simulation was not beneficial explained that the PLCs they participated in while on placement differed procedurally from the in-class simulation activity.

The simulation was beneficial for 95% of pre-service education students in the study. Students indicated that they had knowledge of the structure, etiquette, and language of PLCs, saw the real-life applicability and benefits of PLCs, and felt the simulation improved their language arts teaching skills. While simulations are often used in other disciplines, there is little research that investigates simulations in pre-service education, and this study provides new data on an instructional technique that deserves more attention and use in teacher education programs.

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**Closing the Design Loop in Freshman Engineering: Modelling and Simulation for Iterative Design, Verification, & Validation**

*Thomas Doyle (McMaster University)*

This technology-enhanced approach to teaching and learning transforms a common-year freshmen Design and Graphics course to allow real-time feedback, iterative verification and validation, and design experience not possible in traditional Design and Graphics courses. Using a multi-domain system modelling and simulation software for mechanism design, more than 1000 first year students with no background in the material can fully experience the design process and close the design loop in a 12-week course. Through a guided dissection of a common device, such as a CDROM, students design a retrofit mechanism, like a read-head drive train, to meet specific design objectives for their term project. The engineering education literature on engagement, self-efficacy, project-based learning, and experiential learning are each relevant to this pedagogical methodology and research. Providing common experience elements in problem solving context to a diverse group of freshmen engineers enhances their engagement and innate intellectual curiosity. Providing "real engineering" projects early in the young engineer's education improves learning and provides a sense of being an engineer. This early sense of belonging or participating in the profession positively affects self-efficacy and thereby improves student retention. The use of multi-domain modelling and simulation software, especially for a large class, is intended to offer an experiential learning environment without the physical resources (and limitations) necessary for every student to have, for example, a gear-train set. This paper presents the multimodal intervention and the research methodology for examining First Year Engineering Students Motivation, Learning Style, Engagement, Performance and Perception. The results of the study will be used to refine the delivery of the course and to better understand the First Year Engineering student.
**Fostering, Developing & Evaluating Interdisciplinary Learning Experiences**

Less chartered waters, Sotl conversations on interdisciplinary learning and teaching  
*Michele Scoufis (University of Sydney), Helen Dalton (University of New South Wales)*

“There is a crack, a crack in everything. That’s the way light gets in.”  

The disciplinarity of teaching in Australian universities can also be found internationally. As Klein (2000) notes, for most of the twentieth century, the question of knowledge has been framed by disciplinarity, as mode 1 rather than the mode 2 learning of interdisciplinarity. Klein also comments, that often our curriculum is extracted from a fully integrated world and it is “dis-integrated” by university disciplinary units. Strober (2011, p1) states, “Over the past 10 years, numerous research universities’ strategic plans have called for increased interdisciplinary work. Nonetheless there is little evidence that it is happening.” Disciplinary boundaries on local campuses remain firm, and departments retain their power (Klein, 1996). Diverse disciplinary perspectives are not being integrated so that our students can learn how to respond to challenges that transcend disciplines (Golding, 2009). As a consequence our students are not being prepared to deal with practical problems.

The area of interdisciplinarity provides a wealth of opportunities for research in the scholarship of curriculum. There is little SoTL research on the capabilities needed for either students or staff to engage effectively with interdisciplinary teaching and learning. Whilst Klein (2000), Thew (2007), Mansilla, et al., (2007) and Mansilla, (2005) recognise that students, teachers and researchers require specialised skills to cope with the complexity of effective interdisciplinarity practice, the nature of these is unexplored in detail.

This paper reports on survey research of students and staff involved in two interdisciplinary courses. Whilst confined in scope our research uncovered individual psychological factors that can together foster or limit the effectiveness of interdisciplinary learning and teaching. The critical importance of dispositions such as open mindedness and skills relating to communication, intercultural learning, critical analysis, negotiating problem solving and working collaboratively emerged. Klein’s model is used to explore these factors. With the support of participants who will be asked to reflect on their own experiences and practice of interdisciplinary teaching, we hope to crack open the perception of disciplinary boundaries and in so doing, uncover the great potential for discourse and discovery in the spaces between traditional disciplinary boundaries.

There remains the risk that the process of interdisciplinary learning and teaching as compared with traditional disciplinary modes will be “disparagingly seen as modern and sexy” (Thew, 2007, p.8). Is interdisciplinary learning and teaching just a passing fad?

**Perceptions and reflections:**  
**Evaluation design for an innovative teaching and learning environment**  
*Chad Harvey, Sarah Symons, Carolyn Eyles, Andrew Colgoni, Russ Ellis, Sarah Robinson, Genevieve van Wersch (McMaster University)*

This paper describes a longitudinal educational research study evaluating a new and pedagogically-innovative undergraduate degree program. The study, currently in its initial stages, is designed as a five-phase investigation into the implementation and results of the Integrated Science Program (iSci) at McMaster University. The challenge we face is to develop and test a pedagogic research model for a unique teaching and learning environment.

In this session, we will describe our aims, methods, and current results. In addition, we will seek feedback on our study design and encourage discussion of program evaluation methodologies.

iSci is a four-year degree program leading to a Hons BSc in Integrated Science (or a Hons BSc in Integrated Science with a concentration in one of eleven science disciplines). The program, currently in its fourth year of implementation, attracts an intake of around fifty highly motivated students per year, selected via grades and a supplementary application. iSci has been designed to integrate multiple scientific disciplines using
innovative pedagogical methods, taught by a multi-disciplinary team. All of the course content within the four years of the program is custom designed.

The aims of the research study are program development, documentation, and evaluation. Developmentally, we want to inform our internal curriculum design processes and improve instructional efficiency. We want to document the creation of the Program, recording methodologies and materials. We want to investigate which aspects of the Program are "successful", by determining what aspects students, instructors, and other stakeholders regard as valuable outcomes. Ultimately, we need to communicate these ideas, structures, procedures, and results to both internal and external audiences.

In this paper we present the results of the first phase of the study. We designed an online questionnaire to collect students’ impressions in four key areas: 1) efficacy of pedagogical methods, instructional spaces, and integration; 2) preparedness for their next academic step; 3) recognition of their skills; and 4) their expectations for next year. We surveyed students in all three years of the program at the end of the academic year 2011/12. To test the efficacy of the instrument, we also collected respondents’ opinions on the clarity of each question. We will briefly describe our plans for the future phases of the study. Phase two will use the tested and edited questionnaire annually for current students, tracking students through the program. Two modified versions of the questionnaire will be used for incoming and exiting students. Phase three involves gathering comparative data from non-iSci students and instructors via survey and interviews. Phase four will gather institutional data including instructional team questionnaires and interviews; data about student grades, research placements, and admissions; and materials such as course and planning documents. The final phase will investigate alumni destinations and reflections via online surveys.

Dissecting Through Barriers- IPE in the Anatomy Lab

Bruce Wainman, Andrew Palombella, Karen Tsui, Stephanie Chan, Shazmeen Manji (McMaster University)

Effective, team-based healthcare delivery has been identified as a key strategy in healthcare renewal, necessitating the development and training of interprofessional collaboration skills for healthcare professionals. The implementation of Interprofessional Education (IPE) within healthcare programs has demonstrated improvement in patient care and satisfaction, reduced clinical error rates, improved collaborative team behaviour and can diminish negative professional stereotypes. In recognizing the need for interprofessional learning, as well as the universal commonality and interest in gross anatomy across healthcare programs, an interprofessional cadaver dissection course was founded at McMaster University in 2009. This ten-week problem-based learning (PBL) gross anatomy course was offered to students in the following programs at McMaster University: medicine (MD), midwifery, nursing, physician assistant, occupational therapy and physiotherapy. Twenty-eight randomly selected students were allocated into four interprofessional groups, each consisting of up to six different professions. Pre- and post-course surveys consisting of The Interdisciplinary Education Perception Scale (IEPS) and Readiness for Interprofessional Learning Scale (RIPLS) were used to measure differences in attitudes and perceptions towards IPE and collaboration, while focus groups were used to qualitatively evaluate these changes. Weekly evaluations were also implemented to gauge anatomical knowledge acquisition and to provide feedback for course improvements. Data from the 2011 and 2012 courses were pooled to increase sample size. Course outcomes were positive, with quantitative results indicating a significant increase in willingness to participate in interprofessional learning across all professions. In the MD group a number of significant results emerged post-course, including stronger agreement on the value of interprofessional learning, strengthened perceptions of competency and autonomy with team approaches and higher regard developed for other professions. Qualitatively, students commonly reported that the course deepened their understanding of not only anatomy but also of other professions. Students also agreed on the value of dissection as a learning tool and that learning together as an interprofessional team was valuable and encouraged professional collaboration.
Fostering, Enabling and Supporting SOTL

Creating Spaces for Development of SOTL
Ruth Pilkington (University of Central Lancashire)

SOTL is well established within the UK for developing practice in HE in line with the professional ethos of an ‘academic’ who is scholar of both the discipline and teaching and learning within the discipline (Healey 2000). This underpins the work of colleagues at a university in the Northwest of England. The paper shares how using the notion of ‘professional space’ we developed mechanisms for changing institutional culture with respect to SOTL, supporting diverse disciplinary approaches and integrating leadership and academic development. We invite colleagues to discuss our model and its value for their approaches to SOTL.

The challenge of SOTL is well documented with respect to its ‘big brother’, research but if the professional aims of the new UK Professional Standards Framework are to be achieved (UUK, 2006, 2011), then academics have to be equally scholarly about their teaching and learning practice. This requires progressive engagement in SOTL as outlined by Healey and Jackson (2004: 11) in their identification of 3 levels of research, and also Yorke (2000) whose three levels of engagement suggest structure and facilitative processes require support in communities of practice. Our development of the Pedagogic Research Forum (PRF) facilitates a community of practice approach. It is founded on the notion of creating spaces within organisational structures through which professionals can come together, to learn and develop their practice in a supportive, risk-free environment (Pilkington, 2011, unpublished thesis).

In 2011, we evaluated this space in a study resulting in the articulation of a model through which SOTL can be engaged with progressively using organisational space: through courses, groups, workshops and forums; and through facilitated reflective dialogue. We explored the impact of the PRF on its members via semi-structured interviews and the CIROP measure of impact (King et al, 2003). The use of interviews to accumulate case studies alongside the survey provided additional qualitative perspectives on data. The paper presents the model and discusses the impact achieved through the mechanisms it supports using King’s (2010: 37) definitions of impact, dissemination and influence.

The model for SOTL adopted by the team begins with an ideal, the notion of the ‘professional educator’ who has both subject and disciplinary expertise. Three routes enable development of SOTL engagement following Yorke (2000) and Healey and Jackson (2004). These routes involve development of the ‘scholarly practitioner’ through course participation (up to doctoral level), sharing practice within organisationally structured spaces, and enhancing practice through SOTL. The mechanisms of dialogue, the courses and the forum are introduced and discussed in the paper alongside the potential of the model in the light of outcomes from the impact study. The model is further underpinned by concepts of dialogue based on Brockbank & McGill (2007), Brookfield (1997) and notions of collaborative meaning making (Wenger, 1997) and exchange. The conclusion of the team is that the concept of organisational space for sharing, learning and reflection is an important one for those engaged in embedding SOTL approaches which are respectful of the HE environment and the primacy of the discipline.

