festival
of teaching
and learning

MAY 4, 2017

Explore. Discuss. Innovate.

Keynote: Maryellen Weimer, "The Teaching Professor"

TABLE OF CONTENTS

A NOTE FROM THE STEERING COMMITTEE

The University of Alberta is home to great teachers – past and present – and the Festival of Teaching and Learning serves as our annual celebration where all instructors and learners are invited to "inspire, model, and support excellence in teaching and learning" (Objective 14, For the Public Good). This year's programming will foster excellence in the academy by creating a venue for the exploration of both practiced and experimental classroom teaching innovations.

The day should stimulate plenty of discussion across the institution, as this year's lineup of presenters will explore the effectiveness of classroom interactions, the benefits of discovery learning, the assessment of graduate attributes, the development of mentor relationships, the use of digital teaching tools, the need for student feedback, and more. This year, the participants of the Festival of Teaching and Learning have embraced the opportunity to gather and learn from one another and it is our hope that the conversations that are started here today will continue throughout the year in your departments and faculties.

We are proud to be a part of the community's supportive learning environment and we welcome your contributions to strengthen teaching and learning at the University of Alberta.

Sincerely,

Janice Miller-Young and Sarah Forgie
Co-Chairs, Festival of Teaching and Learning

On behalf of the 2017 Festival of Teaching and Learning Steering Committee

Marina Banister, VP Academic, Students' Union

Hallie Brodie, Internal Communications Specialist, University Relations

Jen Carstensen, Administrative Coordinator, Centre for Teaching and Learning

Ken Cor, Associate Director, Centre for Teaching and Learning

Heather Larson, Graduate Student's Association

Eva Lemaire, Assistant Professor, Campus Saint-Jean

Cosette Lemelin, Educational Developer, Centre for Teaching and Learning

Sim Senol, APO, Centre for Teaching and Learning

Janet Wesselius, Associate Professor-Philosphy, Augustana Campus

festival **of teaching and learning**

ACKNOWLEDGEMENTS

EDMONTON CLINIC
HEALTH ACADEMY
(Lower Level L1)

11405 87 Ave NW, Edmonton, AB T6G 1C9

Lecture Theatre L1-190

Class-room L1-150

Class-room L1-140

elevator

elevator

stairs

stairs

washrooms

Class-room L1-230

Class-room L1-220

ECHA LOWER LEVEL 1

Lunch / Information Fair L1-280 Quiet Study Lounge

stairs

stairs

washrooms

Class-room L1-430

Class-room L1-420

elevator

elevator

stairs

festival of teaching and learning
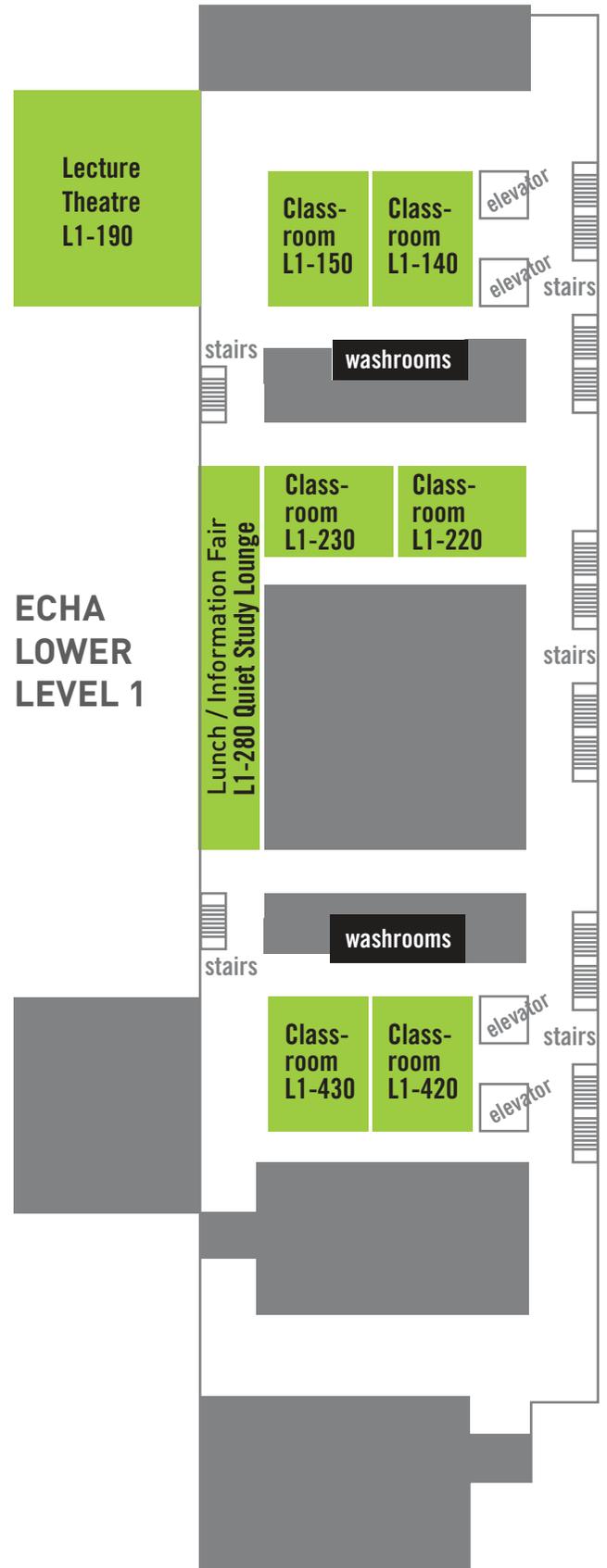
SCHEDULE AT A GLANCE

8:30 - 9:00	**Coffee & Refreshments** *(Outside of ECHA L1-190)*
9:00 - 9:10	**Opening Remarks:** Janice Miller-Young, Director, Centre for Teaching and Learning *(ECHA L1 -190)* Lorne Babiuk, Vice-President/Research, Vice-President (Research) Sarah Forgie, Vice-Prov/Learning Initiatives, Provost and Vice-President (Acad)
9:10 - 10:20	**Keynote:** Participation, Five Reasons Why and Five Ways to Make It Happen *(ECHA L1 -190)* Maryellen Weimer, Professor Emerita of Teaching and Learning at Penn State Berk
10:20 - 10:30	**Coffee** *(Outside of ECHA L1-190)*

bring digital device

bring syllabi draft

requires pre reading

10:30 - 12:30	**CONCURRENT SESSIONS** *ECHA L1-140*	**CONCURRENT SESSIONS** *ECHA L1-150*	**CONCURRENT SESSIONS** *ECHA L1-220*
10:30 - 11:30	**Blended Learning in Engineering Design** Pierre Mertiny, Brian Yang	**Graduate Attributes Assessment Platform: A Course Recommender System and a Mapping Tool** Samira ElAtia, Osmar Zaïane	**Backwards Design** Michael Cenker
	Blended "Hybrid" Course in Otology Creating a Flipped Course Model for Otolaryngology Residence Nahla Gomaa	**Delivering Digital Assessments on Student Devices: What have we Learned? Teaching and Learning Experience in Higher Education** Jamie Stewart, Mark Hall	**Must it *Always* be a Paper? Switching to Multi-modal Assignments to Enhance Motivation, Collaboration, and 21st Century Multi-literacy Skills in the Diverse Classroom** Christina Grant, Soyeon Cho, Taya Thibeault
	GAP [Geek Assisted Prompts] in Discovery Learning Nahla Gomaa		
11:30 - 12:30	**Integrating Social Media: Twitter Micro Reflections** Cristina Stasia, Lily Ren	**Implementing Student Feedback on Teamwork and Leadership Skills in The Classroom** Nicole Wilson	**Strengthening Engagement with the Next Generation of Learners: Exploring e-portfolios, asset mapping and digital story in adult learning and teaching** Zane Hamm
		What's Great (and not so great) About Computer-based exams Alexander Gainer	**An Educational Framework for Undergraduate Engineering Curriculum Development** Alyona Sharunova, Mehwish Butt, Suzanne Kresta, Jason Carey, Loren Wyard-Scott, Samer Adeeb, Luciënne Blessing, Ahmed J. Qureshi
	Using Google Docs in eClass Anwen Burk, Matt Cheung	**Creating Undergraduate Awareness about Careers in the Discipline** Chuck Lucy, Mike Serpe	**Graduate Teaching and Learning Program: Building Scholarship in Teaching and Learning** Suzanne Kresta, Renee Polziehn, Deanna Davis, John Nychka, Heather Zwicker

continued...

10:30 - 12:30

	CONCURRENT SESSIONS *ECHA L1-230*	CONCURRENT SESSIONS *ECHA L1-420*	CONCURRENT SESSIONS *ECHA L1 - 430*
10:30 - 11:30	**Mapping Stories for your Class** Charlene Nielsen 📱	**Mentor-Ships, All Aboard: Navigating the Seas of Supported Teaching Development** Billy Strean, Jordan Long	**Enhancing a Traditional Philosophy Seminar With Active Learning Strategies** Ka Ho Lam, Kathrin Koslicki
	Navigating copyright in an online teaching environment Amanda Wakaruk	**Paradigm-Shifting Pedagogy: Incorporating Stress Management into the University Curriculum and Courses** Dalbir Singh Sehmby, Jurate Motiejunaite 📝	**Making a Big Class Feel Like a Small One: Small-Group Discussions in Classes of Over 100 Students** Alvina Mardhani-Bayne, Michelle Sims
			Exit Tickets to Encourage Active Engagement in the Post-Secondary Classroom Alvina Mardhani-Bayne, Michelle Sims
11:30 - 12:30	**Peer-assisted Teaching and Learning in Pharmacy Clinical Skills Education** Theresa Charrois, Terri Schindel	**Living Latin at the University of Alberta: A New Way to Teach an Old Language** Kelly MacFarlane, Christopher Mackay	**Development of an Engaging Chemistry App to Increase Student Interest in Learning Organic Chemistry** Hayley Wan
	Community Service Learning in Adapted Physical Activity: Lessons learned, challenges, and questions remaining Joanna Auger, Kelvin Jones	**Task-Based Teaching: Insights from Language Learners** Xavier Gutiérrez	**How (free and easy) Technology Increased Student Engagement in our Classroom** Chris Zarski, Mark Hall 📱
	Imagining Cities: Integrating Theory and Practice of Civic Engagement Across Disciplines Zane Hamm	**Research Critical Thinking (RCT) Activity** Alvina Mardhani-Bayne, Michelle Sims	**Students Really Start Learning when I Stop Teaching: Shifting to a Facilitated Self-directed Learning Approach** John Nychka

12:30 - 1:30	**Lunch /Information Fair** *(ECHA L1-280 Quiet Study Lounge)* **Poster Presentations** *(Outside of ECHA L1-190)*
1:30 - 2:20	**Panel: Publishing Discipline Specific Pedagogical Scholarship** *(ECHA L1-190)* Suzanne Kresta, Associate Dean, Faculty of Graduate Studies & Research, Professor, Chemical and Materials Engineering Kim Misfeldt, Professor of German, 3M National Teaching Fellow, Vice Dean, Augustana Campus Liam Rourke, Associate Professor, Department of Medicine
2:20 - 2:30	**Coffee & Refreshments** *(Outside of ECHA L1-190)*
2:30 - 4:00	**Teacher Features** *(ECHA L1-190)* Barbara Billingsley, André Costopoulos, Louanne Keenan, Lien T. Luong, Sherif Hanafy Mahmoud, Valerie Miller, Dalbir Singh Sehmby

festival of **teaching** and **learning**

KEYNOTE SPEAKER
MARYELLEN WEIMER

Maryellen Weimer has edited The Teaching Professor newsletter since 1987 and writes the Teaching Professor Blog.

The Teaching Professor Blog features a new weekly post from Maryellen on such topics as: the scholarship of teaching and learning, classroom policies, active learning, assessment, generational differences, and student performance.

She is a professor emerita of Teaching and Learning at Penn State Berks and won Penn State's Milton S. Eisenhower award for distinguished teaching in 2005. Dr. Weimer has a Ph.D. in Speech Communication from Penn State.

Dr. Weimer has consulted with over 650 colleges and universities on instructional issues and regularly keynotes national meetings and regional conferences throughout the US and Canada.

She has published several books, including: Inspired College Teaching: A Career-Long Resource for Professional Growth (Jossey-Bass, 2010), Enhancing Scholarly Work on Teaching and Learning: Professional Literature that Makes a Difference (Jossey-Bass, 2006), Learner-Centered Teaching: Five Key Changes to Practice (Jossey-Bass, 2002).

PARTICIPATION, FIVE REASONS WHY AND FIVE WAYS TO MAKE IT HAPPEN

Participation is a widely used and almost universally endorsed instructional strategy. Despite this, it often fails to engage students. A lot of students won't participate, others do so reluctantly; and a few participate too much. Large courses, rooms not designed for interaction and required courses make it even more challenging. However, extensive research validates the importance of classroom interaction and the pedagogical literature offers a wide range of strategies that encourage students to participation in all kinds of courses. During this keynote, we'll revisit this favorite instructional strategy, revisiting the reasons it merits our efforts and sharing ideas and information that can increase its effectiveness.

CONCURRENT SESSION ABSTRACTS

An Educational Framework for Undergraduate Engineering Design Curriculum Development

Authors: Alyona Sharunova, Mehwish Butt, Suzanne Kresta, Jason Carey, Loren Wyard-Scott, Samer Adeeb, Luciënne Blessing, and Ahmed J. Qureshi

Contemporary industrial product design and development no longer adheres to the boundaries of a single discipline and has become tightly integrated, often relying on interaction of multiple disciplines for completion of integrated product design. A collaboration of specialists from different engineering disciplines is required to develop efficient solutions to interdisciplinary or transdisciplinary problems of product design. Despite this shift from mono-disciplinary to transdisciplinary, the engineering design curriculum remains focused on teaching discipline specific design practice through skill based subject pedagogy with a limited emphasis on the importance of design process and transdisciplinarity in the design process. As a result, new graduates starting in design and development organizations face a difficulty finding a common basis of understanding of disciplines' interactions and have to go through a long process of often implicit 'onboarding' to understand the transdisciplinary engineering design process. This can be avoided by developing and adapting undergraduate design process education in line with industrial demands. A number of empirical studies on transdisciplinary engineering design process in industry have pointed out core similarities in the design process in engineering industry. These studies show that engineers in each domain perform analogous steps when designing the product but using different terminology. As a result, a framework of common design stages and methods has been developed. Similarly, a number of cognitive models of design and creativity have been proposed. However, very limited research has been carried out on developing a design process education framework while considering the cognitive processes in the engineering design process.

