4IÈME CONFÉRENCE ANNUELLE

SALTISE

4TH ANNUAL CONFERENCE

Inspiring Change, Leveraging Evidence:
New Models for Designing Instruction

Apprentissage actif,
s'inspirer des résultats de recherches et des meilleures pratiques

JUNE 02
2015
02 JUIN

WWW.SALTISE.CA
2015CONFERENCE@SALTISE.CA

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SALTISE

Welcome

We are very excited and honoured to host the 2015 SALTISE Conference at John Abbott College.

A warm welcome is extended to all participants - we hope you enjoy our beautiful campus and facilities.

The SALTISE Conference continues to grow and develop as an important opportunity for faculty to share pedagogical approaches and research in science teaching. It is primarily driven by teachers for teachers and has resulted in innovative ideas and applications for successful student learning in the classroom and beyond.

The end result, and what matters most, is that our students benefit by becoming more engaged in their learning. It is gatherings like SALTISE that become the springboard to the initiatives that make this possible.

A heartfelt thank you to all of the conference organizers.

Again, we welcome you and fully expect the day to be an enriching and invigorating experience for all.

Bienvenue

Le collège John Abbott est ravi et très honoré d'accueillir la Conférence annuelle SALTISE de 2015.

Nous vous souhaitons la bienvenue et espérons que vous apprécierez notre beau campus et ses installations.

La conférence SALTISE n'a cessé de grandir et de se développer pour offrir aujourd'hui aux enseignants une occasion unique d'échanger de nouvelles approches pédagogiques et les plus récents résultats en matière de recherche sur l'enseignement des sciences. Conçue avant tout par des enseignants pour des enseignants, cette conférence est à l'origine de nombreuses idées nouvelles et d'applications innovatrices qui se traduisent par un apprentissage réussi en classe et bien au-delà.

En fin de compte, ce qui nous importe le plus c'est le profit que tirent nos étudiants lorsqu'ils participent plus activement à leur propre apprentissage. La rencontre que nous propose SALTISE constitue un véritable tremplin vers les initiatives qui favorisent l'atteinte de cet objectif.

Je tiens à remercier chaleureusement tous ceux et celles qui ont participé à l'organisation de cette conférence.

Encore une fois, soyez les bienvenus à cette journée qui sera sans aucun doute très stimulante et enrichissante pour vous tous.

John Halpin
Director General

Erich Schmedt
Academic Dean

Teresa Berghello
Dean of Science & Social Science

Information about SALTISE

SALTISE - SUPPORTING ACTIVE LEARNING & TECHNOLOGICAL INNOVATION IN STUDIES OF EDUCATION is a community of instructors and professional development staff from English and French educational institutions within the Greater Montreal region, as well as other regions of Quebec. *(On another front, many of you have been requesting that we make the community more inclusive and we've heard you. SALTISE now stands for – Supporting Active Learning & Technological Innovation in Studies of Education. We extend a warm welcome to those colleagues who have been asking for this expansion of the network.)*

This community is brought together because of the shared goals of supporting pedagogical change involving innovations in instruction and leveraging the use of educational technology to promote learning.

SALTISE owes its creation to a consortium composed of science faculty and educational researchers from Montreal area educational institutions, Dawson College, John Abbott College, Vanier College and McGill University, funded by a Chantier 3 institutional grant from Quebec's Ministry of Education (Ministère de l'Enseignement supérieur, de la Recherche, de la Science et de la Technologie).

The 4th Annual Conference thanks the *Vitrine technologie-éducation (VTÉ)* for its funding.

Currently, SALTISE has over 200 members and continues to grow with the support of collaborations from members of the college and university education networks. In particular, SALTISE acknowledges the partnership of the Vitrine technologie-éducation (VTÉ), a non-profit organization with the mission of guiding Quebec post-secondary education institutions in their educational technology choices - based on funding by Ministère de l'Enseignement supérieur, de la Recherche et de la Science (MESRS).

SALTISE COMMITTEE OF PRINCIPALS:

- **SALTISE co-Directors Elizabeth Charles (Dawson College) & Nathaniel Lasry (John Abbott College)**
- **Murray Bronet (John Abbott College)**
- **Marielle Beauchemin (Vanier College)**
- **Chris Whittaker (Dawson College)**
- **Silvia d'Apollonia (Dawson College)**
- **Kevin Lenton (Vanier College)**
- **Ken Ragan (McGill University)**
- **Robert Bracewell (McGill University, Professor Emeritus)**

SALTISE EXTERNAL ADVISORY BOARD

- **Thérèse Laferrière (Laval University)**
- **Jim Slotta (OISE at the University of Toronto)**

Informations sur SALTISE

SALTISE: SOUTIENT L'APPRENTISSAGE ACTIF PAR LA TECHNOLOGIE ET L'INNOVATION DE LA L'ENSEIGNEMENT est une communauté de professeurs et de chercheurs dans le domaine du développement professionnel intervenant dans les établissements post-secondaires francophones et anglophones dans la région du grand Montréal, ainsi que d'autres région du Québec.

Cette communauté a pour objectif de promouvoir les innovations pédagogiques et l'optimisation de l'utilisation des technologies éducatives pour promouvoir l'apprentissage.

SALTISE a été créée par des chercheurs et de enseignants de la faculté des sciences des establishments éducatifs de la région de Montréal suivants : Collège Dawson, Collège John Abbott, Collège Vanier et l'Université McGill. SALTISE est financée par une subvention institutionnelle « Chantier 3 » du Ministère de l'Enseignement supérieur, de la Recherche et de la Science (MESRS) du Québec.

La quatrième conférence annuelle remercie *Vitrine technologie-éducation (VTÉ)* pour son financement.

SALTISE compte plus de 200 membres et continue de croître grâce à l'étroite collaboration entre collèges et universités dans le system éducationnel du Québec. En particulier, SALTISE aimerait souligner l'implication de la Vitrine technologie-éducation (vté), une organisation à but non lucratif financée par le Ministère de l'Enseignement supérieur, de la Recherche et de la Science (MESRS) et dont la mission est de guider les choix des établissements d'enseignement supérieur québécois en matière de technologie éducative.

LE COMITÉ DIRECTEUR DE SALTISE :

- **Co-Directrice et Directeur du SALTISE, Elizabeth Charles (Collège Dawson) & Nathaniel Lasry (Collège John Abbott)**
- **Murray Bronet (Collège John Abbott)**
- **Marielle Beauchemin (Collège Vanier)**
- **Chris Whittaker (Collège Dawson)**
- **Silvia d'Apollonia (Collège Dawson)**
- **Kevin Lenton (Collège Vanier)**
- **Ken Ragan (Université McGill)**
- **Robert Bracewell (Université McGill, Professeur Émérite)**

CONSULTANTS EXTERNES

- **Thérèse Laferrière (Université Laval)**
- **Jim Slotta (OISE, Université de Toronto)**

SALTISE

Welcome from 2015 SALTISE Conference committee

The SALTISE Conference Committee welcomes you to the 4th Annual Conference, **"Inspiring Change, Leveraging Evidence: New models of designing instruction"**.

Thanks to our host, John Abbott College and funding partners, la Vitrine technologie-éducation (VTÉ) and Entente Canada-Quebec (ÉCQ).

The Committee has put together an exciting program with distinguished speakers, reports of principled practical solutions and interactive sessions. We hope that these presentations will continue to inspire and encourage efforts to reach further as we bring researchers and practitioners together to share ideas and strengthen our growing network.

Enjoy the Conference!

Mots de bienvenue de la part du comité de la Conférence SALTISE 2015

Le comité de la conférence SALTISE vous accueille à la 4e conférence annuelle, « **Apprentissage actif, s'inspirer des résultats de recherches et des meilleurs pratiques.**»

Merci à notre hôte, le Cégep John Abbott et nos partenaires financiers, la Vitrine technologie-éducation (VTÉ) et l'Entente Canada-Québec (ECQ).

Le comité a mis sur pieds une programme passionnant avec des conférenciers de renommée, des rapports de solutions pratiques et des sessions interactives. Nous espérons que ces présentations vont continuer à nous inspirer et nous encourager dans nos efforts visant à nous dépasser et à rapprocher chercheurs et praticiens dans le partage d'idées et de consolider notre réseau en pleine croissance.

Bonne Conférence !

