Great Teaching Revealed

INSIDE:
- TEACHING BY DESIGN
- GOING THAT EXTRA MILE
- THE POET PEDAGOGUE

A SPECIAL ISSUE OF RESEARCHLIFE
MESSAGE

FROM THE VICE-PRESIDENT (ACADEMIC) AND PROVOST

Welcome to this special issue of TeachingLIFE, where the University of Manitoba celebrates our teaching innovation and excellence.

The University of Manitoba has been recognized as Manitoba’s premier university, bringing teaching to life for well over a century. Our university offers over 100 programs and 5,500 courses. From the development of the first MOOC (massive open online course), to innovative service learning courses such as Architecture’s focus on “designing for a more socially responsible future”, to the inner city social work program at the William Norrie Centre on Selkirk Avenue that teaches Indigenous ways of practice, our teaching and student engagement activities have made contributions that have local, national and global impact.

I invite you to turn the page and step into the exciting world of teaching and learning at the University of Manitoba. You will be inspired by what you find. University teachers across disciplines are working passionately and diligently to enhance the student learning experience. Whether it is refining the instructional design of a course, using tools like videos, iPads and e-learning, or creating group work and field experiences, this magazine conveys the commitment and rigour of our faculty in their approaches to teaching.

This issue also highlights our award-winning teachers and presents recent publications by our instructors and faculty. This issue showcases the broad range of approaches and contributions to teaching and learning that happen across our diverse campus. I am very proud of the accomplishments of my colleagues. At the University of Manitoba, teaching matters and it is something to celebrate!

—Joanne C. Keselman, PhD
INSIGHTS

Dr. Janice Ristock, Vice-Provost (Academic Affairs)

TEACHING BY DESIGN

Education professor Jennifer Katz saw a need to adapt to the changing student population in her classrooms, to create inclusive classrooms. She found an innovative use of an architectural design principal to do just that. BY ANDREA DI UBALDO

NOT BY THE BOOK

Lance Roberts is a gifted teacher who embraces the challenge of teaching today’s student. He strives to develop the optimal teacher/student relationship that he knows allows learning to happen. BY KATIE CHALMERS-BROOKS

THE POET PEDAGOGUE

Storytelling plays a large role in Aboriginal teaching methodologies. Native studies instructor Agnieszka Pawlowska shares her personal teaching philosophy—things she has learned and continues to learn in her journey, both in the boreal forest and as a new teacher. BY AGNIESZKA PAWLOWSKA

GREAT TEACHING REVEALED

Mathematics instructor Robert Borgersen uses all the resources at his disposal to enable students to succeed. He is a true educational pioneer, testing the waters of educational technology. BY CHRIS RUTKOWSKI

TeachingLIFE

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Elders have the biggest impact in guiding the course, which involves a 5-day intensive retreat where students set up camp and live ‘on the land’; gather supplies and set up a sweat lodge; participate in sharing circles and ceremonies; and listen to presentations and storytelling from a variety of Indigenous perspectives such as Cree, Anishinaabe and Dakota. “Elders come in, share their own stories about healing processes they go through, and what they do to help others using their own stories—personal stories,” says Hart.

Students in social work, law, education, arts and more have benefited from taking the course. “Their eyes are opened up widely,” says Hart.

While the course also includes reading and writing assignments, the emphasis is on learning by doing. According to Hart, “The experiential part is vital.” He explains, “We’re reflecting Indigenous ways of being, and we’re being consistent in our own epistemologies and our own pedagogies so that students have a full experience as opposed to just reading about it.”

Learning to Listen

FOR THE PAST TWO YEARS, NURSING PROFESSORS ELAINE MORDOCH AND DONNA MARTIN HAVE BEEN TEACHING GRADUATE STUDENTS ABOUT MULTIPLE REALITIES. THOUGH THE SYLLABUS DOES NOT GUARANTEE IT, THE COURSE PROVIDES A TRANSFORMATIONAL LEARNING EXPERIENCE: STUDENTS WILL UNDERGO A DEEP STRUCTURAL SHIFT IN THE BASIC PREMISE OF THEIR THOUGHTS AND FEELINGS AND ACTIONS.

“We’re trying to teach nurses and other students to really think about the context of people’s lives, to understand people’s stories and not be judgmental. When two people are sick with the same type of cancer, their journeys often play out differently and we want nurses who understand this, respect people for that, and try to help them on that unique journey,” Mordoch says.

Martin and Mordoch teach this in their Qualitative Research Methods course using the book The Help by Kathryn Stockett. The Help is rich in characters and political and social undertones foreign to a Canadian graduate student. The students focus on various themes in the book and record their thoughts and reactions in the margin. They then interview each other about their reactions and transcribe the interview. This process allows students to really listen to opposing views. They begin to question the genesis of their own assumptions—culture, gender, personal history perhaps—and once discovered, they begin to learn to suspend these assumptions, letting the data speak for itself. Equipped with this skill, they are better able to listen to others through unbiased paradigms.

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Above: Professor Michael Hart

Michael Hart, is playing a lead role in sharing indigenous healing and helping practices. A Canada Research Chair in Indigenous Knowledges and Social Work, Hart teaches the course Indigenous Ways of Practice, which connects students with a deeper understanding of Indigenous cultures and peoples in Manitoba through experiential and participatory learning. The course challenges students to explore views that may be different than their own, and encourages them to expand their repertoire of helping methods, to positively impact clients and communities.
AT THE LEGAL HELP CENTRE, U OF M LAW STUDENTS HELP DISADVANTAGED PEOPLE NAVIGATE OUR COMPLEX LEGAL SYSTEM AND ASSERT THEIR RIGHTS. BY GIVING THEIR TIME TO THOSE WHO CAN’T AFFORD A LAWYER THEY GAIN A BETTER UNDERSTANDING OF THEIR FUTURE ROLE.

“My internship is among my favourite law school experiences,” says Jayme Menzies. “It has granted me invaluable experience but has also contributed to my sense of purpose as I work my way through an education that can be confusing and frustrating at times. Learning to further understand and respect economically disadvantaged community members has made the Legal Help Centre a refreshing environment in which to work. With this internship program Robson Hall can continue contributing to a sustainable source for accessing justice.”

Three years ago, the Faculty of Law introduced several service learning internships, bridging the academic study of law and its practice in the community. In addition to serving clients at the Legal Help Centre—focusing on family, tenancy and immigration matters—students have the opportunity to get involved at the University Law Centre (guided by Legal Aid lawyers) and the Public Interest Law Centre.

The latter tackles policy issues related to consumers, poverty, the environment, and Aboriginal and Charter of Rights challenges. Unique in Canada, the Centre takes on test cases for public interest groups and low-income people.

Connecting academic study with service contributes to learning that is deeper and longer lasting, says Faculty of Law dean Lorna Turnbull. “Students engage in problem solving by drawing on the substantive knowledge they have acquired over the course of their law studies, while serving the needs of underserved members of our community.

SOIL SCIENTISTS DON FLATEN AND PAUL BULLOCK KNOW THE VALUE OF THE CASE STUDY AS A TEACHING TOOL.

They are part of a team (three professors, two teaching assistants and one farmer) that deliver the Diploma in Agriculture course SOIL 0620 Soil Conservation and Management. The core knowledge provided through lectures is brought to life in the lab section of the class, where the students are divided into small teams and presented with “real-world” challenges of soil management and conservation.

All the labs focus on a case farm based on a Brandon area organic operation owned and operated by Ian Grossart, a graduate of the diploma program himself. Students analyze the soils, landscape, weather and air photos to assess land and water related environmental risks, then discuss how to mitigate and adapt to them. The issues include climate risk, nutrient management, salinity, erosion and irrigation.

Bullock says the lab exercises have students seriously debating among themselves the pros and cons of the various management choices to address the situations.

“It is clear that a level of engagement has been achieved that is triggering serious thought that should stay with these students long past the final lab exercise,” he said.

Bringing the Field to the Faculty
KUDOS

TEACHING AWARDS

UNIVERSITY I (UI)

U1 offers an annual award to recognize excellence in teaching among those teaching courses included on the U1 list of recommended introductory courses. Students nominate an instructor who was instrumental in helping them make a successful academic and personal transition to the University of Manitoba; and/or stimulated their interest in the subject area he/she taught; and/or was enthusiastic, organized, and facilitated effective learning.

The award winners for 2011-2012 were:

PROFESSOR ROB BORGersen, MATheMATICS, FACULTY OF SCiENCE

Student comments:

“Professor Borgersen enjoys teaching, which makes a huge difference. He makes himself very accessible and adds humor into the class. He has been extremely accessible, helpful and organized. He put up a website in which there are resources and remarks that are vital to the course. You can also email him or Skype him any time of the day. I think he is doing a great job teaching!”

PROFESSOR WILLiAM KORYTOSki, MATheMATICS, FACULTY OF SCiENCE

Ongoing Outstanding Teacher 2011-2012 Award Winner

Student comments:

“Thanks to Professor Korytowski, I did pretty well and actually enjoyed the class. He is very enthusiastic and has a very effective way of explaining things. If you didn’t understand one way, he was quick to think of another way to explain. I would consider taking more math classes if I could take them with him. He’s an amazing professor!”