This is a presentation of a theoretical framework based on empirical engineering design research and educational psychology for developing the core elements of a transdisciplinary engineering design process curriculum. Our goal is to review the current design education at the University of Alberta and existing national and international best-practice design education programs to develop a design curriculum for first year engineering design course. Using psychosocial research methods and statistical analysis as well as Blessing and Chakrabati's Design Research Methodology, our goal is to collect, analyze and present empirical data from the courses of the Faculty of Engineering members who are teaching or involved in design processes. The framework is based on the transdisciplinary design processes identified in empirical research as well as educational psychology frameworks and teaching approaches such as Bloom's taxonomy and Kolb's model of experiential learning. The framework accounts for the establishment of diversified learning environment through personal learning goal development, practical experience and transdisciplinary teamwork, which would facilitate the development of both technical and general competencies necessary for successful industrial practice. The presentation explains the Bloom's and Kolb's approaches, their implementation in engineering education and relation to design process as well as covers the analysis of design processes from cognitive perspective and the role of creativity and intuition in design and education.

References:
David R. Krathwohl (2002) A Revision of Bloom's Taxonomy: An Overview, Theory Into Practice, 41:4, 212-218, DOI: 10.1207/s15430421tip4104_2

Gericke, K., Blessing, L., & Qureshi, A. J. (2013). ANALYZING TRANSDISCIPLINARY DESIGN PROCESSES IN INDUSTRY – AN OVERVIEW. Proceedings of the ASME 2013 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference IDETC/CIE 2013. Retrieved from http://proceedings.asmedigitalcollection.asme.org/

Kolb, A. Y., Kolb, D. A., & Lewin, K. (2013). Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education, 4(2), 193–212. Retrieved from http://www.jstor.org/stable/40214287

Qureshi, a J., Gericke, K., & Blessing, L. (2013). Design Process Commonalities in Trans- Disciplinary Design. ICED13: 19th International Conference on Engineering Design, (August), 1–10.

Qureshi, A. J., Gericke, K., & Blessing, L. (2014). Stages in Product Lifecycle: Trans-disciplinary Design Context. Procedia CIRP, 21, 224–229. https://doi.org/10.1016/j.procir.2014.03.131

"Backwards Design" or more Authentic and Engaged Learning in your Courses
Michael Cenker

A.
I have been a learning designer and learning consultant in post-secondary since 2004, with the U of A Faculty of Medicine and Dentistry since 2013. I have developed and delivered a large number of workshops for faculty members in that time, and participated in the development a myriad of courses and learning resources.

B.
This workshop is based on the "Understanding by Design" (UbD) work of Wiggins and McTighe. It will present a planning strategy for use at both class and course levels. The workshop will focus on the three stages of UbD: identifying desired results; determining assessment evidence; and planning learning experiences and instruction. These are related to the key elements of the UbD framework—overarching understandings, essential questions, and transfer performance tasks.

C.
1. Identify the three planning stages of Understanding by Design (UbD)
2. Reflect on and identify "essential questions and overarching understandings" for their own course
3. [at a future date] Integrate essential questions and overarching understandings in their class and course planning and integrate them regularly into their teaching
4. [at a future date] Locate further resources on UbD

D.
1. (Prior to the session) participants are invited to view the one-page planning document that will serve as resource for the workshop: https://docs.google.com/a/ualberta.ca/document/d/1EFs0xK5NXd7GgnJUYTG-CEdGzV3YyU4AxVy3oIyi6sc/edit?usp=sharing
2. (During the session) Participate in Q-and-A about the one-page resource
3. Think-pair-share with a peer one or two essential questions and overarching understandings for their own
4. Reflect in discussion on the overarching understandings and essential questions identified for this session
5. (After the session) A further resource developed by Jay McTighe, co-developer of the UbD approach, can be found here: http://www.ascd.org/ASCD/pdf/siteASCD/publications/UbD_WhitePaper0312.pdf

Blended "Hybrid" Course in Otology Creating a Flipped Course Model for Otolaryngology Residents

Nahla Gomaa

During the Otolaryngology residency program, Otology is taught by various means; including extensive ambulatory care, surgical and emergency sessions exposure, providing opportunities for clinical application of knowledge. The Theoretical aspects are delivered through seminars prepared by the residents themselves, and attended voluntarily by faculty members.

Blended or hybrid courses are estimated to be utilized by 79% of public institutions of higher education (Allen et al., 2007) in the US. It is an innovative approach, in the form of flipped classrooms, which provides a substantial portion of the necessary didactic component via online readings, pre-recorded lectures, and saves in-class time for interactive sessions (Ruffini, 2012). Therefore, combine elements of face-to-face and online courses.

Moraros et al. 2015 describes the advantages of Flipped Classrooms for both learners and instructors, namely improving learning outcomes, enhancing clinical reasoning, and enriching learners' problem-solving abilities. In the mean time, it accords with the CanMEDS directives by providing an active learning pedagogy that enhances developing skills of collaboration, leadership, scholarship and health advocacy.
Methodology:

In our pilot project, a flipped course in Otology replaced the traditional didactic morning seminars. The face to face time in this case was used for interactive case-based discussions, panel discussions, research study critical appraisal, or planning a preventive or interventional programs. The online component would be released on Moodle typically around a week before the assigned session in the form of Captured slides with recorded presentations, or recommended readings with hyperlinks to the U of A library electronic journal collections or book chapters.

One of the residents, was assigned as a moderator to each session. As such, the moderators were given training and orientation at the beginning on how to record their presentations using Camtasia software, and the objectives of the interactive sessions. They were given the selection of the format for their interactive sessions. Once they choose the format, they were asked to give ideas and ask for the Faculty (instructor's) help on how to run the sessions.

A pre- and post-course test was distributed via RedCap, aiming to capture the residents' knowledge; not only in Otology, but their decision making skills in CanMEDs rules related questions. In addition, a pre- and post satisfaction surveys to evaluate residents' satisfaction and the learning outcomes were sent. Pertinent to this, we started to create online question bank for further references and revisions of the course.

Most of the work during the summer studentship focused on assessment of the need for change, designing and collecting resources for online courseware as well as interactive sessions, creating an online question bank, and preparing the pre-and post-course surveys. Having limited financial support, we utilized university and institutional resources to formulate the online sessions for the pilot study. The course was delivered as a non-credit course. An expected resistance of the residents made it easier to use qualitative methods for course evaluation. The new teaching method was expected to enhance clinical reasoning, collaboration, and active participation of residents through their role playing as moderators or panellists, which seemed to be better achieved in junior, than senior residents. It would also help faculty members to work on weak points in real time during the interactive sessions, and cover gaps in knowledge, including cases and investigations that may not be seen in clinical settings.

References:
Allen, I.E., Seaman, J., and Garrett, R. Blending In: The Extent and Promise of Blended Education in the United States (March 2007). http://sloanconsortium.org/publications/survey/pdf/Blending_In.pdf.

Belfi, L. M., Bartolotta, R. J., Giambrone, A. E., Davi, C., & Min, R. J. (2015). "Flipping" the introductory clerkship in radiology: Impact on medical student performance and perceptions. Academic Radiology, 22(6), 794-801.

Curriculum development for medical education. Kern D. E., Thomas P. A. and Hughes M. T. (Eds.), (2nd ed.). Baltimore, MD: The Johns Hopkins University Press. 2009

Frank, J. R., Snell, L., & et al. (2014). Draft CanMEDS (2015) physician competency framework - series 1. Ottowa: The Royal College of Physicians and Surgeons of Canada.

Moraros J, Islam A., Yu
S., Banow R., and Schindelka B. (2015): Flipping for success: evaluating the effectiveness of a novel teaching approach in a graduate level setting. BMC Medical Education201515: 27. DOI: 10.1186/s12909-015-0317-2© Moraros et al.; licensee BioMed Central. 2015

Ruffini MF. (2012). Screencasting to Engage Learning. Educause. http://www.educause.edu/ero/article/screencasting-engage-learning.

Young, T. P., Bailey, C. J., Guptill, M., Thorp, A. W., & Thomas, T. L. (2014). The flipped classroom: A modality for mixed asynchronous and synchronous learning in a residency program. Western Journal of Emergency Medicine, 15 (7), 938-944.

Blended Learning in Engineering Design

Pierre Mertiny, Brian Yang

Engineering design is a methodical series of steps that utilizes scientific, ethical and managerial concepts to create a functional products or service. To teach engineering design, the learning objectives are not to grasp fundamental scientific concepts but to learn the ability of applying scientific concepts to real world applications with real world constraints. Hence, the most effective method to teach this subject matter is not by books and exams, but by providing students with ample of time for experiential learning. Traditionally, the second year mechanical engineering design course, MecE 260, focused on enforcing the students' conceptual scientific knowledge from other courses and gaining the experience of designing and manufacturing a functional remote controlled vehicle. However, with recent restructuring of mechanical engineering second year courses, additional scientific concepts were incorporated into MecE 260. By introducing new learning objectives into an already condensed course, the time for student-teacher interactions became limited. Undesirably, the course was trending towards assignments and exams, while sacrificing time for sharing experiences in design. The face-to-face time was occupied by teaching the additional scientific concepts instead of elaborating on the actual design process, successes and failures. The teaching assistants' time was used to teach and mark pre-requisite materials instead of guiding the students' design work. The entire course was overloaded with content, leaving not enough time to neither delve into scientific concepts nor to share time and experience pertaining to design.

Blended learning is a method where the strength of both traditional and digital learning are incorporated to achieve the course learning objectives. In the case of MecE 260, blended learning was implemented to shift the review of pre-requirement material to the digital medium. By moving this content online, time was freed for the instructor to elaborate on the additional scientific concepts, and the teaching assistant to support the students with guidance in engineering design. In addition, digital learning opportunities via online videos were provided to the students for reviewing manufacturing processes. By providing these videos, not only was time freed up for the instructional team to guide the students' design work, but competency and safety in relation to manufacturing processes was improved. This presentation provides a quantitative comparison of course outcomes in terms of examination results, design reports, and course evaluations between the traditional and the blended course structure. The goal of this comparison is to show that blended learning not only improved the conceptualization of scientific concepts, but also increased experiential learning opportunities in MecE 260. With the implementation of blended learning, the course was re-directed towards engineering design as it is meant to be taught: with time and experience.

Community Service Learning in Adapted Physical Activity: Lessons learned, challenges, and questions remaining

Joanna Auger, Kelvin Jones

This presentation will focus on the lessons learned and the existing challenges in the implementation of a unique community service learning project developed for KIN 372 (Neuroscience Considerations for Adapted Physical Activity). During this course, instructors used a physiological approach to examine how neurologic and neuromuscular impairments present barriers to participation in physical activity for people experiencing disability. For the community service learning project, each student group worked with a local disability organization (e.g. Parkinson Alberta, SCI Alberta, MS Society of Alberta) to provide tailored information about physical activity in relation to a specific neurologic or neuromuscular impairment. Each student group facilitated a focus group discussion with 3-4 community members living with a specific impairment. The goal of this discussion was to identify gaps in the current exercise guidelines for that population. The community members drove the research question that the student group investigated. This is a novel approach in the field of adapted physical activity as it is common to have academics, medical professionals or exercise professionals directing the research priorities. Through this project students identified topics of importance for people living with the neurological condition. The director of this project was the community group and the audience was the community group. Both of these factors significantly increased student engagement. Once the primary research question was determined, the students conducted a systematic review of the research literature. The students and community members determined the most appropriate method for the students to relay their findings back to the community (i.e. presentation, pamphlet, newsletter, video, etc.). At the end of the semester, each student group presented their deliverable to the community group and received feedback. Discussion points in this presentation will include lessons learned, such as: 1) how to clearly explain to community partners the expected roles and responsibilities of the community partner and the students; and 2) methods for teaching students about how to conduct a high quality systematic review of the research literature. Discussion will also focus on current challenges and questions that arose, such as: 1) How much and what type of instructor guidance to provide throughout the project?; 2) how to ensure that the systematic review process is of high quality?; 3) whether to proof all student deliverables prior to them going out to the community; 4) how to ensure that the community groups are using the deliverables in their intended manner?; and 5) how to meaningfully involve community partners in the assessment of the student work?

Creating Undergraduate Awareness about Careers in the Discipline

Chuck Lucy, Mike Serpe

What job can I get with a _____ degree?

This is a common question asked by students. And a question that most university professors do not have the resources or experience to answer. Professional societies have developed resources [1] and there are but a few examples of career preparation courses [2]. This presentation discusses a course developed to raise awareness of students to career opportunities and expectations in chemistry.

Introduction to Industrial Chemistry [3] introduces students to the practices, environment, concepts, and other issues associated with the industrial workplace. The course has no traditional lectures. Rather CHEM 300 is a blended course consisting of seminars by chemists from local industry, industrial tours, informational interviews, and professional skills development such as resume writing and interview skills. Prior to each event, students watch short videos related to the career or industry [4], and post a reflection or question. As a final exam, students apply to a job description provided by a local chemist, and then do a "mock interview."

The challenges and outcomes of this initiatives will be discussed. One of the more positive and least expected outcome has been greater connection to our alumni.

References:
www.acs.org/content/acs/en/careers/college-to-career.html, accessed March 3, 2017.

M.L.B. Jones and P.G. Seybold, Combining chemical information literacy, communications skills, career preparation, ethics and peer review in a team-taught chemistry course, Journal of Chemical Education 2016, 93(3) 439-443, and references therein.

www.ualberta.ca/chemistry/undergraduate-program/courses/chem-300, accessed March 3, 2017.

www.ualberta.ca/chemistry/undergraduate-program/resources-for-careers-in-chemistry, accessed March 3, 2017.

Delivering Digital Assessments on Student Devices: What have we Learned? Teaching and Learning Experience in Higher Education

Jamie Stewart, Mark Hall

Mark Hall is an Associate Professor and the Associate Chair and Director of the MScPT in the Department of Physical Therapy. He has led the Bring Your Own Device and ExamSoft teaching and learning initiatives in the department. Mark has a keen interest in teaching faculty development and inter-professional learning. Mark completed his PhD at the University of Alberta.

Jamie Stewart completed both his undergraduate degrees (Commerce and Education) at the UofA and completed a Masters in Instructional Design at BYU. After a long period of leading educational technology initiatives in higher education in Dubai, Jamie now works as a learning designer in the Technologies in Education department in the Faculty of Education and is the operational manager of the Learning Assessment Centre.

Abstract:
At the University, there is increasing demand for digital assessments and decreasing computer labs -- something has to give.