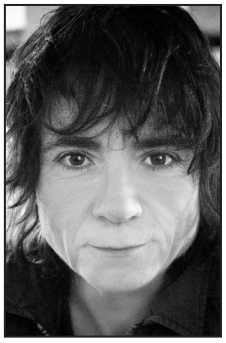
2015 CONFERENCE COORDINATORS


XIHUI WANG


CATHY GIULIETTI


CHAO ZHANG


LAURA SCHAFFER


SARAH WILLIAMS


MARTHA MULLALLY

2015 Conference Coordinators

Xihui Wang, Cathy Giulietti, Chao Zhang, Laura Schaffer, Sarah Williams, & Martha Mullally

2015 Conference Planning Committee

John Bentley (Concordia), Rob Cassidy (Dawson), Michael Dugdale (JAC), Alexandre Enkerli (VTÉ), Suzanne Kunicki (Dawson), Jen Mitchell (Vanier), Maria Orjuela-Laverde (McGill), Melissa Repas (JAC), Jim Sparks (Champlain) and SALTISE executive

SALTISE Executive

Co-Directors:
Elizabeth (Liz) Charles (Dawson) and Nathaniel Lasry (JAC)

Members:
Marielle Beauchemin (Vanier), Murray Bronet (JAC), Kevin Lenton (Vanier), Ken Regan (McGill)

SALTISE Founding Members

(emeritus and external)

Roger Azevedo (North Carolina State University, external), Bob Bracewell (McGill, emeritus), Silvia d'Apollonia (Dawson, emeritus), Gale Seiler (Iowa State University, external)

Associate Members

Dawson ALC - Active Learning Community (Chris Whittaker - Co-Coordinator, Leigh Barnett-Shapiro, Suzanne Kunicki, Tim Miller, Kathyrn Morrison)

CLAAC project - CLasses d'Apprentissage ACtif (Bruno Poellhuber (Principal), Samuel Fournier St-Laurent, Louis Normand)

Technical and Logistics Support

Graphic Designer: Isabelle Kalekas

Web support at Dawson College:
Chris Georgieff & Jonathan Pearlman

Communications and Support Staff at John Abbott College:
Robert (Tony) Beale, David Campeau, Debbie Cribb, Christina Daousis, Claudia Deme, Lison Desclos, Ray Fourneaux, Miles Gordon, Debbie Job, Josée Lanouette, Bill Mahon & Melissa Repas

Awards Committee

Kaila Folinsbee (Dawson College), Éric Francoeur (ETS), Anastassis Kozanitis (Polytechnique), & Jim Sparks (Champlain)

SALTISE

Location of Events

ALL EVENTS WILL BE HELD AT:

John Abbott College
21275 Lakeshore Road
Sainte-Anne-De-Bellevue (Quebec)
H9X 3L9

Tel : 514-457-6610

PARKING:

John Abbott campus –parking will be "FREE"

(courtesy John Abbott College Administration – see campus map for locations)

NAME TAGS & REGISTRATION:

Available on the day of the Conference in front of the "Agora" (see map)

DIRECTIONS TO JOHN ABBOTT: see website: http://www.johnabbott.qc.ca/contact-us/

FREE Buses leaving from downtown at Dawson College, 4001 de Maisonneuve West entrance

MORNING SCHEDULE TO JOHN ABBOTT: 7:30 a.m. or 8:30 a.m.

AFTERNOON SCHEDULE TO DAWSON: 5:15 p.m. or 5:45 p.m.

KEYNOTES (MORNING AND AFTERNOON): will be held in the Agora

AWARDS: same as above

CONFERENCE SESSIONS: Anne-Marie Edward Science Building (HS) (see schedule for room assignments)

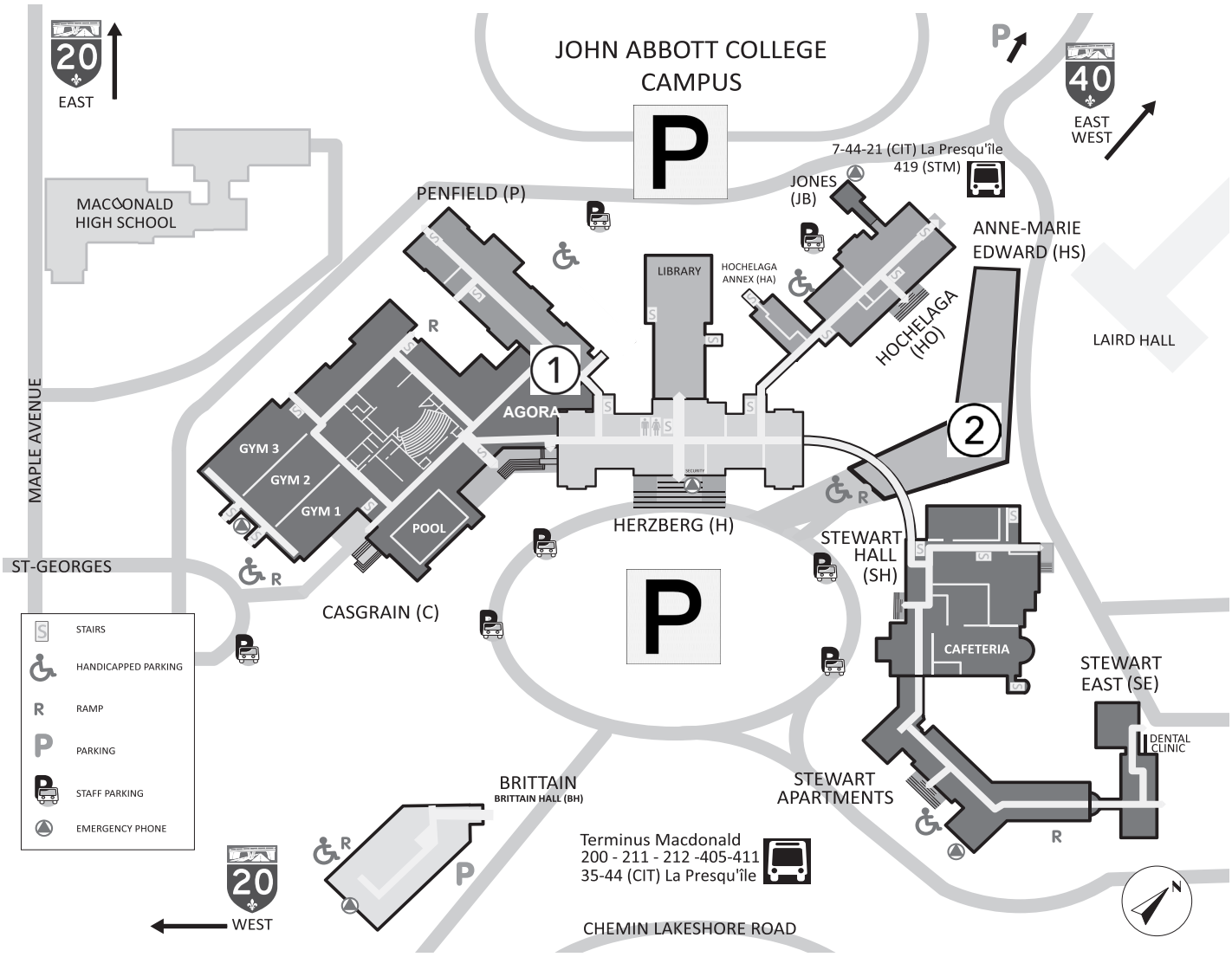
POSTER SESSIONS: Atrium of Anne-Marie Edward Science Building (HS)

HEALTH BREAKS: lounge area of 2nd floor Anne-Marie Edward Science Building (HS)

LUNCH: Inner Courtyard (weather permitting) or Atrium of Anne-Marie Edward Science Building (HS)

WINE AND CHEESE RECEPTION: same as above

Science Building with the exception of the keynotes and award presentation.



Legend

1 AGORA

- Registration Table
- Keynote
- Awards Ceremony

2 ANNE-MARIE EDWARDS SCIENCE BUILDING (HS)

- Conference Sessions (various classrooms)
- Lunch (outdoors)
- Poster Session (Atrium)
- Wine and Cheese (Atrium)