“I ranked him all fives on the categories on the nominations form because he is truly deserving of each and every one of those fives. Even though we are in a large classroom, he makes us all feel like individuals and treats every question with direct explanations. It is evident he does everything to make his students succeed.”

PROFESSOR LANCE ROBERTS, SOCiOLOGY, FACULTY OF ARTS

Student comments:

“Professor Roberts related subjects to everyday life, making us interested in all lectures. This also made it easier to learn and helped me get through the first term smoothly.”

“Professor Roberts genuinely tried to help his students succeed in the field of Sociology.”

“One of the best professors I’ve had thus far!”

“I loved his lectures so much!”

PROFESSOR ROBERT SMith, ENGLISH, FILM & THEATRE, FACULTY OF ARTS

Student comments:

“Professor Smith is a very good teacher who enabled the students to participate in discussions and helped us to write better essays. He is always full of energy.”

“Professor Smith is one of the best theatre instructors I have ever had. He inspires me to be the best actor that I can be.”

“Professor Smith is one of the best theatre instructors I have ever had. He inspires me to be the best actor that I can be.”

Top: Robert Smith
From Left to Right: Rob Borgersen, William Korytowski, and Lance Roberts
TEACHING AWARDS

The University encourages and supports excellence in teaching through awards that recognize academic staff members who have earned outstanding reputations as teachers. All students in their graduating year, as well as recent graduates and colleagues, are invited to nominate academic staff members for consideration for teaching awards. 2012 marked the 45th year that the Stanton Award for Excellence in Teaching, and the 42nd year for the Dr. and Mrs. H.H. Saunderson Award for Excellence in Teaching were presented at the spring convocation ceremonies.

**DR. AND MRS. H. H. SAUNDERTON AWARD FOR EXCELLENCE IN TEACHING**

**ROBERT J. ELIAS, GEOLOGICAL SCIENCES, CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES**

An exceptional teacher, award-winning researcher and holder of a world record for his work, Robert J. Elias is dedicated to his students and to furthering knowledge in geology. Despite his reputation with students for crafting difficult tests, they describe him as “awesome”. Known for his humour and slideshows, Professor Elias has received various teaching and research awards over the course of his career.

**SUBRAMANIAN (SUDDU) SIVARAMAKRISHNAN, MARKETING, ASPER SCHOOL OF BUSINESS**

Recognized for his extensive knowledge, humour and dedication to his students and community, Dr. Subramanian Sivaramakrishnan is an award-winning educator and researcher. His students praise his dedication to teaching and ability to make them enthusiastic about learning. His students enjoy his ability to infuse lectures with humorous anecdotes and to provide abundant examples to illustrate points.

**OLIVE BEATRICE STANTON AWARD FOR TEACHING EXCELLENCE**

**PAULINE BRODERICK, FACULTY OF EDUCATION**

Dedicated to the arts and the improvement of her community, Pauline Broderick instills her students with the same passion for drama and knowledge she holds. She inspires her students with a passion for the arts which she has carried with her from her days as a teacher at the Prairie Theatre Exchange Theatre School. While there, she expanded the theatre's role in using drama as a means of developing life skills and social awareness through her work with the Choices Program, an anti-gang initiative, and Upward Bound, an innovative adult education program.

**BARBARA GOODWIN, FACULTY OF NURSING**

Recognized as an exceptional educator, Barbara Goodwin is an award-winning professor who uses humour and her extensive experience to infuse students with a passion for nursing. This teaching award comes as no surprise to her students who proclaim her to be the “best prof ever”. She is known for her lighthearted approach, ability to explain complex material, and for possessing a humour that can lighten the mood of a challenging course.
It’s the kind of event where a box of tissue papers lay at the ready by the podium. At the annual Student Teacher Recognition awards, graduating students invite a professor, and a high school or elementary school teacher, to simultaneously stand in front of a crowd while their greatness is extolled.

“This is one of the best events of the university year,” Mark Torchia, director of University Teaching Services, said prior to the event. “Each year, graduating students give personal and touching tributes to certain men and women who made such a difference in their lives and inspired them to become the trailblazers and challengers they are today.”

Emotional though it got, surprisingly, elocution did not suffer from sobs or mumbles; perhaps thanks to past oration teachers, or perhaps thanks to the excitement of the day, which gave levity to the speeches.

Coming into the auditorium a young woman remarked to her companion, “This is exciting.”

“So exciting,” the other woman, Mary Hall, said.

“My son Thomas is being recognized but I’m also a teacher and I also teach at the university and that’s why I’m so excited,” Hall explained when asked why she was excited. “I really think it’s wonderful for the university to recognize the people that have made such an impact on the learning of young people through their dedication and their outstanding teaching and their commitment and their care.”

In the event’s 20-year history, over 800 teachers have been honoured. Some teachers come from around the world to attend; this year a teacher came from Dubai. The 2012 event saw, for the first time, a father and son get recognized for their teaching: Frank Hechter, a professor of orthodontics, and his son Richard Hechter, a teacher at the Collegiate at the University of Winnipeg (and assistant professor at the U of M’s Faculty of Education).

This year’s theme was “going the extra mile”, and although School of Art student Kae Sasaki could not thank her high school teacher, Hiroyuki Kondo, in person because he could not travel the miles from Japan, she nevertheless honoured him, and her sculpture professor Gordon Reeve, whom she wrote a humorous haiku for.

“Professor Gordon Reeve/You’re the wind beneath our wings/ Flap flap flap flap flap.”

Teachers deserve to be celebrated for innumerable reasons but one reason seemed prevalent in most speeches, and it was something the Province’s Minister of Advanced Education and Literacy, Erin Selby, noted at the beginning of the event: Great, impactful teachers have the ability to see a student’s potential and nurture it, even before the student knew that potential was there.

Many of these great teachers were trained by the University of Manitoba’s Faculty of Education, an innovative faculty that challenges its students, amplifying their passion and honing their natural teaching talent.
University Teaching Services (UTS) began more than 20 years ago and has played an important role in the teaching and learning environment at the University of Manitoba. Now, more than ever, that role has become critical. To better reflect our broadening and scholarly mandate, UTS is changing its name: effective May 15, 2013 we are now the Centre for the Advancement of Teaching and Learning.

When we reflect on today’s trends in higher education, it is apparent that there are many pressures on instructors across North America; greater competition for grant funds, increasing learner-teacher ratios, accelerating enrollment in graduate programs. Students similarly have pressures and needs; expectations for experiential learning and technology-based approaches to learning, in-school employment rates of 45%, family and job market pressures.

All of these considerations (and many more) create impacts on the process of teaching and learning and the Centre finds itself right in the middle! And that is just where we thrive.

With a mission that encompasses all of the strategic areas of importance at the U of M, i.e. academic enhancement, student experience, Indigenous achievement and being an outstanding workplace, there is no shortage of opportunities for the Centre to positively impact teaching and learning.

Everyone in our unit is always ready to engage and assist, whether that is to design and provide custom workshops, explore new learning initiatives, or provide teaching and learning consultation for departments or faculties. Planning or revising a curriculum? About to undergo an accreditation visit? We provide resources. Need to learn more about how to use technology and engage learners through active learning strategies? Look no further than the Centre.

To learn more visit umanitoba.ca/uts
WHAT IS TEACHING FOR?
Most professors, if asked—“What is research for?”—can readily answer: “It contributes to the production of knowledge; it is for discovery; it solves problems; it contributes to my discipline; it is my career focus – where my expertise lies, my passion.” Professors can often point to the significant contribution that our research makes in the development of new technologies, clinical procedures, social policies, etc. that make a difference to individuals, organizations, and society. But when asked—“What is teaching for?” answers beyond conveying knowledge (“professing”) may not spring to mind as readily as they do for the question “what is the value of research?”

By Janice Ristock, PhD, Vice-Provost (Academic Affairs)

If we look at universities across the country, we see that they have been placing more emphasis on teaching and learning in part because of a greater focus on student engagement and the desire to enhance the student learning experience. While the impetus may sometimes have been more enrolment-driven than purely student-centred, valuable developments have ensued from the turn to pedagogy; for example, new vice-provost (teaching and learning) positions, expanded centres of teaching and learning, and the establishment of teaching chairs who focus on the scholarship of teaching and learning and on promoting teaching innovations and excellence.

Yet the higher education system has recently been accused of failing its students. In the book, Academically Adrift: Limited Learning on College Campuses, authors Richard Arum and Josipa Roksa suggest that students don’t seem to be learning much and that universities have failed students in teaching writing, critical thinking, complex reasoning, and leadership skills. They argue that part of the failure is due to lack of academic rigor—as though there is an inverse relationship of sorts between engaging students and challenging them.

Another recent volume on the state of higher education (Managing Technology in Higher Education: Strategies for Transforming Teaching and Learning) challenges universities to think into the future about what our teaching delivery and learning environments should look like: “We need to move away from the dominant paradigm of the fixed time and place classroom as the default model for university and college teaching, and think of all the many other ways we could organize and manage teaching.” MOOCs (Massive open online course) have almost become the order of the day.

