Teaching Matters

Great Teaching . . . by Design

Know What You're Asking For: Understanding Behaviour Change

It seems that with the start of a new year, I focus on the stereotypical "trying something new". In my last two January newsletter articles, I wrote about teaching risk-taking and savouring failure as part of learning, which are both elements of trying something new. This year, I want to explore an even more fundamental part of doing something differently, again from the perspective of our students, and think about just what exactly we are asking them to do.

Anytime we expect our students to do something other than what they are doing, we are aiming for a change in behaviour. This change in behaviour could be in response to our implementation of a new instructional method, or it could just be in response to engaging with whatever methods we have already been using. When I hear faculty members gripe about how their students are not "engaging" in a course, what I really hear is that students are not adopting the desired behaviours for learning. Let's unpack this situation a little more.

Perhaps the heart of the matter is students' motivation? I have been involved in a few workshops and a conference session in the past year detailing elements of student motivation according to expectancy-value theory: how do we convey to students that they can achieve the tasks in a course and how do we help them find value in these tasks? This motivational model is relatively straightforward and puts a strong emphasis on the students' experience in a course. We recently released a CTE Teaching Tip on this topic, which includes various concrete strategies to help. I believe in the value of this theoretical approach, but I also believe there are other theories that can help us to influence students' behaviours.

I have studied students' responses to innovative instructional methods, and have explored reasons why they may resist engaging with methods that are new to them or that they did not expect to encounter in a course (Ellis, 2015). In essence, I was studying why they did not adopt desired behaviours. It has been fascinating work, and I've thought a lot about how to explain the findings. One theory that seems to align well is Fishbein and Ajzen's (2010) Reasoned Action Approach (RAA) model for predicting and informing how to change human behaviour.

Overall, students decide what behaviours they will engage in or not. But how do they decide? According to RAA, people's **behaviours** are predicted by their **intentions**, which are guided by a combination of **attitudes**, **norms**, and **perceptions of control** that form based on their underlying **beliefs**. Similar to other frameworks, like the Teaching Perspectives Inventory, the model follows a basic beliefs → intentions → actions process, and the authors claim that this process is consistent but may be done consciously or unconsciously. The model identifies three main types of beliefs – behavioural, normative, and perceived control – and it is at this level of beliefs that Fishbein and Ajzen (2010) claim that "we learn about the substantive considerations that guide people's decisions to perform or not the behavior of interest" (p.23).

In short, **behavioural** beliefs include the positive or negative consequences that students believe they may experience if they perform a particular behaviour (e.g., "I can embarrass myself if I give a 'dumb' answer in front of my classmates"). With **normative** beliefs, students believe that important others would approve or disapprove if they performed a particular behaviour, and these others do or do not perform the behaviour themselves (e.g., "I will participate in class if my friends do"). Finally, **perceived control** beliefs include

personal and environmental factors that students believe can help or impede their attempts to perform a behaviour (e.g., "I do not believe I can speak cogently in front of others" or "I have nothing worthwhile to say at 8:30 in the morning!"). Getting students to uncover and lay bare their underlying beliefs about a course is a whole other topic, but I hope I have given some ideas in this article for further contemplation about what we are really asking of our students when we want them to act in a different way.

I will be talking more about the RAA model at a workshop I'm co-facilitating this term on overcoming student resistance as part of our Educational Technologies Week (being held February 29 to March 4). The topic would also fit well with this year's Teaching and Learning conference theme on "Learning from Challenge and Failure". How can we use the elements of this theory to set the stage for students to adopt behaviours that allow them to engage with failure? If you want to discuss these ideas further, please let me know.

References:

Ellis, D.E. (2015). What discourages students from engaging with innovative instructional methods: Creating a barrier framework. *Innovative Higher Education, 40*, 111-125. doi: 10.1007/s10755-014-9304-5

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. New York, NY: Taylor & Francis Group.