P PARKING

- Free parking available in the front of the main building or in the rear

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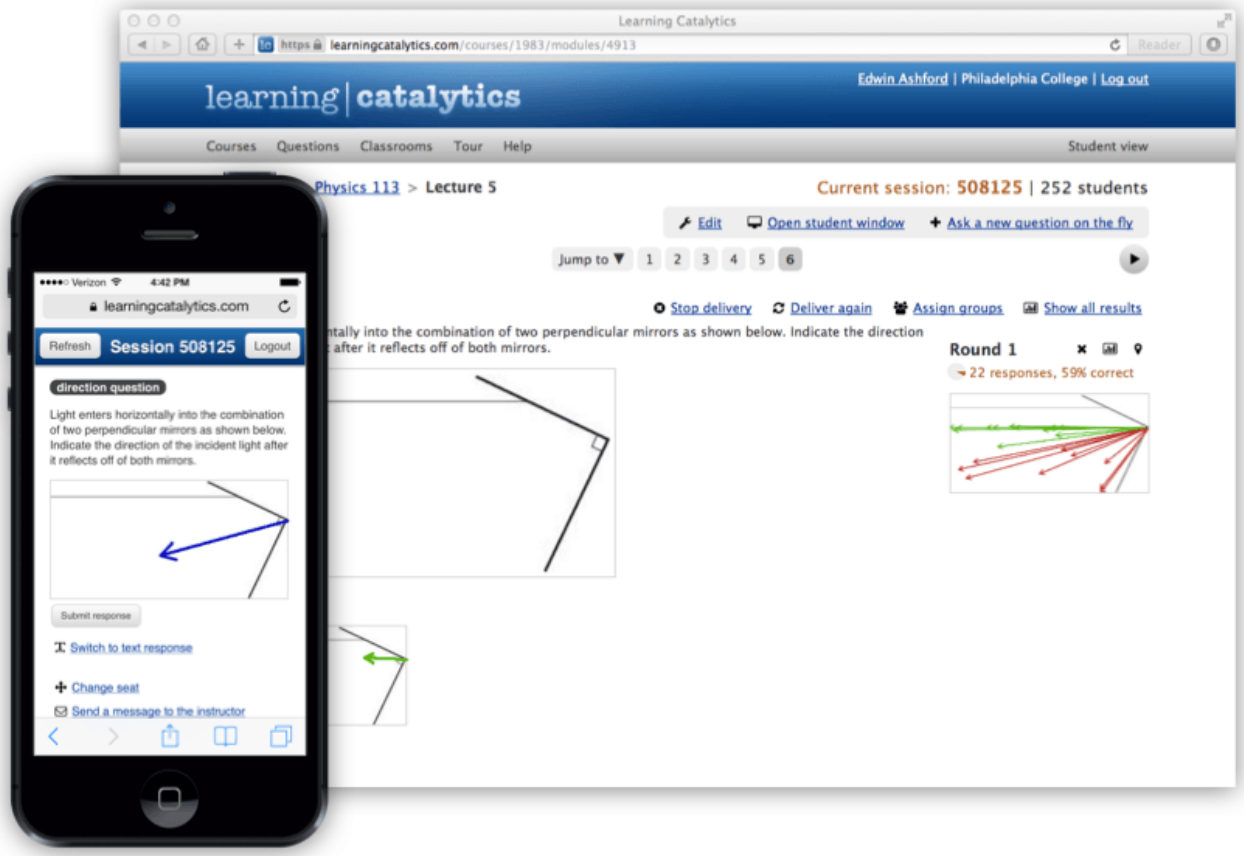

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Keynote Speakers

MARY PAT WENDEROTH, PH.D.
UNIVERSITY OF WASHINGTON

"The Future of Evidence-based Teaching"

Location and time: Agora @ 8:30 a.m. - 9:30 a.m.

BIOGRAPHY

DR. MARY PAT WENDEROTH is a Principal Lecturer in the Department of Biology at the University of Washington, where she teaches animal physiology and is an active member of the University of Washington Biology Education Research Group. Recognized for her teaching excellence, Dr. Wenderoth is a winner of the University of Washington Distinguished Teaching Award and member of the University of Washington Teaching Academy. She is currently involved with the broad dissemination of best science teaching practices through her involvement with the National Academies Scientific Teaching Alliance (NASTA) and co-founding of the Society for the Advancement of Biology Education Research (SABER). SABER is a national network of biology instructors involved in hypothesis-driven research that is building the body of evidence-based teaching literature for undergraduate Biology. Dr. Wenderoth has authored several publications about evidence-based teaching in STEM disciplines, and notably is a co-author of the large meta-analysis published in the Proceedings of the National Academy of Science (PNAS) last spring. That study reports on the effectiveness of active learning compared to traditional lectures in undergraduate courses. In particular, active learning significantly reduces failure rates and increases exam scores (Freeman et al., 2014). In an accompanying editorial, Carl Wieman wrote about this research, "This meta-analysis makes a powerful case that any college or university that is teaching its STEM courses by traditional lectures is providing an inferior education to its students" (Weiman, 2014).

REFERENCES:

1. Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafora, N., Jordta, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. PNAS, 111(23):8410 – 15.
2. Wieman, C. E. (2014). Large-scale comparison of science teaching methods sends clear message. PNAS, 111(23): 8319–20.

ELIZABETH (LIZ) LOSH, PH.D.
UNIVERSITY OF CALIFORNIA, SAN DIEGO

"Noise in the Data: Qualitative Research and Evidence-Based Pedagogy"

Location and time: Agora @ 2:00 p.m. - 3:00 p.m.

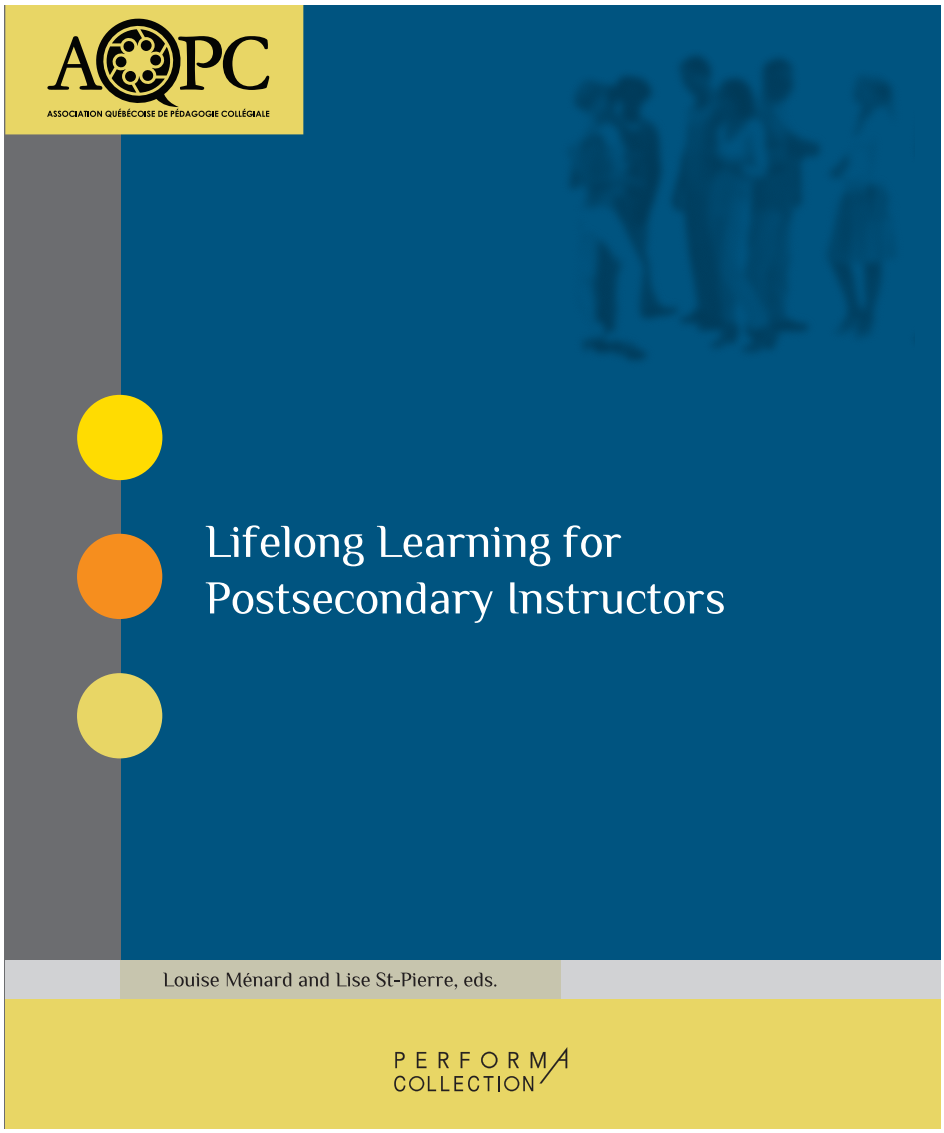
BIOGRAPHY

DR. ELIZABETH LOSH is the author of *Virtualpolitik: An Electronic History of Government Media-Making in a Time of War, Scandal, Disaster, Miscommunication, and Mistakes* (MIT Press, 2009) and *The War on Learning: Gaining Ground in the Digital University* (MIT Press, 2014). She is the co-author of the comic book textbook *Understanding Rhetoric: A Graphic Guide to Writing* (Bedford/St. Martin's, 2013) with Jonathan Alexander.

She writes about gender and technology, the digital humanities, distance learning, connected learning, media literacy, and the rhetoric surrounding regulatory attempts to limit everyday digital practices. She has written a number of frequently cited essays about communities that produce, consume, and circulate online video, videogames, digital photographs, text postings, and programming code. This work has appeared in edited collections from MIT Press, Routledge, University of Chicago, Minnesota, Oxford, Continuum, and many other presses.

She is Director of the Culture, Art, and Technology program at Sixth College at University of California San Diego (UCSD), where she teaches courses on digital rhetoric and new media. She is also a blogger for Digital Media and Learning Central.

"As forces of technological innovation and global migration impact universities nationwide, understanding the role of electronic and second-language literacy is critical."



NOW AVAILABLE!