Making a Greater Difference: The Impact of Strategic Collaborations between Two SOTL Programs
Carol Hostetter, George Rehrey (Indiana University)

Our presentation traces the integrative efforts that have occurred between two somewhat different SOTL programs that coexist at a large multi-campus research university. Specifically, we provide evidence of how these two programs have collaborated in order to diminish perceived barriers and distinctions between the faculty involved in these programs, as well as the work they have contributed to each of these initiatives. We also outline how our collaboration has offered opportunities for dialog and mutual support between the upper administrations of each program. McKinney (2012) asserts that cultural changes in the academy come when faculty and administrators act as change agents to promote the scholarship of teaching and learning. One method she suggests using is collaboration with colleagues, which in this particular case includes the directors of the two SOTL programs.

We discuss how the changes accomplished since 2007 run parallel with, and often build upon several influential works that have recently encouraged SOTL programs to play a role in other campus initiatives.
We are also mindful of how these authors may differentiate between the integration and institutionalization of programs (Hutchings, Huber and Ciccone, 2011).

The presenters each direct initiatives that support faculty who make public their evidenced-informed teaching and learning practices. For the past 14 years one program has focused on the flagship campus and supported the ongoing work of faculty involved in local, national and international conversations about teaching and learning. It has been influential in ISSOTL since its inception, with many of its faculty involved early on with Carnegie Academy for the Scholarship of Teaching and Learning.

The younger program is tasked with bringing faculty together from all 9 university campuses, with the mission of establishing an interdisciplinary SOTL community intended to support instructors of all ranks. SOTL research fellowships are provided, leading to campus-based workshops, research, reflective criticism, conference presentations and journal articles. An online journal is published, and two books on SOTL are currently in process.

Both programs share the goal of transforming higher education, complement each other’s work with faculty, and enjoy the support of their respective administrators.

The presentation outlines how the vision, mission, and administrative strategies that help faculty develop SOTL projects within and across disciplines has undergone significant change in order to contribute to new and proposed initiatives taking place across the university. We will do this by comparing the trajectory of movement toward SOTL initiatives that are both more holistic and unified from the faculty member’s perspective.

**Advancing the scholarship of teaching and learning among teaching-focused academics**

*Gordon Joughin, Anne Bennison (University of Queensland)*

This paper addresses the question, ‘How do we integrate leadership, academic development and SOTL in a research intensive university?’ by reporting the analysis of a program to support engagement by teaching-focused academics in scholarship of teaching and learning (SoTL) activities. Hutchings, Huber and Ciccone (2011) note four sites that are critical in bringing SOTL into the mainstream of university or college life - the program reported on here focused on the professional development site, within the context of the recognition and reward of pedagogical work.

A teaching focused academic at this university is expected to contribute principally to teaching and scholarship of teaching. For promotion purposes they are required to provide credible evidence of their participation in SoTL activities, including leadership, publications, participation in teaching and learning projects, and teaching and learning awards or grants. A survey conducted in 2009, two years after the introduction of teaching-focused positions, found there was a need to promote a better understanding of SoTL among teaching focused academics and to support their participation in SoTL activities. The program described in this paper was introduced by the academic development unit at the university in response to this finding.

Many of the teaching focused academics have transferred from traditional teaching-research positions and although skilled in disciplinary research, often lack confidence in teaching-related inquiry. Questions such as, what literature is appropriate, what methodologies should be used, and how should the findings be disseminated must be addressed if these academics are to participate effectively in SoTL activities. With teaching focused academic spread across the university, a whole of university approach was taken by the academic development unit.

This program involved monthly workshops and seminars over eight months. These focused on topics that would assist teaching focused academics to inquire into and improve their teaching, provided opportunities to consider how to disseminate their findings, and gave them opportunities to share practices and develop a community of practice around SoTL. It was hoped that the program would provide a vehicle to initiate discussions that would extend beyond the workshop series. The professional learning opportunities provided by the program were thus intended to assist participants to develop their identities as teaching focused academics.
This paper presents the findings of an online survey that was used to evaluate the program and inform future planning, including information on the usefulness of the content of the workshops, their value in providing opportunities to engage with other teaching focused academics, if and how participants applied ideas and practices from the workshops in their SOTL work, and their perceived future needs. The paper analyses these findings in the context of professional development theory, and presents implications of the findings for supporting SOTL across a university or college. Participants in this conference session will be invited to share their experiences of professional development in their own institutions through brief small group and plenary discussion.

### Friday

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<tr>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td><strong>Convention Centre</strong></td>
<td><strong>Webster A (3rd floor)</strong></td>
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<tr>
<td>Meeting for ISSOTL members interested in forming a General Education Interest Group</td>
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<tr>
<td><strong>Sheraton</strong></td>
<td><strong>Beckett Room (Concourse level)</strong></td>
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<tr>
<td>History SoTL Group (ISSOTL External Affiliate) Meeting</td>
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<tr>
<td><strong>Lluna Station</strong></td>
<td><strong>Grand Ballroom</strong></td>
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<tr>
<td><strong>Optional Banquet</strong></td>
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<tr>
<td>Dinner will be provided for delegates who registered for the optional conference banquet.</td>
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<tr>
<td><strong>Dinner on your own</strong></td>
<td>6:30pm</td>
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<tr>
<td>Delegates who did not register for the banquet are responsible for arranging their own dinners. Arrangements have been made with local restaurants to provide conference registrants with discounted dining options. You can also sign up for a “dine around” and meet other conference delegates over dinner. Please consult the registration desk for more information.</td>
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In the late 1990s there independently appeared two new paradigms for understanding obstacles to student learning. In the late 1990s faculty and developers involved with the Indiana University Freshman Learning Project created the Decoding the Disciplines model for improving teaching. Instructors were asked to describe specific bottlenecks to learning in their classes (i.e. places where important skills or material were not being mastered by significant numbers of students). Then groups worked to define precisely what cognitive operations or affective orientations experts in the field used to avoid the bottlenecks, to define strategies for sharing these with more students, and to assess the success of these interventions. The Decoding model has been most systematically applied to the field of history, where the History Learning Project has conducted extensive interviews with historians and explored how successful strategies for mastering historical thinking can be most effectively shared with students.

Simultaneously in the U.K. Erik Meyer and Ray Land were developing the notion of Threshold Concepts. They focused on central gateway concepts that had to be mastered for students to function within a particular discipline. They sought out opportunities for transformative learning experiences that would give students access to the kinds of thinking in particular academic fields. In many cases this required students to abandon “common sense” notions of the subject and to undergo a fundamental and irreversible change in their views of the world. Since then, Threshold Concepts have been identified in a number of disciplines, particularly in the sciences and social sciences.

Each of these approaches has generated a good deal of scholarship on at least three continents. And they both have posed a major challenge to older notions of learning as the accumulation of isolated facts and concepts. But very little attention has been paid to the similarities and differences between the two approaches. They deal with many of the same issues, but they begin with somewhat different epistemological and methodological assumptions and proceed in ways that only partially overlap. A systematic comparison of the two paradigms is in order, not only because it can be useful to those attempting to apply these approaches in the classroom but also because it can help the practitioners of each approach to understand the underpinnings of its own work and because each paradigm has much to offer the other.

This session will seek to make a contribution to a dialogue between Threshold Concepts and Decoding the Disciplines. To set up the discussion there will be three presentations:
- Bettie Higgs will discuss the use of Threshold Concepts to help students master geology, with special attention to behaviors that prevent students from grasping essential Threshold Concepts
- The directors of the History Learning Project (Leah Shopkow, Arlene Diaz, David Pace, and Joan Middendorf)
will present the Decoding paradigm with examples from history, discuss the assumptions that underlie this approach, and compare and contrast this approach with Threshold Concepts.

- Randy Bass will share his experiences designing and implementing a faculty development initiative and course redesign methodology that combines the two approaches.

The last thirty minutes of the session will be devoted to small group discussions of how SoTL practitioners can make use of these processes. The result of these discussions will be shared with the larger group at the end of the session. We believe that this session will contribute to three threads of the conference: 1) integrating diverse disciplinary approaches to teaching, learning, and SoTL; 2) integrating theory and practice in SoTL; and 3) integrating diverse, international perspectives on and practices of SoTL.

**Panel Presentation**

**Rebuilding a SoTL Community in a Climate of Assessment and Accountability**
*Cathy McCarron, Sally Quast, Kim Burns, Denise Marchionda (Middlesex Community College)*

Few would disagree that both public and private institutions of higher education in the United States are under growing pressure from governmental agencies, the public, students, alumni, boards of trustees, and administrators of their respective colleges and universities to justify expenditures amid rising tuition and fees. Nowhere is this truer than in U.S. community colleges where calls for faculty to train workers are muffling the voices of those dedicated to educating citizens. In these institutions where reflection on teaching is a luxury, stakeholders are taking a magnifying glass to communities of practice such as SoTL to determine their return on investment of very limited resources. While early adopters of SoTL believe it belongs at the core of institutions’ missions and contributes to improved student learning, those unfamiliar with its tenets and results may see it as a budget item to be redlined. At Middlesex Community College in Massachusetts, the SoTL Community had thrived under the umbrella of The Carnegie Foundation’s CASTL program for more than a decade. However, the separation from The Carnegie Foundation and the impending retirement of the Middlesex SoTL group’s founder left the group in jeopardy.

This panel will explore the MCC SoTL Community’s transition into its second phase. The group will outline steps for creating and/or redefining a SoTL community and offer practical ideas for launching and expanding SoTL work on campus. The four members that comprise the panel include Sally Quast, Professor of Chemistry; Cathy McCarron, Associate Professor of English; Denise Marchionda, Professor of English; and Kim Burns, Associate Dean for K-16 Partnerships and IRB Chair.

- Sally Quast, new co-coordinator of MCC’s SoTL Community, will describe the challenges in maintaining a SoTL program in a time of tight budgets and close scrutiny.

- Co-coordinator Cathy McCarron will also discuss the marriage of the college’s assessment work with action research strategies, drawing on her work as faculty fellow for assessment and explaining how the program review process can lead to expanding participation in SoTL work.

- Denise Marchionda, a faculty member who has participated in both phases of the group, will describe why SoTL is central both to her teaching and to the institution’s priorities. She will demonstrate how she works with full-time and adjunct faculty members to infuse action research and new interdisciplinary teaching strategies throughout the college.

- Kim Burns will provide an overview of her doctoral work in which she researched 13 community college faculty engaged in SoTL work to determine its impact on teaching; she will also describe the administration’s view of SoTL in its second decade on campus.

The panel will explain how it has reinvented SoTL to become an inclusive community that aligns closely with institutional priorities without sacrificing the intellectual and reflective work that faculty are interested in engaging in. Using the new General Education initiative at Middlesex that infuses the Institutional Student Learning Outcomes of written and oral communication, quantitative literacy, multicultural and global literacy, social responsibility, and personal and professional development across the curriculum, the new phase of SoTL will focus on both the institution and faculty working on common ground to improve student learning.

As individual projects continue, collaborative ones are in the planning process in an effort to design projects that align not only to Institutional Student Learning Outcomes, but also to state and national frameworks such...
as LEAP (Liberal Education and America’s Promise), a national initiative involving hundreds of campuses and several state systems championing the importance of a twenty-first-century liberal education; and PARCC (Partnership for Assessment of Readiness for College), a consortium of states dedicated to building a common set of K-12 assessments in English and Math designed to prepare students for college and careers.

