Welcome to Connections - Your Teaching & Learning Resource

Sue Vajoczki - Director, Centre for Leadership in Learning

It is an exciting time on campus with the start of the fall term. I personally love the energy, excitement and anticipation that our students bring to the campus in September. It is also the time of year at which you may be encountering a new challenge in your teaching. Remember that we are only a phone call or a short walk away. We can help you explore a solution to your challenge.

I would like to draw your attention to a very interesting article on the relationship between teaching and research. The article, which came out in the August 19 edition of Science, describes a project that demonstrates that graduate students who have the opportunity to both teach and research during their graduate studies display significantly greater improvement in their abilities to generate testable hypotheses and design valid experiments than do those who only engage in research. Ultimately the authors argue that in the STEM disciplines (science, technology, engineering and mathematics), which were the focus of this project, teaching experience can contribute substantially to the improvement of essential research skills. I was intrigued by this article, in part because it demonstrated, in a fairly robust experimental design, evidence of an additional link between research and teaching. It is certainly worth a read.

It has been an exciting six months since our last newsletter. We have moved in to our new space on the fifth floor of Mills Library (Room 504). This move has brought all of our services together in one space. This means that we can provide you with a one-stop place to access all of our staff, our collection of teaching and learning materials and our services. The new space also contributes to our own productivity because our departmental colleagues are now together in one location. In addition, we have had a number of exciting events on campus. The following list highlights just a few of these:

• Eric Mazur’s talk on peer instruction (see the video on our website - cll.mcmaster.ca - if you were unable to attend);
• The first annual retreat for President’s Award for University Teaching winners, with more than 35 previous President’s Award winners attending;
• Graduate Student Day, at which 897 Teaching Assistants, both graduate and undergraduate, participated in three hours of teaching and learning development; and,
• New Faculty Orientation to Teaching & Learning, which provided many of our new faculty with an opportunity to learn about the campus and about what is available to support their teaching and learning (thanks to all the other groups on campus that participated in this event!).

Our biggest news of the summer is that, in June, we were delighted to participate in the announcement of a 1 million dollar donation to McMaster University to fund the creation of the Paul R. MacPherson Teaching Fellowships in the Centre for Leadership in Learning (see following article).

This spring at our Learning Technologies Symposium we were asked to provide more details to the campus community about learning technologies and future plans for the technologies at McMaster. As a first step in providing that information we have introduced a Learning Technology Update which is available at: http://cll.mcmaster.ca/ltupdate.html.

Enjoy the energy of the fall term, and the gorgeous fall weather that we have in southern Ontario. Have a great term teaching!


SAVE THE DATE!

International Society for the Scholarship of Teaching and Learning (ISSoTL) Conference

Week of October 22, 2012

Hamilton Convention Centre & Sheridan Hamilton Hotel
Hamilton, ON

Hosted by the Centre for Leadership in Learning at McMaster University

For more information about ISSoTL, see: http://www.issotl.org

For information about the 2011 conference, to be held in Milwaukee, WI, see: http://issotl11.indiana.edu/
Teaching & Learning News

The Paul R. MacPherson Teaching Fellowships

The Centre for Leadership in Learning is thrilled to announce the establishment of the Paul R. MacPherson Teaching Fellowships in the Centre for Leadership in Learning at McMaster University. This program, made possible by a generous donation from Paul MacPherson, will identify, through a competitive application process, faculty members who have demonstrated good teaching practices and who show promise of becoming inspiring teachers and of inspiring others. It will allow Fellows to work for a portion of their time over a one- to two-year period in the Centre for Leadership in Learning as teaching and learning scholars, where they will have opportunities to enhance their own teaching by exploring innovative approaches, to collaborate with an interdisciplinary network of colleagues on scholarly teaching, and to provide leadership in teaching and learning across campus. It will also afford them an opportunity to develop and to work through a project leading to a tangible outcome or product that will enhance teaching and learning on campus and/or beyond. Once an individual has been identified as a Paul MacPherson Teaching Fellow s/he will maintain this title throughout her/his employment at McMaster. The competition for the first Fellowship will be announced in December 2011. The first Fellowship will commence in July 2012.

Partnerships

Bringing a renowned teaching & learning scholar to McMaster

Beth Marquis - Educational Research Consultant, CLL

At CLL, we value highly the opportunity to collaborate with Faculties and Departments across campus to enhance the learning of McMaster students. This past spring witnessed an especially effective example of this process, when CLL partnered with the Department of Civil Engineering, the Department of Engineering Physics, the Department of Materials Science & Engineering, the Faculty of Engineering and the Faculty of Science in order to offer a presentation and workshop by Dr. Eric Mazur (Harvard University). These events, at which Dr. Mazur discussed effective teaching using an interactive technique that he calls Peer Instruction, attracted more than 230 participants from across McMaster’s six Faculties, and subsequently spurred the development of a new Community of Practice for those interested in implementing some of Dr. Mazur’s ideas in their teaching. For further information about, or to join, this new Community of Practice, contact Kris Knorr at knorrk@mcmaster.ca.

