

LTISE

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# About SALTISE

SALTISE - SUPPORTING ACTIVE LEARNING & TECHNOLOGICAL INNOVATION IN STUDIES OF EDUCATION is a professional learning community made up of educators from both English and French institutions within the Greater Montreal area, and beyond. Our community of post-secondary instructors, educational researchers, educational/faculty developers and instructional designers are brought together because of our shared goals of advancing evidence-based pedagogies and educational technologies to promote deeper learning, which in turn closes achievement gaps, supports students' academic success and perseverance through the post-secondary levels.

SALTISE owes its development and expansion to the financial support of the Entente Canada-Québec (ECQ), funded through the Ministre de l'Éducation et de l'Enseignement supérieur. It extends its resource development, knowledge mobilization innovations and community-based efforts to over 1500 educators. Its expanding website (https://www.saltise.ca/) consists of dozens of resources and tools that support the implementation of instructional innovations; as well as aims to provide a venue for our community to make connections and engage in conversations around topics of educational research and practice. The SALTISE annual conference hosts international and national scholars, and provides opportunities for local experts to share best practices in the area of active learning pedagogy and the use of technology. To learn more, go to https://www.saltise.ca/about/about-us/

# À propos de SALTISE

SALTISE SUPPORTING ACTIVE LEARNING 8 TECHNOLOGICAL INNOVATION IN STUDIES OF EDUCATION (SOUTENIR L'APPRENTISSAGE ACTIF ET L'INNOVATION TECHNOPÉDAGOGIQUE PAR LA RECHERCHE EN ÉDUCATION) est une communauté d'apprentissage professionnelle composée d'éducateurs provenant d'établissements d'enseignement supérieurs francophones et anglophones originaires de la grande région de Montréal ainsi que d'autres régions du Québec. Cette communauté d'enseignants, de chercheurs en éducation et de concepteurs de matériel didactique se rassemble autour d'objectifs communs : mettre en œuvre des innovations pédagogiques reconnues et des technologies éducatives afin de promouvoir un apprentissage profond, tout en soutenant la réussite des étudiants et leur motivation durant leurs études post-secondaires.

SALTISE doit sa création et son développement à une subvention d'Entente Canada-Québec, relative à l'enseignement dans la langue de la minorité et à l'enseignement des langues secondes (ECQ), Ministre de l'Éducation et de l'Enseignement supérieur. Par son développement de ressources, ses innovations en matière de partage des connaissances et ses efforts communautaires, SALTISE rejoint plus de 1500 éducateurs. Son site web qui ne cesse de se développer (https://www.saltise. ca/) offre à présent une douzaine de ressources et d'outils pour mettre en œuvre des innovations pédagogiques. Le site héberge la communauté SALTISE lui permettant d'établir des liens, d'échanger des pratiques pédagogiques et de partager des recherches en éducation. Dans le cadre de sa conférence annuelle, SALTISE accueille des chercheurs canadiens et internationaux, offrant ainsi aux spécialistes locaux l'occasion de discuter et d'échanger des pratiques exemplaires en pédagogie active et concernant l'utilisation des technologies éducatives. Pour plus d'information concernant SALTISE, voir le site https://www.saltise.ca/about/about-us/



# SALTISE Conference Committee Comité organisateur de la conférence SALTISE

#### **Conference Co-Chairs / Coordinators**

Suéli Bonafim (SALTISE), Bojana Krsmanovic

#### **Conference Planning Committee**

Bojana Krsmanovic (Concordia), Sueli Bonafim (Concordia), Azra Khan (Dawson), Carol Hawthorne (Concordia), Cory Legassic (Dawson), Dario Guiducci (JAC), Diane Querrien, (Concordia), Elizabeth Charles (Dawson), Éric Francoeur (École De Technologie Supérieure), Eva Bures (Bishop's University), Florence Sedaminou Muratet (Collecto), Hilary Sweatman (McGill), Jennifer Mitchell (Vanier), Joel Wiebe (University of Toronto), Kenneth Ragan (McGill), Lorraine Chiarelli (Concordia), Maria Orjuela-Laverde (McGill), Michael Dugdale (John Abbott), Myriam Dimanche (Dawson), Murray Bronet (John Abbott), Nicolas Parent (McGill), Philippe Caignon (Concordia University), Robert Cassidy (Concordia), Sarah Anthony (McGill), Susan MacNeil (Collecto), Valerie Bourassa (McGill), Victoria Pickering (McGill), and Janaya Gripper (Dawson)