Lifelong Learning for Postsecondary Instructors is the highly anticipated translation of the French book "Se former à la pédagogie de l'enseignement supérieur" – the "go to" reference on pedagogy in higher education which has been adopted in many colleges and universities.

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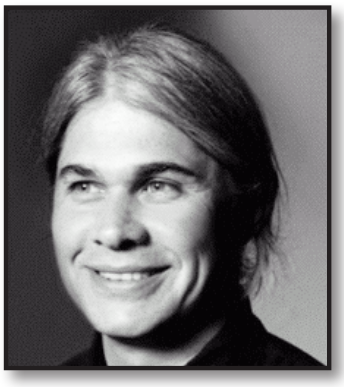

SALTISE IS PROUD TO ANNOUNCE THIS YEAR'S RECIPIENT OF OUR SPECIAL AWARD FOR EXCEPTIONAL CONTRIBUTIONS TOWARD OUR COMMUNITY OF PRACTICE.

The **Pedagogical Innovation and Lifetime of Contribution 2015 Award** is presented to PROFESSOR JAMES D. SLOTTA.

Professor Slotta is a Canada Research Chair in Education and Technology at the Ontario Institute of Studies in Education (OISE), University of Toronto. He is a leading figure in the International Society of the Learning Sciences (ISLS) and has contributed to its expansion worldwide. His research focuses on the design and impact of technology-enhanced learning environments as well as the investigation and development of socio-cognitive models of learning and instruction - "Knowledge Community and Inquiry" (KCI), where students in a classroom work together to create a persistent knowledge resource, which then serves as a source of materials and inspiration to subsequent inquiry projects.

Professor Slotta has had a profound impact on the SALTISE community. His contributions to the Community are broad and far reaching. Listing just a few, he has: been a mentor to individual members since 2003; supported techno-pedagogical initiatives and developments undertaken by members (namely DALITE); advised on grant applications; and been on the SALTISE Advisory Board since its inception in 2011. On the world stage, Professor Slotta has been instrumental in developing initatives and collaborations with colleagues in China (e.g., Beijing Normal University), Europe (e.g., Network of Academic Programs in the Learning Sciences), and North America (e.g., Dawson College, Embedded Phenomena and Inquiry Communities project, Educoder, Web-based Inquiry and Science Education project).

Among his many attributes are Professor Slotta's keen intellect, deep insights, and most importantly, his talent for bringing people and communities together in a true spirit of collaboration. He has been a role model to all who have had the pleasure of working with him including his students, colleagues at OISE, and members of SALTISE. We are truly grateful for his contributions to us both personally and collectively. **Here are a few quotes from the numerous support letters:**

> Professor Slotta has put in countless hours working alongside our research team to bring about this co-designed project that respects curricula needs while at the same time leveraging technological capabilities. (DALITE TEAM MEMBERS)

> [Professor Slotta's] approach for research group meetings became a beacon for other academics at OISE, University of Toronto, where researchers, technologists, visiting scholars and educators come together to share their experience and knowledge. This modeling of his theoretical beliefs fostered a community of learners that continues to grow. (DR. CHERYL ANN MADEIRA, DEPARTMENT OF CURRICULUM, TEACHING AND LEARNING, OISE/UNIVERSITY OF TORONTO)

> While Professor Slotta has continuously distinguished himself in his scholarly work, what sets him apart is that he intentionally incorporates innovative ideas from his research in his teaching practices. (DR. MICHELLE LUI)

> It is [Professor Slotta's] mentorship that has sparked and nurtured my very identity as a researcher, and given me wondrously rich learning opportunities in which to test my ideas. (CRESENCIA FONG, POSTDOCTORAL RESEARCH FELLOW, UNIVERSITY OF TORONTO - OISE & SMART TECHNOLOGIES)

Please join us at the Award's Ceremony, Conference day at 3pm, to honor this incredibly generous scholar and friend.

Program at a Glance

8:00 a.m. - 8:30 a.m. - Registration and Welcome (Agora)					
8:30 a.m. - 9:30 a.m.	**Morning Keynote Speaker (Agora)** **DR. MARY PAT WENDEROTH**				
	INVITED SPEAKER SESSIONS (HS-606)	FRENCH & BILINGUAL SESSIONS (HS-230)	INTERACTIVE SESSIONS (HS-201)	PRACTITIONER SESSIONS (HS-232)	DISCIPLINE SPECIFIC TOPICS (HS-248)
SESSION 1 9:45 a.m. - 11:00 a.m.	1.1 **Improving Teaching: Individual & Community Perspectives** *Formative change laboratory intervention for educational design,* **Alain Breuleux** (McGill) *Virtual tours and practica in the life of an enduring knowledge building community,* **Thérèse Laferrière** (Laval) Discussant: Rob Cassidy	1.2 **Enseignement comme l'expérimentation : Rapports sur des succès** *(session en français)* *Les étudiants en tant qu'associés : surmonter les obstacles à l'apprentissage de collaboration* **Alexandre Enkerli** (VTÉ) *Classe inversée ou « flipped classroom » : exemples pratiques orientés vers la réussite de l'étudiant,* **Ondina Galiano** & **Lucie Giguère-Kolment** (Cégep AL) *Utilisez des planches effaçables à sec et microbiennes modèles pour des activités de groupe,* **Marie-Claire Rioux** (JAC) Chair : Suzanne Kunicki	1.3 **Community of Practice at Work** *Making learning visible: Student whiteboards in the science classroom* *Facilitators:* **Sean Hughes** (JAC) **Alice Mcleod** (JAC) **Roxane Milette** (JAC) **Caroline Viger** (JAC) Chair: Kathy Morrison	1.4 **Authentic Practice & Active Learning** *An independent research project in science: Good old fashioned active learning,* **Roberta Šilerová** (JAC) *Experiences with active learning in engineering courses: Overcoming the resistance barrier,* **Lawrence Chen** (McGill) *TEAM involvement in freshman science classes,* **Alice Cherestes** (McGill) Chair: Chris Whittaker	1.5 **Collaborative Learning & Authentic Research Questions In the Lab** *The small world initiative (SWI) at McGill: Engaging undergraduates in scientific discovery and crowdsourcing the search for new antibiotics,* **Claire Trottier** (McGill) *Designing pedagogy with seaweed in mind: An online approach,* **Murray Bronet & Petra Turkewitsch** (JAC) *Using Crazy Egg to crack how students use your website,* **Sylvia d'Apollonia & Suzanne Kunicki** (Dawson) Chair: Phil Lagogiannis
11:00 a.m. -11:15 a.m. Break & Refreshments (HS-Atrium)					
SESSION 2 11:15 a.m. - 12:30 p.m.	2.1 **Changing Minds & Practices: A Grand Challenge** *Using targeted interventions to promote conceptual change in science,* **Ying (Elaine) Syuan and Anila Ashgar** (McGill) *Can we change students' beliefs about physics*?, **Calvin Kalman** (Concordia) *Short writing assignments as a teaching tool in the life sciences,* **dik Harris** (McGill) Discussant: Mary Pat Wentworth	2.2 **Vidéos éducatives en Chimie et au-delà** (Billingual session) *"Chem cast" rethinking the supplemental support provided by TAs in General Chemistry,* **Jim Ghoshdastidar** (McGill) *Vidéos pour la classe inversée en chimie générale: Développment, utilisation et satisfaction des étudiants,* **Caroline Cormier & Veronique Turcotte** (Cégep AL) *Chemical experiment videos: Beyond the lab coat,* **Yann Brouillette** (Dawson) Chair: Jon Guillemette	2.3 **Multiple Approaches in Active Learning** *Blended learning on physics: A constructivist approach in education,* **Paul Bazelais** (JAC) *Active learning through multiple intelligences,* **Neerusha Baurhoo** (McGill) *Global climate models for the classroom: A review of active learning in inquiry climate change teaching and its implications for new educational technologies,* **Drew Bush** (McGill) Chair: Michael Dugdale	2.4 **Adapting Technology for Diversity** *What do students really want when it comes to their instructors use of ICTs?,* **Alice Havel & Jillian Budd** (Dawson) *Leveraging a Practice of Peace Competencies for Social Inclusion and Innovation,* **Julie Mooney** (Dawson) Universal Design for Learning, **Roberta Thompson** (McGill) Discussant: Liz Losh	2.5 **Innovative Technologies and Pedagogies** *Hands-on, brains-on, and high-tech in lab courses,* **Benjamin M. Zwickl (**Rochester) *The role of an online collaborative textbook annotation tool in a flipped introductory physics class,* **Kelly Miller** (Harvard) Discussant: Nathaniel Lasry