Both the Department of Physical Therapy and the Learning Assessment Centre (LAC) entered into pilot projects this year to address digital examination needs. The LAC was looking at ways to make their testing services mobile and the Department of Physical Therapy was looking at ways to use student devices to deliver secure exams across multiple campuses and to increase their reporting ability for accrediting bodies. This session will report on those two pilot projects and specifically address the following topics:

Why the ExamSoft testing platform?
BYOD - Secure exams delivered on student devices - lessons learned.
Exam analytics and student feedback
Suggestions for the next phase of the pilot

Learning Objectives:
Participants will be able to:
- Identify the pros and cons for delivering digital exams on student devices
- Identify the components of a robust digital testing eco-system

Strategy:
Participants will:
- In groups of 3 or 4, participants will write a short exam on their device.
- In groups of 3 or 4, participants will assess the quality of an exam, overall, and the quality of individual questions.

Development of an Engaging Chemistry App to Increase Student Interest in Learning Organic Chemistry

Hayley Wan

Approximately 3000 students per academic year are enrolled into the introductory organic chemistry courses at the University of Alberta. Some of these students are completing a degree in chemistry but most are required to complete these courses as pre-requisites for other degree programs such as medicine, dentistry, pharmacy, and food science. A large portion of the curriculum involves teaching spectroscopic techniques and analysis, which is a difficult topic to master for students and often results in frustration and minimal interest.

Students of today are often described as the 'Net-Generation' and spend a lot of time surfing online, using apps, and interacting on social media.[1] With access to computer technology being widely available, the development of online, interactive programs are more beneficial for students as they provide better engagement and allow greater learning flexibility. There are only a small number of online programs that effectively teach undergraduate level organic spectroscopy. Unfortunately, some of the currently available programs are not interactive and involve static display of spectral problems.[2]

With the assistance of a grant from the University of Alberta Teaching Initiative Fund (TIF), we are collaborating with a local, non-profit company called Onlea to develop an interactive app to assist students in the learning of organic spectroscopy. Onlea were also the producers of University of Alberta's first MOOC – Dino 101.[3] To better engage and make the topic of organic spectroscopy more interesting for students, it was decided that the app should incorporate an aspect of every day life and the universally relatable theme of food was selected. With this app, students are able to learn and practice their organic spectroscopy skills by analyzing spectra of chemical compounds commonly found in everyday foods, for example, raspberries or chili peppers. The app is dynamic, provides interactive feedback for both correct and incorrect answers, and helps to build problem solving and critical thinking skills in the students.

This presentation will provide an overview of the project to date, assess the alpha version of the app and examine feedback obtained from the first round of student testers. Testing methods, future improvements to the app and expectations for the next two years of the project will also be discussed.

References:
https://www.educause.edu/research-and-publications/books/educ-ating-net-generation/it-age-or-it-first-steps-toward-understanding-net-generation

https://webspectra.chem.ucla.edu/

https://onlea.org/courses/dino-101/

Enhancing a Traditional Philosophy Seminar With Active Learning Strategies

Ka Ho Lam, Kathrin Koslicki

In this presentation, we share strategies undertaken to enrich an undergraduate philosophy class. In the past, philosophy professor Kathrin Koslicki has taught Philosophy 233, The Trial and Execution of Socrates, in a traditional seminar format. Although students have been reasonably satisfied in past classes, Dr. Koslicki was looking for ways to help students make connections to the significance of the case of Socrates beyond key philosophical texts that are usually used in the study of this topic.

The pilot class, supported with TLEF funding, used two key pedagogical strategies to enrich students' experiences: blended learning,and a final project in which students held their own mock trial for Socrates. Blended learning was incorporated through a series of pre-recorded video lectures by faculty from different departments in the Faculty of Arts. Students gain the advantages of interdisciplinary learning (Mahoney & Brown, 2013), as professors enhanced the course topic with disciplinary perspectives from drama, law, history, and political science, among others. The class was partially "flipped" by having students view these lectures and complete study questions in advance of the class, leaving much more time in class for discussion activities (Wallace, Walker, Braseby, & Sweet, 2014).

The second enrichment strategy was a culminating class project; a mock trial for Socrates, in which students prepared for roles as prosecutors, defense, witnesses, and jurors. The partially flipped format created space during face-to-face class time for students to work in groups to prepare for the "trial." Students groups were based on their roles in the trial. Students collaborated in these groups, sharing resources and building arguments.

The course was evaluated in a collaborative effort between the professor, her TA, and members of the Arts Pedagogy Research and Innovation Laboratory (APRIL). Ethics clearance was obtained for the study. Researchers observed three classes, and interviewed both the instructor and TA for the course. Student assignments incorporated reflection activities, which served as another source of data. Students were also invited to complete midterm and final evaluations of their course experience. All but one student in the class of seventeen consented to participate.

Instructor and student accounts suggest that student engagement increased as a result of increased opportunities for class discussion, but in particular as a result of the final class project. The authenticity of the final "mock trial" was enhanced by the presence of an invited audience and additional volunteer jurors. Interdisciplinary lectures provided students with novel sources and resources for arguing and reasoning from their respective roles in the "trial." The instructor found that the quality of students' reasoning was greater, overall, than that she had encountered in past year end term papers and exams. Findings support those of previous studies that show increases in student motivation, self-directedness, metacognition, and higher-order thinking coming out of well structured project-based learning (Lee, Blackwell, Drake & Moran, 2013; Stefanou, Stolk, Prince, Chen, & Lord, 2013).

References:
Lee, J. S., Blackwell, S., Drake, J., & Moran, K. A. (2013). Taking a leap of faith : Redefining teaching and learning in higher education through project- based learning. Interdisciplinary Journal of Problem-Based Learning, 8(2), 3–13.

Mahoney, K., & Brown, R. (2013). Devising and interdisciplinary teaching: A case study in collaboration between theatre and humanities courses. College Teaching, 61(4), 143–149. Retrieved from http://10.0.4.56/87567555.2013.817378

Stefanou, C., Stolk, J. D., Prince, M., Chen, J. C., & Lord, S. M. (2013). Self-regulation and autonomy in problem- and project-based learning environments. Active Learning in Higher Education, 14(2), 109–122. http://-doi.org/10.1177/1469787413481132

Wallace, M. L., Walker, J. D., Braseby, A. M., & Sweet, M. S. (2014). "Now, what happens during class ?" Using team-based learning to optimize the role of expertise within the flipped classroom. Journal of Excellence in College Teaching, 25(3/4), 253–273.

Exit Tickets to Encourage Active Engagement in the Post-Secondary Classroom

Alvina Mardhani-Bayne, Michelle Sims

The benefits of "exit tickets" - short prompts that students respond to in writing at the end of a lesson so that teachers can assess learning - have been demonstrated both in K-12 contexts (see, for example, Fisher & Frey, 2004) and in post-secondary contexts (Danley, McCoy, & Weed, 2016). These low-stakes writing exercises allow every student to participate, provide instructors with an opportunity to monitor student understanding and attitudes, and create a space for students to reflect on their learning. The feedback students gain on the exit tickets allows them to receive personalized, daily updates on their progress in class, ability to perform on exams, gaps in their knowledge, and focused areas of improvement. Finally, the use of the exit ticket allows instructors to track attendance, participation, and assessment trends in large classes.This presentation describes the use of an exit ticket in 100- and 200-hundred level Linguistics classes with approximately 50-160 students. In these classes, exit tickets are called "quizzes" and contain a series of 3-10 questions. These questions reflect the style of the exams. On the course syllabus, these quizzes collectively account for 10% of a student's course mark. In the course, quizzes are marked based on completion, though the instructor provides feedback for improvement. Too, students are able to see the point value grade they would have received if they had put a similar answer on an exam. In this way, the students are given constant feedback on exam performance. To create a low-stress, low-burden form of assessment, students are allowed to complete the quiz using whichever resources they prefer (textbook, notes, peer work), but are encouraged to complete the quiz as if they were taking an exam (without resources) in order to reflect on their performance and have a sense of ownership over their progress in the course. This presentation will provide examples of the exit ticket strategy that may be useful for instructors in other fields and will describe anecdotal evidence from students for the effectiveness of this approach.

References:

Danley, A., McCoy, A., & Weed, R. (2016). Exit Tickets Open the Door to University Learning. InSight: A Journal of the Center for Excellence in Teaching and Learning, 48, 48-58.

Fisher, D., and Frey, N. (2004). Improving Adolescent Literacy: Strategies at Work. New Jersey: Pearson Prentice Hall.

GAP [Geek Assisted Prompts] in Discovery Learning

Nahla Gomaa

The goal of the teaching strategy was to compensate for the gaps that are detected during discovery learning sessions, especially when students disregard an objective either because it was covered in lectures or other educational setting, or because the design of the vignette is not eliciting it.

Therefore, this innovation is based on a strategy similar to the brainstorming concept. The main presenter has started it in class setting when the time is close to the debriefing session, yet students are not coming close to discuss the objective of concern. At that point, any preceptor would be trying everything else in class to facilitate the students to get to the missed objective. This may have worked, but it seemed for me like a directive approach. So I started throwing pictures on the google Docs that I share with the students for taking notes. Then asked them the following session "What did this picture mean to you?". My pictures could have been MRIs, CTs or a funny picture, However they had to stimulate question like "what are the side effects of the medication?" or "what is the drug interaction". It can only be emulating the anatomy in a funny way, to elicit the importance of the objective. Later, the students started to throw prompts and raise discussions about them the next day. Therefore, I knew and could assess their knowledge in the objective of concern. By time, the students prompts turned to be much better than mine.

Evaluation strategy:
I am in the process of assessing the validity of the prompts in the educational process, via a reciprocal questionnaire to test if the prompts elicit the questions meant, and to ask students to generate prompts based on predetermined objectives.

Although the strategy seems to be simple, it is considered an interactive method of stimulating the students thinking on what could the prompts mean, stimulate the discussion on the following session, efficient for the time of the session, as the preceptor -Knowing that the objective is important- does not have to raise a discussion in class when the vignette is not helping.

References:
Reeve T.C. (2006): How do you know they are learning?: the importance
of alignment in higher education. Int. J. Learning Technology, 2 (4): 294-309.

Rhadakrishna R.B. (2007): Tips for developing and testing questionnaires and instruments (45) 1: Tools of the Trade 1TOT2.

Onwuegbuzie A.J., Witcher A.E. Collins K.MT., Filer J.D., Wiedmaier C.D., Moore C.W. (2007): Students' Perceptions of Characteristics of Effective College Teachers: A Validity Study of a Teaching Evaluation Form Using a Mixed-Methods Analysis. American Educational Research Journal, 44 (1): 113-160.

Weiner (2007): Measurement: Reliability and Validity Measures. Johns Hopkins Bloomberg School of Public Health.

Graduate Attributes Assessment Platform

Samira ElAtia, Osmar Zaïane

Within the priorities and parameters of engagement and independent monitoring of student progress, a two-year Teaching and Learning Enhancement Fund (TLEF) project used the Graduate Attribute Assessment Platform (GAAP) as a tool for instructors to assess their progress within the 7 Graduate Attributes (GAs) of the university. In this workshop, we will present the final product project. Participants will be added to my course in eclass. We will carry out the evaluations of the GAs. Participants will work within eclass (1) to do the assessment, (2) to retrieve reports, and (3) to find ways to adapt the GAAP tools to their specific needs and map to their own courses.

Participants will be able:
- to explore the GAAP suite of tools
- to be able to produce and compare reports, and
- to start a meaningful implementation of the GAs within the learning outcomes of courses.

Participants will be asked to work in pairs: one as student and the other as an instructor. They will be assessing the same simulated course. They will do both instructor and students evaluations, and they will discuss, compare and think about the process of the assessment from both perspective. The hands-on activities as well as the pair-interaction will engage the participants into active learning. Participants will have a hands-on experience of the GAAP, they will receive reports and visualize progress. Finally, they will also be able to map their own learning objectives to the GAs.

Graduate Teaching and Learning Program: Building Scholarship in Teaching and Learning

Suzanne Kresta, Renee Polziehn, Deanna Davis, John Nychka, Heather Zwicker

The Graduate Teaching and Learning program is open to all graduate students and postdoctoral fellows at the UofA. The program was fully reviewed in 2015-16 to focus on learner outcomes and to incorporate a new Level 4 centered around the scholarship of teaching and learning. The new program has four levels:

Level 1: Introduction to teaching and learning: classroom basics – 20 hours of workshop sessions

Level 2: Developing practical teaching skills with feedback and reflection – development of 3-5 teaching skills, a minimum of 2 hours of instruction with feedback from peers, a mentor, students, and documented self-reflection. This experience is complemented with the development of a teaching philosophy or statement of practice, documentation of the instructional materials and reflections on skills development, and a teachng CV.

Level 3: Pedagogy and course design: deepening understanding – this is a full term course with three hours of instruction per week and an extensive set of reading resources. The course assignments are themed around the development of a sample course. Classroom time is roughly 50% active or experiential learning, and 50% content focussed.

Level 4: Building a foundation of scholarship in teaching and learning – the new level will invite students to engage in a research project related to teaching and learning, or to develop a substantial teaching artifact, under the supervision of a teaching mentor, and under guidance from the Center for Teaching and Learning. The proposed prototype, to be offered to a group of 10 students in the summer of 2017, will be presented for reflection and discussion. As far as we have been able to determine, this is the first SoTL focussed module to be offered to graduate students in Canada so there are many opportunities to explore.

How (free and easy) Technology Increased Student Engagement in our Classroom

Chris Zarski, Mark Hall

a) A brief description of your teaching and learning context and goals: As instructors in the Department of Physical Therapy we teach to students across three campuses simultaneously utilizing video conferencing technology. Student engagement is crucial in any teaching environment but becomes even more difficult when teaching using this distributed model. Our goals are to ensure that students are free to ask questions, that we are able engage students in the learning process and that we are able to gauge the understanding of those students during class itself.

b) Your innovative teaching, learning and assessment strategy: Integrating technology into the classroom is nothing new. However, it can be intimidating and overwhelming to know which applications and technologies are most effective. This session outlines two professor's current uses of free technologies that strive to optimize student's ability to ask questions, enhance student engagement and to facilitate and assess learning.

c) A brief description of best practices or research in this area:
Over the past two decades, post-secondary education has seen an exponential growth in the use of technology with both the delivery of course material (flipped classrooms) and with communication between instructors and students within the classroom itself (Hoglund, 2015). The use of technology can be an effective means to engage students and optimize learning within the classroom.

d) A brief description of any evidence that supports the effectiveness of the strategy in your context and why it might be useful for others:
A number of researchers have evaluated the effectiveness of technology in teaching and learning. Students tend to prefer online and multi-media presentations over traditional lecture, and technology appears to support collaboration, problem solving and applied learning (Thiele et al 2014, Wallace et al. 2012). However, it has been reported that technology should not be used unless it has a specific purpose or goal (Contact North, 2012).Thus it is key to match one's educational goals with a suitable technology to achieve the goal. This session will briefly cover some of the freely available software, and pair them with specific learning goals the instructor may have.