Donna Ellis

Bob Sproule: 20,000 and (Ac)counting

After teaching more than 20,000 students during his tenure in Waterloo's School of Accounting and Finance, Bob Sproule's passion for teaching has not abated. Sproule believes that his role as an instructor is to support students as they explore and construct their knowledge, not just to impart knowledge. He's the perfect example of a thought-provoking and insightful instructor, one who thrives on the opportunity to interact with his learners.

Sproule says that his biggest challenge in the classroom has been changing students' assumptions about their own role in their learning. Many students, he says, believe that they have little agency in how they learn because the instructor is the expert. Sproule strives to get students to see that articulating and sharing their perspectives, and making decisions in response to changing conditions, is essential for good learning. In his classes, he tries to create an environment that encourages this kind of active engagement. "Teaching," he says, "is not about surface learning. It's about deep learning, which is not learning for the sake of regurgitating information to pass a test or the course. Deep learning influences future behaviour and has an impact on an individual." To this end, Sproule divides his large classes into small groups and has them engage in discussions and peer-based learning, often by using clickers, simulations, and case studies. Sproule also designs his courses with Bloom's Taxonomy in mind to ensure that his learning activities align with a range of cognitive levels that foster deep learning.

Sproule has recently retired from the School of Accounting and Finance, but he continues to be involved with teaching and learning at Waterloo through the [Instructional Skills Workshop](#) (ISW). This four-day, internationally recognized workshop helps instructors develop effective lesson plans and enhance their in-class teaching skills. After taking the ISW himself, Sproule realized "how impactful it was for me as a teacher and so I made the decision to become an accredited facilitator of the ISW." To date, he has co-facilitated the ISW 5 times, and says that "facilitating the ISWs is a joy because the instructors are there because they want to be there and learn. They engage with each other and the ideas are constantly bouncing off of each other." Recently, Sproule has decided to go one step further with the ISW and become a trainer – that is, someone who trains the facilitators who deliver the workshop.

Sproule has taken a leadership role in numerous national and international organizations that focus on post-secondary teaching and learning. He's also received many teaching awards over the years – such as the 2005 Innovations in Accounting Education Award and the 2012 Desire to Learn Innovation Award – but he never mentions these during our interview. While it's an honour to receive such awards, Sproule affirms that his greatest satisfaction is simply seeing his learners' personal development.

Arifeen Chowdhury

UWaterloo's Teaching and Learning Conference 2016: 'Learning from Challenge and Failure'

This year's Teaching and Learning Conference theme is an opportunity to open up discussions with our colleagues, our students, and ourselves around the beliefs we hold about challenges, setbacks, and failure in the context of teaching and learning at the University.

How do these beliefs shape the ways in which we teach, learn, and lead? How do we work to cultivate a culture that encourages risk-taking, growth through experimentation, and learning from our earnest attempts that lead to failure? What measures can we put in place to ensure that the members of our community have the opportunity to flounder, perhaps fail, and flourish?

During the Conference, we will explore not only challenges and failures, but the work of *learning* from these challenges and failures. The difficult cognitive and emotional work of learning from these experiences does not happen automatically or autonomously. It takes time and must be guided by people who care deeply about our development.

In preparation for the Conference, we have been asking instructors to share with us their teaching failure stories. Invariably, the response we have received when making the request (admittedly, with some hesitation) is "Which story? Only one? There are so many!" We are grateful to these brave contributors. If we keep these stories hidden, the perception we promote is that teaching well is a venture down a path of certain success, rather than one of trials and errors before one sometimes "gets it right".

Airing our experiences of challenge and failure publically may certainly feel vulnerable and risky. But what might be the risks of not sharing these stories? Engineers Without Borders Canada (EWB) publishes an annual 'Failure Report' in which they highlight a dozen or so stories of failure – and learning from failure – in their international development efforts. This is risky in many ways – financially, for an organization that depends on contributions from donors; emotionally, for the people in the field sharing their stories. But EWB has determined that the benefits of disclosing these failures outweigh the costs of hiding them. Because hiding them does not help them, or other organizations, solve the problems which they are hoping to solve – poverty, access to clean water, food security, etc. This approach recognizes that we are involved in a collective endeavour to improve our communities.