While the tensions experienced by the Middlesex SoTL Community are not uncommon and are documented in the literature (Hutchings, Huber & Ciccone, 2011), the lived experience and strategies of the group are worth examining. This second phase is in its early stages, and the group will describe its successes and its challenges as the community moves forward. Drawing on the strength of the group’s twelve-year history, the new coordinators will explain their attempts to preserve the best aspects of the SoTL Community while adapting to current demands for assessment and accountability.

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<th>Sheraton Ballroom Centre (2nd floor)</th>
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<td>K03</td>
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**Reading Across the Disciplines**
Karen Manarin (Mount Royal University), Margy MacMillan (Mount Royal University),
Sherry Linkon (Youngstown State University), John Russo (Youngstown State University),
Todd Nickle (Mount Royal University)

**Chair:** Karen Manarin, English, Mount Royal University

Although reading is a foundational skill for academic success across the disciplines, discussion of and research into reading practices usually occurs in the context of the literature or language classroom. This panel seeks to promote discussion of reading across the disciplines. Each panelist will speak briefly from his or her own disciplinary perspective. We then hope to have a vigorous discussion about how students read across the different disciplines, highlighting disciplinary variations and transdisciplinary practices. Panelists and participants will also discuss barriers to teaching reading across the disciplines. Do content area instructors think of what they do in these terms? Where does reading instruction belong in the post-secondary environment?

**Student Experiences Reading Social Science Research Articles**
Margy MacMillan, Library, Mount Royal University

This presentation sketches the results of research into student perceptions of reading academic articles in the field of communications. As a librarian, I noticed students’ reluctance to read scholarly materials, and difficulties integrating material from the literature into their own research projects. After developing a number of workshops on reading scholarly materials, I undertook a study of senior communication students’ perceptions of reading challenges, the strategies they used to overcome those challenges, and relationships between reading strategies and confidence in comprehension.

Students noted that reading articles more than once, and discussing them with peers had a positive effect on comprehension. At a deeper level, comments around authority came through in the results – students use articles to support arguments made to authority figures and invest these articles with an inherent, generally unquestioned authority as one of the key values. Data from this study has been contextualized through comparison with data on reading extracted from the results of a large qualitative study of the student experience at Mount Royal University. Insights from this research, the literature and the classroom will shed light on some causes of student difficulties, strategies that students identify as useful, and evidence that indicates links between some strategies and students’ comfort levels with academic texts.

**Interdisciplinarity and Critical Reading: From Research into Practice**
Sherry Linkon, English and American Studies, John Russo, Labor Studies and Management
Youngstown State University

While disciplinary knowledge is embodied in genres and reading strategies that reflect the distinct habitus of the field, critical reading is, like writing, an intellectual practice that is at once disciplinary and transdisciplinary. This presentation will examine the connections between disciplinary and transdisciplinary reading practices by tracing the evolution of a single research project. In 1999, Linkon began researching students’ difficulties with interdisciplinary analysis. As part of that initial project, she developed and tested a strategy for facilitating students’ ability to compare and connect genres from multiple disciplines using a common analytical tool, the text analysis rubric. A few years later, Russo began using the rubric to teach...
critical reading in a course for advanced undergraduates and graduate students in the business school. This provided the opportunity to test the rubric’s usefulness with a wider range of texts. Linkon and Russo have since translated their approach into an online textbook, based largely on Russo’s adaptation of the text analysis rubric to his course on work. The online textbook is now being used in first-year writing, American studies, and literature courses, demonstrating the transferability of this approach to critical reading across a range of fields and genres.

**Reading for the Sciences**

*Todd Nickle, Chemical and Biological Sciences, Mount Royal University*

Science students often don’t see the value of strong reading skills. Some students state that they chose science because they don’t want to read. In reality, science isn’t about the facts we know, but rather it is a systematic process of clarifying the unknown and students must be able to access a large volume of work in the existing record in order to contribute. Sadly, many students arrive at university without possessing confident and established reading capabilities. Many struggle to comprehend popular media such as a textbook or popular journals like Scientific American or Discover. If given a choice between hearing new information in lecture or reading it themselves, students frequently choose only the former. Many students read if it is the only vehicle by which they can acquire course material. Because they find reading difficult, they are burdened not only by the effort of reading and understanding, but also in applying ideas to complex physical laws. In this presentation I will describe strategies used to engage Science students in reading. I use YouTube and small group work to get students engaged with “how science is done”. Lectures tend to avoid the (still testable) material found in the textbook and assignments require information found there. My teaching intentionally reinforces reading skills and promotes reading practice. I model how scientists use written work to show them how to extract and condense information from “word problems”. Reading and writing exercises are typically assigned outside of “exam conditions” to give them a chance to develop their reading and summarizing skills and produce better work.

**Sheraton Ballroom West (2nd floor) 9:00-10:30am**

**K04**

**Tactile Academia - Integrating Creative Practice into Teaching and Learning**

*Alke Gröppel-Wegener (Staffordshire University), Sarah Williamson (University of Huddersfield), Lisa Gold (Manchester Metropolitan University)*

**Session Chair: Dr Alke Gröppel-Wegener**

This panel aims to showcase and discuss a range of ways in which creative practice can be integrated into teaching and learning. Using examples of research that consider history, education as well as art and design courses in Higher Education, it is hoped to start a discussion on ways to grab students’ attention through the visual and tactile.

The three presenters for this panel come from different institutions and teach on different courses, thus providing a number of perspectives on this clearly related research. It is envisioned to take the format of three 20 minute presentations followed by 30 minutes for discussion with the audience.

Dr Lisa Gold, Associate Lecturer in both the History and Art and Design departments at Manchester Metropolitan University, will begin with a presentation of her research on using art installation to foster a deeper engagement of history students as presented in her project “How long is that rope you spun?” which focused on the Salem witch trials. To critically evaluate the transferability and use of visual information by students in the first year history classroom an exhibition reflecting the taught element of the course was used to investigate the students’ experience of traditional teaching (lectures and seminars) combined with a third (visual) element. Being confronted with an art installation inspired by the subject matter gave students the impetus to discuss their learning materials from an emotional response to the piece. This was analysed through a questionnaire designed to clearly assess the impact of visual information on history students. Her findings suggest that taking the subject matter away from the two-dimensionality of texts and ‘flat’ lectures allows a different understanding and engagement with it, stirring strong emotions, inspiring passionate dialogue and challenge viewers with scenes that are in need of interpretation.

Dr Alke Gröppel-Wegener, Senior Lecturer of Study Skills in Art and Design at Staffordshire University, will give an introduction into her research of embedding study skills into studio-based creative courses through hands-on research projects. Taking objects from the faculty based Betty Smithers Design Collection (a research collection of everyday 20th Century objects) as a starting point, here first year undergraduate
students were given strategies to visualise parts of academic practice through writing in different genres and small making projects inspired by book arts. Drawing on a Writing in the Disciplines approach, particular focus was given to stages of research that might be hidden for the students, such as questioning the provenance of (academic) sources, in order to give focus to their independent study time and allow a deeper engagement with the academic research process. Run as a small scale pilot project with both volunteers and as part of an undergraduate module (in the first year of a 3D Design award), feedback was gained through pre- and post-evaluation questionnaires as well as comparing the final outcomes of the module with the cohort the year before to ascertain whether a deeper engagement with the subject matter took place. Although only indicative because of a relatively small sample size, findings suggest that including a step of visualisation between the actual research and the writing up in the academic sense has great potential in allowing students to understand requirements and expectations of academic writing that can ultimately lead to more complex thinking about their subjects, particularly for visual learners.

Sarah Williamson, Senior Lecturer at the School of Education and Professional Development at the University of Huddersfield, explores the potential of collage as a visual method alternative to written forms of evaluation and reflection. Reporting on a project integrated into teacher training of a range of disciplines she will discuss the opportunities of non-textual ways of conveying information and particularly highlight the potential of layering and juxtaposition in the initial stages of research. Her research data comes from semi-structured interviews, questionnaires and focus groups of post-graduate students training to teach art and design in the UK post-compulsory sector.

These different strands of research lend themselves well to a discussion of a range of ways to engage students through supplementing the more traditional focus on written texts in Higher Education with visual, haptic and tactile experiences, contributing to the growing body of knowledge on experiential learning. Building on the work of Eisner (2007) and Biggs (2004) who argue that knowledge comes in different forms which are not always linguistic, it will be discussed how different ways of teaching can challenge the “sea of words and more words, in which visually-based communications are not taken as serious intellectual products” (Collier 2011: 59). In extension it will be explored how integrating creative tasks that are not tied to writing in the first instance into teaching and learning strategies can give students time for thoughts and ideas to emerge and surface (compare Gauntlett 2010, Treadaway 2009, Wix 2008 and Csikszentmihalyi 1997), developing reflection in both practice and academic contexts.

Reflecting on each of the projects, as well as looking at this research as a larger spectrum, provides an outlook for future development, not only of these specific examples, but rather their use as models for teaching and learning. We will explore the practicalities connected to process and share strategies for successful implementation. It is hoped that the following discussion with the audience will be able to crystallize ways of fostering engagement in any academic discipline through a hands-on, visual approach to the subject matter.

This panel is linked to a pre-conference workshop (Pop Up Tactile academia: Developing Reflective Thinking through Visual Book Making), that aims to explore some of these visual ways of reflection in a hands-on way and we will hopefully include some of the artefacts produced during the workshop in the panel presentation and discussion.

**Observing, Studying and Reflecting on Teaching: Implications & Supports**

**Using research on learning and teaching to develop our academics**
*Sue Morón-García (University of Birmingham)*

Teaching in higher education is not alone among the professions in requiring practitioners to demonstrate fitness to practice; this can be through the creation of a teaching portfolio or successful completion of an accredited course. In the United Kingdom recommendations over the last 15 years (e.g. Dearing, 1997; HM Government, 2011) mean the latter is most common. The Higher Education Academy (HEA) facilitates the benchmarking and portability of the qualification across institutions through the Professional Standards Framework (http://www.heacademy.ac.uk/ukpsf). As work-based qualifications the underlying theory and way of assessing progress and competence is through critical reflection on practice.
However what this actually means is often not well articulated, understood or integrated into the course (Kahn, et al., 2008; Karm, 2010; Lyons, 2006; Smith, 2011) and candidates who fail to pass can be left bewildered. Reflection on the support I was providing for participants on an existing programme who needed to re-submit and contact with persistent delayers indicated a lack of understanding as to how to write about teaching and learning in a critically reflective way. The opportunity to redesign the programme arose, informed by an evaluation (Cleaver & Buckley, 2011) of the previous programme, my experience of running a differently structured programme elsewhere and these critiques of the development and use of critical reflection. This paper will use reflection on practice (tutorial notes and journal entries), feedback from participants and facilitators (interviews, questionnaires, in class surveys) and consider participant outcomes (grades and the quality of submissions) to discuss “what structures and processes need to be put in place to aid the development of participants’ ability to write in a critically reflective way?” and to begin to examine their effectiveness in this first year of operation. Strategies included the use of Brookfield’s definition of critical reflection (2006) as a framework for the summative assessment on the first module, employing reflective tools and activities (as suggested by Karm, 2010; Smith, 2011) throughout, making wide use of formative feedback and building in an action learning (Beaty, 2003) approach to facilitate critical examination of assumptions and context.