Attendees are asked to please have their smart phone, ipad or laptop available for the session.

References:
Hoglund LT. Mobile devices and software applications to promote learning in a musculoskeletal physical therapy class: A case report. J Phys Ther Educ. 2015; 29(2):54-61.

Thiele, A. K., Mai, J. A., & Post, S. (2014). The Student-Centered Classroom of the 21st Century: Integrating Web 2.0 Applications and Other Technology to Actively Engage Students. Journal of Physical Therapy Education, 28(1), 80-93.

Contact North (2012) Ten guiding principles for the use of technology in learning. Retrieved from:http://www.contact-north.ca/sites/default/files/contact-North/files/pdf/publications/ten_guiding_principles_for_use_of_technology_in_learning.pdf

Wallace S, Clark M, White J. 'It's on my iPhone': attitudes to the use of mobile computing devices in medical education, a mixed-methods study. BMJ Open 2012;2: e001099. oi:10.1136/bmjopen-2012-001099

Imagining Cities: Integrating Theory and Practice of Civic Engagement Across Disciplines

Zane Hamm

Advancing Civic Education & Collaboration
Imagining Cities:
Theory & Practice of Civic Engagement Across Disciplines

a) Teaching and learning context and goals:
Fostering healthy, resilient, inclusive, and engaged communities requires the energy and commitment of students and community members as thinkers and "hands-on" city builders. Dr. Zane Hamm, in partnership with The Centre for Public Involvement (CPI) and the University of Alberta's Community Service Learning (CSL) developed this course that responds to the U of A call to engagement. CSL fosters and supports student engagement in the not-for-profit sphere and links academic study with community action and practice.

b) Innovative teaching, learning, or assessment strategy
Zane will share learning goals, literature, activities for field study and reflection to support learners to work with community partners and learn core principles and theoretical foundations of civic engagement. Participants share and develop knowledge and skills to enhance citizen engagement in the specific context of Alberta.

E-portfolios, digital story and dialogue are used for assessment and critical reflection, along with other summative evaluations.

c) a brief description of current best practices or research in this area
On June 17, 2016 the University of Alberta Board of Governors unanimously approved For the Public Good, as the new institutional strategic plan. "For the Public Good" frames a commitment to "empower and enable each member of the University of Alberta to build, experience, excel, engage, and sustain." Now is the time for educators to shape opportunities to for individual and collective action.

Current literature supports a culture of civic engagement through structures, practices, and ongoing education to promote and foster a civic engagement infrastructure (Nabatchi and Leighninger, 2015). Opportunities abound across disciplines to foster a sense of civic identity through higher education in concert with community engaged scholarship, and through continuous reflective practice (Westheimer and Kahne, 2004; Mitchell, T, Battistoni, R, and Banik, C., 2015).

d) a brief description of any evidence that supports the effectiveness of the strategy in your context and why it might be useful for others

• I will share examples of studies that support learners' civic identity, and e-portfolios from the Imagining Cities course as evidence of students' learning through community-engaged content and collaboration.
• Through immersive and interdisciplinary projects with local community partners, educators and learners gain a deeper understanding of complex issues and relevant responses.
• I am excited to share resources, relevant readings, activities, assessments and guest speaker contacts to support others in this work. I will also share the latest City of Edmonton principles and framework to guide public engagement, from the Council Initiative on Public Engagement 2017.

Bridging theory and practice
Key questions that drive inquiry include:
• How do we mobilize citizens to come together to engage in dialogue and deliberation about urgent issues like energy transition and poverty?
• What are the most urgent challenges facing our cities and the greatest opportunities for social change?
• Where and how do citizens have opportunities to
participate in decision-making that impacts their lives?

Topics can include foundations and principles of engagement and democracy, decision-making, and innovations in civic engagement that are happening on a municipal level. In this session I will highlight new ways of collaborating with community partners and supporting learners across disciplines to explore how citizens and cities are playing key roles in addressing complex issues, and how citizen participation is a foundation for change.

I provide resources and ideas for activities and assessment. I also include a resource that can be shared with participants in advance. Please see Strengthening Public Engagement in Edmonton at http://goo.gl/f9PLEP.
#Imagining Cities

References:
Westheimer and Kahne (2004). What kind of citizen? The politics of educating for democracy. American Educational Research Journal, 41 (2). Pp.237-269.

Nabatchi, T. and Leighninger, M. (Eds). (2015). Chapter 2: Good or bad? Charming or tedious? in Public Participation for 21st Century Democracy (pp. 13-44). Hoboken, NJ, USA: John Wiley & Sons. doi: 10.1002/9781119154815.ch2

Mitchell, T, Richard, D., Battistoni, R, and Banik, C. (Spring, 2015). Reflective practice that persists: Connections between reflection in service-learning programs and in current life. Michigan Journal of Service Learning, 21(2):pp 49-64.

Strengthening Public Engagement in Edmonton. (2015). Access at http://goo.gl/f9PLEP.

Implementing Student Feedback on Teamwork and Leadership Skills in The Classroom

Nicole Wilson (nicole.wilson@ualberta.ca)
Festival of Teaching and Learning
May 2017

Research suggests that when students receive the feedback on their skills relevant to effective teamwork multiple times during a team project, there are positive benefits in the individual's teamwork skills and confidence as well as the team's interpersonal effectiveness and performance (Donia, O'Neill, & Brutus, 2015). Students typically complete the assessments three times during a team project to see the greatest benefits.

At the University of Alberta, in leadership courses with a team projects component, we used a self and peer teamwork assessment to provide students with the development opportunity of building their skills as well as assessing their contributions for their course grades. To do this, we collaborated with the ITP Metrics Laboratory at the University of Calgary. Teaching Fellows undertook training on the assessments and assessment de-briefing with the Principle Researcher. The assessments were research-based, valid, reliable assessments of student's individual skills relevant to team success and leadership as well as the student teams' overall health. All of these assessments are based on solid psychological research, and there is ongoing graduate student research that continues to support the role of peer feedback and skill assessment in the classroom.

The students completed the assessments three times during a two-semester long team project with 8-10 students per team. At each time point, students completed two assessments. First, a self and peer feedback assessment where each student rated themselves and each of their team members on individuals' communication, commitment to the team, quality of work standards, knowledge and skills contributed to the team, and actions to keep the team on track. Second, a team health assessment looking at the extent to which team members, as a group, contributed to the overall functioning of the team in terms of communication, ability to adapt, trust, conflict, contributions, use of team members' knowledge, and seeking the knowledge of others outside the team. After completion of the assessments, students received a personalized report of their individual skills related to teamwork and the overall health of the team from the assessment company. In class, Teaching Fellows debriefed the assessments with individual reflection and group discussion. Teaching Fellows also offered individual follow-up discussions during office hours. Results showed improvement in students' individual skills relevant to team success as well as the overall health of the team over the two-semester long project.

References: Dona, M., O'Neil, T. A., & Brutus, S. (2015, January). Peer Feedback Increases Team Member Performance, Confidence, and work Outcomes: A Longitudinal Study. In Academy of Management Proceeding [Vol. 2015, No. 1, p. 12560]. Academy of Management

Integrating Social Media: Twitter Micro Reflections

Cristina Stasia, Lily Ren

Instructors build students' capacity to articulate informed opinion via diverse assignments including reflection essays, argument papers, and op-eds. One increasingly valuable way to build students' argument and rhetorical skills is to integrate social media into existing course objectives and curriculum. I have incorporated social media into all of my courses for the past fifteen years, both at the University of Alberta and at a private university in the United States. Integrating diverse platforms including YouTube, Twitter, Instagram, and even dating apps like Tinder and Grindr, has significantly increased students' engagement with course material in all my courses—from film theory to gender studies to interdisciplinary leadership.

Currently, I have two assignments that use social media: Twitter Microreflections (TMR) and a Vodcast. In this workshop, I will introduce participants to the Twitter Microreflection, which challenges students to apply course content to current events via a single thick tweet. I created this assignment specifically for an interdisciplinary course, and it can be easily integrated into most disciplines with slight modifications.

Unlike a traditional reflection assignment, Twitter's character limitations force students to hone in on their argument, to reflect on how course content connects to real world events, and swiftly builds students' ability to communicate sophisticated theory and concepts to a general audience. This assignment also underlines the importance of sharing what students are learning with those beyond their own faculties, avoiding disciplinary discourse in favour of accessible, interdisciplinary language. The TMR has directly impacted students' ability to craft sophisticated, clear thesis statements, as well as introduced them to what is at stake in sharing academic knowledge beyond academic spaces. Importantly, it has also forced them to be careful evaluators of information: when they have tweeted articles without fully reading them, they have been held accountable for the problematic statements in them. Incorporating social media helps underline what is at stake in how students share their opinions, as well as teaches them critical social media communication skills which are increasingly necessary for diverse fields and professions. This assignment has not only created connections between students and community stakeholders, but it has also been instrumental in building the social media and assessment skills of the graduate student Teaching Fellows who help deliver this course.

The learning objectives for workshop participants include: simple ways to incorporate Twitter into their existing courses; how to prepare students to use Twitter; how to grade Twitter assignments; and how to handle the unexpected. Participants will use active learning strategies including grading existing TMR; crafting a TMR about the workshop (those without Twitter will write theirs on the board); and brainstorming one way to include Twitter into a current or upcoming course.

Living Latin at the University of Alberta: A New Way to Teach an Old Language

Kelly MacFarlane, Christopher Mackay

"Living Latin" is a new approach to teaching ancient languages, proving very effective in Latin classes in secondary schools. We plan to adapt this approach to the university classroom, and provide students with a better foundation and greater fluency in Latin through experiential learning.

Students will be taught the language as a "real" or "living" language, where they will actively interact with Latin by hearing and speaking it as well as reading and writing. Our goal is for students to gain a more active understanding of the language and an improved ability to read and understand ancient texts. By directly engaging with Latin, in Latin, students will see their fluency, understanding, and confidence, grow.

We will increase the amount of Latin used in the classroom. In the traditional method students are expected to learn, in English, complex grammatical rules about Latin and are assessed on their ability to use those rules to convert Latin to English. We aim instead to keep the students in the target language; the more students work with Latin, the greater their ability to understand Latin. This is standard in modern language classrooms, but almost entirely missing from university Latin classrooms.

In addition to the new style of Latin teaching, we will change the order in which the material is introduced. Traditional Latin textbooks tend to shelter "harder" grammar, which means common constructions aren't seen until the 2nd year, and to teach grammar in blocks, with all instances of a given phenomenon treated at once. It's more effective to introduce the more important concepts early to allow students to read and discuss standard Latin texts early and to leave uncommon details to a later time. We will write a new textbook that will be a union of best practices, where students will experience a great deal of Latin, in a logical order with the most important and most common grammatical concepts coming early, and with more emphasis on learning the Latin language rather than Latin grammar.

The standard methodology for Latin teaching is "Grammar Translation:," which uses formal analysis of grammar as a means to translate the language. This method, however, teaches the language through the filter of English. We will instead apply the principles of Second Language Acquisition, as seen in the modern language classroom, to "teach the language; not about the language" (Keith Toda, obiter dictum).

The "Living Latin" approach is fast growing in popularity, with workshops and retreats dedicated to speaking and conversing in Latin. Participants in these workshops have an active knowledge of Latin and can discuss Cicero's style or where to go for coffee. Through this approach, students learn the language better, and in a more interesting way. We will know that the new method is effective if we see a greater number of students connecting and actively engaging with Latin with improved fluency, and continuing into upper-year classes. If this method proves effective, it could be expanded to our Ancient Greek classes. The method could also be expanded to other so-called "dead" languages, provided they have a sufficiently large corpus of texts of sufficiently broad content.

While our presentation will be of greatest interest to Latin and Ancient Greek instructors, it should also prove useful both to instructors of modern languages in particular and in general to those interested in active, student-centered learning and how experiential learning can be applied to the language classroom.

References:
Carlon, Jacqueline M. "The Implications of SLA Research for Latin Pedagogy: Modernizing Latin Instruction and Securing its Place in Curricula" Teaching Classical Languages (2013): 106-122.

Coffee, Neil. "Active Latin: Quo Tendimus?" Classical World: 105.2 (2012): 255-269.

Tunberg, Terence and Milena Minkova. "Active Latin: Speaking, Writing, Hearing the Language." New England Classical Journal 39.2 (2012): 113-118

Making a Big Class Feel Like a Small One: Small-Group Discussions in Classes of Over 100 Students

Alvina Mardhani-Bayne, Michelle Sims

In undergraduate classes with over 100 students, students and instructors may sometimes expect class sessions to consist solely of a one-way oral lecture accompanied by a PowerPoint presentation capturing key points and providing visual information (Mann & Robinson, 2009). However, a recent study in Australia found that lecture-heavy science classes have higher student failure rates than those with few lectures (Symonds, 2014). Moreover, research from the UK has shown that the majority of post-secondary students find at least half of their lecture-based classes boring, a psychological state that has been linked to increased truancy and lower grade point averages among students (Mann & Robinson, 2009). One strategy to counteract the negative effects of over-reliance on lecturing is to employ small-group discussions during class time. Small-group discussions allow students an opportunity to produce and use language, rather than passively listen, which helps to deepen understanding of the material (Mercer, 2000). Additionally, small-group discussions give students access to a greater variety of linguistic input, which is beneficial to students who are learning English (Gibbons, 2002). While it may seem as though small-group discussions are not feasible in a large class with only one instructor, this presentation will outline a method for having multiple small-group discussions percolating simultaneously in a way that ensures student accountability and engagement: Each student is assigned to the same group for every discussion, and each group is made up of students taking on different roles. For example, the Group Leader keeps the group on task, the Notetaker keeps a record of the discussion, and the Reporter summarizes the discussion and shares it with the entire class. Students take turns rotating through different roles to ensure equitable participation, and knowing that they are expected to report to the whole group and produce a record of their discussion safeguards against off-task behaviour. Specific examples of how this strategy was used in a large undergraduate Linguistics course will be provided in this presentation, along with reflections from the instructor and students that demonstrate how small-group discussions enhance teaching and learning in large classes.

References:
Gibbons, P. (2002). Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom. Portsmouth, NH: Heinemann.