In the next piece, Dr. Nik Provatas, who provided the initial impetus for this event, offers some reflections on Dr. Mazur’s sessions and the insights they offered. To view a video of Dr. Mazur’s initial talk at McMaster, visit: http://cll.mcmaster.ca.

c.2005, Stu Rosner.

Congratulations!

Congratulations to Lori Goff, Educational Consultant at CLL, whose poster entitled “Convenience and conversation: A comparison of approaches to peer reviews” was awarded second place in the poster competition at the recent Society for Teaching & Learning in Higher Education (STLHE) conference in Saskatoon.
Partnerships

Self-Directed Learning and the Future of Teaching Large Classes
Nikolas Provatas - Professor & Chair, Materials Science & Engineering

This past May, McMaster was treated to a wonderful seminar and associated workshop about effective teaching, facilitated by Dr. Eric Mazur of Harvard University. Going into this event, I was not sure what to expect; coming out, my idea of effective teaching had been significantly challenged.

Dr. Mazur discussed his ConcepTest approach to teaching. In this approach, students are trained to engage in self-directed learning by helping each other through complex ideas that are required to synthesize a solution to a problem. Key to the approach is the development of problems that expose, on the “road” toward their solution, the subtleties of a concept or problem. Students are required to read through various materials assigned by the professor. Following this, they must take a simple on-line quiz related to the assigned readings. By examining student submissions for the quiz, the professor develops a set of in-class problems aimed to expose the major misconceptions and fallacies made by students. Class time is then devoted to helping students iteratively coach each other through a problem. Students that get the answer to the problem are encouraged to pair up as often as they can (3-5 minutes per question) with those that do not. The process results in intense moments of mental activity that lead to “percolation” of understanding through a significant portion of the class.

The iClicker can be used to gauge student performance before and after students help each other. A significant amount of data collected by Dr. Mazur demonstrated that the ConcepTest approach yielded improved performances by students in all grade categories. Ironically, this modern approach to teaching is reminiscent of the classical Socratic approach to teaching, wherein the teacher does not merely relay information to listening pupils, but rather, guides them through appropriately crafted experiences that illuminate a path to understanding, which students must walk for themselves.

Learning Spaces

CLL Teaching Commons Classroom - Mills Library 504/X
Erin Aspenlieder - Post-Doctoral Fellow, CLL

The new space on the fifth floor of Mills Library for the Centre for Leadership in Learning is remarkable for a few reasons. The space brings together educational consultants, librarians, learning technologists and instructional designers to foster collaborative dialogue and work; the space offers students, staff, and faculty members a convenient, centralized pool of print resources on teaching and learning; it emphasizes a comfortable environment to consult resources, hold meetings and engage in discussions; and, the space features the “CLL Inquiry Classroom.”

The Inquiry Classroom is a space intentionally designed to foster collaborative, inquiry learning and discovery. Moveable desks allow for multiple classroom configurations to facilitate discussion and conversation, while a SmartBoard and white boards offer platforms for presentations and interactive work. Comfortably seating up to 31 participants, the Inquiry Classroom also supports 15 users with laptops and wireless access.

Since its opening the Inquiry Classroom has been used to host curriculum and program reviews, departmental retreats, cohorts of Education 750 – CLL’s graduate course on teaching and learning, Avenue to Learn instructional sessions, workshops on specific teaching topics and other teaching related professional development activities. Indeed, there are few limitations on how the Inquiry Classroom might be used.

The CLL Teaching Commons Classroom.

To that end, you are welcome and encouraged to book and use the Teaching Commons for any teaching related professional development activity. Contact Elvia Horvath at horvath@mcmaster.ca or x24540 to check on availability.
New Communities of Practice

Communities of Practice are groups of people who share a set of interests or a passion about a topic, and who increase their knowledge in this area through discussion and shared experiences. In response to interest from the campus community, CLL will be offering 3 new Communities of Practice during the 2011-12 year. The new Interactive Teaching & Peer Instruction community began meeting in July 2011, while the Community Engaged Learning and Research on Teaching & Learning communities will meet for the first time this fall.