These challenges are significant, if not daunting, especially for individual faculty members working to balance the demands of teaching, research, and service. They also raise the need to consider, at an institutional level, how universities can better support and value teaching and how research-intensive universities might strive for a reputation of teaching excellence that parallels our reputation for research excellence.

At the University of Manitoba much has been going on in the area of teaching and learning. This special issue is a testament to our teaching excellence and the content that highlight many individual faculty members from a range of disciplines that are effective, dedicated, and innovative teachers. University Teaching Services has been engaged with several faculties in the process of curriculum mapping—an approach to reviewing programs to help align teaching with learning outcomes and assessment practices. We have also struck a task force on blended and e-learning to help us develop a university-wide approach that considers the pedagogical and technological resources that are necessary to sustain it. Underlying much of this work is, still, the question, “what is teaching for?”

As we look across different disciplines, particularly professional schools like law, engineering, education and social work, we can perhaps more easily imagine and embrace the value of teaching. Fields like medicine, dentistry and nursing make it clear that the successful teaching of specific skills (from brain surgery to root canals) and assessment of situations and symptoms (stroke versus heart attack) can be a matter of life or death. Here the answer to “what is teaching for?” almost goes without saying.

Perhaps less well understood is the purpose of teaching in the liberal arts or basic sciences, particularly in an economic climate when the focus is often on what jobs students can get with an undergraduate degree. In these areas teaching is often about what Martha Nussbaum calls “the humanistic aspects of science and social science—the imaginative, creative aspect and the aspect of rigorous critical thought.” She makes a compelling argument that universities need to teach higher order analytical reasoning if we are to preserve a democratic, civil society. In many ways then, teaching students to think deeply about history, about how power operates, about the construction and meaning of categories, and about the greater validity of some forms of evidence over others, is also a matter of life and death.

Teaching is at the heart of what we do at the University of Manitoba and we strive for teaching excellence because we care about our students and seek to engage them in what matters most.
Robert Borgersen can’t play the piano.

But that’s okay, because he’s a math prof.

Nevertheless, he says the secret to students successfully learning math is to practice it a lot. “I like to compare it with playing the piano. There would be many things I would need to learn in order to be able to play piano well: what an octave is, the notes, how to read music, what a major and minor are, and so forth. But I still wouldn’t be able to do it unless I practiced.”

He adds: “I can’t play the piano, but because I practice, I can do math.”

Borgersen is an instructor in the mathematics department in the Faculty of Science. He explains: “Many people get through primary and secondary school without needing to practice math much, and so when you get to university and discover that practice is not just a good thing but is essential, it can be a very hard transition. I know it was for me.”

It is perhaps because he had to overcome that transition himself that Borgersen developed a passion for teaching math at the postsecondary level. He describes taking math courses in university as a rude awakening. “In my experience, most things taught through primary and secondary school is something to the effect of ‘learn this now, because you’ll need it later.’ But later never seems to come, so students understandably lose interest.

“Arriving in university, students are first asked to do more math for the sake of math, and then are asked to solve more applied problems. But these are generally the dreaded ‘word problems’ which they find very difficult. It seems to be a contradiction: students hate the ‘theoreticalness’ of math, but dread the complexity of word problems that apply math to the real world.”

Borgersen uses all the resources at his disposal to enable students in their coursework, including online practice tests, blogs and even social media. His online syllabus is a many-faceted stepping stone to mathematics resources around the world. There are links to online worksheets, answers to old exams and bonus assignments. He’s set up a web page for each class he teaches that gives the course outline, assignment due dates, problem solving hints, special announcements, office hours and a special departmental “Honesty Declaration Form” that must be printed off and handed in with each assignment. There is also a link to a wiki for one course (developed by mathematics Prof. Michael Doob): an internal web-based encyclopedic guide to material covered, such as definitions, equations and visual representations.
Still need more help? Borgersen has posted regular office hours and invites students to phone or email him if they have any questions. He even invites students to use Skype if they need some personal assistance.

Despite his truly “open door” policy (virtual and otherwise), Borgersen notes: “I only get maybe half a dozen [Skype] calls per term, and that’s in a term teaching nearly 500 students; although the students that use it like it. In the end, it gives me reassurance knowing that students have little excuse for not getting help with the content, since I am making myself so available.”

Borgersen is convinced that accessibility and availability are the keys to effective learning and instruction.

“At the beginning of every term, I do a quick survey asking how many of the students have a laptop or netbook with a built-in camera, and how many of them use Skype already. Both questions receive an affirmative from a very large percentage of the class, so I know they are able to reach out for help if they need to do so.”

He notes that future teaching will look very different from traditional instruction: “I’m looking for a way to make it much easier for students to learn, using technology and resources that were not available previously. For example, I could have a video chat where they don’t need to login and don’t need a program, but just do it in their browser: click a button and they’re talking to me. I’m hoping this may produce great results.”

A true educational pioneer, Borgersen continues to test the waters of educational technology. He says: “I just experiment and try things out not afraid to fail, but rather, through failure I learn something more about the way the world works and the way my students think.”

As if multiple web pages and classroom teaching wasn’t enough, there are Borgersen’s blogs themselves. They include his ruminations of all things mathematical and also introspective posts on educational technology and best practices of teaching. His posts allow him to speculate on the nature of reality, current issues in the news and the philosophy of learning.

As an example, in response to a question posed to him on Facebook, Borgersen posted the exchange in his personal blog. The original query was whether professors should: “cater to the needs and learning styles of their students, or if students just need to suck it up and learn no matter how the professor teaches.”

He replied at length, and summarized his viewpoint: “When students work hard and show a desire and interest in the content, the professor is under a moral obligation to give them the good that is due them.”

He added: “A teacher’s job is to teach. A student (a.k.a. learner)’s job is to learn. That’s why it makes sense to fire a teacher

A true educational pioneer, Borgersen continues to test the waters of educational technology.
who doesn’t teach, and fail a student who doesn’t learn—rather than fail a student whose teacher doesn’t teach, or fire a teacher when his or her students don’t learn. However, good teachers will strive to help their students in any way they can, whether it be out of empathy, out of an ethical imperative, out of a moral imperative or something else.”

Borgersen has tried to help students overcome a fear or aversion to math by trying to be more approachable, more accessible and yes, even more entertaining than many other instructors.

When asked the secret to teaching students in a way that makes them more interested in math, he replies: “I wish I knew. Many people smarter than I have tried to answer that question. For me, I find that a certain amount of ‘entertainment’ is necessary to hold students’ attention. I recognize that I am ‘putting on a show.’”

When he first started teaching, getting through to students was a challenge, because Borgersen says he is “a quiet guy; very much an introvert.” But over the years he learned to get “outside himself” and now is “more like the teacher they need me to be.”

He explains: “I have a collection of jokes that I pull from and reuse on a yearly sometimes even weekly basis. Many are lame intentionally and some not intentionally but the point is to entertain, and they do their job.”

What kind of jokes does one use in a math class?

“A gag I use often is a reference to my horrible memory. I’ll tell them, ‘I have a horrible memory. Have I told you that before? I can’t remember...’ I say it often enough about eight or nine times per term that it gets a laugh from them whenever I do.”

There’s also the ancient one-liner: “There are three kinds of people in the world: those who can count, and those who can’t.”

Borgersen uses a version of that one, adapted for advanced math: “There are 10 types of people: those who understand binary and those who don’t.”

(If you don’t get that one, don’t worry about it. It’s a geek thing.)

He continues: “One joke that is specific to calculus classes is when I reference the boy in the movie 28 Weeks Later who has two different eye colours. I note that his being in the room would make ‘the function that maps everyone in the room to their eye colour’ no longer a function!” Pah-DUM-pum!

Maybe you had to be there.

Maybe it was his growing up in the south part of Winnipeg.

Borgersen graduated from Collège St. Norbert Collegiate in 2000, then did a joint undergraduate degree at the University of Manitoba in the joint math and computer science program, with the co-op option. Graduating in 2004, he started his masters program and completed it in 2008. He’s been teaching ever since, and has a typical course load today of six lecture sections each calendar year.

With his frenetic use of resources and passionate view of his field, it’s obvious Borgersen sincerely enjoys math.

“For me, math is all about truth,” he explains. “I love how there’s no in-between in math; everything is true or false. If 1000 people think one way, but the truth is the other way, the truth is the truth. It’s very powerful.

“I love communicating truth to people. I hope that in every interaction I have with people, I guide them towards a more correct understanding of how the universe works. I constantly strive to move myself more in line with how the universe truly works, and with the truths in the universe.”

So, rather than the truth being “out there,” as one TV show would insist, Borgersen finds truth in the preciseness and elegance of mathematics.

He explains: “I want to be like the Bereans described in the Bible, in Acts 17, who were said to have ‘noble character’ because they didn’t just take what they were told at face value, but rather searched out to determine if what they were taught was true.”

With such a strong desire to educate students in the universal truths and elegant solutions demonstrated through mathematics, Borgersen may be one of the last truly noble lecturer/philosophers.

At least, one of the few ones on Skype.