Program at a Glance

	12:30 – 2 p.m. Lunch (outdoor courtyard) 1:00 p.m. – 1:45 p.m. **Poster Session** (HS - Atrium)				
2:00 p.m. – 3:00 p.m.	**Afternoon Keynote Speaker (Agora)** **DR. LIZ LOSH**				
3:00 pm – 3:30 pm	**Award Presentations (Agora)**				
SESSION 3 3:45 p.m. – 5:00 p.m.	3.1 **Using Technology to Enhance Learning** *Transforming a large classroom into a small classroom-like environment with an online group project*, **Madoka Gray-Mitsumune** (Concordia) *Problem-based learning online: Transformative experiences for students and design challenges for professors,* **Ann-Louise Davidson** and **Nadia Naffi** (Concordia) *The effect of Twitter on student engagement and learning: A case study from a field biology course,* **Chris Buddle** (McGill) Chair: Madoka Gray-Mitsumune	3.2 **Engagement dans de nouveaux modèles d'enseignement et d'apprentissage** *(session en français)* *Vers de nouvelles dimensions d'hybridation pour la formation des enseignants* **Florian Meyer** (Sherbrooke) *Apprentissage actif base sur les tutoriels d'exemples reels en robotique,* **Sonia Gounar** (Cégep BB) *De la motivation à l'engagement,* **Séverine Parent** (Laval) Chair : Yann Brouillette	3.3 **Active Learning Community: Building communities of practice,** *Panel Discussion* *Panel members*: **Adam Finkelstein** (McGill) **Anastassis Kozanitis** (Polytechnique) **Eric Francoeur** (ETS) **John Bentley** (Concordia) **Jen Mitchell** (Vanier) **Lynda Gelston** (JAC) **Chris Whittaker** (Dawson) Chair: Kathy Morrison	3.4 **Best Practices in Active Learning** *Classmates as teachers: Using students from a class as tutors for active learning activities,* **Karl Laroche** (Vanier) *Connecting the dots: Combining active learning methods,* **Michael Lautman** (JAC) *POGIL in introductory calculus,* **Al Hayek** (JAC) Chair: Sameer Bhatnagar	3.5 **Active Learning in Mathematics & Future Learning** *Cultivating mathematical intuition for STEM resilience and success*, **Anita Parmar** (McGill) *Mathematics and statistics: "A new kind of learning",* **Fred E Szabo** (Concordia) *Principles and practices of high quality teaching: Journaling to support student understanding,* **Steve Rossy** (McGill) Chair: Jon Guillemette
5:00 p.m. - 6 p.m.	Wine & Cheese				

Posters:

1. *Strategies for success: Impact of learning styles and the study environment on outcomes in CEGEP biology,* **Tim Klempan** (Concordia)
2. *Comparing the level of engagement and effectiveness of learning activities based on their design,* **Roxanne Millette** (JAC)
3. *Use of Secondlife as a tool for immersion and learning,* **Greg DeLuca** (Champlain)
4. *Promote reflective learning by polling,* **Jennifer Zhao** (McGill)
5. *Integrating technology in the active classroom: Tablet use in anatomy,* **Tim Miller** (Dawson)
6. *Getting students hooked on photonics,* **Rhys Adams** (Vanier)
7. DALITE: Using a CEGEP designed asynchronous PI platform on Open edX, **Michael Dugdale** (JAC), **Sameer Bhatnagar** (Dawson), & **Nathaniel Lasry** (JAC)

Legend:

Cégep AL = Cégep André-Laurendeau
Cégep BB = Cégep de Bois de Boulogne
Champlain = Champlain Regional College, Longueuil
Concordia = Concordia University
Dawson = Dawson College
ÉTS = École de technologie supérieure
Harvard = Harvard University
JAC = John Abbott College
Laval = Université de Laval
McGill = McGill University
Polytechnique = École Polytechnique de Montréal
Rochester = Rochester Institute of Technology
Sherbrooke = Université de Sherbrooke
Vanier = Vanier College
VTÉ = Vitrine technologie-éducation

SALTISE

June 2nd Conference Day

Opening remarks & Plenary Session:
MORNING SESSIONS

SESSION 1:
9:45 - 11:00 am

1.1 Improving Teaching: Professional Development in Community of Practice

ALAIN BREULEUX (McGill University) - *Formative Change Laboratory Intervention for Educational Design*

This presentation introduces formative change laboratory intervention as an approach to educational design. This approach emphasizes collective activity systems, their inherent contradictions as sources of change, and is characterized by a structured inclusion of participants in the process. The application will be illustrated with two examples: a) the initiation of a professional learning network for elementary and secondary school teachers concerned with digital literacy and students' success in mathematics, and b) the collaborative design of innovative learning spaces at McGill University.

THÉRÈSE LAFERRIÈRE (Université Laval) - *Virtual Tours and Practica in the Life of an Enduring Knowledge Building Community*

The model features student teachers, school-based and university-based teacher educators working in a school setting. Reflection-on-practice, collaborative inquiry and knowledge building are promoted during onsite practica. At the end of each onsite practica, cohorts are invited to leave a collective artefact (virtual tour) for the knowledge building community. Incoming student teachers do a few virtual tours as they formulate their learning project, which are conceptualized as legitimate peripheral participation into the knowledge building community.

1.2 Enseigner que l'expérimentation : Des rapports sur ce qui fonctionne

Enseignement comme l'expérimentation : Rapports sur des succès

ALEXANDRE ENKERLI (Vitrine technologie-éducation (VTÉ)) - *Étudiants Associés : Surmonter des Obstacles à L'apprentissage Collaboratif*

La collaboration avec les apprenants est un terreau fertile permettant aux pédagogues de faire croître l'innovation. De l'évaluation par les pairs au plan de cours collaboratif, c'est souvent en habilitant les apprenants à jouer un rôle actif dans leurs expériences d'apprentissages qu'on réussit le mieux à les stimuler. Toutefois, diverses barrières se dressent lorsqu'une enseignante désire prendre une telle voie. Partant d'exemples concrets, cette présentation cartographie des chemins autour des embûches à l'apprentissage collaboratif.

ONDINA GALIANO (Université de Sherbrooke, PeDTICE (pédagogie (Pe), de didactique (D) et de technologies de l'information et de la communication pour l'éducation (TICE) et Cégep André-Laurendeau) et LUCIE GIGUÈRE-KOLMENT (Cégep André-Laurendeau) - *Classe inversée ou « flipped classroom » : exemples pratiques orientés vers la réussite de l'étudiant.*

Depuis quelques années, plusieurs s'intéressent et adoptent les principes de la classe inversée à leur enseignement. S'agit-il d'une mode, d'une nouvelle méthode pédagogique ? Il y aura premièrement une présentation de l'état des connaissances actuelles concernant la classe inversée. Nous examinerons plus particulièrement les défis qu'elle représente pour l'enseignant et son environnement. Deuxièmement, il y aura une présentation d'exemples de la classe inversée qui illustreront l'interrelation de la recherche vers la pratique.

MARIE-CLAIRE RIOUX (John Abbott College) - *Utilisez des planches effaçables à sec et microbiennes modèles pour des activités de groupe*

La microbiologie pose un problème pour de nombreux étudiants parce que le sujet n'est pas tangible et les microbes sont difficiles à visualiser. Pour adresser ce problème, des activités interactives utilisant une collection de microbes en peluche ainsi que des activités de groupe centrées sur des tableaux effaçable à sec ont été développées. Les activités axées sur la taxonomie, l'identification des fonctions des globules blanches, et la prévention de la transmission d'infections seront présentées. Les obstacles et les succès de chaque approche seront présentés.

1.3 Community of Practice at Work

SEAN HUGHES, ALICE MCLEOD, ROXANE MILETTE, MARIE-CLAIRE RIOUX, & CAROLINE VIGER (John Abbott College) - *Making Learning Visible: Student Whiteboards in the Science Classroom*

Active learning does not have to involve high tech equipment, or a whole course overhaul. Join us for a tour of low-cost ways to make classrooms more active in many disciplines using simple student whiteboards. We will make the case for creating a classroom where students model positive learning behavior, and invite participants to try some activities where students work on whiteboards around the classroom.

1.4 Authentic Practice & Active Learning

ROBERTA ŠILEROVÁ (John Abbott College) - *An Independent Research Project in Science: Good Old Fashioned Active Learning*

This presentation will highlight a new capstone research project course for senior science students at John Abbott College. Examples of typical research projects, the course evaluation plan and the symposium where students showcased their research as poster and oral presentations will be described. Student perception data and research supervisor feedback will presented.

LAWRENCE CHEN (McGill University) - *Experiences with Active Learning in Engineering Courses: Overcoming the Resistance Barrier*

In this presentation, I share my experience with transitioning to active learning in engineering courses. In particular, I describe how I dealt with three resistance barriers: my own skepticism and fear, lack of support from my colleagues, and resistance from students. I describe my in-class experiences with two different engineering courses and review comments from students about their learning experiences.