Mann, S., & Robinson, A. (2009). Boredom in the Lecture Theatre: An Investigation into the Contributors, Moderators and Outcomes of Boredom amongst University Students. British Educational Research Journal, 35(2), 243-258.

Mercer, N. (2000). Words and minds: How we use language to think together. New York, NY: Routledge.

Symonds, M. E. (2014). Lecturing and Other Face-to-Face Teaching--Too Much or Too Little? An Assessment Based on Student Feedback and Fail Rates. Higher Education Research And Development, 33(6), 1221-1231.

Mapping Stories for your Class
Charlene Nielsen

Charlene Nielsen's mission is to share the geographical perspective with all disciplines, and is the chief instigator of UofA's annual GIS Day. She has guest lectured, been a teaching assistant, developed and taught conference workshops and graduate student short courses, as well as provided Geographical Information Systems (GIS) teaching consultations for various credit courses at the University of Alberta. Charlene has been active in FGSR's GTL Levels 1, 2 and 3 programs.

The human brain has evolved to heavily rely on visual information; therefore effective teaching will combine who, what, where, when, why, and how, in a visual story that explains what happens across different locations and time periods. Esri's Story Maps - an online application that is accessible by any internet browser - can lure in your students to show them the ideas they need to understand. All disciplines will benefit from bringing-to-life static textbook maps or location-based concepts, including historical and literary events, scientific and medical discoveries, planning and design innovations, political and commercial interests, recreational and cultural treasures, and beyond.

You can create easy online applications that will help you to: portray lecture information in spatial and nonspatial ways with a mix of interactive maps and other media; teach critical thinking and organizational skills; engage students in active learning collaborations; help students communicate results from their semester-long projects; assess students' work; to name a few.

Bring your own laptop to connect to the internet, sign up for a free account, examine existing story maps to get ideas to use in your own discipline, get hands-on experience creating a simple story map, and take home the resources to help you keep learning how to incorporate relevant Story Maps for your class.

Mentor-Ships, All Aboard: Navigating the Seas of Supported Teaching Development
Billy Strean, Jordan Long

Mentoring remains the preferred method of teacher preparation programs in many countries (Thomas, 2007) and has been used as an informal and formal teacher-improvement strategy at the post-secondary level for some time (Bryant-Shanklin, 2011; Budge, 2006; Gabriel & Kaufield 2008; Lumpkin, 2009; van Ginkel, Oolberkkink, Meijer, Paulien & Verloop, 2016). Research (e.g., Amber, Harvey, & Cahir, 2016) has shown benefits to both mentor and protégé, including the improvement of effective teaching practice, self-confidence, personal job satisfaction, professional and personal relationship development, stress relief, career and leadership development, and self-reflection and self-awareness. These powerful and fulfilling benefits of the mentorship relationship are invaluable to the practicing teacher at the post-secondary level.

(a) The teaching and learning experience in higher education that we will share in this workshop is the mentorship relationship of a beginning sessional instructor and former graduate teaching assistant with a Professor and 3M National Teaching Fellow.

(b) The proposed 30-minute Teaching and Learning Workshop will feature the facilitators teaching participants how to develop and thrive in post-secondary teaching mentorships.

(c) The intended learning outcomes for the session include that by the end of the workshop, participants will be able to:
i) identify key benefits of an effective mentor relationship;
ii) articulate key features of building rapport and developing an effective mentor relationship; and
iii) apply these strategies to their own teaching/learning mentor relationships.

(d) The active learning techniques will include pairs and groups discussing effective and ineffective experiences as a mentor/protégé; a group process of mining best practices; and a process in pairs to make plans on how they will apply the concepts and strategies.

The facilitators will share the narrative of how they developed their mentor/protégé relationship, identifying key aspects of the success and the particular benefits that both parties experienced. The comments will be contextualized to assist participants in implementing effective strategies for productive and fruitful mentor relationships.

Must it *Always* be a Paper? Switching to Multi-modal Assignments to Enhance Motivation, Collaboration, and 21st Century Multi-literacy Skills in the Diverse Classroom

Workshop Facilitators:
BP WRS 101 Instructor: Christina Grant
BP C4WTutors: Soyeon Cho and Taya Thibeault

While K-12 educators have been enthusiastically embracing multiple means of expression—ways of showing knowledge—for years, university instructors remain overwhelmingly rooted in the traditional essay, paper, or other text-only genre. Why is this? What are we worried about losing if we offer students the chance to create an animation instead of a report? A poster instead of an essay? An iMovie instead of a written proposal? Conversely, what 21st century communication skills are we withholding from our post-secondary students when we continue to insist on only papers?

In this interactive workshop, an instructor and two in-class tutors trained by the Centre for Writers will share their experiences as they made the switch from teaching and mentoring an individually written 1,500-word paper (the second and final major course assignment) to an open-choice, collaborative, multimodal project aimed at authentic audiences in a first-year all-ESL writing studies course. The instructor will explain her reasons for making the switch: a desire to better harness technology for learning, increase student motivation, and support students in developing in-demand career knowledge and proficiencies in rhetoric, multi-media literacies, creative thinking, and project-based collaboration. She will outline educational theories that supported the change such as Vygotsky's zone of proximal development[1], Fink's taxonomy of significant learning[2], and Kolb's experiential learning cycle[3]. Also, she will show how adopting a multimodal approach supports Sweet, Blythe, and Carpenter's conviction that instructors should move away from both the sage-on-the-stage and guide-on-the-side teaching models and towards the co-learner role of "mentoring from the middle[4]." Both the instructor and tutors will outline the new learning and collaborations they undertook in shifting to multimodal; for example, determining how to teach and mentor story-boards and partnering with the Faculty of Education's Technologies in Education. The tutors, in particular, will share their unique, close-up insights into the students' experiences of 'going multimodal,' including both challenges and successes.

In this workshop, participants will:

- Discover educational theories and research that support a shift—at least in part—to multimodal assignments
- See the realities of a real-life switch from a traditional to contemporary approach to teaching, learning, and assessment
- Hear about some teaching and tutoring strategies the instructor and tutors learned and executed "on-the-fly" in response to student need
- View actual examples of students' final multimodal projects: Animations, iMovies, brochures, and Prezis with voice-over
- Discuss potential constraints and affordances of non-paper assignments and potential effects on quality of learning, motivation, and instructor-student and student-student relationships
- Discuss specific advantages the multimodal project approach offers for multilingual students and those with diverse backgrounds and skills sets
- Gain confidence in acquiring the strategies and skills to support multimodal assignments such as technical expertise (only basics needed), storyboards, design theory, oral and written feedback, and assessment tools
- Acquire ideas and tips for trying multimodal assignments either in small or large, formative or summative ways
- Discuss ways to find and harness the motivating effects of authentic audiences for students' multimodal projects
- Recognize the value of and excitement in embracing new approaches in order to better serve students' 21st century learning needs

References:
[1] Vygotsky, L. Mind in Society. London: Harvard Press. 1978, p. 85

[2] Fink, D. L. Creating Significant Learning Experiences. Josey-Bass, 2003. p. 30

[3] Kolb, D.A. Experiential Learning: Experience as the Source of Learning and Development. New Jersey: Prentice Hall, 1984.

[4] Sweet, Charlie; Hal Blythe, Rusty Carpenter. "Teaching Creative Thinking and More" in Thriving in Academe: Reflections on Helping Students Learn, NEA Higher Education Advocate, 2013, pg. 8.
http://www.nea.org/assets/docs/HE/Thriving.Sept2013.pdf

Navigating Copyright in an Online Teaching Environment.
Amanda Wakaruk

a) As the UofA's Copyright Librarian, I am responsible for creating and providing literacy instruction sessions for my peers, faculty members, and students. I have been involved in instructional activities at the UofA and with previous employers (in higher education) dating back to 1999. See: https://sites.google.com/a/ualberta.ca/wakaruk/

b) [workshop abstract] What are the copyright implications of scanning a book chapter and uploading it to eClass? What can you do when you find your lecture slides in a fee-based course content aggregator like OneClass or Course Hero? This session will discuss the evolving role of fair dealing in the classroom and possible implications related to the 2017/2018 review of the Copyright Act. It will also introduce instructors to the recently approved UAPPOL Use of Copyright Materials Procedure and Course Materials Copyright Information Document, which outline the UofA Copyright Office's current approved practices related to the use of copyright-protected materials in the classroom.

c) By the end of this session, participants should feel more confident when making decisions about copying, presenting, and distributing resources for instructional purposes. They will also have a better understanding of copyright basics and of the role of Copyright Office on campus.

d) Soliciting feedback from participants about their (on topic) experiences forms the basis of my teaching style. In addition, we will work through at least two case studies as part of this workshop.

Paradigm-Shifting Pedagogy: Incorporating Stress Management into the University Curriculum and Courses

Dalbir Singh Sehmby, Jurate Motiejunaite

Experience: Let's face it . . . universities are stressful. With assignments, tests, essays, presentations, and exams, one of the most abundant sources of stress is the classroom. Even though contemporary universities have multiple spaces that support students, those support networks do not necessarily reach the average student. Hence, several students do not have the ability to manage their stress and thus underperform, leading to dissatisfaction with their academic experiences. Even though the spaces and resources to help manage stress are available, neither students nor professors have the time to access them! Hence, there is the need for a paradigm shift that that re-imagines the curriculum as an opportunity to integrate relevant stress management spaces (via topics, activities, and resources) into the classroom time. Although many professors already feel pressed for time in their courses, this workshop will show ways your course may have space for some paradigm-shifting pedagogy.

With examples, advice, and an open forum of exchange, Dr. Motiejunaite and Dr. Sehmby will guide you on this successful paradigm-shifting journey. Dr. Jurate Motiejunaite is an instructor with over 20 years of international experience teaching varying levels, including high school students from over 140 countries, working with educators and professors on multi-national educational outreach projects, and teaching university courses in ESL, English, Comparative Literature, and Business Communication. Dr. Dalbir S. Sehmby has been a university instructor for 17 years, teaching Film/Media Studies, Comparative Literature, and English. Dr. Sehmby has won multiple teaching awards, including the honour of earning a Students' Union Award for Leadership in Undergraduate Education and was U of A's Last Lecturer in 2016.

Description of the strategy:
In this workshop, Dr. Motiejunaite and Dr. Sehmby provide strategies for addressing and incorporating stress management into the curriculum in terms of time management and assignment construction.

List of learning objectives:
a) Identify reasons for student stress;
b) Address the most common stressors in class;
c) Develop a framework for teaching students' stress management skills specific to course work.

Active learning strategies:
This hands-on workshop asks participants to bring their syllabi drafts, so they can identify ways they may already incorporate stress management and to add stress management initiatives into the curriculum. Learning from the highly successful Stresstival initiative at Campus Saint-Jean, Dr. Motiejunaite and Dr. Sehmby give participants the option of incorporating relevant guest speakers and activities into their curriculum to foster a more cooperative and coordinated university support system. Evidence-based techniques will highlight ways that this paradigm-shifting pedagogy may be a time-saver when it comes to student learning, progress, and satisfaction. In addition, participants are welcome to brainstorm their own methods of managing the stress monster. The workshop allows you to implement your own "Stresstival" in your classes, faculties, and campuses. As Gandhi may have said, "Be the change you wish to see at university."

Peer-assisted Teaching and Learning in Pharmacy Clinical Skills Education

Theresa Charrois, Terri Schindel

In order to meet ongoing problems of (1) insufficient lab facilitators in our second year BScPharm clinical skills training, and (2) providing authentic learning opportunities across the program, a novel approach was developed whereby students in the PharmD for Practicing Pharmacists (PDPP) program facilitated two second-year labs as part of their course entitled Frameworks for Teams, Collaboration and Education in Pharmacy Practice. The goal was for the PDPP students to apply their knowledge of professional education, precepting, and facilitation to an authentic task in the BScPharm program. Students gained experience with individual and small-group facilitation. In the following year (Fall 2016), based on course evaluation feedback, PDPP students created plans for the group activities, based on established course objectives, and further developed, facilitated, and evaluated these activities.

There has been significant work regarding peer-assisted learning (PAL) in terms of experiential education of pharmacy students, but minimal investigation into this type of learning model in clinical skills training. This type of model has been used elsewhere; for example with midwifery students in Australia. An educational intervention was implemented to develop clinical teaching skills of students, through peer education sessions (Rance and Sweet, 2016). The model helped in creating a culture for learning as well as developing clinical teaching capacities. In a scoping review across health science disciplines (with the majority of work conducted with medical students), the authors showed that there were significant improvements in the peer tutors academic learning (Williams and Reddy, 2016). PAL is commonly used in experiential education in health sciences, however, students are not often formally prepared for their role of educator in this model. Previous work noted that students do not receive any instruction on effective teaching methods before or during placements (Leong et al, 2012). Our model built on previous work by preparing the peer tutors for their role. As part of their course work, PDPP students learned about theories of adult learning and facilitation. Students were also guided through the process of education blueprinting and development using the ADDIE (analysis, design, development, implementation and evaluation) model of instructional design.

Effectiveness was evaluated based on student evaluations and debriefing sessions. Students expressed overall satisfaction with the entire experience. PDPP students felt the activities were useful for future practice in terms of evaluation and precepting of students. They enjoyed the 'hands-on' practical aspects of the activities. They linked this experience with their roles as professionals in mentoring and training of future pharmacists. BScPharm students felt the experience was useful and enjoying engaging with the PDPP students. They regarded their peers as being knowledgeable and approachable. The addition of developing educational materials in the second year (2016) of this model helped better engage the PDPP students in the learning.

Involving students as peer teachers in clinical skills teaching opens up opportunities for many health-science faculties. What was initiated as a measure to help with limited staffing in the clinical skills setting and creating authentic learning opportunities, transformed into an integral and well-loved activity across the programs.

References:
Leong C, Battistella M, and Austin Z (2012). Implementation of a near-peer teaching model in pharmacy education: experiences and challenges. Canadian Journal of Hospital Pharmacy, 65; doi:http://dx.doi.org/10.4212/cjhp.v65i5.1178.

Rance S, and Sweet L (2016). Developing clinical teaching capacities of midwifery students. Women and Birth, 29, 260-268; http://dx.doi.org/10.1016/j.wombi.2015.12.002.

Williams and Reddy (2016). Does peer-assisted learning improve academic performance? A scoping review. Nurse Education Today, 42, 23-29; doi: 10.1016/j.nedt.2016.03.024.