And again, what’s the secret to learning math? Borgersen says it’s like the old joke about the tourist who gets on a bus in New York and asks the driver: “How do I get to Carnegie Hall?” The bus driver replies: “Practice!”
TEACHING TO DIVERSITY: THE THREE-BLOCK MODEL OF UNIVERSAL DESIGN FOR LEARNING  
(Portage & Main Press, 2012)  
Jennifer Katz • educational administration, foundations and psychology  

In her book *Teaching to Diversity*, Dr. Jennifer Katz synthesizes the research, and 16 years experience of teaching in inclusive classrooms and schools, to provide answers to several questions:  
- How do I make inclusion work for ALL students?  
- What are the foundational best practices of a truly inclusive learning community?  
- How does one create such a community?  

The author pulls together, in an organized way, a three-block model of universal design for learning (UDL) and suggests a step-by-step approach for implementing it. This framework includes:  
- Block One, Social and Emotional Learning: details ways to build compassionate learning communities (K–12) in which all students feel safe and valued, and develop a positive self-concept, sense of belonging, and respect for diverse others.  
- Block Two, Inclusive Instructional Practice: includes a framework for planning units from K–12, and explains instructional and management practices for teaching, assessing, grading, and reporting in UDL Classrooms.  
- Block Three, Systems and Structures: suggests strategies for creating inclusive learning communities, and explores ways in which resource teachers, student services personnel, and school administrators can support and create socially and academically inclusive schools and classrooms. The three-block model of UDL can empower educators with the knowledge, skills, and confidence required to teach diverse learners in the same classroom—including those who have previously been excluded. Ultimately, it is about creating classrooms and schools that heal by teaching to the heart, mind, and spirit of every student.

ABORIGINAL JUSTICE AND THE CHARTER, REALIZING A CULTURALLY SENSITIVE INTERPRETATION OF LEGAL RIGHTS?  
(UBC Press, 2013)  
David Milward • law  

How can Aboriginal justice be practically implemented in ways that go beyond sentencing initiatives and parallels to restorative justice? *Aboriginal Justice and the Charter* explores the tension between Aboriginal justice methods and the Canadian Charter of Rights and Freedoms, seeking practical ways to implement Aboriginal justice. David Milward examines nine legal rights guaranteed by the Charter and undertakes a thorough search for interpretations sensitive to Aboriginal culture.  
Milward strikes out into new territory well beyond that charted by the Royal Commission on Aboriginal Peoples in the mid-1990s. He examines why Aboriginal communities seek to explore different paths in this area and identifies some of the applicable constitutional constraints. This book considers a number of specific areas of the criminal justice process in which Aboriginal communities may wish to adopt different approaches, tests these approaches against constitutional imperatives, and offers practical proposals for reconciling the various matters at stake. Milward grapples with the difficult question of how Aboriginal justice systems can be fair to victims, offenders, and the community while at the same time complying with the protections guaranteed to all Canadians by the Charter.

TO HELL AND HIGHWATER: WALKING IN THE FOOTSTEPS OF HENRY LAWSON  
(Big Sky Publishing, 2012)  
Gregory Bryan • curriculum teaching and learning  

*To Hell and High Water* tells the story of the quest of two brothers to conquer the extreme conditions of outback Australia, recreating for the first time ever, the Bourke to Hungerford ‘tramp’ that influenced some of Australian literary legend Henry Lawson’s greatest works.  
The book is part autobiography and part biography. It is an autobiography of the author’s experiences with his brother, overcoming significant obstacles to achieve his dream of walking in Lawson’s footsteps. It paints a vivid picture of some of Australia’s most remote country, the challenges and dangers, the heat, the distance, mosquitoes, blisters and thirst.  
At the same time it blends in the biography of Henry Lawson’s captivating life including his marriage, struggles with alcoholism, his suicide attempt, influences upon his writing and his ideals of mateship. Extracts of Lawson’s own writing have been carefully selected and woven
into the narrative in a manner that draws parallels between the two experiences and offers fresh insights into his life.

It is a story both of Australia’s past and Australia’s present—in fact a relatively little known past and present. This is an opportunity for readers to find out about an Australia that they know “nought about.” This book is also the story of an ordinary person achieving extraordinary things through unwavering mateship and a dogged determination never to give up. (Text provided by publisher)

(Cistercian Publications, 2012)
John Wortley • history
In the early part of the fourth century, a few Christians, mostly men and some women, began to withdraw from the world to retreat into the desert, there to practice their new religion more seriously. The person who aspired to renounce the world first had to find an elder, a person who would accept him as a disciple and apprentice. To his elder (whom he would address as abba father) the neophyte owed complete obedience; from his abba he would receive provisions (as it were) for the road to virtue. In addition to the abba’s own example of living, there was the verbal teaching of the elders in sayings and tales, setting out the theory and practice of the eremitic life. In due course, these sayings (or apophthegmata) were written down and, later, collected and codified. The earliest attempts to codify tales and sayings are now lost. As the collection grew, they were first organized alphabetically, according to the name of the abba who spoke them, in a major collection known as the Apophthegmata Patrum Alphabetica. A supplementary collection, the Anonymous Apophthegmata, followed. Later, both collections were combined and arranged systematically rather than alphabetically. This collection was created sometime between 500 and 575 and went through a couple of major revisions, the second of which appeared sometime before 970. This second revision was published in an excellent new critical edition, with a French translation, in 1993. Now, in The Book of the Elders, John Wortley offers an English translation of this collection, based entirely on the Greek of that text.

GEOPOLITICAL ECONOMY: AFTER US HEGEMONY, GLOBALIZATION AND EMPIRE
(Pluto Press, 2013)
Radhika Desai • political studies
Geopolitical Economy radically reinterprets the historical evolution of the world order, as a multi-polar world emerges from the dust of the financial and economic crisis. In a radical critique of the theories of US hegemony, globalization and empire which dominate academic international political economy and international relations, Desai reveals their ideological origins in successive failed US attempts at world dominance through the dollar. At a time of global upheavals and profound shifts in the distribution of world power, Geopolitical Economy forges a vivid and compelling account of the historical processes which are shaping the contemporary international order.

“DON’T BE SO GAY!” QUEERS, BULLYING, AND MAKING SCHOOLS SAFE
(UBC Press, 2013)
Donn Short • law
Recent cases of teen suicide linked with homophobic bullying have thrust the issue of school safety into the national spotlight. In “Don’t Be So Gay!” Queers, Bullying, and Making Schools Safe, Donn Short considers the effectiveness of safe-school legislation. Drawing on interviews with queer youth and their allies in the Toronto area, Short concludes that current legislation is more responsive than proactive. Moreover, cultural influences and peer pressure may be more powerful than legislation in shaping the school environment. Exploring how students’ own experiences, ideas, and definitions of safety might be translated into policy reform, this book offers a fresh perspective on a hotly debated issue.

CANADIAN HEALTH POLICY IN THE NEWS
WHY EVIDENCE MATTERS
(EvidenceNetwork.ca, 2012)
Edited by Noralou Roos • community health sciences, Sharon Manson Singer, Kathleen O’Grady, Camilla Tapp • community health sciences and Shannon Turczak • community health sciences
Canadian health policy will always be emerging and unfolding, responding to changing environmental and economic factors, new technologies, publicly held values and differing political landscapes. Canadian Health Policy in the News captures a moment in time and presents the issues that concern Canadians most, grounding our national discourse and debate on healthcare in the best evidence.

IMAGINING WINNIPEG: HISTORY THROUGH THE PHOTOGRAPHS OF L.B. FOOTE
(University of Manitoba Press, 2012)
Esyllt Jones • history
In an expanding and socially fractious early twentieth-century Winnipeg, Lewis Benjamin Foote (1873–1957) rose to become the city’s pre-eminent commercial photographer. Documenting everything from royal visits to deep poverty, from the building of the landmark Fort Garry Hotel to the riots of the 1919 General Strike, Foote’s photographs have come to be iconic representations of early Winnipeg life. In Imagining Winnipeg, historian Esyllt W. Jones takes us beyond the iconic to reveal the complex artist behind the lens and the conflicting ways in which his photographs have been used to give credence to diverse and sometimes irreconcilable views of Winnipeg’s past. Incorporating 160 stunning photographs from the more than 2,000 images in the Archives of Manitoba Foote Collection, Imagining Winnipeg challenges our understanding of visual history and the city we thought we knew.
IPAD
THE SWISS ARMY KNIFE OF THE CLASSROOM

by Amber Skrabek

AT A TIME WHEN MOST TEACHERS AND PROFESSORS STRUGGLE TO GET THEIR STUDENTS TO “POWER-DOWN” THEIR DEVICES SO THEY CAN BETTER LEARN THE MATERIAL, ONE PROFESSOR IN BIOSYSTEMS ENGINEERING IS EMBRACING THAT VERY TECHNOLOGY AND TURNING IT INTO HIS GREATEST TEACHING TOOL.

Ramanathan Sri Ranjan uses his iPad to effectively replace the functions of an overhead projector, computer, whiteboard and document camera. When the iPad was first released Ranjan experimented with it as a teaching tool. He bought the Documents to Go App that allowed him to open and save Word, Excel and PowerPoint files, but the slideshow feature was not very smooth and the transitions were slow during the presentation. However, when a PowerPoint file is opened in the Keynote App, Apple’s own version of PowerPoint, the slideshow ran smoothly. Some of Ranjan’s complex equations had to be recreated using the Formula App. Then Ranjan searched for an iPad App that would allow him to sketch and draw freely just like on a whiteboard. After reading and evaluating the reviews of several dozen Apps, he picked the Notes Plus App which allowed him to draw and sketch in a multitude of colours with multiple pen thicknesses. It had the ability to create and save a .pdf file that can be emailed from within the app. With a VGA adaptor, the iPad easily connected to the classroom projector which instantly recognized it.