As we began to introduce and discuss the Conference theme with others on campus, we discovered that conversations about failure, challenge, and resilience are already going on in residence rooms and in meetings rooms. Often, however, these rooms are behind closed doors. Through the Conference, we hope

to bring these conversations out into the public spaces of our University – a learning organization – so that when we share our stories of innovation, experimentation, and publication, they integrate the stories of uncertainty, failed attempts, and rejections. Because the whole story of our successes often include failure. We hope that the Conference will be one space of many in which we can collectively explore our potential to learn and grow from challenge and failure.

Julie Timmermans

Teaching Squares Program

Program Description

Teaching Squares is a faculty development tool created by Anne Wessely from St. Louis Community College and used by many North American universities and colleges. This project developed in response to problems expressed about peer evaluations systems, namely, that they were critical and judgmental and tended to create a climate of defensiveness and suspicion.

As a contrast, the Teaching Squares approach involves a self-reflective process about teaching gained through observation of one's peers. It is not a peer evaluation exercise but rather a self-evaluation process which takes place in a confidential and mutually supportive environment. The aim of the Teaching Squares approach is to enhance teaching and learning through a structured process of classroom observation, reflection and discussion (leading to a plan for revitalization).

Program Mechanics

A square is formed by four instructors who visit each other's classes over the course of one term. Those being visited are encouraged to provide peer visitors with a copy of their course outline, to comment on why students are taking that particular course, and to share any material that would enhance the observation experience. The peer visitors are instructed to take notes during the classroom visit which would include such particulars as teaching methods, attitudes, classroom materials, and classroom management. The visits are preceded by an organizational meeting (that lays out expectations of behaviour and confidentiality and establishes a classroom visitation schedule) and the visits are followed by a debrief meeting where the participants share their experiences. The intention is that all discussion be from the point of view of the observer who identifies which teaching techniques worked for them and how they might be used to improve the observer's own teaching. By organizing the squares based on diversity of discipline, participants benefit from exposure to different teaching styles and techniques that may not commonly be used within their own discipline culture and it minimizes the distraction factor inherent in familiarity with course content. All Teaching Square activities are facilitated by the program coordinator who also sends out class visit and meeting reminders.

Program Takeaways

By allowing instructors to be "learners" again in their colleagues' classes, Teaching Squares opens up unique spaces for reflection and conversation about teaching. During their classroom visits, the Teaching Squares participants have the opportunity to experience a variety of contexts and challenges which leads to a greater appreciation of the quality of and commitment to good teaching already in existence on campus and, at the same time, it provides the catalyst for growth as participants gather ideas on different teaching approaches and consider how they could be used to improve one's own teaching.

If you are interested in being a part of the Teaching Squares Program at the University of Waterloo, please contact the program coordinator, Monica Vesely, at mvesely@uwaterloo.ca

Monica Vesely

Teaching Awards

Do you know an excellent instructor and/or teaching assistant? Recognize him/her with a teaching award! Tips on writing a persuasive nomination letter can be found in Trevor Holmes' blog entry 'How to Write an Effective Nomination Letter'.

Distinguished Teacher Awards are given in recognition of a continued record of excellence in teaching at the University of Waterloo. The nomination deadline is Friday, February 5, 2016.

Amit & Meena Chakma Awards for Exceptional Teaching by a Student are given in recognition of excellence in teaching by students registered at the University of Waterloo. The nomination deadline is Friday, February 12, 2016.

Verna Keller

Educational Technologies Week (February 29 to March 4)

CTE's second annual Educational Technologies Week features 11 different workshops, ranging from 1.5 to 4.5 hours in length. All UWaterloo instructors and staff are welcome to attend as many workshops as they choose. For detailed descriptions of each workshop and instructions about how to register, go to https://uwaterloo.ca/cte/2016ed-tech or contact Mark Morton at mmorton@uwaterloo.ca.