Teacher observations in SoTL: what do we really mean and how are they valued?
Anders Ahlberg, Maria Larsson, Katarina Mårtensson, Thomas Olsson, Torgny Roxå (Lund University)

Lund University has for the past decade rewarded excellence in university teaching using a SoTL-based Kolb-like circular model wherein “Teaching practice - student learning” is followed by “Teacher observing teaching and learning”, and in turn “Teacher using knowledge about teaching and learning” and finally “Teacher plan teaching and learning in relation to limiting aspects and possibilities”, and so on, iteratively (Olsson et al. 2010). This model includes teaching skills visible in the classroom within an overarching context of pedagogical competence that requires SoTL-mindedness from the excellent teacher (cf. Kreber 2002). The reward system has turned out stable, growing, and accepted by academics, as it has been underpinned and improved by follow-up research and partly validated by course evaluation data.

This ISSoTL session explicitly focuses the “Teacher observation” stage of the model. In the early years of the teacher reward system at Lund University there was a focus on whether or not the teacher involved observations in teaching design decision-making, and to what degree this was done. It was implicitly assumed that it is observations of actual student learning in progress that causes teachers to act and change teaching for the better.

Now we go beyond that notion and scrutinize the character of observations that emerges in the foreground of teacher narratives. What is really observed by the teacher: Student performance or the inherent teaching practices of ones institution? Is it the choice of curriculum? Are teacher observations planned and documented interventions, incidental in-action experiences (Schön 1983), or retrospective stories recreated from memory? Are the observations supported by evidence? Are single critical incidents in the classroom pivotal, or is it repeated experiences of suboptimal learning that make teachers change teaching design? Are student reactions to teaching design important? Are observations gathered to deliberately influence the norms of the teaching team and the students? And, finally, how do the combined answers to all these questions influence our notions of teaching excellence?

In the proposed conference session we aim to first present a range of sample answers to our exploratory questions, extracted from teaching portfolios of rewarded teachers in different disciplines at Lund University, and then open up a discussion on its bearing on our notions on teaching excellence.

Critical Friends: The “We” that Transforms the “I”
Lesley Smith (George Mason University)

Critical friends work within self-study sustains SoTL through its potential to support a grassroots culture of scholarship of teaching and learning, and nurture SoTLs institutionalization from the ground up, through small (2 - 6 person), easily organized, informal critical collaboratives. It is discipline-neutral, and particularly offers practitioners outside the social sciences and educational research fields a context for “collaborative,
questioning, dialogic, and action-oriented processes” (Bodone, Guðjónsdóttir, Dalmau, 2004) responsive to, but neither embedded within nor dictating to, disciplinary ways of knowing.

A twelve-person self-study of teaching collaborative, at a large, public, metro area university, now ending its second year of research, confirms initial outcomes from its first data analysis (2011) on the transformative nature of critical friends work for individual teachers. This initial analysis identified how critical friends transformed the idea of teaching, the purpose of teaching and the assessment of student learning, and initiated the discovery of unexpected zones of connection and relationship, among others. The second round of our analysis further highlights how the critical friends’ process re-energized individual inquiries into teaching and learning. Individual participants re-thought and re-designed questions and instruments; rethought analysis of data and interpretative frameworks; linked to existing literatures and practices across disciplines; and capitalize on informal learning in support of their projects (thus deepening individual SoTL inquiries).

To maximize audience time, the presenter (representing the collaborative) will provide a comprehensive summary of the major conclusions of critical friends’ data (to date) as a handout (also available online), to which the audience might refer during the presentation, plus a detailed selection of definitions, suggestions for further reading and process tips. An 8-9 minute polyvocal, multi-media presentation (pre-recorded) by the collaborative on critical friends’ work as transformative will launch the presentation, followed by an interactive session for audience members to inventory and discuss ways to initiate critical friends’ collaboration in the service of SoTL in their home institutions.

The intense collaboration with critical friends anchors the self-study of teaching, a qualitative methodology for the multi-dimensional analysis of teaching as a social-pedagogical task, (LaBoskey, 2004) prompted with moral, ethical, and political aims (Brown, 2004; Griffiths, 2002; Zeichner, 1995. Within the self-study, critical friends are, “organic and diverse communities of expertise where learners co-mediate, negotiate, and socially construct an understanding” (Samaras et al., 2012), where each individual’s “personal insights and the research process must be documented, presented, and critiqued to validate the researcher’s interpretations.” (Loughran & Northfield, 1998). Rigorous critical friends’ work combines the professional and emotional nurturance of mentorship, the intellectual challenge of cross-disciplinary and cross-status collaborations, and the dispassionate inquiry of the peer review process.

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Enhancing teaching and learning in tutorials through peer-connected tutor training
Angelito Calma, Mark Eggins (University of Melbourne)

This paper contributes to broader discussions about the related concepts of teaching and learning, leadership and academic development. It investigates how a peer-connected tutor training program has helped tutors to devise effective teaching strategies and promote effective learning approaches among business students. It presents most recent evaluation data from the program which reports that one of the most valuable aspects of the program is the opportunity to learn from peers - experienced tutors, peer reviewers, and fellow new tutors. It also includes lessons from tutors reporting on effective approaches to learning in tutorials.

I argue that effective tutoring contributes to effective learning in the business disciplines. I argue further that effective tutoring can be developed through training programs that emphasise peer connectedness. While many universities in Australia include in their professional development and training for new staff tutor training programs, I argue that a discipline-specific and Faculty-embedded program provides better training experiences to new tutors, particularly when it emphasises connections with experienced tutors, peer reviewers, and fellow new tutors from the same Faculty. What benefits do tutors get from a Faculty-embedded and discipline-specific tutor training program? What are some of their experiences in establishing connections with experienced tutors, peer reviewers, and fellow new tutors? What are the perceived successful tutoring strategies that work in their classrooms? This article addresses these questions and reports on the recent program evaluation data highlighting the significant contribution of experienced tutors sharing their experiences during the initial training session, the feedback new tutors receive following peer review of their teaching and the opportunity to discuss challenges and solutions with fellow tutors during follow-up sessions. The article will also include effective student learning approaches as reported by tutors.
The Relative Impact of Traditional and International Teaching Assistant Training Programs
Ken Meadows, Nanda Dimitrov, Debra Dawson (Western University)

Using a combination of qualitative and quantitative methods, the study compares the impact of a teaching assistant training (TA) program with significant intercultural components with the impact of a traditional TA program without intercultural components. We hypothesized that a training program for international TAs (ITAs) with modules on cultural differences in classroom interaction better facilitates the transition of ITAs to Canadian academia than a generic program, and results in a greater increase of international TAs’ teaching self-efficacy, greater frequency of effective teaching behaviours and reduced communication apprehension.

Boman (2008) demonstrated that a generic TA training program resulted in a significant increase in the self-efficacy and effective teaching behaviours among participants. However, the research also provided quantitative evidence that a significant gap in teaching effectiveness persists between Canadian and international TAs, even after twenty hours of training. To help close this gap, our research draws on research by McCalm an (2007), who found that increased self-efficacy contributes to the success of non-native teachers, and research by Murray (1985), whose work shows that higher frequencies of effective teacher behaviours, as measured by the Teacher Behaviour Inventory (TBI) have been correlated to higher student evaluations of teaching.

International students in two programs were invited to complete pre- and post-program assessments of their self-efficacy (as TAs) and their communication apprehension. TATP is a generic, 20 hour TA training program; while Teaching in the Canadian Classroom (TCC) is a 20 hour course for ITAs, enhanced with modules on intercultural communication in classroom settings. Recordings of participants’ two in-program teaching segments were coded using the TBI for their actual use of effective teaching behaviours. A subset of participants were interviewed about their perception of change in their teacher behaviours, cognitions, and reflective practice. It was expected that participants in both programs will demonstrate significant gains in their self-efficacy and use of actual effective teaching behaviours and a decrease in communication apprehension but that the differences will be significantly larger for the TCC students than their counterparts in TATP. The findings will be discussed in light of developing program designed to maximize the preparation of international TAs.

Developing Teaching Assistants as Members of the University Teaching Team
Carol Rolheiser, Tricia Seifert, Graeme Stewart, Pam Gravestock (University of Toronto)

This research project aims to understand how Teaching Assistants (TAs) can most effectively support student learning and best be supported as they develop their own teaching. The study aims to understand how course, departmental, and program structures (including TA training and mentoring) can enhance TA development and student learning. Several recent initiatives at the University of Toronto have focused on the role of the TA. This study was carried out over the course of the 2010-11 and 2011-12 academic years and reports on the following two initiatives:

1) The Centre for Teaching Support & Innovation’s (CTSI) Advanced University Training Preparation (AUTP) certificate is a voluntary two-year program requiring 20 hours of training focusing on teaching skills and instructional design, a practicum, and a reflective element. The AUTP aims to support TAs in their development as teachers both in preparation for their varied roles as TAs and as prospective future faculty.

2) Writing Instruction for TAs (WIT) program, Faculty of Arts & Science, was established in 2008. Lead WIT TAs, drawn from 13 departments across the Faculty, receive 15 hours of specialized training on how to support peer TAs in the teaching of writing. They then return to their home departments and work in collaboration with departmental writing coordinators and course instructors to re-design assignments and instructional activities to support the development of undergraduate writing skills, and train TAs in those courses (referred to as WIT Course TAs) to teach writing skills and to provide feedback on student work.

Preliminary findings will be reported on how the level of TA involvement relates to TAs approaches to teaching. The ultimate goal of this study is to identify programmatic or course-based structures that will enhance deep student learning, enhance the professional development of TAs (e.g., as future faculty), and enhance the culture of teaching at the university.
Research in the Real World: Integrating research diversity and undergraduate voices through an annual undergraduate research conference in Ireland

Carol Barron (Dublin City University), Alison Farrell (National University of Ireland), Mark Matthews (Trinity College Dublin)

Over the last two decades higher education institutions in Ireland have collaborated on a range of teaching and learning issues of both local and national importance. The National Strategy for Higher Education 2030 (2012) reinforces the need for cooperation between these institutions and the necessity for: return on investment, a rationalising of resources and a demonstrated commitment to collaboration. The Dublin Regional Higher Education Alliance, a strategic collaboration of Dublin’s Universities and Institutes of Technology, is evidence of this approach. Against this backdrop, and in light of the growing focus on the scholarship of teaching and learning, the ‘Research Enabled Learning’ strand emerged as one of the focuses of this Alliance’s activity. The broad goal of this group was to explore the better integration of research into undergraduate teaching and learning.

As members of the ‘Research Enabled Learning’ steering group, we established the Undergraduate Research Conference, an inter-institutional initiative, which has been held twice in Dublin City University since 2010. In the broader international context, inter-institutional, multi-disciplinary undergraduate research conferences are well established; such as the Multidisciplinary Undergraduate Research Conference (MURC) in Canada, the British Conference of Undergraduate Research (BCUR) and the long running National Conference of Undergraduate Research (NCUR) in the United States. In Ireland, this event is the only national, multi-disciplinary research conference for undergraduates. In developing it, our aims were to create an event which would enable undergraduate students to present their research and receive feedback in a safe and encouraging environment and foster the use of a common language between disciplines. Methodology: Students completed questionnaires consisting of quantitative and qualitative questions following each conference and were analysed using thematic analysis. These findings are triangulated with informal interview data from students who attended the conference and those who presented at the conference as well as academics who chaired the sessions and those who attended the conference. The findings from the interview data were analysed using content analysis.