#### Innovator Awards Selection Sub-Committee

Sarah Anthony (Co-Chair, McGill University), Azra Khan (Co-Chair, Dawson College), Murray Bronet (John Abbott College), Carol Hawthorne (Concordia University), and Armin Yazdani (McGill University)

#### Student Awards Selection Sub-Committee

Janaya Gripper (Co-Chair, SALTISE), Chao Zhang (Co-Chair, McGill University)

#### Logistics & IT Sub-Committee

Cory Legassic (Chair, Dawson College), Lorraine Chiarelli (Concordia University), Myriam Dimanche (Dawson), Joel Weibe (University of Toronto), and Florence Sedaminou Muratet (Collecto)

#### Program & Schedule

Michael Dugdale (Co-Chair, John Abbott College), Elizabeth Charles (Co-Chair, Dawson), Ken Ragan (McGill), Chao Zhang



(McGill), and Dario Guiducci (John Abbott College)

#### Volunteer Committee

Jennifer Mitchell (Co-Chair, Vanier College), Cory Legassic (Co-Chair, Dawson College), and Victoria Pickering (McGill University)

#### Reviewers

Ken Ragan (Chair, McGill..), Xinli Wang (University of Manitoba), Chloe Lei (Concordia University), André Villeneuve (Université Laval), Anne Laurie (Concordia University), Patti Kingsmill (Vanier College), Eric Francoeur (École de technologie supérieure), Costanza Piccolo (University of British Columbia), Armin Yazdani (McGill University), Jason Lapointe (John Abbott College), Heather Pearson (McGill College), Silvia d'Apollonia (Dawson College), Tim Miller (Dawson College), Richard Filion (Dawson College), Nathalie Duponsel (Concordia University), Rhys Adams (Vanier College), Lawrence Chen (McGill University), Veronique Brule (McGill University), Jean-François Brière (Dawson College), Oulin Yu (McGill University), Elena Boldyreva (University of Toronto), Kristal Turner (University of Calgary), Ed Hudson (John Abbott College), Alan de Aguiar Lopes (Concordia University), Catherine Clement (Concordia University), Eva Mary Bures (Bishop's University), Berenger Benteux (Université de Sherbrooke), Edward Awad (Vanier College), Elizabeth Charles (Dawson College), Chao Zhang (McGill University), and Michael Dugdale (John Abbott College)

#### Technical and Logistics Support

Graphic Design (Program & Posters): Isabelle Kalekas

Web Support: Philippe Haché (Grenadine), Henry Balen (Grenadine), Jordyn Hartzell (Grenadine), Jean-Francois Martin (Concordia)

Translation: Éric Francoeur (École De Technologie Supérieure), Florence Sedaminou Muratet (Collecto), Dan Petrescu (McGill)

Event Planner: Dominique Bourcier (Concordia Hospitality), Marie-France Watson (Concordia Hospitality)



# 2021 Welcome from SALTISE

ON BEHALF OF THE CONFERENCE COMMITTEE AND THE SALTISE EXECUTIVE, we welcome you to the 10th Annual SALTISE Conference! We are delighted that we once again are able to come together to share, celebrate, and reconnect, albeit in an online format because of the continuing pandemic. Living in a Covid-19 world has brought to light many social inequities and pressures that have lived in the shadows but haunt our lives and those of our students —systemic racism, domestic violence, mental health, to name a few. It has put a strain on the educational system and revealed the fissure of socio-economic disparities, which have always existed. Now, with the ubiquitous use of technology recording every aspect of our lives, bringing us into homes, yet keeping us apart, and showing us the different realities, these challenges are presenting themselves in new ways.