Time	Monday February 29	Tuesday March 1	Wednesday March 2	Thursday March 3	Friday March 4
9:30 am to 11:00 am	Course Design for Blended Learning CTE732	Using Technology to Facilitate Collaboration CTE761	Introduction to the Flipped Classroom CTE691	Making Screencasts with Camtasia CTE733	Enhancing Learning Through Gamification CTE750
	15-minute break	*15-minute break*	*15-minute break*	*15-minute break*	*15-minute break*
11:15 am to 12:45 pm	Course Design for Blended Learning, cont.	Using Turnitin® as an Educational Tool CTE756	Introduction to the Flipped Classroom, cont.	Making Screencasts with Camtasia, cont.	Enhancing Learning with Assessment Tools CTE734
	30-minute break (lunch provided)	*30-minute break*	*30-minute break*	*30-minute break*	*30-minute break*
1:15 pm to 2:45 pm	Course Design for Blended Learning, cont.	Addressing Student Resistance to Innovative Learning Strategies CTE757	Concept Mapping Tools CTE731	Teaching Online CTE762	ePortfolios: Process and Product CTE736

Mark Morton

MONDAY FEBRUARY
8
1:00 - 2:30
DC 1302

Dr. Rajiv Jhangiani
Kwantlen Polytechnic University

The Future is Open: Enhancing Pedagogy via Open Educational Practices (CTE755)

"Open Educational Practices" are designed to broaden access and eliminate barriers to learning. They include the creation and adoption of open educational resources, open course development, and open pedagogy. This presentation, co-sponsored by the UWaterloo Bookstore, will make a case for why the move away from traditional (closed) practices is not only desirable but inevitable, and how students, faculty, institutions, and our communities all stand to benefit greatly from this transformation. Register for CTE755 at https://uwaterloo.ca/cte/register
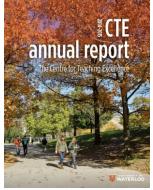
Verna Keller

CTE Staff Research and Service

During 2015, staff at the Centre for Teaching Excellence engaged in various research and service activities. In the Centre's Staff Research and Service activity list, staff members gave invited presentations/workshops in addition to publishing in peer-reviewed journals (such as The Canadian Journal for the Scholarship of Teaching and Learning) and presenting at teaching and learning conferences.

Verna Keller

CTE Annual Report

CTE's inaugural annual report reflects on the Centre's activities from the 2014-2015 fiscal year. CTE Director, Donna Ellis, notes that in the report you will read about the various activities and services that CTE provides in order to foster the high-quality teaching and learning needed to help Waterloo meet the Academic Programming strategic plan goals.

Verna Keller

Learning Innovation and Teaching Enhancement (LITE) Full Grants

In collaboration with the Office of the Associate Vice President, Academic, the Centre for Teaching Excellence (CTE) and the Centre for the Advancement of Co-operative Education (WatCACE) are pleased to announce that four LITE Full Grant projects have recently been funded. We are pleased to note that an increasing number of LITE Grants involve collaborations across units and Faculties.

Congratulations to the recipients!
To read descriptions of these and other exciting projects, please visit the LITE Grant website: https://uwaterloo.ca/cte/lite-grants.

PROJECT 1
Project Title: Creating Capacity for 'WatCV': Student Career and Competency Portfolios
Principal Applicant: Jill Tomasson Goodwin, Department of Drama and Speech Communication

Collaborators
Faculty of Arts
Paul Cegys, Department of Drama and Speech Communication
Rob Danisch, Department of Drama and Speech Communication
Geoff Malleck, Department of Economics/Arts and Business program
Toby Malone, Department of Drama and Speech Communication
Christine McWebb, Global Business and Digital Arts
Kathleen O'Hara Pierce, Arts and Business program
Tim Paci, Department of Drama and Speech Communication
Jennifer Roberts-Smith, Department of Drama and Speech Communication
Jessica Thompson, Department of Fine Arts and Global Business and Digital Arts