This paper will focus on the multi-disciplinary nature of this event and the impact of participation in the conference on students. The concept of a “common language” within a multi-disciplinary perspective and the enculturation of students through University education will be explored within the paper; the shared ‘undergraduate’ experience, the necessity for rigour, the challenges associated with all research and the difficulties associated with communicating ones message provide the thematic threads for the unpacking of this concept.

We will also present the findings from academic staff and students on the multi-disciplinary approach taken by the steering group to the conference, and an assessment of the impact students’ participation had on their future studies and careers. This will be followed by a review of support resources developed specifically to help students apply to the conference and present their research on the day. In gathering and analysing the data, we will seek to identify if we achieved our aims for the conference. To conclude we will provide lessons learned and recommendations, based on our experiences, for colleagues considering such initiatives.

Examining Students’ Competitive Research Presentations: Applying a SOTL Framework to Facilitate Best Practice.

Lyn Goldberg, Douglas Parham (Wichita State University)

Recognizing the conference mission, to create a context for conversation and exchange, and one of its important threads, “Integrating SOTL into Institutional Cultures,” we pose the following question: Does the way in which our university examines and judges students’ research reflect a Scholarship of Teaching and Learning (SOTL) framework, and, if not, how can we implement such a framework to optimize student learning? The tenets of SOTL emphasize student-centered teaching approaches that are effective for student success, such as experiential learning. They also involve collaborative and multidisciplinary input by faculty, student involvement in research, and systematic data collection and dissemination about student learning (Bernstein, 2005; Healey, 2008; Trigwell, 2008). The scholarship of discovery thus can be infused into scholarship in the areas of integration, application, and teaching (Huber, 2004).
Research intensive universities frequently conduct competitive end-of-the-year symposia to showcase students' investigations. While valuable, such symposia may not reflect a SOTL framework. As a result, student participants may not derive full benefit from their experience. At a recent symposium, five faculty members (not content experts in the fields they were judging) rated oral presentations by 18 graduate students. Judges used a written rubric that scored four distinct categories of the students' research presentations: Delivery, Organization, Content/Strength of Material, and Communication Effectiveness, with a maximum of 10 possible points per category. Correlation coefficients documented significant agreement (p < 0.05) on scores collapsed across categories for four of the five judges. However, there were notable levels of disagreement within the categories of Delivery, Organization, and Content/Strength of Material. These results question the purpose of the symposium: whether it is to give students experience in preparing and presenting; or, more demandingly, to judge the quality of the students’ oral presentations and provide participants with an accurate and meaningful assessment of their work. If the latter, better training for judges on the rubric to be used appears essential to establish inter-rater reliability and reduce scoring discrepancies. Further, changes in the format of the symposia appear necessary to allow time for students to respond to questions, an integral component of creative and scientific presentations at professional meetings. A third strategy would be the reciprocal learning opportunity for students in the audience to provide feedback on the presentations. A fourth strategy would be time for immediate feedback from judges to each presenting student. This immediate verbal feedback would be complemented by the written feedback each student would receive at the end of the symposium. This presentation will be organized to facilitate substantive audience discussion of (a) the strategies proposed to optimize students’ learning about research under a SOTL framework and (b) the ways in which such strategies can be implemented and measured.

“One step closer to the real world”: engaging students in authentic research dissemination beyond the curriculum
Jennifer Hill (University of the West of England Bristol), Helen Walkington (Higher Education Academy)

Undergraduate students often believe themselves to be recipients of, rather than producers of, research. We advocate that participation in research is a central element of the undergraduate university experience. Engaging students as producers of knowledge offers them the opportunity to participate in the entire research experience, to disseminate their work to an audience for feedback and to develop transferable skills. Engaging with and disseminating research beyond the curriculum can also contribute to improving motivation to perform at the highest academic level and to career development opportunities.

In this presentation, we consider the 'levels of participation' at which students operate as they begin to engage in undergraduate research and its dissemination. We progress to examine student responses to their preparation for and participation in a range of research conferences. The examples cover a range of levels of exposure from departmental and faculty conferences within universities, to national and international conferences and they include both written (poster) and oral presentation of research.

Whilst increased self-confidence and enhanced presentation skills were common to research dissemination at all types of conference, there were a number of themes that emerged strongly with respect to external-facing, multi-disciplinary conferences. In these contexts, students voiced a need to reflect critically on effective communication to diverse audiences, acknowledging the tensions between concise but detailed and accessible presentation. Student researchers became more aware of their own disciplinary perspective and how this relates to other disciplines. They also commented upon the positive links between the professional external conference context and future employability. Exposing their research to public audiences beyond their institutions was judged as a valuable and empowering expression of their academic efforts. A great sense of achievement was gained from successfully negotiating a professional context and in communicating their work to a public that was genuinely interested. To conclude the presentation, the findings will be interpreted in relation to the notions of ‘self authorship’ (Baxter - Magolda, 2009) and the ‘teacher - student contradiction’ (Freire, 1970).
Infusing Diversity across the Curriculum: From Concepts to Practice
Renee Howarton, Maleka Hashmi (University of Wisconsin-Stout)

Several UW-System initiatives including LEAP, Shared Learning Goals, and Inclusive Excellence were developed in direct response to conclusive evidence that in order to educate learners for the 21st century and a global society, the infusion of diversity within curriculum and pedagogical strategies is imperative. In an effort to transform and infuse diversity into its curriculum, eighteen faculty members at the University of Wisconsin-Stout participated in a multiphase, yearlong project designed to expand their knowledge of diversity-based concepts, guide them in developing and assessing course assignments/projects, and aid them in disseminating the lessons they learned. This research project was funded through an OPID Undergraduate Teaching and Learning Grant with additional financial support provided by the UW-Stout Provost and campus Deans. The intent was to support the broadest number of interested faculty possible in this pilot program.

A two-day workshop in 2011 initiated the project and faculty participants representing diverse disciplines were challenged to explore and broaden their perceptions of equity, diversity and multicultural concepts and to consider how these issues might be meaningfully woven into their courses. The professional profile of the participants was especially significant because many of them came from disciplines that had not historically included diversity concepts within their course content. In addition, few of the instructors had ever been pushed to intentionally infuse this type of information into their courses and to advance theirs and their students’ learning in ways that exceeded superficial or generalized applications of diversity-based concepts into thought-provoking, transformative life experiences.

Faculty members met throughout the fall semester to engage in collegial conversation about how they could effectively integrate pertinent knowledge and perspectives of relatable cultural groups into their particular curriculum and develop strategies that encourage students to reflect upon multiple cultural dimensions of reality. It was the belief of the investigators that every course could become more culturally cognizant and that diversity could flourish as learners move from course to course and are engaged with inclusive teaching practices. Then in the spring semester 2012, they implemented diversity-based ideas, assignments and assessment practices into their courses.

Conference attendees will learn how this program was structured, see examples of course assignments and assessment practices shown in a variety of ways including a digital story format, and learn about project applications for the newest cohort of learners. Summarized overarching survey findings along with individual faculty course assessment outcomes will also be discussed.

This research study supports the ISSOTL Conference themes by actively integrating SOTL research results and classroom teaching practices, capturing student voices through assignments and assessment practices, and incorporating SOTL into institutional cultures. Due to the wide variety of disciplines being represented in the study, the participants are also utilizing diverse disciplinary approaches to teaching, learning and SOTL. This project has important implications not only for UW-Stout but for other campuses as well.

Identifying and Overcoming Barriers to Accessible Education for University Students with Disabilities
Beth Marquis, Kanishka Baduge, Csilla Gresku, Kait Hammel, Katie Rincker, Susan Baptiste, Ann Fudge-Schormans, Anju Joshi, Bonny Jung, Susan Vajoczki, Robert Wilton (McMaster University)

The importance of creating inclusive and equitable educational experiences for all college and university students has been widely recognized (Burgstahler & Cory, 2009; Scott, McGuire & Foley, 2003). Recent teaching and learning scholarship, for example, documents the necessity of acknowledging the increasing diversity of the student population (Pliner & Johnson, 2004), and of uncovering and removing barriers to learning experienced by students with disabilities in particular (Cook, Rumrill & Tankersley, 2009). At the same time, in Ontario, new legislation is making these issues especially pronounced. The Accessibility for Ontarians with Disabilities Act (AODA), which became law in 2005, mandates universal access for persons with disabilities, requiring the removal of barriers to their full participation in all aspects of society, including higher education.
In light of these factors, the authors are currently undertaking a study designed to collect qualitative data about the effects of the AODA legislation on the teaching and learning environment at McMaster University. The current study builds on previous work that investigates students with disabilities’ experiences of tertiary learning (Madriaga et al., 2010; Fuller, Bradley & Healey, 2004). A component of the first phase of this research, conducted by occupational therapy students, explores the ways in which students with disabilities perceive the relative accessibility and inclusiveness of teaching and learning at this institution. The research focus is to identify current barriers to accessibility that must be broken down, as well as supports that can be built upon.

This session will provide participants with an opportunity to consider the accessibility of teaching and learning within their own classrooms and institutions. Using preliminary data from our ongoing research, we will discuss some common potential barriers and supports to inclusive education across disciplines and educational settings. In addition, we will encourage participants to consider the relevance and applicability of these issues to their own teaching and learning contexts. Participants will subsequently be asked to generate and consider, via brainstorming and discussion, possible strategies for overcoming these barriers. By such means, session attendees will engage actively with issues related to the primary conference theme of integrating research on teaching and learning into practice. This session will capture the student voice through both the primary researchers’ interpretation of the results and the lived experiences of participants. Furthermore, we will discuss potential study limitations and make recommendations for future research in this field. Together, this research will have implications for an inclusive educational environment that embraces diversity. Attendees will come away with ideas for enhancing the inclusiveness of their teaching practices and/or advocating for accessible teaching and learning on their campuses.

K16
Inclusive Excellence in Learning Communities
Paul Van Auken, Jennifer Considine, Jennifer Mihalick, Yoko Mogi-Hein, Marguerite Parks (University of Wisconsin Oshkosh)

This research assessed the learning of faculty who participated in an “Engaging Diversity” workshop designed to help them create action plans for changes to engage diversity in their curriculum. The purpose of these changes was to improve the learning environment for, and improve the likelihood of, success for at-risk students - particularly underrepresented students of color and first generation college students - in so-called “gateway” courses (required general education lower-level courses) at University of Wisconsin Oshkosh (UWO). There is extensive research supporting the idea that changes in teaching strategies and curriculum materials can create more inclusive classrooms (Ladson-Billings, 1995). In order for these changes to occur, however, classroom instructors must understand and incorporate these strategies into their teaching.

Switching to student-centered pedagogy is a challenge for many instructors, particularly since college instructors often have little to no background in teaching strategies. For many instructors who attended the “Engaging Diversity” workshop, this was the first exposure to teaching and learning scholarship and teaching strategies for multicultural education. The scholarship of teaching and learning (SoTL) underscores the complex process of learning. Shulman (1993) suggests learners must be engaged in active, collaborative, reflective reexamination to explore what they already “know” and acquire new knowledge.