These new groups will be added to the existing Accessibility, Instructional & Curricular Support Staff, Level 1 Instructors, Pedagogy, Teaching Professors, Teaching with Technology, and Writing communities, which will continue to meet throughout the upcoming academic year. Check the monthly CLL Update e-bulletin for specific meeting dates and times.

For more information about joining any of these groups, contact Kris Knorr at knorrk@mcmaster.ca.

New Graduate Supervision Handbook

CLL presents “Good Practice in the Supervision & Mentoring of Postgraduate Students” - a faculty guidebook that addresses common questions, strategies and useful tips about establishing and maintaining an effective graduate supervisory relationship. It is available online (http://cll.mcmaster.ca/resources/pdf/It_Takes_an_Academy_to_Raise_a_Scholar.pdf) and may also be accessed in hard copy in each departmental office on campus. Additional print copies are available for $10.00 each (to cover printing costs).

Please contact Elvia Horvath at horvathe@mcmaster.ca or x24540 to purchase.

Interdisciplinary Encounters

Curriculum and creativity - balancing competing needs in a research-based course

Sarah Symons - Teaching Professor, Department of Physics and Astronomy & Integrated Science Program

The pressure to cover more material is always present. As university instructors, our goal is to teach both content and skills, yet it is usually the content that we worry about. Balancing quantity of material against quality of learning, and trying to mix in skills at the same time is difficult. These issues are magnified greatly in new courses, in interdisciplinary areas, in team teaching, or in innovative pedagogical models. The Integrated Science Program (iSci) falls into all four of these categories, making it a perfect storm of trying to cover a broad curriculum while not losing the feeling of exploration and creativity necessary in a research-based course.

iSci has been running for two years, with some content about to be presented for the third time. We have begun to understand what is possible and what is out of reach for faculty and students. Two areas have proved to be key in managing the competing needs of our curriculum and our research-based learning model.

The first is team communication, both before the start of term and during the term itself. We write course outlines, policies, plans, and portion out time in the schedule. Our research projects each have an outline which includes learning objectives and timescales. These documents collectively mean that the teaching team can envisage who is doing what and when, and make sure that interdependent content is introduced in a logical and timely way. Then, when the course is running, we meet briefly each week to say “I’ve just done...”, and “I’m about to do...”. That way, we all feel that we know what is going on and can integrate material effectively.

The second is assessment design. Each research project asks students (or groups) to construct deliverables which provoke content learning and introduce new communication skills. Each project is different. iSci students design academic posters, give presentations to various audiences, write in different styles, and even collaboratively author a book. In addition to project assessment, students take traditional exams and do homework exercises. Each assessed element has specific goals, demonstrating achievement without generating huge time burdens (for us or them!) or repeating tasks.

In designing the iSci program, we have learned a lot from each other as an instructional team, and also from other similar courses at Mac and beyond. The tension between curriculum constraints and our open-ended research model will never disappear, but balancing the two is in itself a learning experience for the whole iSci community. We are still trying to streamline our processes, making best use of our students’ independent learning abilities and providing a rich, creative learning environment.

Signature Pedagogies

Community-Engaged Education

For several years, McMaster has offered its students a number of opportunities to participate in community-engaged learning. Recently, interest in this pedagogical approach has continued to increase on campus, and faculty members, departments and units have sought to develop additional community-based learning experiences for their students. In response to this growing interest, a new Community of Practice devoted to Community-Engaged Education has been developed, and will meet for the first time this fall. For further information about, or to join, this group, contact Kris Knorr at knorrk@mcmaster.ca.
Signature Pedagogies

The pieces that follow describe some of the various types of community-engaged learning already offered through McMaster, and offer reflections on this approach from the student, faculty and staff perspectives.

Community-based Learning in Health Science 3D03

Mary Koziol - Past-President, McMaster Students’ Union & Assistant to the President, Special Community Initiatives

My first experience with community-based learning was in my third year of studies, through Health Sciences 3D03, Engaging the City: An Introduction to Community-Based Research in Hamilton. Not only did I finally start to appreciate and get excited about the city I had called my home for 3 years, I also learned a lot. It was a vivid, challenging, engaging learning experience through which I came to confront preconceived ideas that I had formulated, and to link theory with reality. My understanding of the complex, interdependent systems that make up a city grew as I examined problems situated within the context of Hamilton. Getting to speak with community members who were experts in their respective areas was one of the most rewarding aspects of the class. It exposed me to the multiple dimensions of knowledge and gave me a tangible grasp of the difficulties of achieving true subjectivity – people’s perspectives are, unsurprisingly, a product of their experiences and background. The class forced me to take a long hard look at my idealism and to recognize the difference between reality and my, at times, romanticized interpretation of it. Overall, it gave me an experience that solely reading books and writing essays could not have accomplished. In addition to the personal development it inspired, I also came to gain a more nuanced understanding of concepts relating to health, poverty and the environment. I recommend that all students have the opportunity to experience this kind of active learning. Furthermore, I urge students to challenge themselves to see education as a relationship in which they partake, rather than as an experience through which they idly drift.