Once his basic teaching technology needs were met, Ranjan began exploring other apps that could help enhance concept delivery. “Using my iPad in the classroom allows me to show real-world and real-time examples of what I am trying to explain to my students,” says Ranjan. “We are able to ‘fly’ to different sites using the Google Earth app to show watersheds, rivers, irrigation systems and drainage control structures.” The versatility of the iPad also allows Ranjan to take his students on virtual lab and field tours by using the UStream Broadcaster app which can turn an iPhone/iPad into a streaming webcam. There is also two-way communication available using the FaceTime app.

Recently, the NotesPlus App went through a major upgrade to allow annotation of .pdf files and instant web access and frame capture from within the app. This allows Ranjan to create additional teaching resources on the go. All his tests are set as “structured” questions where just enough space is provided for the students to write the answer. After the tests are graded, he opens a .pdf file of the blank test from within the NotesPlus App and uses a stylus to write the answers in class within the space provided. This was very helpful to the students, some of whom did not know how much detail was expected in the answer.

All this for a fraction of the cost of more “traditional” technology. A computer, whiteboard, overhead projector, document camera and all the related software would cost more than $6,500—an iPad with VGA adaptor, stylus and appropriate apps = approx. $650.

What was the student experience? Was the technology distracting? At the end of the term, students were asked to provide their experience with the use of this technology. The students expressed overwhelming satisfaction with the way the iPad was used as a tool to teach in the classroom.

So when you enter Ranjan’s class, don’t “power-down”, it’s time to “power-up.”
During the last four decades, interest has grown about the transition of high school students to college and university. Researchers have noted that faculty believe students are ill-prepared for post-secondary studies. Increasingly, students have observed the same phenomenon, complaining that it’s assumed they have greater knowledge than they actually do.

Most students, whether they come to the university directly from high school or return to their studies at a later date, are familiar with the learning environment of high school (characterized by a significant degree of direct instruction). As a result, they’ll often default to that paradigm when determining their role as learners.

University instructors, however, expect students to be more independent in their studies. This difference in expectations often leads to difficulties for first-year students, not because they are unable to perform the tasks they are being asked to undertake, but because they do not understand what it is they are being asked to do.

Our research has shed some light on this discrepancy. Some of our findings indicate that first-year students:

• Are not accustomed to the responsibility of divining meaning from information and will often assume that the two are the same.
• Will often attempt to apply prior knowledge and existing learning strategies to new situations.
• May experience confusion in their classes because the new terminology for existing knowledge is unfamiliar.
• Often understand what they are being asked to do, but they do not understand how to do it.
• Initially require direct and explicit instruction, particularly in matters of procedure. Students need an opportunity to develop an understanding of new processes before being asked to undertake the task independently.

• Tend to focus on the information that is presented in class in discrete units. For example, individual facts, dates, phenomena and texts rather than as an organized whole.

We believe that most students can be taught to adapt to the new learning environment if instructors provide some degree of scaffolding in the first few semesters. Adjustments might include:

• Greater emphasis on direct and explicit instruction, particularly in matters of procedure. For example, frequent use of examples during lectures, detailed demonstrations of procedures, and comparisons between successful and unsuccessful attempts at particular assignments.
• Marking rubrics that clearly identify expectations for assignments.
• Marking schemes that allow students to learn from early evaluations by placing greater emphasis on later assignments and tests.
• Assignments that reward students for their attention to feedback, such as opportunities to rewrite and resubmit.
• Class discussions in which discrete facts are organized into meaningful conceptual frameworks.
• Discussions of the significance of specific events or phenomena.

Most research indicates that many struggling first-year students will learn to succeed if they are only given the chance to adjust to the new learning environment. As instructors, our contribution to that success lies not only in the passionate exploration of the important questions of our respective disciplines but also in the commitment to guide students through their apprenticeship to those disciplines.

Michael O’Brien Moran is the coordinator of Introduction to University, and L. Karen Soiferman is an instructor in that program.
TEACHING BY DESIGN

Researcher Jennifer Katz develops model for inclusive education, giving everyone the opportunity to contribute
With diversity in mind, Dr. Jennifer Katz, assistant professor of inclusive education in the Faculty of Education at the University of Manitoba, is working to create inclusive classrooms.

"Inclusion means that every child is a part of the social and academic life of the classroom regardless of gender, culture, language, ability/disability, sexual orientation or socio-economic status," says Katz. "Students coming to school should all have the chance to feel good about themselves and what they contribute to the community, the opportunity to experience success and growth, and feel a sense of belonging and interconnectedness to something larger than themselves."

This diversity means that students vary in what they already know, what they are ready to learn, how they learn and proceed through the curriculum, and the level of adult support they require for success.

Teaching for over 16 years in her own K–12 classrooms, Katz recognized that traditional teaching practices were not working for her increasingly diverse students. In 2000, she developed a program for establishing an inclusive learning community she called the Respecting Diversity (RD) program. The RD program appreciated the different learning styles of her students, and research indicated it resulted in improved self-concept, respect for others, an increased sense of belonging and pro-social behaviors, and reduced aggression among them.

Katz saw success with the RD program, so she applied that success towards development of a new practice for implementing inclusive education in her classroom that she calls the Three Block Model of Universal Design for Learning (UDL).

Universal Design actually comes from an architecture principle where spaces or buildings were designed from the beginning keeping accessibility for people with physical disabilities in mind," says Katz. "It is the concept of accessibility that is key to the transfer of UDL to education. It became about how do we give access to learning in classrooms; design instruction with diversity in mind."

Grabbing a piece of paper, Katz quickly draws a plant. "I asked one of my classes to draw the parts of a plant, and then I asked them to illustrate how the plant grows. They knew it needed water to grow," says Katz. "One student got all of the pieces of the plant exactly right, but she had trouble showing how the water fed the plant. I asked her which way the water had to go to feed the plant and that triggered that she needed to use arrows to demonstrate the water going up into the plant. She did what she was asked to do."

On the other side of the paper Katz draws an elevator with water in the bottom and what looks to be roots, a cable, and plant foliage at the top. She explains that the cable is the stem. "This is what another student drew to illustrate how a

The Three Block Model provides teachers with a method for preparing students for what they will actually be doing in the future and making education accessible for diverse populations.
plant grows—he demonstrated that the water went up the "stem" to get to the "top floor", which was the plants leaves. He got all of the parts of plants correct, but took it to another level by making the visual representation a metaphor. He went above what was asked of him."

Katz says that both were correct, but they learned differently and showed that they may be drawn to different fields or disciplines. "The first student used the skills and knowledge of a scientist and scientific diagram—knowing the parts and being able to show direction, while the second student used the skills and knowledge of a graphic designer or someone in marketing and advertising who is able to visually express an idea."

Katz explains that teaching using this model isn’t about lowering standards, but rather it’s about preparing students for what they will actually be doing in the future and making education accessible for diverse populations.

The Three Block model provides teachers with a method for creating inclusive environments and improving student engagement. Katz says, "The Three Block model offers teachers a way to include students and to ensure that students have the opportunity to realize their gifts."

"People had researched pieces of the model, but nobody had put them together," says Katz. "I asked, ‘How do I do them all at once?’"

Katz has broken the process of implementation into three blocks to help teachers manage the UDL model.

The first block, called Social and Emotional Learning, involves building compassionate learning communities, in which all students feel safe, valued, and have a sense of belonging. "This takes place at the start of the school year where the whole class looks at working as teammates instead of competing," says Katz. "Students learn to value who they are and what they have to contribute as learners, and to value the diverse skill sets and knowledge of their peers. As a result, bullying and aggressive behavior decrease."

In the second block, called Inclusive Instructional Practice, physical and instructional environments are designed so that students have access to differentiated learning opportunities in order to address their varied learning styles. "Course materials are differentiated in terms of level of difficulty, ways of acquiring knowledge, and strategies for demonstrating the multiple levels of understanding for each student," explains Katz. "Regular feedback and assessment is ongoing so that teachers
can assess for learning, and when needed, conduct evaluation of learning.”

In the final block of the model, *Systems and Structures*, provincial policy, funding, staffing, and other administrative practices are explored in order to promote an “inclusive school system.”

Charles Bendu, a special education resource teacher with Dufferin School in Winnipeg, has begun to implement the three-block model in his classrooms and has witnessed an increase in student engagement. “Once the room is set up and the students understand what their strengths are, the students can begin to demonstrate their learning from that point of view. What makes the UDL model so effective is that it helps teachers guide students to demonstrate their learning and to be engaged. It’s a very democratic and flexible way of instructing students at different levels.”

Katz completed a study in Manitoba of The Three-Block Model of Universal Design for Learning. Funded by a grant from the University of Manitoba, the study explored the instructional outcomes, as well as the social and emotional outcomes for students. Over 600 students and 58 teachers in 10 schools located in four school divisions participated.