ALICE CHERESTES (McGill University) - *TEAM Involvement in Freshman Science Classes*

This presentation draws on the direct experience of the author using peer instruction in freshmen level classes. Different approaches and models of peer learning have been used and results will be described based on the course type. Outcomes will be discussed and analyzed from the instructor and peer facilitator viewpoint. Student academic achievement, emotional gains, and engagement were some of the leading factors of this study.

1.5 Collaborative Learning & Authentic Research Questions in the Lab

CLAIRE TROTTIER (McGill University) - The Small World Initiative (SWI) at McGill: *Engaging Undergraduates in Scientific Discovery and Crowdsourcing the Search for New Antibiotics*

We report on the implementation of the Small World Initiative (SWI) at McGill's Department of Microbiology and Immunology. The SWI is an international, multi-institutional collaboration aiming to bring authentic scientific research to undergraduate classrooms. Students in this course tackle the real world crisis of global antibiotic resistance by crowd-sourcing the discovery of novel antibiotic producing microbes. It allows students to take ownership of a realistic scientific project, gain key laboratory skills, and develop critical thinking and scientific communication skills.

MURRAY BRONET & PETRA TURKEWITSCH (John Abbott College) - *Designing Pedagogy with Seaweed in Mind: An Online Approach*

Students from John Abbott College and the Cégep de la Gaspésie in the Gaspé formed collaborative teams to solve "real-life" problems using a Problem-Based Learning (PBL) approach in a laboratory environment. Online collaborative tools and online laboratory experiments (Virtual ChemLab©) were used. Students reported favorable perceptions of the PBL laboratory exercises. They believed that using the virtual laboratory experiments helped them acquire manipulative and evaluative skills beneficial in the wet-lab.

SILVIA D'APOLLONIA & SUZANNE KUNICKI (Dawson College) - *Website Analytics: Using Crazy Egg to crack how students use your website*

We created a website "Connected Biology" incorporating Web-2 elements to encourage active learning. We subsequently assessed students' use of these elements with Crazy Egg, a commercial tracking site. Results indicated that although students reported that they found these elements useful, they rarely used them. We will demonstrate how Crazy Egg can be used to collect data that informs research, instructional design, and pedagogy.

11:00 - 11:15
Break & Refreshments

SALTISE

SESSION 2:
11:15 - 12:30 pm

2.1 Changing Minds & Practices: A Grand Challenge

YING (ELAINE) SYUAN & ANILA ASGHAR (McGill University) - *Using Targeted Interventions to Promote Conceptual Change in Science*

Researchers in science education know that students hold common sense beliefs derived perceptual experiences, and that the conceptual content of these intuitive ideas is different from accepted scientific models. Intuitive ideas about the natural world persist even after years of formal science instruction, and directly impact the ability of students to reconstruct existing knowledge and gain new scientific knowledge. This presentation will discuss examples of diagnostic items to assess secondary students' alternative conceptions and evidence-based targeted interventions to address them.

CALVIN S. KALMAN (Concordia University) MANDANA SOBHANZADEH (Mount Royal University, Calgary, AB), ROBERT THOMPSON (University of Calgary, Calgary, AB), AHMED IBRAHIM (University of California Riverside, CA), XIHUI WANG (McGill University) - *Can We Change Students' Beliefs about Physics?*

We conjectured that the combination of Reflective Writing with other interactive interventions might get students to undergo epistemological change. We have investigated this question through semi-structured interviews and the use of the Discipline-Focused Epistemological Beliefs Questionnaire (DFEBQ) as a pre-and post-test. Quantitative results showed that the novice science learners' beliefs developed to be more expert-like and they saw knowledge as interconnected.

dik HARRIS (McGill University) - *Short Writing Assignments as a Teaching Tool in the Life Sciences*

We have found the use of short writing assignments (SWAs) in undergraduate classes to be integral to the development of critical thinking and learning skills. We employed student surveys and instructor interviews for eight undergraduate classes, to gain in-depth qualitative and quantitative insights. In addition to improving critical and analytical skills, students reported that the SWAs helped them to link course material to their everyday life and improve conceptual and applied understanding. For instructors, while they reported improvements in students' analytical skills and writing abilities, they also found SWAs to be resource intensive.

2.2 Vidéos Éducatives en Chimie et Au-Delà BILINGUAL SESSION

JIM GHOSHDASTIDAR, IGOR HUSKIC & LAURA PAVELKA (McGill University) - *"Chem Cast" Rethinking the Supplemental Support Provided by TAs in General Chemistry*

McGill's General Chemistry courses have large enrolments of ~1000 students. In place of poorly attended optional tutorials by TAs, we've developed new course resources, including: online weekly quizzes & assignments, online practice exams, exam preparatory courses, drop-in tutorials in residences, and recently, "Chem Cast," a series of videos of past exam problems solved by a TA, with quizzing throughout. Feedback from students on these supplemental support materials has been positive and the average mark in the course has increased by 10%.

YANN BROUILLETTE (Dawson College) - *Chemical Experiment Videos: Beyond the Lab Coat*

A collection of short chemical experiment videos has been produced to illustrate a series of chemical processes. Each video is free, easily accessible, and focuses on chemical reagents, reaction and macroscopic observations. Every new Chem Curious YouTube clip shows a scene from a movie, TV show or comic book that is afterwards mimicked and explained using chemistry.

CAROLINE CORMIER ET VÉRONIQUE TURCOTTE (Cégep André-Laurendeau) - *Vidéos pour la classe inversée en chimie générale : Développement, utilisation et satisfaction des étudiants*

La classe inversée est une méthode pédagogique de plus en plus utilisée en enseignement des sciences depuis 2007. Cette méthode permet de libérer du temps de classe en faisant étudier les nouveaux concepts aux étudiants à la maison, « renversant » ainsi l'enseignement traditionnel. Nous présenterons les modalités de scénarisation et de tournage de ces vidéos, en plus des résultats à un sondage de satisfaction réalisé auprès d'étudiants qui ont vu cette partie de leur cours de chimie générale enseignée en classe inversée à la session d'hiver 2015.

2.3. Adapting Technology for Diversity

ALICE HAVEL (Adaptech Research Network, Dawson College) and JILLIAN BUDD (McGill University), in collaboration with CATHERINE FICHTEN, LAURA KING, MARY JORGENSEN, CRISTINA VITOUCHANSKAIA, & ALEX LUSSIER - *What Do Students Really Want When It Comes to Their Instructors Use of Information Communication Technologies (ICT)?*

This presentation reports the preliminary results of a three-year

study entitled "Student and Faculty Perspectives on Excellence in Information and Communication Technologies and E-Learning Use in College". Qualitative and quantitative data were collected from over 300 students from Dawson College and Cégep André-Laurendeau. Preliminary results will be presented, with a special focus on responses from college students in pre-university science and science-related technology programs.

JULIE MOONEY (Dawson Centre for Peace Education) - *Leveraging a Practice of Peace Competencies for Social Inclusion and Innovation*

In this presentation "peace competencies" – that set of practical skills that help us tune into and manage our emotions, to listen for understanding of different perspectives and experiences, and to find middle ground for resolving conflicts – are interpreted as a technology that supports social inclusion and innovation. We will explore the complex ground of diversity and difference that is often a site of violence, prejudice, and injustice, but that is also a site of opportunity for practising peace and inventing healthier, more inclusive, and more productive ways of being in relationship across difference. This exploration will be set within the context of postsecondary learning environments.

ROBERTA THOMSON (McGill University) - *Universal Design for Learning*

Universally Designed technology and the Universal Design for Learning framework holds the promise to widen access to pedagogy and shift from curriculum structured for the mythic average student towards a flexible environment that responds to diversity of the current student population. Technological tools used by both students and by teachers can support the 3 principles of UDL: multiple means of representation, engagement and action and expression.

2.4 Multiple Approaches in Active Learning

PAUL BAZELAIS (John Abbott College) - *Blended Learning in Physics: A Constructivist Approach in Education*

The purpose of this study was to assess the effectiveness of instruction by comparing learning outcomes of two different instructional strategies: a blended learning format and a traditional lecture-based instruction, in an introductory college physics course. The Force Concept Inventory (FCI) was used to evaluate the effectiveness of instruction, and students' attitudes were examined with a student attitude survey. Blended Learning has proven to enhance both the quality of instruction and student learning.

NEERUSHA BAURHOO (McGill University & Vanier College) - *Active Learning through Multiple Intelligences: Exploring Alternate Conceptions and Favouring Engagement of Diverse Learners in a College Biology Classroom*

This presentation highlights the importance of integrating multiple intelligences (MI) theory in active learning strategies in an introductory college-level biology course. Insights were gained on students' misconceptions and difficulties throughout the biology course while trying to enhance construction of biological knowledge, motivation and engagement of diverse students. This presentation might support science teachers in reflecting on their practices and adopting the hands-on MI-based strategy to support effective learning for diverse students.