Research Critical Thinking (RCT) Activity

Alvina Mardhani-Bayne, Michelle Sims

This workshop addresses how an instructor can create opportunities for authentic talk in small groups within a large (>100) 100-level undergraduate class. Small-group discussions allow students an opportunity to produce and use language, rather than passively listen, which helps to deepen understanding of the material (Mercer, 2000). This workshop focuses on one way to facilitate authentic talk: a research critical thinking (RCT) activity. The RCT activity was adapted from the jigsaw pedagogical strategy (Daniels, Zemelman, & Steineke, 2007). It was co-developed by an instructor and educator to foster student engagement in current scientific research topics. At the beginning of the term, each student picks one of 4-6 research methods that are used in the course's field. The instructor creates small-groups by assigning students who represent different research methods to a group together so that there are not two of the same research methods assigned to a group. Each student is assigned to the same group for every discussion, and each group is made up of students taking on different role (discussed below). Students take turns rotating through different roles to ensure equitable participation. The small-groups discuss a different research question each week, with each individual member contributing how their research method could be applied to the research question. In this workshop, we will demonstrate the activity technique as it relates to the research and ideas participants are exposed to at the Festival of Teaching and Learning (in lieu of field-specific research questions). For our learning objectives, we want participants to: 1) be able to describe the benefits of small-group discussions; 2) construct a concrete plan for creating small-group discussions in their large class; and 3) address some of the barriers they may face and articulate strategies to overcome them. The procedure for conducting the workshop RCT activity is as follows:

1) Groups will be made with 4-6 participants each.

2) Each group member will assume one of five roles:
• Group leader, who leads discussion and ensures participation
• Reporter, who presents the information to the larger group
• Time-keeper, who ensures each group member discusses the topic for up to two minutes
• Note-taker, who records each group member's response
• Members-at-large, who participate in the group discussion without an extra role

3) After the Reporter presents their group's discussion to the larger group, the presenter will then lead the larger group in a brief discussion of the reported responses.

The RCT activity can be adapted in various ways including how students maintain their discussion folder, how discussion topics are generated, the subject matter of the topics (i.e. other than research), additional or fewer small-group roles, and using the activity as an opportunity for students to give individual presentations at the end of the term.

References:
Daniels, H., Zemelman, S., Steineke, N. (2007). Content-Area Writing: Every Teacher's Guide. Portsmouth, NH: Heinemann.

Mercer, N. (2000). Words and minds: How we use language to think together. New York, NY: Routledge.
Reflections on Helping Students Learn (Publication) NEA Higher Education Advocate.
http://www.nea.org/assets/docs/HE/Thriving.Sept2013.pdf pg. 8

Strengthening Engagement with the Next Generation of Learners:
Exploring e-portfolios, asset mapping and digital story in adult learning and teaching

Zane Hamm

A brief description of your teaching and learning context and goals

• This presentation will highlight examples from graduate level health science education and community service learning courses to illustrate examples of engagement and assessment.

Innovative teaching, learning, and assessment strategy
• E-portfolios, digital story telling, DIY diversity and inclusion toolkit, community asset mapping

A brief description of current best practices or research in this area

Current literature emphasizes the need to engage learners in experiential and hands-on learning, with attention to different adult learning styles and opportunities for continuous reflection (Zepke & Leach, 2010; Russell, 2006). Specifically, portfolios, mentorship, opportunities for hands-on and community-engaged learning and reflective activities can enhance positive identity formation in health fields, and increased understanding of connections between theory and community-engaged practice (Rochmawati & Wiechula, 2010). This session is attentive to the next generation of learners, and a range of resources for engaged learning and digital portfolios for assessment (Skiba and Barton, 2006).

A brief description of any evidence that supports the effectiveness of the strategy in your context and why it might be useful for others

This presentation provides an overview of the theory and practical application of various modes of learning and assessment, and demonstrates evidence of student learning through their own words in their teaching portfolios (examples from EDPY 597 Teaching and Learning Adult Education, Masters of Health Science Education, and CSL 300, Community Engagement Theory and Practice).

References:
Zepke, N., & Leach, L. (2010). Improving student engagement: Ten proposals for action. Active Learning in Higher Education, 11, 167 -177. Accessed at: http://alh.sagepub.com.login.ezproxy.library.ualberta.ca/content/11/3/167.full.pdf+html

Russell, S. S. (2006). An overview of adult learning processes. Urologic Nursing, 26, 349-352, 370. Found at: http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=22955356&site=ehost-live&scope=site

Skiba, D. J., & Barton, A. J. (2006). Adapting your teaching to accommodate the next generation of learners, Online Journal of Issues in Nursing, 11(2), retrieved from: http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume112006/No2May06/tpc30_416076.html

Rochmawati, E., & Wiechula, R. (2010). Education strategies to foster professional students' clinical reasoning skills. Nursing and Health Sciences, 12, 244-250.

Students Really Start Learning when I Stop Teaching: Shifting to a Facilitated Self-directed Learning Approach

John Nychka

After a decade of teaching, and numerous teaching awards, I decided to stop teaching. I didn't quit my job, I changed it: I stopped "teaching" so that my students could better learn.

When I started a new course (capstone materials engineering design) I ran into a major downside of the classical pedagogical approaches to teaching and learning which I had been so accustomed – students' dependency on the teacher was holding back their achievement of the high level learning goals of synthesis, integration, creation, and internalization. I found that learner maturity and autonomy needed to be at a higher level, and by not requiring such aspects the learners were not developing such aspects. I struggled with how to cultivate learning; pedagogy offered great means to engage learners but it fell short on self-directing learners.

For context, the course, like many capstone design courses across the nation, provides authentic industrially sponsored open-ended design projects for students so that they may develop engineering judgement and practices (e.g., preparation for decision making and execution). Student projects are an experiential learning tool that offer the opportunity for key elements in the development of judgement, namely: the opportunity to explore a problem rather than solve it immediately, chances to make mistakes in a low cost environment, and learning from failures through reflection. However, within a course with a variety of projects, structured lectures through an algorithmic approach to design did not lend well to development of judgement – content transmission was not effective at developing judgement; knowledge acquisition for students and by students was needed.

After years of struggling with attempts to offer highly structured course delivery I decided to make two major shifts: 1) incorporate self-directed learning practices so that students could help design the course for themselves and their personal learning needs, and 2) repurpose instructors as facilitators, and repurpose students as junior colleagues. The learning model I now use relies heavily on the concepts and resources for adult learning developed by Malcolm Knowles [Knowles 1975] and draws upon the ideas of andragogy and heutagogy [Knowles 1984; Blaschke 2012; Canning 2010]. Students are enabled and empowered to self-determine their requirements for knowledge acquisition, coached by facilitators on how to be able to acquire the knowledge, and apply said knowledge to their complex and complicated project context. The shifts have made a difference in student attitude and thinking ability as evidenced by student responses on surveys and their contributions to the course design and delivery (e.g., setting of learning outcomes, learning contracts, types of assessment, deadlines for assessment, and decision making methods and processes for course changes and alterations).

References:
Blaschke, L. (2012). "Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning". The International Review of Research in Open and Distributed Learning, 13(1), 56-71. Retrieved from: http://www.irrodl.org/index.php/irrodl/article/view/1076/2087 (2016)

Canning, N. (2010). "Playing with heutagogy: Exploring strategies to empower mature learners in higher education". Journal of Further and Higher Education, 34(1), 59-71

Knowles, M.S. (1975) "Self-directed Learning: A Guide for Learners and Teachers". Cambridge Book Co., New York

Knowles, M.S. et al. (1984) "Andragogy in Action. Applying modern principles of adult education". Jossey-Bass, San Francisco

Task-Based Teaching: Insights from Language Learners
Xavier Gutiérrez

This project examines the implementation of a Task-based Language Teaching (TBLT) approach in beginner and intermediate level Spanish language courses at the University of Alberta. TBLT focuses on language use as the driving force for learning a language (Brandl, 2008), and many scholars in the field of Second Language Acquisition agree that "there are theoretical grounds, and empirical evidence, for believing that tasks might be able to offer all the affordances needed for successful instructed language development, whoever the learners might be, and whatever the context." (Van den Branden, Bygate & Norris, 2009, p. 11).

In language learning, a task's main goal is the accomplishment of a non-linguistic outcome (e.g., renting an apartment, buying groceries...) that, at the same time, provides an opportunity to practice the linguistic content learned throughout a pedagogical unit. Thus, in essence, tasks are opportunities for meaningful language use in situations that students would encounter in the real world. The implementation of TBLT in our context emphasized providing such opportunities, not only in the end-of-unit tasks, but also in the activities that led to the development of knowledge and skills necessary to complete those tasks. Class activities exposed students to rich, authentic oral and written input containing relevant structures and vocabulary, and presented them with communicative situations in which they had to use such structures and vocabulary. At the same time, these class activities emphasized learning by doing and collaboration among students as essential elements in language development.

This presentation will focus on the students' perceptions of their learning experience. Learners' perceptions about language learning act as a powerful motivating factor that shapes the actions and behaviours that learners display in their learning (Kalaja & Barcelos, 2003). Furthermore, perceptions can be a useful source of information for program evaluation purposes (Narcy-Combes & McAllister, 2011). Data were collected through a questionnaire (190 responses), a learning journal (44 participants), and focus groups (33 participants). The data from the questionnaire show an overall positive perception of the TBLT approach regarding aspects such as opportunities for practice, exposure to input, applicability in real life, pedagogical materials, learning-by-doing, collaboration, learner progress, and integration of content, skills and formal aspects. Data from the focus-groups and journals provide a more nuanced picture regarding the learners' perceptions about TBLT, revealing other emerging themes such as student engagement, challenges and frustrations, the participants' learning styles, and their motivations. This presentation will also address how these perceptions play a role in the decision-making processes regarding curriculum development and classroom language learning activities. All in all, the analysis of the students' perceptions regarding tasks highlights the centrality of learning language through use and for use, which, in turn, emphasizes the importance of experience as a catalyst for learning. Furthermore, this analysis shows the significant influence of beliefs and perceptions on the students' role as active agents in the learning process.

References:
Brandl, K. (2008). Communicative Language Teaching in action. Putting principles to work. Upper Saddle River, NJ: Pearson.

Kalaja, P., & Barcelos, A. M. F. (2003). Introduction. In P. Kalaja & A. M. F. Barcelos (Eds.), Beliefs about SLA. New research approaches (pp. 1-4). Norwell, MA: Kluwer Academic Publishers.

Narcy-Combes, M.-F., & McAllister, J. (2011). Evaluation of a blended language learning environment in a French university and its effects on second language acquisition. ASp, 59, 115-138.

Van den Branden, K., Bygate, M., & Norris, J. (Eds.). (2009). Task-based language teaching: A reader. Amsterdam: John Benjamins.

Using Google Docs in eClass
Anwen Burk, Matt Cheung

In our work to design and build blended and online courses, we sometimes encounter teaching and learning goals that cannot be met using only eClass. In these situations we turn to other tools that we can use in conjunction with eClass. Google Docs is one of the tools that we use for collaboration and productivity. This session will demonstrate how Google Docs can be used in conjunction with eClass to increase collaboration and streamline course building.

Participants will be able to:

- Identify ways they can use Google Docs in conjunction with eClass as a collaborative teaching and learning tool.
- Identify ways that they can use Google Docs and Google Drive to organize their course content and streamline course updates.
- Add a Google Doc to an eClass course.

Participants will work in groups to analyze and report on two scenarios. These scenarios will pose challenges that we have encountered in our course design work and that we solved using Google Docs. Solutions to these scenarios and actual examples that involve using Google Docs will be presented. We will also provide learning materials on how to link Google Docs in eClass and tips for organizing and sharing class Google Docs in Google Drive.

--

Matt Cheung is a Learning Facilitator with Technologies in Education at the UofA. He works with staff and faculty to find and implement effective and innovative technology solutions for teaching and learning. He also has extensive experience providing technology support to students in the Education Learning Commons.

Anwen Burk is an Instructional Designer and Educational Technology consultant with Technologies in Education at the UofA. She consults with stakeholders to customize approaches to their blended and eLearning needs using a learning outcomes framework. While she lives in Nanaimo, Anwen teaches the online sections of EDU 210 for the University of Alberta.

What's Great (and not so great) About Computer-based Exams

Alexander Gainer

There have been several excellent presentations at this conference by experts in pedagogy on the benefits of computer-based exams, but there has not been many done by actual instructors discussing their own experience with this new type of assessment.

a) I teach introductory and intermediate economics in classes ranging from 75 to 400 students. I have been giving computer-based exams at the Learning Assessment Centre (LAC) over the past three years. I have given 4,600 exams through the L.A.C.

b) To use computer-based exams in my major assessments (i.e., two midterms and a final exam). I believe their are significant benefits to both instructors and students with this approach.

c) The current literature shows that computer-based exams or electronic assessment can improve student assessment, reduce cheating during exams and provide a higher quality environment for students to write their exams.

d) I have a large database on the 4,600 exams to support the case that it improves assessment and discourages cheating. I also have midterm and end of term TSQS administered surveys to show what the student experience was like on computer based exams (1,550 students were surveyed).

POSTER SESSION ABSTRACTS

A Low-Cost Approach to Contemporary Physics Lab Education

Clayton B. Coutu

Project-based, hands-on learning has proven to be an effective approach in extending undergraduate science education beyond the classroom(1). The Physics department has expanded opportunities for students to gain transferable skills through a maker space known as the Shack, (www.sciencehardwarespace.org). The motivation is to enhance the confidence and abilities of our students by providing a space where they can follow their own enthusiasms to the realization of their own projects.

The poster will highlight: my experiences as a Science internship student engaged in hands-on work upgrading the undergraduate physics labs; what is the Shack space, and what it offers students; as well as introduce workshops that present high school students and teachers with simple do-it-yourself experiments.

Raspberry Pi™ computers, and other popular tools of the maker movement such as consumer-oriented 3D printers, are a modest investment with a large payoff for second- and third-year experimental physics courses. These devices are sophisticated enough to be reflective of contemporary research: for example, the accurate robotic gantry of a 3D printer can be re-purposed as a very useful computer-controlled data acquisition device.

Through my work in the undergraduate physics labs, I've upgraded equipment for investigations of thermodynamics and atomic physics. I'll discuss open-source, low-cost solutions for computer applications in such experiments, and give insight into some possible limitations. My focus will be on the skills I developed through the process: coding in a new language (Python); soldering; reading/troubleshooting circuits; designing and printing 3D objects – all relevant, transferable skills.

In addition, I will highlight that the Shack is available at no cost towards the students, and individuals can come in with their own ideas and goals and set to work to realize them. Students with limited backgrounds and experiences can come in and try out pre-designed kits that will introduce them to basic programming along with how to assemble/troubleshoot circuits. These developments began with the Hands-On Physics workshops, (www.ualberta.ca/~hop) that help high school students and teachers get started with contemporary instrumentation and software.
Our poster will be aimed towards: educators interested in a student's perspective on a maker space in a post-secondary setting; students who are unaware of the resources the Shack provides; and teachers who are looking for ways to develop inexpensive, easy-to-use experiments for their classrooms.