Because SoTL research and multicultural education research both suggest that learning best occurs in communities that require active reflection, this research was conducted as a peer study in which gateway course instructors investigated the changes in their own courses in partnership with experienced SoTL scholars. The study followed the experiences of seven instructors who sought to make the teaching practices and classroom environments more inclusive. Seven detailed case studies were built through analysis of peer observations, focus groups, oral and written reflections, student grades, in-depth interviews, and pre and post student surveys. Student feedback was also gathered to assess the effect of the pedagogical changes on classroom climate.

A grounded theory analysis (Corbin & Strauss, 2008) was used to analyze interview, reflection, and focus group data. Instructors utilized a wide variety of strategies to be more inclusive in their classrooms including: individual meetings with students, small group collaborative learning assignments, student reflections, course readings representing diverse viewpoints, and alternative assessment strategies. In implementing these practices, instructors experienced several challenges. In particular, limited time both inside and outside of class and unprepared students made these changes challenging.
Despite these challenges, instructors found that students were more engaged and connected with one another and the course material. In addition to exploring the challenges in class, the study also found that instructors benefited from additional reflection of their own - particularly as they participated in interviews and focus groups. Participating in the study forced them to take time to reflect upon their teaching practices and this reflection led to greater learning and increased feelings of confidence and social support.

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**K17**

**Challenging clinical learning environments:**

*What we can learn from nursing students in a self-directed learning (SDL) and non SDL program?*

Linda M O’Mara (McMaster University), Jane McDonald (Conestoga College), Mary Gilespie (British Columbia Institute of Technology), Helen Brown (University of British Columbia), Lynn Miles (Mohawk College)

Clinical learning is an essential component of learning to be a nurse. In the academic literature, students report experiencing significant challenges in their clinical learning, raising questions about the nature of and response to those challenges. Using a qualitative study design, researchers recruited students from two baccalaureate Nursing programs, one in Ontario and one in British Columbia to answer questions regarding how students perceive a challenging clinical learning environment (CCLE), how a CCLE impacts their learning, and how students respond. In addition, researchers sought to determine whether CCLEs were defined and experienced differently by students enrolled in a self-directed (SDL) program (Ontario) and a non-SDL program (British Columbia). A SDL program refers to a curriculum approach where in addition to meeting specific course objectives, students write and complete personal clinical learning plans and select their patient assignments. Students in non-SDL programs seek to meet course objectives and their clinical faculty select patient assignments. Focus groups were held with 54 students who self-identified as having experienced a CCLE when participating in a clinical faculty-supervised learning experience. No definition of a CCLE was provided; instead that description emerged from the data. Constant comparative analysis was used and a conceptual model was developed to explain the data. Students identified both the context of their learning experiences and relationships in the clinical area as contributing to a CCLE. Context included factors such as their nursing program, the curriculum design, and the patient care unit where they had their clinical experiences. Relevant relationships, particularly with their clinical faculty and staff nurses contributed to a CCLE. The CCLE impacted students by decreasing their learning opportunities and also impacted them as people by increasing anxiety and decreasing professional confidence. Students chose strategies to rebuild, redirect, retreat from, and/or reframe their experiences relative to specific challenges. When examining similarities and differences between data from students in the SDL program and the non-SDL program, we found mostly similarities. These included the challenge of relationships with clinical faculty and nursing staff, the impact of the CCLE on student learning, and the strategies used by students to rebuild relationships. Differences included more frequent references by students in the SDL program to the uncertainty they felt regarding program or clinical faculty expectations and their own abilities to meet expectations. SDL students also described the outcome of challenges as retrospectively positive much more frequently than did the students in the non-SDL program. We were, however, unable to attribute these differences to the program structure or curriculum design.

As clinical teaching remains a complex process requiring skilled responses by clinical faculty, there is a need for ongoing faculty learning and development. Clinical faculty members play an essential role in creating positive environments where students can tap their resilience and develop strategies to learn in spite of the difficulties and complexities inherent in health care and clinical education. Although this study examined CCLEs experienced by nursing students, other disciplines might recognize contextual issues and similarities in teacher-student relationships that will allow transferability of findings.
Within the first year clinical course, Nursing 1214 (“Professional Practice I”), I am interested in how students bridge the gap from theory to practice in learning how they are becoming professional registered nurses. Essentially, in what ways do first year nursing students learn to link theory to practice in the clinical setting? Students in Nursing 1214 are new to the clinical setting and experience uncertainty when trying to translate what they have learned in theory into practice. Students are also concurrently completing a co-requisite course (Nursing 1213) where they learn the theory of health promotion as it should be applied in practice, as well as Biology 1221, a biology course focused on human anatomy and physiology. Fear and uncertainty are common feelings for students as they commence Nursing 1214. I believe that instructor-initiated feedback intended to foster ongoing dialogue between the instructor and the students is essential to this process because students do not necessarily know what they need to know to practice competently. Students rely on many processes to form clinical judgments and make decisions regarding patient care. Storytelling, or the use of narrative, is just one of these processes. Diekelmann’s narrative pedagogy within nursing education (Andrews et al, 2001) brings students and teachers together in converging conversations about subjects that matter, often revealing a new understanding about nursing practice. It is what is going on in these moments that I hope to capture with this project. It is recognized that a “superficial relationship between nurses and their practice roles” (Boychuk Duchscher, 2003, p. 24) can develop if students are not supported in questioning their assumptions underlying nursing practice. Wenger’s (1998) social learning theory posits learning as an act of social participation and collaboration in practice. I am interested in how students are using all forms of feedback as they strive to link theory to practice. In so doing, students’ learning was assessed through various different means, one of which was guided narrative feedback from the instructor that was situated in the context of their clinical experience and directed toward specific benchmarks they must meet in order to progress in the program. Classroom assignments and evaluation interviews were other assessment strategies. Data was analyzed for common themes around what elements students believe to be important in their learning how to become a professional registered nurse. Five out of 8 students consented to have their written work (reflective writing x 2, based on Gibbs’ (1988) reflective cycle; responses to narrative instructor feedback and reflective questions; as well as midterm and final evaluations and self-evaluations). All evaluation interviews were audiorecorded, and there was one post-course interview. Narrative inquiry was the method used to understand and research the ways students make sense out of their first year learning experiences in the clinical context of this study, especially since narrative inquiry is concerned with the organization of human knowledge, and Clandinin & Connelly (2000) describe narrative as “both phenomena under study and method of study”. Results and implications for curriculum development will be discussed.

This study investigates the students’ perceptions of adaptation following fieldwork failure using a grounded theory approach. Occupational therapy recognizes successful fieldwork as the final step in professional education, an indicator of readiness for entry-level practice. Fieldwork (or practice education) is the final gatekeeper for graduation and for eligibility for the national certification examination (AOTA, 2006). Fieldwork failure has been attributed to many causes, however, there is little research specifically examining the perspective of the student or their process of adaptation in order to complete fieldwork. Occupational adaptation (OA), a theoretical frame of reference, provides one view of the interaction between a person and the environment (Schkade & Schultz, 1991; Schultz & Schkade, 1991). Occupational adaptation is the process by which a person makes sense of and interacts with the environment, a normative process that changes over time. In this study, the Occupational Adaptation Model of Professional Development is applied to student development during the fieldwork transition to novice practitioner, often a time when performance demands outstrip the students’ ability to adapt Garrett & Schkade (1995).

The final sample includes twelve occupational therapy students and recent graduates; ten participants who failed and two participants who were successful in Level II fieldwork. The latter participants experienced such strong emotions in response to their fieldwork that they contacted the author, expressing a desire to tell their stories. Though these participants lie outside the original parameters of the study, the author believes their contribution to be valuable to the research, and they are included as outliers. Iterative data collection,
theoretical sampling to saturation, and constant comparative analysis were each incorporated into the study, reflective of grounded theory methods. This presenter will describe the methods, results and implications of the data through didactic presentation. Interactive roundtable discussion with conferees provides an opportunity for exchange of ideas and questions.

Findings reveal a variety of adaptive strategies that students use to move forward following fieldwork failure. Two intertwined themes emerge from analysis of the data, casting new perspectives on fieldwork failure that is not addressed by current literature; “convergence” and “not passing is not the same as failing”. Person, environment and time converge to support turning points in professional development. Failure may be necessary for professional development. Following failure, some students identify typical response behaviors, frequently developing and employing new adaptive strategies for relative mastery during fieldwork education. A limitation of the study is that students are not represented who failed a fieldwork experience and also withdrew or were dismissed from their program. Their adaptive strategies would no doubt enliven this discussion.

This grounded theory investigation provides insight to help prevent the phenomenon of failure, ameliorate the impact of the experience, and provide a focus for educators to support the process of student adaptation. The research suggests that fieldwork be intentionally designed just as we design best practice for clients and best education for the classroom. The research also suggests additional areas for investigation surrounding fieldwork education.

Sheraton MacNab Room (2nd floor) 9:00-10:30am

**Tablets, Clickers & Virtual Children: Using Interactive Technologies to Enhance Learning**

**An Evaluative Assessment of Using Interactive Technologies to Teach Music Theory**

*Matthew Woolhouse, Kyla Whelan (McMaster University)*

This paper reports for the findings of a six-week study, conducted from mid February to early April 2012, in which electronic tablet and SMARTBoard technologies were used to teach music theory to second-year students at McMaster University.

Two problems commonly associated with teaching music theory are (1) that traditional methods afford only limited interaction between students and professor, and (2) that current classroom arrangements restrict the ability of students to hear the music they write. To address these problems we took two music theory classes (n = ca 20 per class), which had previously been taught in conventional classrooms, into the Wong e-Classroom in the Mills Memorial Library at McMaster University. Here students were able to tackle in-class harmony exercises using iPads running the NOTION music “app”, which gave them instant auditory feedback and allowed them to correct errors through repeated listening. Moreover, the instructor was able to display an individual’s work to the entire class via a large-screen Apple TV so that everyone could see and hear their work, and respond.

Current research suggests that students respond positively to technology in the classroom, and with hundreds of software applications now available to students and teachers, educational possibilities are expanding rapidly (Shillingford, 2011). A considerable amount of experimentation is being undertaken in relation to the pedagogical potential of new technologies in the classroom, especially iPads (Rodriguez, 2011). It is commonly accepted that iPads offer great potential in the classroom, but exactly how they should be used is still under debate (Valstad, 2010). To assess the effectiveness of our approach, following the students’ course of instruction, with the help of the Centre for Leadership in Learning at McMaster University data comparing the two teaching environments - conventional versus Wong e-Classroom - were gathered from the students through a detailed questionnaire and focus group.

Following a demonstration of the technology and pedagogical processes adopted in the Wong e-Classroom, this presentation will provide an assessment of the project’s success in terms of students’ learning outcomes derived from the questionnaire and focus group. Moreover, we will report how shortcomings and limitations in the application software were fed back to the developers so that future educational demands can be adequately met. Finally we will outline a related project aimed at converting the theory component of the music curriculum at McMaster into an interactive eBook.
We would like to express our thanks to members of the Centre for Leadership in Learning, and Jeff Trzeciak and Dale Askey of the Mills Memorial Library for generously supporting this project with their time and expertise. Funding for the eBook project was provided by McMaster University as part of Teaching & Learning Grants provided by the Centre for Leadership in Learning.

Clickers - a learning resource?
Helle Mathiasen (Aarhus University)

By focusing on an empirical study of students’ experience with clickers in lessons, around physics teaching at bachelor level in two Danish universities, we can look at the discussion about the premises and the contexts surrounding clickers and how they can be seen as a possible learning resource for both instructors and students more than a control, testing and credits perspective.