Faculty of Applied Health Sciences
Leeann Ferries, Department of Recreation and Leisure Studies

Faculty of Engineering
Carol Hulls, Department of Mechanical and Mechatronics Engineering

Faculty of Environment
Joanne Adair, School of Environment, Enterprise and Development

Faculty of Math
Joslin Goh, Department of Statistics and Actuarial Science
David Landriault, Department of Statistics and Actuarial Science

Faculty of Science
Kelly Grindrod, School of Pharmacy

Centre for Career Action
Christine Kampen Robinson, Centre for Career Action

Centre for Teaching Excellence
Katherine Lithgow, Centre for Teaching Excellence

Student Success Office
Clare Bermingham, Writing Centre

WatCACE
Judene Pretti, Centre for the Advancement of Co-operative Education

WatPD
Anne Fannon, Professional Development Program

PROJECT 2
Project Title: Development and Assessment of a Series of Teamwork Training Workshops for Undergraduate Engineering Students
Principal Applicant: Sanjeev Bedi, Department of Mechanical and Mechatronics Engineering

Collaborators
Faculty of Engineering
Rania Al-Hammoud, Department of Civil and Environmental Engineering
Jason Grove, Department of Chemical Engineering
Carol Hulls, Department of Mechanical and Mechatronics Engineering
Ada Hurst, Department of Management Sciences
Ken McKay, Department of Management Sciences
Chris Rennick, Engineering Undergraduate Office

Centre for Teaching Excellence
Samar Mohamed, Centre for Teaching Excellence

Student Success Office
Erin Jobidon, Student Success Office
Stephanie Johnson, Student Success Office
Andrea Prier, Student Success Office

PROJECT 3
Project Title: Improving Student's Deep Learning through Optimizing Testing Schedules in Waterloo's Online Learning Environment
Principal Applicant: Evan Risko, Department of Psychology

Collaborators
Jonathan Fugelsang, Department of Psychology
Jennifer Stolz, Department of Psychology
Paul Wehr, Department of Psychology

PROJECT 4
Project Title: Not all Rubrics are Created Equal: Impacts of Student-centered Rubrics on Students' Deep Learning
Principal Applicant: Gregory Andres, Department of Philosophy

Collaborators
Chao Yang, Writing Centre
Emiko Yoshida, Social Development Studies

The purpose of the LITE Grants is to provide support for experimenting with and investigating innovative approaches to enhancing teaching that aim to foster deep student learning at the University of Waterloo.

Two kinds of grants are available: LITE Seed Grants for projects up to $5,000, and LITE Full Grants for projects up to $30,000. Both grant formats emphasize the contribution of the project to the University of Waterloo learning community.

There are two annual LITE Seed Grant application deadlines: February 1 and June 1. The one annual deadline for LITE Full Grants is October 1.

For more information about the grants, please visit https://uwaterloo.ca/cte/lite-grants. If you and/or your colleagues are considering applying for a grant and would like to discuss your project, please contact either Julie Timmermans (julie.timmermans@uwaterloo.ca) or Crystal Tse (ctse@uwaterloo.ca) at the Centre for Teaching Excellence.

Julie Timmermans

Graduate Supervision Series

This past Fall term, 29 faculty members packed our workshop room for six workshops held over two days. The focus of the series was graduate supervision practices, from recruitment and research mentorship to examining and career support. In collaboration with the Graduate Studies Office, this series was designed to equip newer faculty members with the requisite experiences to apply for Approved Doctoral Dissertation Supervisor Status.

The first three workshops (CTE801, CTE802, CTE803) set up the basics.

CTE801 Supervision at Waterloo: the relevant policies/practices (Associate Dean, Graduate Studies Office) Participants used case scenarios to delve immediately into issues to which multiple policies and principles apply, imagining themselves as an Associate Dean in a Faculty.

CTE802 Recruiting graduate students, matching research interests and honing questions, the research supervision life cycle. Includes breakout sessions for differing discipline paradigms. (Experienced faculty members, Associate Deans Graduate Studies from the Faculties). Over lunch, participants and panellists discussed best practices in the initial and later stages of doctoral supervision.