Community-based Learning via the Student Success Centre

Adam Kuhn - Manager, Community Service-Learning, Civic Engagement and Leadership

As the Manager of Community Service-Learning, Civic Engagement and Leadership, one of my mandates is to develop and deliver co-curricular (non-course based) opportunities for students to connect with their local, national and global communities. In the Student Success Centre, we do this in several ways; for example, we connect students with volunteer placements and job shadow opportunities, and we organize day, week and multi-week service-based programs. For instance - our Mac Serve Global program takes students out of Canada (to Costa Rica, Kenya and Peru as examples) to allow them to immerse themselves in different cultures and to explore important social issues through intentional service and reflection activities. You can read about our various Mac Serve programs on our blog: http://macserveseries.wordpress.com.

Another aspect of my role is to build our campus capacity to responsibly connect our teaching and learning interests with the immense resources that Hamilton has to offer. I believe that McMaster students have a lot to offer and a lot to gain from engaging meaningfully in the world around them. The good news is that there is quite a number of initiatives already in place - McMaster has a rich tradition of working closely and reciprocally with our community partners! Our goal then is to sustain these initiatives and to create a supportive space for more staff and faculty to turn to community-engaged activities to enhance student learning. This includes providing assistance, access to resources, and networking opportunities for those interested in meeting and exchanging ideas and best practices.

With this in mind, I am very excited about the development of our new Community of Practice focused on the theme of Community Engagement. Through the CoP we are hoping to engage faculty, staff, students and community members around the immense potential that lies in university-community partnerships. I am sure the discussions will be rich and compelling and that we will have an opportunity to focus on developing students that are globally minded, socially engaged and civically active.

Research on Teaching and Learning: Integrating Practices - Conference -

December 7th & 8th, 2011

McMaster University, Hamilton, ON

The Centre for Leadership in Learning (CLL) at McMaster University is thrilled to announce our second annual ‘Research on Teaching and Learning: Integrating Practices’ Conference.

This yearly event brings together faculty, students, staff, and administrators across different disciplines and institutions to promote evidence-informed teaching practices through the sharing of research on teaching and learning.

For more information, to submit an abstract, and to register, visit: http://cll.mcmaster.ca/conference/index.php/2011/
I teach a fourth year course in the School of Social Work called Social Change: Advocacy and Social Action. I developed this course in response to feedback from students, from other faculty members and from the community about the difficulties that students were having in learning about social change. Although there is a great deal of excellent literature and research about Social Change, it really is something that you need to learn about by doing. Students, in this one term class, spend 30-40 hours in the community, in groups, working on social change projects. Each group has a mentor who is active in social change work. Student groups have created educational material, held events, developed new programs, created and supported advocacy projects and generally had a lot of fun while learning important skills and knowledge.

The benefits to students are tremendous. Students continue to talk about their experiences in the class even after they have graduated. They learn that creating social change is not as hard as they thought it would be, and most continue to be active in social change projects in the community. The benefits to the School of Social Work and to McMaster University are increased community contacts and the development of a source of knowledge for students that might not otherwise be available.

There have been some challenges in incorporating this form of experiential education. Students are uncertain at first and feel uncomfortable with the lack of structure to the course. It is difficult to keep track of the students as they engage in so many projects, but having the mentors is a big plus. The mentors ensure that students have effective, topical, community-based support and direction. Their presence means that students are engaged in projects that are useful to the community as well as effective for their education. It is also difficult to balance the hands-on education with traditional academic content. I have reduced lectures to every other week and the reading load is lighter. I believe that when students understand the theory they learn more deeply and they retain it in combination with the skills they develop.
The application of a synchronous education intervention in an online program

Glen Randall - Associate Professor, DeGroote School of Business

The DeGroote School of Business and the School of Rehabilitation Science have come together to create a new online graduate program. This Master of Health Management (MHM) program is intended to provide regulated health professionals with an opportunity to pursue graduate level education while continuing to work in their health care professions. While the program is delivered primarily online, students come to McMaster for two short residency periods during the program. These face-to-face meetings of all students and instructors allow a portion of the program to be delivered in a synchronous format with students having the opportunity to meet and to work with other students in their cohort.