Reference:
Paul Gluck and John King, "Physics Project Lab". Oxford University Press, Oxford, UK, 2015.

Active Case-based Learning in Oral Pathology: The confluence of multiple teaching and learning techniques

Seema Ganatra, Tania Doblanko, Kari Rasmussen, Jacqueline Green, John Valentine, Patrick von Hauff

The dental program contains combined 3rd and 4th year small group seminars in oral pathology and radiology. A few years ago, a student, now graduated and in practice, brought an idea to the clinical instructor – to move away from the didactic approach to the seminars to a more active, case-based approach. This idea has resulted in the creation of a seminar session that embraces multiple teaching and learning techniques. This innovation in the seminars focuses on providing opportunities for learners to:

- demonstrate their current understanding of oral lesions and dental management of medically compromised patients,
- demonstrate clinical judgement,
- assess their own knowledge gaps,
- reflect on their approach to the development of a diagnosis and treatment plan and how it may relate to that of expert clinicians, and
- recognize their role as advocates for their patients.

Current seminar sessions are now designed to have 3rd and 4th year students paired together; each pair is provided with a different patient case and a set of guiding questions. Each student first works independently to provide a clinical description of the oral lesion, a differential diagnosis and/or most plausible working diagnosis, and how to approach patient management. The pairs are then asked to share and discuss their answers and to determine their revised plan as a team. A "wildcard" is then provided to each group, that further describes the patient's medical history, and they are asked to determine if this alters their management of the patient. The seminar group then engages in a guided discussion of each case; each pair presents their findings and the facilitators provide feedback and engage in a seminar-wide discussion of key learning points. Each case is described in context, providing opportunities for discussion around advocacy and how to engage in the management of the patient from a more holistic perspective. When one examines the techniques found within this single seminar session, it is clear that a confluence of multiple approaches has been employed; this includes using the think/pair/share technique 1, active learning 2, creating a mentoring environment between the third and fourth year students 3, and the utilization of narrative storytelling to provide a contextually grounded experience for the learners 4.

Although our team is in the initial phases of a formal research project, our preliminary findings are showing great promise. Third year students have noted the benefits to working with 4th year students, and often stated they would like to have the same experience when they were in their 4th year. In turn, 4th year students commented they believed the 3rd year students were getting exposure to cases sooner in their program with this activity, that they felt they took on a teaching role in their group, and felt that the sessions were a good review for their upcoming board exams. The seminar facilitators observed enhanced discussions between the learners and themselves, and that the students often directed the activities through their questioning of each case.

References:
Lyman, F. T. (1981). The Responsive Classroom Discussion: The Inclusion of All Students. In A. Anderson (Ed.), Mainstreaming Digest University of Maryland, College Park, MD.

Luc, J., & Antonoff, M. (2016). Active Learning in Medical Education: Application to the Training of Surgeons. Journal of Medical Education and Curricular Development. 3: 51–56 doi:10.4137/JMECD.S18929.

Ten Cate, O., & Durning, S. (2007). Dimensions and psychology of peer teaching in medical education. Medical Teacher. 29(6): 546-552. doi: 10.1080/01421590701583816

Hansel, W., & Rasco, T. (1992). Storytelling as a method for teaching values and attitudes. Academic Medicine. 67(8):500-4.

Blended Learning in Introductory University Chemistry I
Christie McDermott

First year students are often overwhelmed with schoolwork and will neglect homework assignments if they are not worth a lot of marks. Instead of working through homework assignments aligned with the lectures, students attempt to cram directly prior to exams. One of the goals of this project was to revise these study habits by using participation in online videos and assessments to promote learning well in advance of exams.

This poster describes a blended learning project developed in Introductory University Chemistry I (CHEM 101) through a Provost's Digital Learning Committee award. In this project, selected lectures throughout the term in large-enrolment (150 – 450 students) CHEM 101 lecture sections were replaced with online materials. For each revised lecture, students watched a series of 8-15-minute videos, worked through an accompanying worksheet, and then completed an online formative assessment. Students then had the choice of either attending or skipping the subsequent lecture period, depending on whether they felt they had mastered the material.

The very large introductory chemistry class sizes make it intimidating for students to ask questions and difficult or impossible for students to work one-on-one with the instructor during lectures. With the implementation of the online videos and assessments, the subsequent, optional, lecture attendance was much decreased (generally fewer than fifty students) so that the instructors could interact more effectively with those students who felt they needed additional help and could focus on student questions and engage them in problem solving.

In addition, with the online activities, a portion of the marks previously assigned to in-class quizzes and midterm exams were redistributed onto online quizzes, which were developed to incorporate both in-class and online concepts. This poster summarizes the scholarly products from this project and the student feedback collected by the Centre for Teaching and Learning (1). The challenges and benefits of blending in large lecture courses will also be discussed, as will our revised approach for our future work on blended materials.

Reference:
(1) Vargas, L.F., Nocente, N. Experiences of Blending, Introductory University Chemistry I: a Summary of Student Surveys & Interviews; Centre for Teaching and Learning Report; University of Alberta, January 2017.

Classroom Assessment Techniques for Formative Assessment and Student Engagement

Michael Cenkner

A.
Suitable for face-to-face and online formats, at virtually any level.

B.
Classroom assessment as defined by Angelo and Cross (1993) is "an approach to help teachers find out what students are learning in the classroom and how well they are learning it. This approach is learner-centered, teacher-directed, mutually beneficial, formative, context-specific, ongoing, and firmly rooted in good practice." One might add, relatively fast to prepare, administer, easy to do, and resulting in increased student engagement. Angelo and Cross's classic book, Classroom Assessment Techniques: A Handbook for College Teachers is the source of the techniques presented in this poster.

As an example, in the Minute Paper technique, in the last few minutes of the class, students respond to a question such as, "What's the most important thing you learned in this class?" or "What important questions remained unanswered for you on this topic?" Learners submit their responses anonymously, and the instructor is able to address important points or questions in the subsequent class.

This simple technique call for not only recall, but also evaluation and metacognition. Morevoer, due to its simplicity, it is suitable for large or small classes, and is adaptable to face-to-face or online formats, for example, with "clicker" technologies.

Areas of assessment are listed below.
Prior knowledge, recall and understanding
Skill in analysis and critical thinking
Skill in application and performance
Skills in problem solving
Skill in synthesis and creative thinking
Awareness of students' attitudes and values
Awareness of students' attitudes and values and self-awareness as learners
Course-related learning and study skills, strategies and behaviours
Learner reactions to class activities, assignments and materials

The poster and conversation will provide information on how to implement these teaching strategies.

C.
Formative assessment is an important part of effective teacher at all levels. The references provide a few examples at the post-secondary level.

D.
Laveault, D. & Allal, L. (2016). Implementing Assessment for Learning: Theoretical and Practical Issues. In Assessment for Learning: Meeting the Challenge of Implementation. Laveault, D. & Allal, L. (Eds.) doi: 10.1007/978-3-319-39211-0_1

Cross, K. & Angelo, T. (1993). Classroom Assessment Techniques: A Handbook for College Teachers. Ann Arbor, MI: The National Center for Research to Improve Postsecondary Teaching and Learning.

Formative Plus Summative Assessment in Large Undergraduate Courses: Why Both?
Glazer, N. (2014). International Journal of Teaching and Learning in Higher Education. 26(2), 276-286.

Keefer, M.W., Wilson, S.E., Dankowicz, H.(2014). The Importance of Formative Assessment in Science and Engineering Ethics Education: Some Evidence and Practical Advicel. Sci Eng
Ethics. 20: 249. doi:10.1007/s11948-013-9428-5.

Evaluating Undergraduate Student Learning through Community Service-Learning Partnerships and Applied Research Experience

Wendy Hoglund, Saira John

My teaching and learning content area expertise is in applied developmental psychology and social and emotional development.

As an instructor, I provide direct opportunities for students to engage meaningfully in applied research and to extend their learning beyond the classroom. In one of my fourth-year courses, I include a community service-learning component where students work as volunteers at a local not-for profit agency to integrate their in-class learning with their applied experiences and to help contribute to the capacity of local agencies to promote healthy development of children.

As a research mentor, I engage students in applied, hands-on learning opportunities to develop their content knowledge about child development in ways that is embedded in their research learning. Students in my research lab have the opportunity to be actively involved in research that is currently following children in preschool across the transition to kindergarten. These students are trained in structured observations of children's behaviours in the classroom as well as behavioural assessments of children's self-regulation and academic skills.

As part of my McCalla Professorship, I have undertaken initiatives to evaluate student learning in my areas of teaching and research mentorship. During the fall and winter of the 2016-2017 academic year, surveys and video interviews were used to evaluate student learning. The aims of each form of evaluation were to examine learning of both students and community partners in formal learning settings (i.e., Community Service-Learning [CSL] partnerships) as well as learning of students in informal settings (i.e., research activities in a developmental psychology lab).

The surveys and video interviews with students focused on how course and research settings contributed to each student's (1) career goals, (2) educational goals, (3) research learning, and (4) applied learning (e.g., knowledge mobilization). For community partners in the CSL partnership, individual video interviews touched on (1) community organization research goals, (2) learning through CSL partnerships, and (3) evaluating the CSL partnership. Through the evaluation of student learning, I hope to elucidate the ways in which student learning in formal and informal settings extends beyond the classroom and the lab. Knowledge from these research initiatives will be used to support undergraduate students across educational and research settings.

Giving a Kahoot about Instructional Assessment

Jessica Thorlakson, Janice Kung

Library sessions are typically one-shot sessions in which there is limited time to cover a myriad of topics. To keep students focused and engaged, we incorporate active learning principles such as hands-on activities, group participation, and gamification strategies. This is important because research shows that the use of different interactive learning modes increase student learning (Oakleaf et al., 2012). As such, this poster will demonstrate the use of Kahoot, an open-source, game-based learning platform as both a formative assessment and active learning tool in the classroom.

Kahoot allows instructors to create online quizzes (e.g. multiple choice questions) that can be used on any computer or mobile device and does not require students to create accounts beforehand, making it easily accessible. Operating like an audience response system, students select the correct response on their own devices, and results are tabulated and collected in real-time. Instructors can then use student responses to review and reinforce content. For instance, if the majority of the class answers a question incorrectly, the instructor can use the opportunity to explain the concept differently or use other examples. There is evidence to suggest that "when feedback is combined with effective instruction in classrooms, it can be very powerful in enhancing learning" (Hattie & Timperley, 2007, p. 104). Students can identify where there are gaps in their understanding and ask questions on the spot. Moreover, there are points awarded in the Kahoot quiz, which generates playful competition amongst students and leads to more engagement with classroom content.

Kahoot has been used in a number of Health Sciences, Life Sciences, and Engineering library sessions at the University of Alberta. We will provide a case study of how it was used in a series of curriculum-based, 300-level Pharmacy seminars, and include anonymized data collected from the Kahoot quizzes in our analysis.

Our findings illustrate that this program is an effective assessment tool, while also enhancing students' engagement and understanding of classroom content. Since formative assessment in the classroom can be challenging for instructors, this poster provides examples on how Kahoot may be used in diverse learning environments.

References
Hattie, J., & Temperley, H. (2007). The power of feedback. Review of Educational Research, 77(1), 81–112.

Oakleaf, M., Hoover, S., Woodard, B., Corbin, J., Hensley, R., Wakimoto, D., & ... Iannuzzi, P. (2012). Notes from the field. Communications In Information Literacy, 6(1), 5-23.

Learning in the Online Cohort of the PhD in Nursing Program

Pauline Paul, Joanne Olson, Judith Spiers, Ashley Hyde

The purpose of this poster presentation is to present a teaching innovation consisting of offering the PhD in Nursing Program through an online cohort approach. We will present preliminary findings of a TLEF funded study about how students learn to become scholars, and if and how they develop a community of learners in the online cohort PhD program.

Many students entering the PhD in nursing do so after having worked for a number of years and after having established both professional and personal roots within their community. These roots often make it difficult for them to relocate, making online studies an attractive option for both the individual and their employer. Established in 2015, the online cohort of the PhD in nursing program is the first of its type at the University of Alberta. In this program, students come twice to Edmonton for intense immersion, and they take all course work as a group. While online graduate education offers flexibility for students, isolation has been identified as a deterrent to program completion (Govender & Dhunpath, 2011; Halter, Kliener & Hess, 2005; Janta, Lugosi & Brown, 2014). Using a focused ethnography approach one of our goals is to understand whether the cohort approach to online doctoral education creates a community of learners that can alleviate some of the commonly reported feelings of isolation. Student participants will be interviewed at least twice during the program of study and faculty members who teach in the program and/or supervise these students will be interviewed one time. Data collection and analysis are occurring concurrently and comparative coding techniques are used to identify ideas, categories, and themes of interest.

To date, eight student interviews have been completed and analyzed. Preliminary findings indicates that students view the online PhD program as a unique experience, not entirely understandable to those who have not participated in a similar, intense online learning experience. Students report feeling a strong connection to their peers and for this reason see the maintenance of "student to student" relationships as a means of surviving in the program. According to students, key to the development of these strong relationships that have endured beyond coursework were in-person residencies at several points in the program (at the beginning and following one year of coursework).

Through connection to faculty members are seen as important to student success in the program, students viewed their peer-to-peer connections as even more crucial to understanding doctoral-level concepts and their development as scholars. At completion, the results of this study will enable us to better understand the role that online cohort models can play in contributing to an effective, online learning environment. In addition, the results of this project will have the potential to guide those who develop novel online doctoral programs in Canada and beyond.

References:
Govender, K., & Dhunpath, R. (2011). Student experiences of the PhD cohort model: Working within or outside communities of practice? Perspectives in Education, 29, 88-89.

Halter, M.J., Kliener, C., & Hess, R.F. (2006). The experience of nursing students in an online doctoral program in nursing: A phenomenological study. International Journal of Nursing Studies, 43, 99-105.

Janta, H., Lugosi, P., & Brown, L. (2014). Coping with loneliness: A netnographic study of doctoral students. Journal of Further and Higher Education, 38(4), 553-571.

Wall, S. (2015). Focused ethnography: A methodological adaptation for social research in emerging contexts. Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 16(1), Art. 1.