DREW BUSH & RENEE SIEBER (McGill University) - *Global Climate Models for the Classroom: A Review of Active Learning in Inquiry Climate Change Teaching and Its Implications for New Educational Technologies*

A gap exists between how anthropogenic global climate change (AGCC) is taught and how scientists investigate it. Advances in computing technology have improved research-grade global climate models (a key tool of scientists) and teaching with global climate models (GCMs). Early evidence suggests active student inquiry with GCMs poses challenges including teaching global topics in classrooms situated in specific geographic regions. Climate change educators must carefully design curricula, use and explain appropriate technologies, and provide strong guidance while relating student learning to their personal experiences.

2.5 Innovative Technologies and Pedagogies

BENJAMIN M. ZWICKL (Rochester Institute of Technology) - *Hands-on, brains-on, and high-tech in lab courses*

Lab courses are complex learning environments that involve hands-on activities, such as designing, building, and using apparatus, and also brains-on activities, such as asking and answering questions, sense-making, explaining, collaboration, quantitative and conceptual reasoning, documenting, writing, and presenting. Although creating a good hands-on and brains-on lab is a daunting challenge, I argue that modeling (i.e., building, testing, and refining scientific models) is one key pillar of lab pedagogy. I will provide a short review of several modeling-focused pedagogies that have been applied in introductory and upper-level lab courses and talk about ongoing physics education research in evaluating students' model-based reasoning in labs. Finally, the talk will reflect on the two-way relationship between modeling and technology in lab courses. Technology enables an emphasis on modeling in lab courses (e.g., motion sensors and data acquisition), and

modeling enables a better understanding of lab technology (e.g., an oscilloscope) that students might otherwise treat as a mysterious black box.

KELLY MILLER, SACHA ZYTO, DAVID KARGER, JUNEHEE YOO & ERIC MAZUR (Harvard University) - *The Role of an Online Collaborative Textbook Annotation Tool in a Flipped Introductory Physics Class*

We investigated the role of an online collaborative textbook annotation tool, in a flipped introductory physics class. This tool serves as both the primary content delivery mechanism and provides a discussion forum for students. We analyzed the relationship between students' level of online engagement, and traditional learning metrics, to understand the effectiveness of discussion forums in the context of flipped classrooms.

12:30 - 2:00 pm - Lunch

1:00 - 1:45 pm
Poster Session (Concurrent with Lunch)

2:00 - 3:00 pm
Afternoon Keynote Speaker: Liz Losh

3:00 - 3:30 pm Award Presentations

SESSION 3:
3:45 - 5:00

3.1 Using Technology to Enhance Learning

MADOKA GRAY-MITSUMUNE (Concordia University) - *Transforming a Large Classroom into a Small Classroom-Like Environment with an Online Group Project.*

This presentation explores group projects as a way to manufacture a small-classroom like environment with a large class. Students from a large class were divided into small groups. Through online and face-to-face group activities, they created collaborative Wiki pages containing information from scientific literature. The group project transformed the way students interacted with the instructor and peers. Students learned key components of evaluating scientific literature and successful collaboration.

ANN-LOUISE DAVIDSON & NADIA NAFFI (Concordia University) - *Problem-Based Learning Online: Transformative Experiences for Students and Design Challenges for Professors*

This presentation will address the problem of designing interactive online courses in higher education. First, we will present the theoretical foundations used to design an online undergraduate university course about social media in a problem-based learning approach. Second, we will discuss the two narratives of the designer-developer-instructors along with student reactions. More specifically, the data will be presented as a reflective analysis of the instructors with regards to the values that underlie the scholarship of teaching and learning.

CHRISTOPHER BUDDLE (McGill University) & LAUREN SOLUK (Mohawk College, Toronto, ON) – *The Effect of Twitter on Student Engagement and Learning: Case Study from a Field Biology Course*

In a field biology class at McGill University, the effects of Twitter on learning dynamics was studied. As part of an assignment related to science communication, students were required to Tweet during the class about their natural history research projects. Overall, the Twitter project further supports the notion that online social media tools have a place in the classroom, provided they are linked tightly to learning outcomes, proper training is given, and guidelines are followed.

3.2 Engagement dans de nouveaux modèles d'enseignement et d'apprentissage

FLORIAN MEYER (Université de Sherbrooke) et ÉRIC SANCHEZ (École normale supérieure de Lyon, France) - *Vers de nouvelles dimensions d'hybridation pour la formation des enseignants*

Dans cette communication, nous présenterons des cadres théoriques qui permettent d'expliciter et de saisir la multiplicité des formes d'hybridation des parcours de formation selon les dimensions spatiales et temporelles en illustrant notre propos par des exemples issus de nos expériences de formateurs. Nous proposerons ensuite l'identification de nouvelles configurations prometteuses pour l'élaboration de parcours de formation. Nous conclurons en soulignant les défis et opportunités que représentent les multiples possibilités d'hybridation offertes par le numérique aujourd'hui.

SONIA GOUNAR (Collège de Bois de Boulogne) - *Apprentissage actif base sur les tutoriels d'exemples reels en robotique*

Afin de faciliter l'apprentissage actif, les étudiants de l'équipe de robotique produisent des tutoriels autodidactes sous forme de vidéos qui seront utilisés comme support à l'apprentissage ou même un outil d'apprentissage rapide. Cette approche permet au futurs « roboteux » de visualiser directement les vidées et de sauver ainsi du temps précieux tout en évitant de détruire le matériel électronique et électrique. Ces vidéos faites par les étudiants dans le local de robotique permettent de rester dans un contexte réel.

SÉVERINE PARENT (Université Laval) - *De la motivation à l'engagement*

Cet atelier présentera différentes conceptions de l'engagement en pédagogie et l'abordera comme ayant un plus grand ancrage dans l'action que la motivation. En effet, une fois que l'apprenant est dans l'action, qu'il participe, le phénomène enclenché peut être abordé sous l'angle de l'engagement. Des exemples illustrant l'engagement dans ses différentes dimensions seront donnés afin de mieux reconnaitre les manifestations de l'engagement dans l'apprentissage.

3.3 Active Learning in Mathematics and Future Learning

ANITA PARMAR (McGill University) - *Cultivating Mathematical Intuition for STEM Resilience and Success*

Mathematics provides the foundation for STEM disciplines and achievements in math are creative and deeply satisfying. How can we foster the resiliency required to attain better comprehension of math in elementary school students? Is it possible to shift society's perception of math from an elite skill towards a belief that it is an extension of our innate logical capacity? This problem is viewed from the perspective of a scientist visiting the world of elementary education.

FRED E SZABO (Concordia University) - *A New Kind of Learning*

In this presentation, I will be discussing opportunities for teaching and learning interactively with technology, such as Mathematica, and with the "manipulation" of mathematical statements to enhance conceptual understanding through computational experimentation.

STEVEN ROSSY (McGill University) - *Principles and Practices of High Quality Teaching: Journaling to Support Student Understanding*

To support teachers to ask questions that move students from knowledge-based to explanatory responses to deeper understanding, teachers journaled their questions and student responses. This journaling process helped teacher exhibit best practice and record student understanding. Ambitious teaching strategies consistently utilized from elementary to secondary and then postsecondary levels would certainly be advantageous to student learning over the long term. Future research will examine shifts in teachers' identities and motivation that might direct them to these ambitious teaching practices.

3.4 Best Practices in Active Learning

KARL LAROCHE (Vanier College) - *Classmates as Teachers: Using Students from a Class as Tutors for Active Learning Activities*

This paper will present a novel methodology where students peer-tutor classmates during active learning exercises, and preliminary results from an empirical examination of this approach will be presented. The notion that students can help each other learn is widely accepted, and peer-tutoring is becoming a reasonably common practice. Within an active-learning classroom, tutors provide an effective solution to the problem of the instructor not having enough time to help all the groups and address all misconceptions.

MICHAEL LAUTMAN (John Abbott College) - *Connecting the Dots: Combining Active Learning Methods*

Although there has been an explosion of interest in active learning in the past decade, and with it the development of teaching tools and methods, there has been less consideration of how these tools can be used in a concerted manner. This seminar will look at how to effectively combine different active learning methods and how to evaluate which methods to use with a specific subject matter, and how to use different technologies to support this process.

AL HAYEK (Vanier College) - *Process Oriented Guided Inquiry Learning (POGIL) in Introductory Calculus*

This presentation deals with active learning in a Calculus 1 science CEGEP class using the methodology of Process Oriented Guided Inquiry Learning (POGIL). Working in teams of four, answering questions, filling in tables and completing graphs, students arrive at an understanding of the basic concepts of calculus. This presentation will explain the methodology, provide some observations, report on student evaluations and discuss limits and possibilities.

3.5 Active Learning Community: Building Communities of Practice

PANEL DISCUSSION

Overcoming the Sisyphean Challenge in Pedagogical Change: Active Learning communities moving forward together

This symposium will present a panel of leaders from Montreal's post secondary institutions who have been working toward expanding the use of evidence-based active learning pedagogies. Panel members will describe their local efforts at supporting the principled uptake of new approaches to education as well as how we might adapt a network model to create the synergies across institutions to further the momentum of change. In particular, they will bring this discussion to the SALTISE community so that we all begin to think of how we might work together to overcome the challenges of sustaining the human and physical resources needed to ensure furthering of change instructional practice.