The study was completed in the period 2010-2011. **Research question:** How can the use of clickers facilitate students learning?

**Focus:** Communication in relation to feedback processes, teaching rhythm, types of questions, anonymity/non-anonymity premises and elite/the majority of students perspective thus benefit from clickers - how when and why?

The empirical portion is based upon data obtained via observations of teaching (classroom with 20-43 students), group interviews and follow up interviews with the instructors.

The theoretical framework is based on a systems theoretical perspective, inspired by the German sociologist N. Luhmann (Luhmann 2000, 2006) and his concept of communication, teaching and learning as knowledge construction, and the concept of trivial and non-trivial systems (Foerster & Pörksen, 2003).

A communication unit is defined as a synthesis of three selections, where the first two selections, namely the information to be sent and the message form or utterance, are chosen by the “mediator”, or “utterer”, whilst the third selection, the interpretation or choice of understanding is an activity that is undertaken by the “addressee”(Luhmann, 2000). The first two selections in a communication unit use language (in the broadest sense). The communicated information (the first two selections) can be observed, but the third selection, choice of understanding, cannot be observed (an awareness activity).

Lens: Learning as knowledge construction and communication as nutrition for learning. Students and teachers as unique observing systems.

Based on the systems theoretical perspective and the concept of trivial and non-trivial systems (Foerster & Pörksen, 2003), we can conclude, from our studies, that clicker usage can in itself, depending on the approach to systems as trivial or non-trivial, be conducive to both a controlled approach as well as to a more open approach that favours clickers as a communicative and teaching supportive resource, where ongoing feedback is an important activity. In short, if used without discernment, clickers could be used as a tool that would promote trivialization, but when used with discernment, (critical pedagogical reflection, premises: the complexity of the nexus between teaching and learning), they provide excellent support for enhancing knowledge construction within non-trivial systems. The individual instructor’s pedagogical and didactic competences are determining in this setting - they determine how well clickers are put to use, and are in fact a foundational element in strategizing both the instructor’s and the students’ use of clickers and indeed, have an impact on the benefits that can be seen with the technology. The classroom study, does give occasion to reflect upon what are seen to be pertinent questions based on the approach to systems as basically non-trivial and the focus on communication as nourishment for learning:

- Is there learning potential in letting the students formulate clicker questions, and if so, what kinds of learning benefits can be identified?
- What learning gains/potential can be seen with regard to different groups of learners?
- Can we envisage clickers implemented in settings where they support the development of concrete qualifications and competences?
- How are the different types of clicker questions to be matched with different academic goals?
- How can all students be given an opportunity to express their reasoning behind their clicker voting?
- How can we ensure academic feedback to students’ voting responses?

This proposal should be seen as an open invitation to further discussion and research.
Virtual Children, Real-World Learning: The Use of Online Tools to Build Content Knowledge and Enhance Learning of Developmental Principles
Sarah Bunnell (Ohio Wesleyan University)

Increased student engagement with course material enhances knowledge retention, depth of learning, and transfer of knowledge (Dowson & McInerney, 2001; Hancock & Betts 2002; Lumsden 1994). To that end, there is compelling evidence that when students possess content knowledge about a topic, they are able to more deeply connect new information to their existing knowledge base (e.g., Chi, 1978). That being said, some educators express concern that encouraging students to make personal connections can be distracting to student learning, as they may become so focused on personal experiences that they do not meaningfully engage with diverse perspectives on a topic. In this investigation, I examined whether a virtual world could be used to increase students’ feelings of having authentic personal experiences related to the course, and if so, whether personal connections made in the online domain would impact students’ processing of course content.

The investigation’s context was two sections of a Child Psychology course, an upper level undergraduate course. Taking advantage of the potential impact of content knowledge on student learning in this class can prove difficult, as the vast majority of students do not have children of their own to whom they might link course content, and a significant amount of students report having had only minimal contact with children at all. In order to attempt to enhance students’ content knowledge and in turn, potentially enhance their ability to link course material to personal experience, the MyVirtualChild program was introduced into the course. In this program, students act as parents of virtual children from their birth through adolescence. As the virtual child ages, students are required to make parenting decisions related to the course content. In this way, students are able to engage in the parenting decision-making process, while also being provided with detailed information about the impact of their choices on child development.

Students complete a semester-long journal describing their child’s behavior, their parenting decisions, and how their decisions and the child’s behavior connect to the course content and their own experience as a child. To examine how the virtual childcare experience impacted student learning, the journal content was assessed in two ways: 1) Journal entries were coded for references to connections between the virtual child and either course content or personal childhood experiences, and 2) journal entries were assessed using the Linguistic Inquiry and Word Count program (Pennebaker, Booth, & Francis, 2007) to determine whether there were student-level differences in the nature of the written content (e.g., references to the student’s self or to other individuals, the use of sensory/perceptual language, word count). These variables were compared to course performance variables, including exam and paper performances.

Results will be discussed in terms of whether virtual experiences can be used to increase student content knowledge, engagement, and learning. Session participants will be asked to consider the ways in which they encourage students to use their personal experiences to more deeply process course material, as well as the pros and cons of using virtual tools to foster real-world learning.
assignment was a major focus in this survey. The questionnaire responses, combined with analysis of a sample of assignments and students’ reflective commentaries on the experience of engaging in online team-working, confirmed the module team’s perception that the assignment offered significant and distinctive learning opportunities, but that in order to make it work better we should provide more support and guidance for students to raise their awareness of the skills needed for effective collaborative writing.

This paper describes a project that was developed after the first presentation of Voices and Texts, arising out of the analysis of student and tutor responses to the end-of-module questionnaire. This survey data provided the basis for formulative evaluation that enabled development of new resources for use in the virtual classroom to enhance students’ skills in co-writing and co-editing wikis. One element in these resources consisted simply of written guidance notes drawing attention to the processes of continual revising and refining that characterise solo writing as much as collaborative composition. But another element of the project adopted a more demonstrative approach in the shape of a seven-minute screencast in which a small group of (fictional) students begin writing a wiki together. The screencast shows both the forum discussions and the material that is thus generated for the wiki, and at the same time the spoken commentary voices some of the thoughts and concerns of the fictional students as they work towards a group response to their set task. The focus, then, is on the social and language skills required for successful online collaborative work, rather than on the technical dimension of working with wikis.

I will invite conference participants to put themselves, briefly, in the shoes of students faced with a collaborative writing task, and use part of the screencast to show how student concerns and anxieties can be simply dramatized. The paper will conclude with a report on the further survey-based evaluation of the new teaching materials described here, and their potential for wider adaptation.

Canned Resumes: Implications for Professional Writing Courses and Career Services Departments

Lynn Ludwig (University of Wisconsin-Stevens Point)

Does giving a model of a specific student resume create a copy-cat version from all other students? Are career guidebooks, so often stocked with numerous pages of resume formats, truly assisting the job hunter? Is it possible to exhibit the essence of a candidate’s uniqueness within a boilerplate template?

These questions beg for a SoTL investigation in common practices of the teaching of resume writing. The SoTL taxonomy question, “What works?” (Hutchings, 2000) guides this project. Inherent in the discussion about resume templates is the time-honored debate of process-oriented versus product-oriented writing. Process enthusiasts value the exploration and self-discovery elements of their orientation, while product enthusiasts focus on the result of the writing, or product, and argue it is still a “reputable practice for some writers” (Farmer & Arrington, 1993). Process supporters often fear that giving students a model to follow will eclipse the creative spirit and result in mechanically-generated, near-duplicate end results.

The goal of this project is three-fold: (1) to determine if a canned resume can actually result in a unique product (“Does it work?”), (2) to learn about the students’ perceptions of the creation of a resume, and (3) to share the results with our campus Career Services Department. This paper will present the results of the project in which two classes of 300-level Professional Writing (English) courses entitled “Advanced Business Communication” are given the same assignment with a successful student-created resume model presented in one, but not the other. I will provide evidence from the following methods: a rubric-guided assessment of the canned and non-canned resumes, a student questionnaire, reflections from student interviews, and summaries of group discussions.

Since the implications of these observations go beyond the English writing classroom to the Career Services Department, integrating the practice of resume writing in both departments would serve the students far beyond their initial courses. Not only do enrolled students depend on the job-hunting strategies provided by Career Services Departments, but today’s out-of-work alumni who have been forced to find new jobs and reinvent themselves often return to their alma mater for assistance in obtaining employment. By sharing the results of this project with our Career Services Department, the potential integrative approach could serve as a catalyst for transforming the way both departments approach the teaching of resume writing. Audience members will be asked to promote an integrative practice on their campus, where resume writing is taught in different departments.
What is the cost of confusion? My students spend much of their time in a muddle. On the one hand, they don’t recognize categories that, to me, are pretty basic in literary studies, like “fiction” and “nonfiction.” They are apt to call any long work in prose, like A Vindication of the Rights of Woman, a “novel,” while Pride and Prejudice is a “story.” And without any organizing principles, they are overwhelmed by the mass of “data” we expect them to control. As professors, we emphasize nuance and complexity in each text we read. Can we offer clarity, as well? This presentation would focus on “the organization of knowledge,” a key concept in the science of learning, but one that has not been adopted in literary studies. Experts’ knowledge is organized in ways that help them solve disciplinary problems. One famous example is De Groot’s study of chess masters: they see pieces on the board in terms of strategies they enable, while novices just see the pieces. Ambrose et al. (How Learning Works, Jossey-Bass, 2010) also use the example of an anatomy professor whose lectures focused on separate anatomical systems. When he gave students a problem that asked them to organize their knowledge in a different/more global way, they couldn’t do it (43). Experts have multiple “knowledge structures” (that is, they organize their knowledge in multiple ways) and choose the one most suited to the task at hand. Experts in literary studies need to master a vast amount of content knowledge. We can help students by offering “advance planners,” ways to organize the knowledge they are in the process of acquiring. But it is crucial to shape our advance planners to the tasks that we expect students to perform. I will offer a series of examples: one for placing individual texts on a historical grid; one for generating scholarly paper topics; one for helping students articulate their expectations while they are reading an individual text, and so on. I argue that organizing content knowledge is essential to literary studies, and that we can and should provide useful knowledge structures to our students. “Before and after” evidence will be provided from a content-heavy course on British literature to 1800.
a postgraduate year of study. As we recruit a good number of non-UK students onto our programmes, I will consider if there are differences in perceptions and needs in terms of employability training amongst non-UK student cohorts and UK students. In summary, I will present evidence collated from national and multi-national bioscience employers on graduate skills requirements and how this has been integrated into the curriculum to expand employability training opportunities. I will also present evidence collated from students on the value of the training received and the ways in which the feedback is being integrated to further develop and enhance professional development. Finally, I will discuss some of the factors to consider in designing and implementing employability training initiatives for taught postgraduates including content and opportunities that are step-up so as to build on and extend existing skills, embedding training within the curriculum or developing stand-alone modules and taking into account the needs of UK and non-UK student groups.

K27

“Essays are important but I want to get a job”: skilful and social learning supporting graduate employability
Yvon Appleby (University of Central Lancashire)

This paper discusses qualitative findings from a recent Higher Education Academy two-year study in the UK that explores aspects of students’ learning in the first year at university and future employability. Data was gathered from two follow on semi-structured interviews with 20 first year university students and interviews with 9 employers and 9 alumni looking the mathematical, communication and digital literacies learned at university and required for employment.