Listening to Learners: Using learner feedback and performance analytics to improve pedagogy in online courses

Gavin Bradley, Morgan Patzelt

(A) The potential pedagogical benefits of Massive Open Online Courses are numerous; flexible student learning, reduced stress on student attention spans, and the removal of physical barriers such as classroom size are just a few that have been proposed in support of the MOOC model (Glance et al., 2013). Another may be the potential for statistical evaluation of MOOCs to make pedagogical improvements (Blanco et al., 2013; Ferguson and Staples, 2014). Due to the exponential increase in class sizes and the ease of computer- based metric accumulation in MOOCs, educators can easily interpret workable data sets with larger sample sizes, making it possible to analyze these courses for pedagogical successes or failures.

(B) Manually compiled 'dashboard metrics', including data on completion rate and student assessment performance, from eleven of the University of Alberta's publicly accessible MOOCs on the 'Coursera' platform, were interpreted to evaluate the pedagogical strengths/weaknesses of the courses.These metrics highlighted a gulf in completion rate of students between the general interest (e.g. Dino 101) and professional development courses (e.g. Software Product Management); the latter had substantially higher completion rates. Subsequently, narrative analysis of learner stories from the general interest courses was used to identify problems related to this disparity. Students identified two clear problems with the assessment format of the general interest MOOCs: the lack of feedback in quiz questions and the ambiguity of multiple-response quiz questions.

(C) These salient issues inspired two pedagogical changes to the graded quizzes in the general interest MOOCs. First, the exact number of correct responses were incorporated into the instructions for multiple-response questions and, second, detailed feedback was provided for each incorrect response. Interpretation of the 'dashboard metrics' over the next number of months allowed for the application of simple statistical tests to assess the efficacy of these changes on student performance. Initial results suggest a significant increase in the average first attempt score of students and a significant decrease in the average number of quiz attempts by learners, after the changes were made.

The wealth of information that can be unearthed via online analytics, is a boon for any instructor committed to improving their online course. Here, we recommend a three step process based on our successful case study; (1) the interpretation of learner feedback; (2) feedback informed pedagogical change; (3) statistical assessment of effective-ness of pedagogical change. Using this methodology, course administrators can continue to identify problems and make informed educational improvements to their online course

(D) References

Blanco, Á. F., García-Peñalvo, F. J., & Sein-Echaluce, M. (2013, November). A methodology proposal for developing adaptive cMOOC. In Proceedings of the First International Conference on Technological Ecosystem for Enhancing Multiculturality (pp. 553-558). ACM.

Glance, D. G., Forsey, M., & Riley, M. (2013). The pedagogical foundations of massive open online courses. First Monday, 18(5).

Ferguson, R., & Sharples, M. (2014, September). Innovative pedagogy at massive scale: teaching and learning in MOOCs. In European Conference on Technology Enhanced Learning (pp. 98-111). Springer International Publishing.

Student Engagement In Large Classroom: The effect on grades, attendance and student experiences in an undergraduate biology course

Anna Rissanen

A Biology first year university class that has over 600 students creates a challenge to instructors who would like to offer high quality teaching as they can cause poor student attendance. One suggested approach to increase atten- dance is to increase interactions by using student engagement during classes. When students are engaged in active learning exercises they achieve higher grades, and more students stay in higher education (Freeman et al., 2007; 2014; Gasiewski et al., 2012). Student engagement by active learning includes collaborative learning among students, preparing and attending to classes, and any kind of interaction with the course content inside and outside of the classroom (Svanum & Bigatti, 2009; Handelsman et al., 2005).

This study was designed to increase student engagement in large classes. One of the three sections in Introductory Biology class (Biology1001, 200 students in each section) was taught using active learning and student engagement (Engaging Class), and two other sections received lectures without active learning or significant engagement (Lecture Class). This was a mixed method study with quasi-experimental design that used both quantitative and qualitative research methods, and it was conducted during the fall semester in 2013 at Memorial University, Canada.

The results indicated that by increasing student engagement in a large classroom a statistically significant increase in student attendance occurred in the last six weeks of the semester. In addition, active learning significantly increased conceptual understanding in the Engaging class measured by pre- and post-testing. Interestingly, students reported that they liked active learning, and reported higher engagement in many areas in the Engaging class compared to Lecture classes according to CLASSE survey and student focus groups.

The significance of these results is three fold. Firstly, the study showed that by modifying classroom instruction, the instructor can promote students' motivation to attend classes. Secondly, this study showed that by attending classes first year students can achieve better learning outcomes, specifically better conceptual understanding, and metacog- nitive skills. Thirdly, according to students, they welcomed the interactive classroom activities, and they appreciated the chance for deeper learning during the class time, and they self-reported being more engaged and involved in the course content.

References:
Freeman S., O'Connor E., & Parks J., Cunningham M., Hurley D., Haak D., Dirks C., & Wenderoth M.P. (2007). Prescribed active learning increases performance in introductory Biology. CBE Life Science Education, 6, 132-139.

Freeman S., Eddy S., McDonough M., Smith M.K., Okoroafor N., Jordt H., & Wenderoth M.P. (2014). Active learning increases student performance in science, engineering, and mathematics. Proceedings in National Academic Science USA, 111, 8410–8415.

Gasiewski, J., Eagan, K., Garcia, G., Hurtado, S., & Chang, M. (2012). From Gatekeeping to Engagement: A Multicon- textual, Mixed Method Study of Student Academic Engagement in Introductory STEM Courses. Research in Higher Education, 53, 229:261.

Handelsman, M. M., Briggs, W. L., Sullivan, & N., Towler, A. (2005). A measure of college student course engagement. Journal of Educational Research, 98(3), 184–191.

Svanum, S. & Bigatti, S.M. (2009). Academic Course Engagement During One Semester Forecasts College Success: Engaged Students Are More Likely to Earn a Degree, Do It Faster, and Do It Better. Journal of College Student Development, 50(1), 120-132.

Teaching collaborative behaviors to the inter-professional perioperative care team with Simulation

Bin Zheng, How Lee

BACKGROUND:
Performing a surgical procedure requires a healthcare team comprised of surgeons, anesthesiologists, and nurses. Traditionally, learners in each profession are educated by different Faculties with different teaching curricula. When healthcare learners operating room and are assigned to an interdisciplinary surgical team, they often experience a high amount of frustration and anxiety due to a lack of team knowledge and confidence. Healthcare advocates have interpreted the lack of team training and ineffective team performance to be the root causes of perioperative adverse events.

STRATEGY:
To meet the demand for a stronger collaborative team practice, we designed an educational strategy that allows learners from medicine (surgery, anesthesiology) and nursing to be educated together during the three phases of perioperative care (pre-operative, intra-operative, and post-operative). To protect patient safety, all training phases are conducted purely under an immersive simulated environment with the use of multiple simulation models including standardized patients, task trainers, and a high-fidelity mannequin.

PROGRAM DEVELOPMENT & ASSESSMENT:
 A total of 7 training session were conducted in 2017. On each session, learners' knowledge and clinical performance were assessed by knowledge tests, standardized patient's comments, and self-administered surveys. Videos captured the learners' performance, the team's behaviors, and collective responses when unexpected adverse events occur.

RESULTS & CONCLUSION:
Preliminary findings have shown inter-professional team training yielded satisfactory education outcome to trainees over different healthcare disciplines. They developed shared team cognition, effective team communication and collaborative team behaviors in the simulation setting. Team training increased team competence during the perioperative care in the real clinical setting. We anticipate that this simulated inter-professional learning opportunity will be adopted by educators from other healthcare faculties as well by other academic institutions.

Uncovering Practicum Program Theory: A case example in human ecology

Kathryn Chandler, Deanna Williamson

The proposed poster will share findings from a study that explicated the theory underpinning the Human Ecology Practicum Program (HEPP) offered in the Department of Human Ecology. As is common with post-secondary experiential education programs, tacit theory and working philosophies have directed the on-going development of the HEPP since its inception over 40 years ago, and no explicit theoretical model had been conceptualized to explain how and why the program works. In addition to being overdue, the study was prompted by experiential education scholars who suggest that experiential education programs, including practica, have not generally been subjected to good quality research, and that to advance knowledge about how experiential education programs function and whether they are effective, specification of program theory is needed. The purpose of the study, therefore, was to uncover and articulate the theory of the HEPP (i.e., purpose, design, logic) as it is understood by program stakeholders. Using a document analysis, focus group and individual interviews, and a stakeholder working group, we explored stakeholder perspectives on the purpose, design, and logic of the program. Findings indicated a common understanding among stakeholders about the fundamental purpose and design of the program, and about the mechanisms by which design features lead to program goals. The findings were then used to develop the theory of the Human Ecology Practicum Program, which we will showcase in the poster. Our study offers a case example of the development of a practicum program theory, demonstrates the value of involving stakeholders in theory development, and supports the articulation of program theory as part of course planning and evaluation within post-secondary experiential education programs.

References
Baldwin, C., Persing, J., & Magnuson, D. (2004). The role of theory, research, and evaluation in adventure education. The Journal of Experiential Education, 26(3), 167-183.

Carver, R. (1996). Theory for practice: A framework for thinking about experiential education. Journal of Experiential Education, 19(1), 8-13.

Katula, R. & Threnhauser, E. (1999). Experiential education in the undergraduate curriculum. Communication Education, 48(3), 238-255.

Rossi, P., Freeman, H. & Lipsey, M. (1999). Expressing and assessing program theory. Evaluation: A systematic approach, 6th Ed. (pp. 155-188). Thousand Oaks: SAGE.

WHOMUN: Lessons learned from a student-organised global health simulation

Finola Hackett, Umair Sajid

Role-playing simulations have been widely used in the undergraduate social sciences context, in fields such as international relations and political science. Such simulations, in which "students 'put on the skin' of another person" can create "active participation in the knowledge experience…[which] allows students to experiment and build their knowledge base."[1] However, such simulations to date have not been used extensively in medical education. The World Health Organization Model United Nations (WHOMUN) simulation in the Faculty of Medicine & Dentistry is an example of applying these methods in training future physicians through a global health simulation. This engages the full extent of physician competency roles outlined by the Royal of Physicians and Surgeons of Canada. WHOMUN is an innovative teaching project which can build students' competencies in the CanMEDS areas of Collaborator, Communicator, and Advocate, and expand their knowledge of areas of global health.[2]

The WHOMUN simulation had its fifth iteration in November 2016. This event allowed students from all university disciplines to learn about global health issues, policy-making and research in an experiential manner. The simulation format has undergone changes with each cycle, but fundamentally involves students taking on the role of country representatives to deliberate on issues pertinent to the theme of the event. The event intends to reinforces the teachings of the medical curriculum, while providing students the opportunity to explore health issues from the microscopic-cellular level to the macro-population level.

A survey of student confidence and knowledge in different areas of learning is administered before and after the event. Students are also provided with a resource guide and pre-assignment on the global health topic to be debated (Zika virus in 2016). Following, focus groups inform reflection on the event and how it can be changed in the future. WHOMUN in 2016 as a teaching tool was adapted from being a mandatory curriculum component to an extracurricular event, whereas in 2015 and prior all first year medical students were required to participate.[3] Although participant numbers were fewer as an extracurricular event, student engagement was much higher due to self-selection of those interested in global health and simulation based learning.

A form of teaching often used in other disciplines, we show that simulation based group work can be an effective teaching tool in medical education. The change in format between the WHOMUN 2015 and 2016 displayed how the effectiveness of this teaching tool can vary based on the setting in which it is administered. Furthermore, having students not only apply their knowledge but also experience the challenges of addressing public health issues can help students "go beyond the boundaries of their own locales and experiences", to foster values of empathy and global citizenship.[4]

References;
Kanner MD. War and Peace: Simulating Security Decision Making in the Classroom. PS: Political Science & Politics 2007;40:795–800.

Frank JR, Danoff D. The CanMEDS initiative: implementing an outcomes-based framework of physician competencies. Medical teacher. 2007 Jan 1;29(7):642-7.

Feng S. World Health Organisation Model United Nations (WHOMUN). Poster session presented at: th Annual Canadian Conference on Medical Education; 2016 Apr 16-19; Montreal, QC.

Krain M, Lantis JS. Building knowledge? Evaluating the effectiveness of the global problems summit simulation. International Studies Perspectives. 2006 Nov 1;7(4):395-407.

Your Students Are More Bored Than You: Strategies to support students emotions in your classroom

Lily Le, Lia M. Daniels

A brief description of your teaching and learning context and goals:
Evidence is accumulating that emotions are crucial for students' learning (Pekrun, 2006) and that emotions can be contagious meaning that instructors' emotions are important for teaching. Students quickly pick up both obvious and subtle cues about their instructor's emotion, which in turn influence their own emotionality and attitude toward the class. For instance secondary school teachers' enjoyment influenced their students' perception of enthusiasm in teaching and their own experience of enjoyment (Frenzel et al., 2009). However, little is known about the emotional experiences of university instructors particularly in comparison to students' emotions. For example, at U of A at least 40% of undergraduate students report being bored in their classes (Tze, 2011), but do instructors feel the same way? Thus, the goal of this TLEF project was to explore instructors' feelings of boredom and to compare instructors' and students' experiences of a wide range of other emotions.

A summary of your teaching and learning strategy, research, or assessment methods:
This project involved three phases of collecting information:
We conducted think-aloud sessions with instructors to get their perspectives on a measure of common causes of boredom.
We sent a questionnaire to instructors of large class (n>100) asking them about their feelings of boredom and other emotions.
Instructors sent a similar questionnaire to their students asking them about their feelings of boredom and other emotions.

An overview of your results and conclusions, if appropriate:
We highlight three main conclusions:
When instructors think about all the parts of their course, they are most bored by grading.
Instructors are bored when they feel they are being under-challenged or when the class feels monotonous.
Instructors generally have a more positive emotional perspective on their class than do their students (e.g., instructors are more happy, interested, excited and less bored than their students).
These results suggest that although instructors' emotional experiences are largely pleasant, their students have a different emotional experience. Thus our recommendations for instructors focus on ways they can enhance their students' positive emotions and reduce boredom in their classrooms (Daniels, Tze, & Goetz, 2015). Our recommendations are based on the Control-Value Theory of Emotions (Pekrun, 2006) which highlights best practices for supporting students positive emotions and reducing boredom.

References
Daniels, L. M., Tze*, V., & Goetz, T. (2015). Examining boredom: Different causes for different coping profiles. Learning and Individual Differences, 37, 255-261.

Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., & Sutton, R. E. (2009). Emotional transmission in the classroom: exploring the relationship between teacher and student enjoyment. Journal of educational psychology, 101(3), 705-716.

Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. Educational psychology review, 18(4), 315-341.

M.C. Tze, M. C. (2011). Investigating academic boredom in Canadian and Chinese students. (Unpublished master's thesis). Retrieved from: http://hdl.handle.net/10402/era.27791