Students in the study ranged from Grade 1 to Grade 12, and were located in a variety of rural, suburban, and inner city schools. Results confirmed the earlier findings of Katz’ RD program, which include improved student self-concept, respect for diverse others, sense of belonging, and perception of class climate.

As well, the study indicated that students were significantly more engaged in their learning, and specifically, were more actively engaged in their learning in UDL designed classrooms at all ages. Analyses were conducted to explore whether the model has differential impacts on students of varying ages, locations (i.e. rural versus urban), and gender. It was discovered that students in secondary UDL classes, on average, spent 42 out of 60 minutes actively engaged, while students in non-UDL classes spent seven out of 60 minutes actively engaged. While the results were profoundly significant at the high school level, significant effects were found at all ages, locations, and for all genders.

Teachers were also surveyed to determine their experience of teaching in this way – the benefits and challenges, student outcomes, and job satisfaction.

“We found that everyone is more engaged when we teach in this way—learners and teachers,” says Katz.

Katz says she will now focus more on the third block with a study in three school divisions in Manitoba looking at how they roll out the model on a large scale.

“Initially, I worked only on the outcomes. For this next project, in September 2013, I want to look at how we do this systematically—what needs to happen to implement the model as well as the outcomes if we do it one way versus another way,” she says.

Her research model has been adopted by the Canadian Research Centre for Inclusive Education. Katz has met with Jody Carr, the Minister of Education for New Brunswick, to discuss the model and New Brunswick is developing a three-year initiative to teach their teachers how to implement UDL in their classrooms.

Katz formed the Manitoba Alliance for Universal Design for Learning (MAUDel) to learn more about The Three-Block Model of Universal Design for Learning and to help move the inclusive education agenda forward in Manitoba. MAUDel includes members of the University of Manitoba and University of Winnipeg’s Faculty of Education, graduate students in the Faculty, members of the Manitoba Teacher’s Society, Manitoba Education, the Association for Community Living, and Manitoba First Nations Education Resource Centre, and teachers and administrators from many different school divisions across the province.

Katz regularly travels the country speaking to school staff, parent and teacher groups, governments and other community agencies educating them on UDL and inclusive education. Her book, *Teaching to Diversity: The Three-Block Model of Universal Design for Learning* (Katz, Jennifer. Winnipeg: Portage & Main, 2012), was published last spring and is being used by teachers across Canada.

To visually represent how each student learns, the class created a “community brain.”
CanU Challenges
Students to be Explorers

Faculty of Education students build relationships and discover new teaching practices

For the third year, bachelor of education (BEd) students mentored 60 students in grades five through seven from schools in Winnipeg’s inner city in literacy, art, and drama as part of a six-week afterschool program called CanU. The goal of CanU is to provide athletic, nutritional, and literacy learning opportunities to disadvantaged youth while encouraging them to plan for post-secondary education.

Over 45 education students volunteered in this year’s program, where they were paired with one or two mentees. Jeshpreenia Kaur, in the second year of the BEd middle years program, says her experience was one she will never forget. “It was amazing to see my two students grow from day one to the end,” she says. “They were both so shy at first. Each week, we would get a little bit closer and they would tell me something about themselves out of the blue. By the end we were having the best conversations that I will always remember.”

The Faculty of Education’s program for CanU was a collaborative effort led by a team of faculty: Michelle Honeyford, Gregory Bryan, Pauline Broderick, Liz Coffman, and Karen Boyd, a doctoral candidate in Language and Literacy. The program was designed to engage the students in exploring literacy and identity through visual and dramatic arts. CanU participants and their mentors rotated weekly, spending time together in interactive, hands-on workshops in art, drama, and writing—organized around themes from the picture book, Looking Like Me.

“We were challenged to work with our students to explore their identities through things like poetry, painting and drama,” explains Kaur. “We really got to build strong relationships with them because of the one-on-one time with them. That was really different from my practicum experiences. I learned that teaching is about building relationships.”

Honeyford explains that CanU gives faculty and BEd students the opportunity to bridge the gap between coursework and practicum. “In this space of CanU, we have an opportunity to model practice for our students, to teach alongside them, and then to discuss what we’ve learned,” she says. “In other words, teaching and mentoring aren’t limited by the structures we experience in coursework or practicum. They are experienced in action, together, and then they’re reflected upon.”

Top: Grades 5 through 7 CanU students from schools in Winnipeg’s inner city in literacy, art, and drama as part of the six-week after-school program. Below: Jeshpreenia Kaur and her mentee, Ross, discover their identities through art.
“It was great to work with our teachers and see them in their element and to reflect with them later,” says Kaur. “Through the CanU program I learned different ways of using visual arts, drama, and writing that I will be able to incorporate in my own teaching.”

CanU participants used the Faculty of Education’s facilities, allowing them to become familiar with the places, people and programs at the university and a greater sense of what the university has to offer.

“CanU has been very powerful for me as it has helped shape my teaching experience,” says Kaur. “It has also been amazing to see the kids exploring the university and believing that they can achieve a post-secondary education.”

Half a millimetre.
That’s all that was keeping Dario Schor from getting his team to assemble UMBUG ready for testing this past winter at the Canadian Space Agency (CSA) in Ottawa. When they had started putting together all the components of the spacecraft, the team discovered it was a smidgen too long.

“But it’s not a major problem,” he says. “It’s just a matter of grinding down the metal end of the spacecraft.”

Designing and assembling UMBUG (short for U of M Biology Unimpeded by Gravity satellite) was a labour of love and lack of sleep for the dedicated team of students and faculty advisors of the U of M Space Applications and Technology Society (UMSATS). UMBUG is about the size of a litre container of milk and it may be destined for Earth orbit.

“It was exciting to work on the first student-designed satellite in the province,” said Dario Schor, UMSATS project leader, a 28-year-old graduate student in computer engineering.

The UMBUG satellite is the end result of three years of work for more than 100 students from a variety of disciplines, including engineering, science, management and architecture, plus 50 advisors from academia and industry. Their impetus was an announcement in 2010 by the CSA about the Canadian Satellite Design Challenge (CSDC), a challenge for students in post-secondary institutions to design, build, and test an operational triple pico-satellite (T-Sat), with the winner heading for space.

The competition culminated in late 2012 when a panel of judges tested the entries for spaceworthiness and scientific value, and the design placed second in the competition.

The CSDC provided students with an opportunity to expand their understanding and skills learned in their university courses through hands-on experience while designing and managing a complex project. In the first phase, students were exposed to numerous learning opportunities that expanded their theoretical and practical knowledge as well as their communications and teamwork skills.

In the early stages of the competition, teams from the U of M, the University of British Columbia and Carleton University emerged with the top marks. In fact, the UMSATS team held the lead in the competition throughout the design stages.

UMBUG was designed to carry two scientific payloads. The primary payload was to launch into space a colony of microscopic organisms called tardigrades and monitor their behaviour when exposed to the harsh space environment, to see if they can reproduce in space.

A second onboard experiment was designed to obtain spectrographic data of the Sun over a broad range of frequencies. Despite its small size (a restriction forced by the cost and weight determinants of launching a satellite into space) UMBUG contained all the components necessary to control the experiments, communicate with a ground station at the university, provide power and control the orbit of the spacecraft, all done on a minimum budget.

In addition to the technical components of the mission, students needed to fundraise at least $75,000 and solicit donations of time and materials from aerospace and other firms. Funds would support the design efforts—developing prototypes, testing, final assembly—and travel costs to CSA’s Ottawa facilities for final testing. The support they received included financial as well as in-kind donations of equipment or expertise. Donors include: Magellan Aerospace, Texas Instruments, Shell Canada, The Winnipeg Foundation, StandardAero, and the Canadian Forces.

UMSATS is hard at work again, further improving its UMBUG for entry in the next CSDC competition and using collaborative tools such as wikis to facilitate communications between team members.
Sometimes what we learn in the classroom is what not to do.

For sociology professor Lance Roberts that lesson came early in his university career, when he was still a student and living in Alberta. It was decades ago yet he remembers vividly the physics professor who stood at the front of the room and did little more than recite the textbook, which he happened to have written. He had almost no interaction with his students. “He was a textbook wired for sound. There wasn’t a single thing that went on in that class that wasn’t in the textbook. I’ve never gotten over that,” says Roberts. “Our job is to creatively connect with students.”

And do so in the language they are most fluent in, he adds. Most of the 250 students in Roberts’ Introduction to Sociology course were using a computer before their first day of kindergarten. To gauge how much they’ve learned in his class, he invites them to communicate through a medium they are most comfortable with. That means producing a video, in addition to regular writing assignments.

“I think for many students, their digital skills are stronger than their written narrative skills. This is not a pitch to say the latter are unimportant but it says something about where our students are. These are students who live in a digital world. They’re wired. They’re connected. They’re different in some ways, so how can we draw upon that experience of theirs in some way that is meaningful?”

At the end of term, he transforms his lecture hall into his version of the Academy Awards. The top three video submissions in each category are revealed and premiered for the class.