The link between learning and employability, particularly in higher education, is increasingly well established in developed economies. In the UK the influential Dearing Report in 1997 identified communication, mathematics and information technology, the focus of the literacies in our study, as key skills for learning and employability. However, many researching and writing in this field have been critical of viewing these aspects of learning simply as decontextualised individually acquired skills, to be supported through study skills sessions. Strategies based upon teaching and learning, rather than simple skill development, supported by curriculum development and learner engagement provide alternative and more pedagogically sophisticated approaches which take account of employability (Knight and Yorke, 2004).

Knight and Yorke’s (ibid) model uses the concept of skilful practices which refers to developing curriculum and pedagogy that are situated, contextual and supported through authentic tasks. In our study this concept contributed to understanding what the students told us in interviews of being supported to be pro-active, strategic and focussed in developing wide ranging skills for future career success. It also incorporated how the students developed strategies to access a range of formal and informal institutional support. Where the students described developing autonomous social networks to support learning the concept becomes extended beyond the focus of curriculum and pedagogy. Rather than stretching conceptual meaning beyond its explanatory power a social practice approach, with an emphasis on learning, enables the incorporation of agency, history and purpose seeing the participant in a social world where learning occurs through social practices rather than simple cognition (For summary see Lave 2009).

Understanding the possibilities and limitations of skilful and social practices enables us to include what happens inside as well as outside the classroom, and to take account of learning and teaching. The interview data from the employers and alumni in our study shows that general communication confidence, autonomy and group work skills, most valued by employers, can be developed by students in skilful and social ways at university. The session will provide the opportunity to explore these insights by sharing differing international experiences with participants.

K28

Who me? With the enhanced importance of employability for our graduates, findings from an Education based longitudinal study offer suggestions for more effective support for both students and staff in 2012.
Julie A Anderson (University of Plymouth), Helena Mitchell (Oxford Brookes University)

Recent research (Artess, Forbes, and Ripmeester 2011) has again suggested that students should primarily take responsibility for their own employability and be “placed at the centre of the process”. But to achieve this it is proposed that student opinion is “more actively investigated and tracked”. This was a primary purpose of this original HEFCE funded project where an English university education department sought to investigate,
evaluate and then improve its support to its students. In doing so it was also aligning itself with the proposal
of Haug and Tauch (2001, p.21) who suggested that “enhanced employability seems to be the strongest source
of change and reform in [European] Higher Education’

The study started in 2004 and was initially presented at ISSOTL in Sydney. It was a longitudinal research
project in two parts. It will be completed mid 2012. 127 Education students initially participated regarding their
understandings of employability. Semi structured interview questions were used by the two authors to probe
students views. Working with the Careers Department staff, the project undertook Focus group and workshops
for students. In addition, it worked in parallel with a broad range of HE staff on their own understandings of
employability.

As a result of the original work, employability was more deeply embedded into the undergraduate curriculum
at the university, most notably with first year students, using focused questionnaire material to help them
consider their strengths and to begin to take control of their progress in terms of employability. A student
profile was also introduced as part of taught sessions in the compulsory first year module. A key finding from
2004 was that the “majority of respondents thought that their degree would substantially improve their job
prospects” (Anderson and Mitchell, 2006). However, there was an undervaluing by students of what skills
and abilities they had developed through their courses as well as a general misunderstanding of the value of
engaging with Careers staff in their institution.

The recent revisiting of the project aimed to replicated the first phase of the project as far as possible with an
additional aim of evaluating the work overall and offering further proposals for future directions both here in
our own institutions in the UK as well as further afield. As a CIS 2011 paper notes, there is a well developed
understanding around the value of sharing good practice not only within the UK HEIs but “also between
institutions across other countries such as Australia, Canada as well as across Europe” and we trust we will
add to the sharing of good practice through this latest work.
Implications for engaging students through attention grabbers may result in ameliorating boredom (low arousal) and its associated negative consequences (Wolters & Taylor, 2012). In addition, the resulting student engagement, a strong predictor of learning (Kuh & Klein, 2006), has the potential to increase student retention, persistence, and graduation rates (Tinto, 2009).

**K30**

**Are we adequately preparing/selecting our students for academic success?**

*Janet Macaulay (Monash University)*

In the changing higher education sector in Australia, University administration has driven a move towards increased flexibility in the choice of subjects taken at the undergraduate level. This was partially addressed by decreasing pre-requisite requirements, sometimes without full consideration of the impact on student academic success and engagement with their studies. This paper presents a case study showing the value of a research based approach to guiding university policies and demonstrates that increased integration of SOTL into institutional culture and decision making processes can support evidence based decision making processes.

This study examined the impact of pre-requisites studies on students undertaking Biochemistry as part of an undergraduate Bachelor of Science degree. Biochemistry is considered to be a difficult subject by many students and at most Australian Universities, when it is taught as a major within a 3 year Bachelor of Science degree, it builds on previously learned concepts taught by biology and chemistry departments. The relaxation in pre-requisite studies has resulted in students enrolling in 2nd year Biochemistry subjects with prior studies ranging from strong backgrounds in both chemistry and biology to minimal backgrounds in these disciplines. Data was collated on students prior studies including; final year of high school (chemistry and biology), 1st year university (chemistry and biology), 2nd year Biochemistry and 3rd year Biochemistry. Analysis of mid-semester test and end of semester examinations results indicate that prior studies in related subjects do correlate with academic success.

This data raises the issues of how these university decisions are made and that when changes have been implemented it is crucial the evidence provided by SOTL must be considered and used as a basis for the discussion and implementation of further change. Much work needs to be done to fully integrate SOTL into institutional culture.

**K31**

**The Anatomy of Academic Rigor from the Student's Point of View**

*John Draeger, Lisa Hunter, Pixita del Prado Hill, Ronnie Mahler (Buffalo State College)*

The National Survey of Student Engagement (NSSE) draws on student feedback to gauge the level of academic challenge at particular institutions (Kuh, 2009). Our campus’s NSSE results led to an institutional mandate to increase the level of academic rigor. Inspired by attempts to understand the implications of NSSE data on other campuses (Payne et. al., 2005), a cross-disciplinary research group developed a multidimensional model of academic rigor based on findings from faculty focus groups, a campus wide survey of faculty, and an extensive literature review. In this previous work, we found that challenging students requires attending to a number of overlapping categories, including active engagement (Finkel 2000; Light 2001; Graham & Essex 2001; Bain 2004), meaningful content, (Parkes 2001; Jensen 2005), higher-order thinking (Trigwell & Prosser 1991; Braxton 1993; Norvall et al. 1996; Nosich 2009), and appropriate expectations (Exley 2002). These dimensions overlap and a context (e.g., assignment, course, or course of study) might be considered rigorous or challenging along some dimensions and not others. We argued, however, that learning is rigorous only if it covers some of the elements most of the time and all of the elements at some point during the semester. While our previous work began with student perceptions contained in the NSSE data, we did not explicitly include student voices. The current study is designed to elicit the student perspective. It draws on both a campus-wide survey of students and a series of focus group interviews. In this presentation, we intend to report about the student perspective on academic rigor. Attendees will learn about: (1) the attributes of academic rigor and the elements or methods that promote it; (2) the advantages and disadvantages of being in an academically challenging class; (3) whether students value academic rigor, and (4) student suggestions to enhance academic rigor on an institutional basis. Student voices allow us to further empower faculty and students with resources to raise the level of academic rigor.
Morning Break

Convention Centre  3rd Floor Lobby  10:30-11:00am

Refreshments available

Session L: Plenary Presentation

Convention Centre  Chedoke AB (3rd floor)  11:00am-12:30pm

**L01**  ISSOTL founding members on the past, present & possible futures of SOTL  
*Randy Bass (Georgetown University), Angela Brew (Macquarie University), Gary Poole (University of British Columbia), Jennifer Meta Robinson (Indiana University)*

What opportunities and challenges for scholarship of teaching and learning emerge from the changing conditions for this work, such as expanding virtual and global platforms for education, evolving disciplinary and cross-disciplinary standards and practices of research and scholarly collaboration, and changing curricular and institutional demands? What roles can and should ISSOTL take with regard to these issues? This plenary session will feature a panel drawn from among the ISSOTL founders. The panelists will discuss the first nine years of the Society and what the future might hold for the scholarship of teaching and learning. Audience members will also be invited to contribute comments and questions.

Closing Remarks

Convention Centre  Chedoke AB (3rd floor)  12:30-1:00pm
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<td>Sally Abey</td>
<td>Plymouth University</td>
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<td>Shahad Abdulnour</td>
<td>University of Toronto</td>
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## Presenter Index

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<th>Session Number</th>
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<tr>
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<tr>
<td>Megan Wrightman</td>
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<td>Maureen Worron-Sauve</td>
<td>Scleroderma Societies of Ontario &amp; Canada</td>
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<td>Brian Yates</td>
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Hamilton - Downtown Map

Note: Due to map scale restraints, only BUILDINGS of a certain size and other prominent landmarks have been displayed. © Teament/Land Information Services Inc. and its licensees (2009). May not be reproduced without permission.
“TLI will strive to push boundaries and expand the field by introducing a wider range of genres and perspectives. We plan to do this without compromising well-established criteria that would be expected across the disciplines. We will be creative, thoughtful, artistic, and scientific. This sounds ambitious, but it is just what SoTL needs within the covers of one leading journal.”

Nancy Chick, Vanderbilt University–Center for Teaching

“We have learned that literature in the field must speak to scholars in their language as it helps those same scholars expand their language and understanding of just what learning and teaching can be.”

Gary Poole, University of British Columbia–School of Population and Public Health

Questions regarding submissions may be directed to TLI@vanderbilt.edu.
Paul R. MacPherson Teaching Fellowships

The Paul R. MacPherson Teaching Fellowships at McMaster University were established in 2011 as the result of a generous donation from Paul R. MacPherson. This program seeks to identify, through a competitive application process, faculty members who have demonstrated exemplary teaching practices and who show promise of becoming outstanding educators and of inspiring others. It allows Fellows to work for a portion of their time (typically over a one-year period) in the Centre for Leadership in Learning, where they will have opportunities to enhance their own teaching by exploring innovative approaches, to collaborate with a network of colleagues on scholarly teaching and learning, and to provide educational leadership across campus. During this time, Fellows are expected to develop and to work through a project leading to a tangible outcome that will enhance teaching and learning on campus and/or beyond.

2012 MacPherson Fellow

In May 2012, Dr. Lynn Martin from McMaster’s School of Nursing was selected as the inaugural Paul R. MacPherson Teaching Fellow. During her initial fellowship year, Dr. Martin will work on developing a resource guidebook about quality assurance and quality enhancement processes in higher education.

For further information about the MacPherson Fellowships, visit http://cll.mcmaster.ca/awards_and_grants/macpherson_fellows/index.html
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CRITICAL TRANSITIONS IN TEACHING & LEARNING

In higher education around the world, inquiry into student learning is moving from isolated practice to systematic research, from peripheral projects to institutional integration, from the margins of disciplines and campuses toward a central position in the academy. This conference will focus on these and other transitions in scholarly teaching and the scholarship of teaching and learning.

At the conference, you will have the opportunity to explore both individual SoTL projects and also broader questions about the scholarship and practice of teaching and learning in higher education.