PANEL MEMBERS:

- Jen Mitchell, Pedagogical Counsellor in IT, PDO, Vanier College
- Adam Finkelstein, Educational Developer at Teaching and Learning Services, McGill
- John Bentley, Program Coordinator, Instructional Development, Centre for Teaching and Learning, Concordia
- Anastassis Kozanitis, Conseiller pédagogique, Bureau d'appui pédagogique, Polytechnique Montréal
- Lynda Gelston, Department of History, Economics & Political Science, John Abbott College
- Chris Whittaker, Physics Department, Dawson College
- Éric Francoeur, Service des enseignements généraux, École de technologie supérieure

Panel Discussion Chair: Kathy Morrison (Dawson)

POSTERS & SHOWCASES:

1. Greg De Luca, (Champlain - St. Lambert) - Use of Secondlife as a Tool for Immersion and Learning

   How can a virtual 3D environment leverage immersion, and provide students with an opportunity to gain authentic experience? A Secondlife research/pedagogical tool was developed for the Special Care Counselling program. Students arrive in the 3D space, proceed to the virtual counselling office, and complete course assignments. The goal is to discover whether the online tool has merit for immersion and learning and to create a virtual presence for Champlain Cont. Ed. and an asynchronous practice space for our students.

2. Jennifer Zhao, (McGill) - Promote Reflective Learning with Polling

   This presentation will report on an initiative where Poll Everywhere, an online polling software, was used in research methods workshops for graduate students. Issues of creating poll questions, setting up polls, and presenting poll responses to facilitate meaningful learning experiences will be discussed. Success and lessons learned will be shared.

3. Tim Miller (Dawson) - Integrating Technology in the Active Classroom: Tablet Use in Anatomy

   This presentation will focus on three in-class and out-of- classroom active learning activities implemented in Myology and Ultimate Frisbee courses at Dawson College. The use of tablet devices within the Active Learning Community at Dawson College is quite new, but has proven to supplement activities by providing variety, interactivity, and an increase in organization of the course material.

4. Roxanne Millette, (JAC) - Comparing the Level of Engagement and Effectiveness of Learning Activities Based on Their Design.

   Display of a variety of low tech activities designed in an effort to make learning more accessible and engaging for students. Includes examples of graphic organizers and puzzles to complete. Test your biology knowledge while you play! Student feedback pertaining to the effectiveness of these activities is presented.

5. Rhys Adams (Vanier) & Lawrence R. Chen (McGill) - Getting Students Hooked on Photonics

   We present a collaboration between Vanier College and McGill University. Photonics-themed active learning activities were conducted in the college, and students visited undergraduate teaching and graduate research photonics laboratories at McGill. The visit introduced the students to the breadth of photonics, and highlighted cross-disciplinary approaches to photonics research. Furthermore, funds were set aside to give college students an opportunity to assist the college professor with experiments as part of a paid summer research internship.

6. Tim Klempan (Vanier, Concordia) - Strategies for Success: Impact of Learning Styles and the Study Environment on Outcomes in CÉGEP Biology

   A pilot survey collected data from 29 students at Vanier College over the course of the winter session. Information was collected on learning styles and preferences, study habits, and study environment to examine potential association with grades for the course. Learning style responses were used to construct dimensions of Kolb's learning styles for the participants. The factors measured suggest the importance of learning styles/behaviours and the study environment in the learning process, student engagement, and teaching practices.

7. Michael Dugdale (JAC), Sameer Bhatnagar (Dawson), & Nathaniel Lasry (JAC) - DALITE: Using a CEGEP designed asynchronous PI platform on Open edX

   DALITE, 3-year PAREA supported research initiative, is a web-based tool designed to implement peer instruction asynchronously. DALITE is effective in promoting student conceptual learning and can replace classroom PI, making more time for other active learning activities. The DALITE team is collaborating with edX to make the platform freely available.

SALTISE Mini-Grants

The SALTISE Mini-Grant Initiative provides funding for innovative active learning initiatives. We prioritize projects from groups that work to use and promote active learning. Ideal projects include the development of collaborative activities or technologies that enhance active learning.

The SALTISE Mini-Grant Initiative is dependent on funding received by SALTISE. We publish annually the number of projects to be funded as well as the maximal amount funded per project. This year Mini-grants were funded to a height of $2,000 each. The recipients for 2015 are shown below.

SALTISE Mini-Grant Recipients for 2015:

RECIPIENT (S)	INSTITUTION	TITLE OF PROJECT
Caroline Cormier & Véronique Turcotte	CÉGEP, André-Laurrendeau	Vidéos pour la classe inversée en chimie générale: développement, utilisation et satisfaction des étudiants
Jim Ghoshdastidar, Igor Huskic & Laura Pavelka	McGill University	"Chem Cast" - Rethinking the Supplemental Support Provided by TAs in General Chemistry
Yann Brouillette	Dawson College	Chemical Experiment Videos: Beyond the Lab Coat
Michael Lautman	John Abbott College	Connecting The Dots: Combining Active Learning Methods
Al Hayek	Vanier College	POGIL in Calculus 1: Implementation & Case Study
Sonia Gounar	Collège de Bois de Boulogne	Apprentissage actif basé sur des tutoriels d'exemples réels en robotique
Greg DeLuca	Champlain College	Using virtual 3D environments to leverage immersive learning experiences
Tim Miller	Dawson College	Use of tablets in active learning classrooms
Roxanne Millette & Marie-Claire Rioux	John Abbott College	Use of Dry-erase Boards and Microbial Models for Group Activities
Caroline Viger	John Abbott College	Use of Student Dry-erase Boards in the Physics Classroom

Congratulations to this year's mini-grant holders!

Check the SALTISE website www.saltise.ca this November to find out about the next SALTISE Mini-Grant Initiative. We look forward to receiving your active learning initiative!

THE SALTISE 4TH ANNUAL CONFERENCE COMMITTEE WISHES TO THANK: the Canada-Québec Agreement on Minority-Language Education and Second Language Instruction, is managed by Ministère de l'Enseignement supérieur, de la Recherche et de la Science (MESRS), for the funding of this year's conference.

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Enseignement supérieur, Recherche et Science
Québec

A particular thanks goes to our partner, Vitrine technologie-éducation (VTÉ). VTÉ is a non-profit organization with the mission to guide Quebec post-secondary education institutions in their educational technology choices. VTÉ provides a free online laboratories on emerging technologies and new ways to teach, a catalog of teaching and learning resources as well as software group purchases for cégeps and universities.

Nous adressons un remerciement particulier à notre partenaire, la Vitrine technologie-éducation (VTÉ). La VTÉ a pour mission de guider les choix des établissements d'enseignement supérieur québécois en matière de technologie éducative. La Vitrine technologie-éducation organise des laboratoires en ligne, gratuits, sur des technologies émergentes et de nouvelles façons d'enseigner, un catalogue de ressources d'enseignement et d'apprentissage ainsi que des achats regroupés de logiciels pour les cégeps et les universités.

vté
vitrine
technologie
éducation

Finally, we thank our host, John Abbott College, for their warm welcome and commitment to ensuring the success of the SALTISE conference.

Enfin, nous remercions le Collège John Abbott, l'hôte de cette conférence, pour leur chaleureux accueil et leur engagement à assurer le succès de la conférence de SALTISE.

SALTISE

SALTISE thanks the following for their generous support of this conference

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NOTES

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Profweb supports IT integration in teaching and learning.

Profweb - the Quebec College Crossroad for IT integration: http://www.profweb.qc.ca/en

CCDMD provides digital and online materials for a number of college disciplines and programs.

CCDMD (Centre collégial de dévloppement de matériel didactique) http://www.ccdmd.qc.ca

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http://vteducation.org/en

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http://www.cegepadistance.ca

APOP provides a platform for disseminating pedagogical materials and promotes new information technologies.
http://apop.qc.ca/

Teaching and Learning Services (TLS) promotes and supports the ongoing development and enhancement of teaching and learning at McGill University.
Teaching and Learning Services-McGill:
http://www.mcgill.ca/tls/

Founded in 1988, the Association pour la recherche au collégial's sole mission is to promote college research, which it does by holding information, professional development, and outreach sessions, organizing annual colloquia, awarding prizes, and taking positions on research. http://vega.cvm.qc.ca/arc/

The CDC offers an extensive collection of documents on college-level education and on education in general, produced by professionals in leading facilities and organizations.
http://cdc.qc.ca

The Quebec Association of Physics Teachers is a section of the American Association of Physics teachers (AAPT). Our association regroups over a hundred physics teachers from high schools, CEGEPS and Universities. For more information: http://www.qcapt.ca/