The students use video to apply sociological principles to their chosen topic. This could mean analysing the lyrics of a country song or the androgynous main character in Mercer Mayer children’s books. “It’s a wonderful way for students to express their sociological imagination in a form that is closer to the world they live in,” Roberts says.

He also encourages participation in the “digital conversation” that unfolds regularly on his class website. His weekly
The classroom is a place where professors and students should feel comfortable to try and fail; that’s how you learn.

Roberts has earned several teaching awards since coming to the U of M from Edmonton nearly four decades ago. Most recently, he received the student-nominated 2011-12 Excellence in Teaching Award for University 1.

In teaching, he says, it’s important to avoid making assumptions about what your students know. “I guarantee you, in any large class, not all students will be able to compute percentages. Not all will know the equation for a straight line. Not all will know the date of the French Revolution or the difference between Bach and Beethoven. They won’t. And by the way, it’s not their fault. They didn’t create the education system that brought them to us.”

Dwelling on the debate about whether or not students today in fact arrive at university with less developed skills than they once did serves no useful purpose. “You need to begin where the students are,” Roberts insists.
And not alienate anyone if they stumble along the way. The classroom is a place where professors and students should feel comfortable to try and fail; that’s how you learn. “Any professor who comes off as so impressive that he or she never makes a mistake or any student who feels the same way, something is off.”

Roberts doesn’t take lightly those moments in class when a student misses the point and makes a comment that’s incorrect. He knows it, the other students know it, and if handled incorrectly, the interaction can be damaging to the confidence of all of the students. “It’s very easy to be shamed in a situation like that. And when people are shamed in a teaching and learning situation, I think it’s terrible,” he says. “Not only does it feel bad but it has consequences that inhibit your learning. You’ll be less willing to take the kinds of risks that are necessary to learn anything serious.”

Roberts diffuses the situation with humour. “A classroom that doesn’t have any laughter is a place that is not meeting the standard,” he says.

In his co-written book Authority in Classrooms, he describes the optimal relationship between a teacher and a student in order to achieve optimal learning. What role should a teacher take?

At one end of the scale, you have what Roberts calls the ‘Total Sophisticate’, who has a full command of the discipline, comes to class and fills the board and the lecture hall with points – and essentially disregards the students. This person is overly demanding and not supportive enough. On the other end of the scale, you’ll find what he calls the ‘Full Sentimentalist’, who is so concerned with supporting, nurturing, and reinforcing that too little is asked of his students. The ‘Warm Demander’ finds a balance between the two.

As such, Roberts aims to teach his students how to better connect what they’re learning to what’s going on in their personal lives. Over a cup of coffee, they’ll tell him about the mounting stress in their lives, yet they don’t make the link between their turmoil and the world conflict they just read about in the textbook. “There is this continuing challenge to help students make a connection between abstract concepts and principles and real-world concrete illustrations. Because last time I checked, sociology was about the social life of real people,” he says.

This is why it’s important to him to show video documentaries that reinforce the link. His students saw footage from an American boot camp revealing how ordinary 18-year-olds are transformed into marines capable of killing. They also got a better idea about cultural imperialism by watching Cola Conquest II: How Coke Took Over The World. Case studies like these give them an idea of what’s happening on a micro level.

To better understand what’s going on at the macro level, he brings in large-scale data sets for his students to analyze. For example, they looked at information from 189 communities to test the legitimacy of the nature versus nurture debate. These are data sets that in the past would have taken years to access. “It would have been virtually impossible—unless you were in a major centre like Paris, Boston, or Berlin—to get your hands on that kind of material. Now, high quality international data sets are publicly available,” Roberts says. “It’s an entirely different world and from a teaching point of view, it’s potentially a much more wonderful world.”

The physical space where students attend school also plays a role in their learning process, he notes. Roberts has gathered information from close to 1,000 schools across Canada, elementary through high school, to develop a better way of measuring how the condition of the building affects student performance. Governments spend billions of dollars every year renewing schools. But if you look at research in this area, you’ll find opposing findings about whether or not students actually benefit. There are studies that report a correlation—up to one letter grade—and studies that say there is no link. “I’ve spent the last five years looking into this question and figuring out what’s going on,” Roberts says.

He discovered that, currently, administration looks at the issue only from a property management perspective. From this angle, a classroom with a single one-square foot window would be deemed adequate—as long as it didn’t leak. But there would be no mention of how the lack of natural light affects the morale of the teacher and students who spend their days there.

Roberts has developed research tools to better gauge how a building influences the learning that happens within its walls. This means getting input from principals and teachers and asking them the right questions. “It’s a very interesting puzzle that has very important practical consequences,” says Roberts, who grew up in Edmonton.

His father was a working-class steam engineer; his mother stayed at home, and was “right out of the 1950s movies,” he says. Sociology first captured his imagination as an undergrad student, when he had inspiring professors who were also sociologists, people who “sparked (his) interest in this way of looking at the world.”

Now, he hopes to do the same for his students.

“Every year you get to start anew with a fresh set of faces who are among the brightest and best Manitoba has to offer and you get to make a difference in their lives. How does it get better than that?”
Agnieszka Pawlowska recently graduated from the Certification in Higher Education Teaching (CHET) program. She is currently pursuing a doctoral degree at the University of Manitoba in the Native Studies Department and has been teaching within the department. What follows is Agnieszka’s teaching philosophy, from her own experience and in her own voice.
Step, step, push, sit. Paddle paddle.
The reflection of the landscape against the water also reflects the pondering of teaching. With one paddle stroke after another, I imagine that the art of teaching is about fostering learning in a creative and challenging manner that reverts back to self-reflection. Like the canoe, whose design allows one to travel narrow pathways deep into the land, teaching is about motivating the student to explore the numerous channels and unique pathways of scholarly framework to the final destination: a different person, a changed society, a potential teacher.

Paddle paddle; as the dark water glides against the canoe, each paddle stroke brings me closer to my destination. My teaching goal is to provide students with a framework of knowledge through concepts, terminology and theories of the discipline of Native Studies and to enable them to develop an informed concern about contemporary social issues. While developing their ability to articulate verbally and through writing their prior knowledge and experiences, I strive to prompt students to make them think and question their roles in our society.

Paddle paddle. Critical thinking is engaged to provide the students with the skills to examine historical facts and contemporary representations of Indigenous people in mainstream society. I believe that my overarching goal is transformative education. Paddle … swoosh. I’ve crossed the channel.

Thump. Step, step. It is getting dark. As I unravel my tent and necessary equipment to prepare for the night, I know that an effective teacher needs to be organized. Carefully designed user-friendly syllabi, strategically timed lesson plans, visually appealing lecture slides, and content-targeted explanations help me set the stage for much of my teaching groundwork. My syllabus is filled with a convenient schedule, readings and lesson objectives as well as with the necessary terminology and grading rubrics. This will help the students know exactly what is expected of them each class and from the course overall. I always make sure that the weight of each assignment is low so as not to overburden and discourage the students; instead, I present them with an opportunity to develop skills through smaller attempts. This provides students with options and gives them more chances to succeed.

As I stir the fire and lean closer into the warmth of the flames, I think of the ways I try to create a warm and safe classroom environment. For me, this exists through a relationship with the students. In fact, compassion and understanding is a necessary key is the discipline of Native Studies. For instance, many of my Aboriginal students are mature students, some are single mothers; most are dealing with unresolved personal issues. Many come with low self-esteem, uncertainty, fear of failure—or with much expectation of failure—and some with no knowledge of their own history. I try to accommodate those needs through flexible yet regular office hours, through bi-weekly journals to help the students reflect on what they are learning and through scaffolding instruction (cf. Bruner) like research presentations. In addition, my tests are reflective of Bloom’s taxonomy: the first test is usually knowledge based, the second has some comprehension-based questions, and the third test is a mix of the first two levels intertwined with application and even some reflection. This gives the students a chance to recall, learn and identify their own knowledge. Finally, like the many different lessons I learn from my time in the bush, I also remind
as a non-Aboriginal woman, am learning from them, so their views help us all contribute to this discipline.

Crackle, snap. The firewood pops and cracks brightly against the darkness of the night. As I look up at the sky, filled with thousands of stars, I recognize a few constellations. The Big Dipper is there. So is the little one. I try to distinguish others; this reminds me that an effective teacher knows that there are different types of learners, thus multiple tools and differing teaching strategies must be used to reach all students. Like the stars that blend with the moonlight above me, my lectures are intertwined with short movie clips, role playing, presentations, crossword puzzles and pre-test Jeopardy games. I remember how much fun we all had when we prepared for that first test by playing Jeopardy! In addition, I have brought in Ojibway medicines too so that the students can touch, smell and even celebrate one First Nation’s tradition.

A-ha! I recognize the twin stars Castor and Pollux! This “a-ha” moment is also one I enjoy seeing on the student’s face when a complex theoretical idea was just understood through a concrete, life-based example. I recall when I attempted to explain the “civ/sav dichotomy”—what better way than through the famous Twilight franchise? The contrasting pictures of civilized Edward-the-Vampire against the scantly clad and savage Jacob-the-Werewolf was one that most Aboriginal men in the class could relate to. And my tough bargaining skills from the Canadian fur-trade era were really helpful to the students in understanding the economic market system of the time...