CTE803 Meeting with supervisees (Conflict Management and Human Rights Office) Educators from CMAHRO provided a framework for delivering positive and negative messages early on in supervisory relationships, following up on the morning's case scenarios.

The next three workshops (CTE804, CTE805, CTE806) went more deeply into particular facets of research mentorship, successful completion, and beyond. These may be of interest to faculty members who already have ADDS status.

CTE804 Guiding writing and research with ethics and integrity (Office of Research Ethics, Writing Centre, Academic Integrity Office)

CTE805 Intercultural and gendered interaction: working with students and co-supervisors in the context of cultural and gender diversity (Equity Office, Centre for Teaching Excellence)

CTE806 Next steps: Examining and career support/letter writing (Graduate Supervision Award winners)

Overall, the workshops were rated highly and we received helpful feedback for the next round, scheduled for February 5 and February 26, 2016. Inquiries should be directed to Raymond Legge at GSO or Trevor Holmes at CTE.

Trevor Holmes

A Message from the CTE Graduate Student Team

The Centre for Teaching Excellence also welcomes four new members to the graduate student team. Tommy Mayberry (English Language and Literature), Stephanie Verkoeyen (Geography), and Caitlin McArthur (Kinesiology) joined the TA Workshop Facilitator team starting in the Fall 2015 term. Brandon DeHart (Electrical & Computer Engineering) will be joining the TA Workshop Facilitator team in Winter 2016.

We would like to thank our past TA Workshop Facilitators, Donata Gierczycka, Dave Guyadeen, Daniel McRoberts, Karly Neath, and Sara Scharoun, for all of their hard work and contributions made during their time at the CTE, and wish them the best of luck in their future endeavours.

The workshop facilitators are doctoral students who successfully completed CTE's Fundamentals of University Teaching program. They were hired based on their interest in university teaching, strong communication skills, and interest in supporting teaching development of graduate students.

Monika Soczewinski

Congratulations to CTE Spring and Fall 2015 grads!

The following seven students completed the Certificate in University Teaching program in Spring 2015: Trevor Bekolay (MATH), Marcia Chaudet (SCI), John Doucette (MATH), Ahmed Gawish (ENG), Maxwell Hart (ENV), Emily Milne (ARTS) and Mohamed Zawam (ENG).

The following five students completed the Certificate in University Teaching program in Fall 2015: Abdulbaset Ali (ENG), Stephanie Chesser (AHS), Hadi Hosseini (MATH), Konstantinos Karanasios (ENV) and Fatemeh Mousavi (SCI).

The following student completed the Certificate in University Language Teaching program in Spring 2015: Coleen Even (French Studies).

In addition to CUT graduates, 58 participants completed the Fundamentals of University Teaching program in Spring 2015. The numbers by faculty are as follows: Applied Health Sciences 5, Arts 11, Engineering 21, Environment 11, Mathematics 3, and Science 7.

49 participants completed the Fundamentals of University Teaching program in Fall 2015. The numbers by faculty are as follows: Applied Health Sciences 8, Arts 7, Engineering 22, Environment 5, Mathematics 4, and Science 3.

Congratulations also to the 18 Postdoctoral fellows who completed our Teaching Development Seminar Series in the Fall 2015 term.

Monika Soczewinski

Contributors:

- Arifeen Chowdhury, Special Projects Assistant (Teaching Stories)
- Donna Ellis, CTE – Director
- Trevor Holmes, CTE – Senior Instructional Developer, Programming
- Verna Keller, CTE – Program Coordinator, Faculty Programs
- Mark Morton, CTE – Senior Instructional Developer, New Educational Technologies
- Monika Soczewinski, CTE – Program Coordinator, Graduate and Postdoctoral Student Programming
- Julie Timmermans, CTE – Instructional Developer, Consulting and Research
- Monica Vesely, CTE – Instructional Developer, Curriculum and Programming