The MHM program combines core management education (accounting, finance, marketing, human resource management) with a broad understanding of the Canadian health care policy development and service delivery environments (health system design, health policy analysis, and evidence-based decision-making). Students, who come from across the country and represent professions ranging from physicians and nurses to physiotherapists and dietitians, gain the knowledge, skills and abilities necessary to excel as a middle or senior manager within both the public and private spheres of Canada’s health care sector.

MHM faculty members Glen Randall, Patricia Wakefield and Terry Flynn identified that some research in the area of distance education suggests that additional positive outcomes may be associated with the provision of synchronous versus asynchronous educational methods. However, providing synchronous online education can be more expensive, cumbersome to deliver, and inconvenient for students who are employed full-time.

We thus used the creation of this new graduate program as an opportunity to design a research project that assesses the impact of using an onsite residency period (in this case three days) to supplement the online learning experience of students. The objective was to determine whether or not the introduction of a face-to-face educational intervention improves student learning experiences and outcomes in an otherwise asynchronous online learning environment. The research project consisted of designing a survey of student learning experiences that was administered both prior to and following the onsite residency intervention. Questions addressed a wide range of issues including background information on students’ past experiences and comfort levels with online education as well as their current level of satisfaction with the online tools being used.

While the analysis of the data is not yet complete, preliminary results indicate that students’ opinions of the online format are favourable, but that they also feel that it is essential to have some form of face-to-face interaction among students and instructors (residency time, use of Skype, online synchronous chats whenever possible). While qualitative comments indicate that the onsite residency was a valuable addition to the MHM program, helping to build a greater sense of community within the cohort and facilitating greater student-to-student connections following the intervention, quantitative results were not statistically significant pre and post the residency (possibly due to the small sample size). What remains is to determine how long lasting the effects of the intervention are in order to best decide where such interventions should ideally be placed throughout the program.
Award-Winning Instruction

McMaster Names New Recipients of the President’s Awards for Excellence in Teaching
Lori Goff - Educational Consultant, CLL

This past spring, McMaster once again celebrated three remarkable educators by way of the President’s Awards for Excellence in Teaching. These awards demonstrate the value that McMaster attaches to its educational function and recognize those who, through innovation and commitment, have significantly enhanced the quality of student learning. This year’s recipients certainly fit this description. Brief profiles of their excellent work can be accessed by clicking on the links which follow their names below.

**Carlos Filipe**
Department of Chemical Engineering
Recipient of a 2011 President’s Award for Instruction
http://cll.mcmaster.ca/awards_and_grants/Carlos_Filipe.html

**Mandeep Malik**
DeGroote School of Business
Recipient of a 2011 President’s Award for Instruction
http://cll.mcmaster.ca/awards_and_grants/Mandeep_Malik.html

**Karen Finlay**
Department of Diagnostic Radiology
Recipient of a 2011 President’s Award for Educational Leadership
http://cll.mcmaster.ca/awards_and_grants/Karen_Finlay.html

President’s Retreat for Past Recipients of President’s Awards for Excellence in Teaching

Dr. Alan Neville - Associate Dean, Education, Faculty of Health Sciences

This past June, I was privileged to be invited as a previous recipient of a President’s Award for Educational Leadership to a retreat hosted by the President, Patrick Deane, for past recipients of President’s Awards for Excellence in Teaching. The retreat gave me an uncommon opportunity to meet educational leaders from all parts of the university campus.

In his opening address, Patrick Deane recommitted the University to improving the student experience. He noted that universities have been successful in increasing research funding and research activity, perhaps at the expense of losing focus on the quality of the educational experience provided to our students. Patrick Deane also suggested that this was an opportune time for McMaster University to define its identity as an educational institution as we anticipate a new vision document from AUCC, the signing of a strategic enrolment agreement between McMaster and the Provincial Government and the possible future decoupling of funding from growth.

For me, the most interesting part of the day was the opportunity to participate in a small group discussion with colleagues from different parts of the university. In addition to considering the “possibilities” for McMaster with respect to various teaching and learning issues, the group in which I participated also spent considerable time allowing each member to describe a teaching or educational “pearl” that was worth sharing with colleagues.

While the sheer weight of student numbers in some courses may be intimidating to those who want to innovate instructional design, there was certainly enthusiasm in the group for using educational technology appropriately to foster a student centred approach even when classes are large. Some talked of taking education out of the classroom and fostering a service learning approach to education where possible and relevant. When small groups reconvened for a closing plenary at the end of the day, it was clear that the educational leaders at McMaster are not short of innovative ideas, but a one day retreat can do little more than surface these ideas and there will need to be ongoing opportunities for sharing of these ideas across the university.