Articulated through ‘plain language,’ I strive to make my explanations accessible and I always welcome questions and challenges. A-ha, I finally found the teapot-looking constellation, but I forget the actual name… I am turning in for the night.

The next morning I awaken to light rain; I gather up my things quickly and begin my trek. Walking fast, the raindrops drip down the side of my nose and tickle me. I laugh. I like to laugh, which is why I often employ humour in my lectures. As my “hook” at the beginning of each class, I tend to tell a joke, have a guest lecturer or play a video of a stand-up comedian. All these are carefully selected and there is a lesson to be learned from each. The students really enjoy this and I, too, get to laugh. I think that students are meant to interact, participate, ask questions and be challenged. I know they like to laugh and joke too! I also realize that some like pictures and games and that many need to receive feedback on their work. And I definitely know that they like to learn something about themselves. They told me just like I am telling you. And one day, you will tell to someone else your journey about learning. Or you can always tell them mine.

As I approach my destination, I recall the things I have learned and continue to learn in my journey, both in the boreal forest and as a new teacher.

I can impact motivation by engaging them through humour, different learning activities and relevance [to their lives]. Drip drip.

As I approach my destination, I recall the things I have learned and continue to learn in my journey, both in the boreal forest and as a new teacher. The little successes I have achieved are because I was prepared, well-instructed, and have learned by trial and error. As with any form of learning, mistakes are made; but an effective teacher will learn from them and self-reflect. Yes, I have come to the conclusion that an effective teacher not only engages in scholarship of their relative discipline, but also recognizes that students learn best when they can interact, participate, ask questions and be challenged. I know they like to laugh and joke too! I also realize that some like pictures and games and that many need to receive feedback on their work. And I definitely know that they like to learn something about themselves. They told me just like I am telling you. And one day, you will tell to someone else your journey about learning. Or you can always tell them mine.

Agnieszka Pawlowska completed her MA at the University of Manitoba; she earned a BA from McGill University. Her research interests include issues in colonization and imperialism and how these relate to self-determination, land rights and the management of natural resources. Her doctoral work with Poplar River First Nation examines sustainable community economic development and the establishment of a UNESCO World Heritage Site. Agnieszka has been teaching for two years and she greatly enjoys working with students and collaborating with them to enhance their knowledge and perceptions about Native Studies.
There is a lot of talk these days in the media and on university campuses about MOOCs, blended learning, hybrid learning, flipped courses, emerging technologies for learning and the like. At the University of Manitoba we, too, have noticed an upsurge of interest, discussion and debate about these matters from the Board of Governors on down.

One of the challenges is terminology. What exactly do we mean by online learning? What is the difference between a blended course and a hybrid course? One way of sorting out the terms we use for e-learning is to arrange them on a continuum with fully face-to-face at one end and fully online at the other.

Moving from left to right—from fully face-to-face to fully online—the first key transition is the point at which online learning activities are a required course component, not just optional. The second key transition is the point at which the amount of class-time is reduced. A flipped course is an example of a course with a required online component and, if class time is reduced, is also an example of a hybrid course. These days distance education is largely synonymous with online learning but may still involve the use of other media.

Each of the transitions involves profound changes in the shape of teaching and learning and raises important issues around accessibility, the quality of interaction, the level of engagement, the integrity of assessment and the need for new support services, to name a few.

For an individual faculty member, the move from face-to-face to online teaching represents an increase in complexity in both practical and pedagogical terms and, because of this, can be very labour intensive. Universities across the country provide different levels of training and support for faculty who want to move online. At some universities faculty are offered some initial training on how to use a learning management system but are then more or less on their own. Some universities have faculty-based instructional technologists who provide assistance with technology, while others have assembled a team of specialized personnel to tackle the complexities of online learning.

The Distance and Online Education unit within the Division of Extended Education is a good example of the latter approach. The team approach brings together a range of e-learning specialists to assist faculty in the design, development and delivery of their online course. The team includes experts in learning design, instructional technology, digital media, and copyright management with years of experience supporting teachers teaching and students learning online.

For more information visit umanitoba.ca/distance
From June 2-7, 2013 seventeen Indigenous high school students from Winnipeg, Northern Manitoba and Saskatchewan will arrive on the Fort Garry Campus to experience the thrill of doing exploratory research first-hand.

It’s part of the Verna J. Kirkness Science Education Program. Grade 11 high school students representing First Nations, Metis and Inuit communities, will work in pairs with a post-doctoral fellow or graduate student, experiencing trailblazing research first-hand. The students will also stay in residence while here to further immerse themselves in the U of M’s unique culture.

This program creates fun opportunities for students to engage in research and experience life on campus. The program’s goal is to further excite the students’ interest in pursuing science and research at university, and in making a positive difference in their home communities.

“Education has a transformative power for students, their families and their communities,” said Dr. David T. Barnard, president and vice-chancellor. “It is our honour to partner with the Verna J. Kirkness Foundation so that First Nation, Metis and Inuit students can experience and be inspired by laboratory science.”

Verna Kirkness, the program’s namesake, is an alumna three times over, having completed her BA, BEd and MEd at the U of M. She is a member of the Fisher River Cree Nation, and a member of the Order of Manitoba and Order of Canada. She is a national leader in education in Canada who has inspired countless students and educators in both Aboriginal and non-Aboriginal communities.

The students in this year’s program are coming from Winnipeg, communities throughout Manitoba’s Frontier School Division, Fisher River Cree Nation, Peguis First Nation and Saskatchewan.

Indigenous Achievement, Office of the President is a sponsor of the event and nine faculty members are hosting the students in their laboratories. They include: Nancy Ames (Richardson Centre for Functional Foods and Nutraceuticals), Eric Bibeau (mechanical & manufacturing engineering), Annemieke Farenhorst (soil science), James Friel (human nutritional sciences), Norman Halden (geological sciences), Witold Kinser (electrical & computer engineering), Juliette Mammei (physics & astronomy), Elizabeth Ready (kinesiology & recreation management), and Barbara Sharanowski (entomology).

“The students are not the only ones who benefit from this program. The mentors (the professors, graduate students, and post-doctoral fellows) relish the opportunity to give back to the community and to witness the students’ excitement and wonder of doing research for the first time,” said Dr. Ron Woznow, the founder of the Verna J. Kirkness Education Foundation.

For more information, please visit Indigenous Connect: umanitoba.ca/indigenous
The translation of the Latin phrase Primum non nocere is “first, do no harm” or “above all, do no harm” and is an oath taken by medical doctors the world over. It remains a foundation in current medical practice.

In 1999, the Institute of Medicine brought national and international focus to the issue of patient safety with the release of “To Err is Human: Building a Safer Health System.” The statistics were disturbing—70% of mistakes in medicine were due to human error. Canada took notice and accelerated plans to improve education and training for health professionals.

In 2012, the University of Manitoba and the Women’s Health Program (WRHA) joined forces and launched the Inter-professional High-Risk Obstetrical Simulation training program. The joint initiative brings together health care professionals in Winnipeg who work in obstetrical settings (midwives, nurses, doctors, residents) to learn in the Faculty of Medicine’s Clinical Learning and Simulation Facility.

The program was developed by: Maggie Ford, associate director of the Centre for the Advancement of Teaching and Learning (previously with the Dept. of Obstetrics and Gynecology); Christine Finn-bogason, WRHA nurse educator in the Women’s Health Program; and Marshall Tenenbein, assistant professor of anesthesia, Faculty of Medicine.

“The intention of this project is ultimately to improve patient care and outcomes by increasing effective communication of healthcare teams as well as building clinical confidence,’ says Ford. “Every member of the team has a critical role to play in these life and death situations: their confidence in themselves and their colleagues is enhanced by this training, we expect, will have positive impacts in the ‘real-life’ emergency situations.”

“We’re taking people who’ve been doing their jobs for years and bringing them to the Clinical Learning and Simulation Facility and exposing them to new crisis resource management techniques,” explains Tenenbein. The simulation training is immersive for the participants providing “realistic” situations they have and will encounter in care settings, without any risk of harming the patient.

The health care professionals who participate in the sessions take part in two simulated, high-risk obstetrical emergencies: the scenarios remain unknown until they begin the simulation. After each scenario, a group de-brief takes place with a 45-minute interactive education session before the second simulation.

“We are trying to determine if by having an intervention between the two simulations, do we see a difference in the behaviour of the team in the second scenario? That’s just part of the research,” Ford explains.

Team performance, communication and cohesion in the two simulations are evaluated from reviewing the video recorded sessions, using a validated assessment tool (Global Assessment of Obstetric Team Performance). After the session, at one and six-month intervals, the participants are surveyed again to see if they’ve experienced a difference in the way they work with people; how they communicate; how they feel about voicing their opinion within the team; and their confidence when it comes to situations that may have intimidated them in the past.

“Simulation has strengths over simple didactic presentations in that it is trialing and testing the actual interaction between the team members. It also meets the inter-professional education goal of learning from, with and about each other,” says Margaret Morris, head of the obstetrics department in the Faculty of Medicine and medical director of the WRHA Women’s Health Program.
Above: Students interacting with Elder-in-Residence Florence Paynter at Migizii Agamik (Bald Eagle Lodge).