As the Executive, we have strived to create inclusive environments, through all our activities; and, ensure diversity and equity in our choices of staff and the individuals we sponsor, including presenters and key speakers. Nonetheless, we acknowledge that we can always do better and need to be even more intentional and action-oriented about addressing under-representation and plurality in all aspects of our work. As a Community, while the efforts of SALTISE are small by comparison and cannot address social inequities, we recognize the necessity to play a role in bringing attention to the need for even a wider diversity in the field of educational research and innovation, and the impact of these on who might benefit – i.e., the diverse populations of students who may be under-represented in some disciplines and fields.

This year we have witnessed a growing sense of reflectiveness and desire for change among our community members. We have seen important strides towards designing more accessible learning as some have taken up the affordances of communication technologies for leveling opportunities. Equally impressive, the forced mass movement to online instruction has raised consciousness and questions about some of the things we have taken for granted previously. For instance, how effective are our instructional and assessment practices? Who is not represented, when we turn on our cameras? How might we identify ourselves in pronouns and avatars? Does the age-old paradigm that our role as teachers is to transfer information still apply in this online world? What do my assessments really assess if my students can copy-paste the answers so readily? These, and a host of other questions, demonstrate that 2021 is not just about the pivot of the pandemic, but it is about taking steps forward by reflecting on what we have learned about ourselves in the past year.

In this 10th anniversary of the SALTISE Conference, we are proud that the theme reflects our purpose — Moving Forward Together: Opportunities and Challenges for Pedagogical Innovation. We have assembled a schedule of exciting talks

and presentations that reflect our mission and values. We hope these sessions will provide answers, solutions, and open new lines of communication. We draw attention to our keynote Scott Freeman whose work focuses on the impact of active learning on improving success for underrepresented minorities. In addition, we hope that our interactive formats will make the three days memorable, positively, as we leverage new ways of engaging with each other online and taking time to reflect on this topic of social awareness. including equity, diversity and inclusion (EDI) as we network in the Gather Town environment.





In this 10th anniversary Conference Program, we reflect on the past and take the time to honour our founder and those who were with

us in the early years 2011-2014. We also proud to announce the recipients of this year's SALTISE Innovation awards, including the new category of Educational Designers. We hope you will take a look at this publication and enjoy the photos from our archive.

In closing, SALTISE reaffirms its gratitude to those who have been on the frontline throughout the year-long battle with the Covid-19 virus: the healthcare and essential services workers, who risk their lives to help preserve ours. And, those educators at all levels (elementary, secondary, and post-secondary) who have been teaching both in-person and online classes. In many ways, you have been the unsung heroes of the pandemic because you have risen to all the challenges and changes thrown at you. We are truly privileged to call you our colleagues.

We are indebted to our SALTISE team: the 2020-21 SALTISE Fellows, the 2021 Conference Committee, the SALTISE representatives from the Anglophone Colleges, the Comité d'Orientation, and, last but by no means least, our Office staff including the many the graduate students who have been our research assistants and our colleagues, including the our SALTISE Executive Committee, who have been the friends we can always count on. These individuals have logged countless Zoom hours this year to ensure that we keep moving forward and achieving our goals. THANK YOU ALL!!!

Best wishes to you all and stay safe,

Liz Charles & Nathaniel Lasry, (SALTISE co-Directors)



### Un mot de bienvenue de SALTISE

AU NOM DU COMITÉ D'ORGANISATION ET DU COMITÉ DE DIRECTION DE SALTISE, nous vous souhaitons la bienvenue à ce 10e colloque annuel. Nous sommes ravis de pouvoir de nouveau nous réunir pour partager, célébrer et retisser des liens. Le tout bien entendu en ligne, pandémie oblige. La crise de la COVID-19 a révélé de nombreuses inégalités et pressions sociales, souvent cachées, qui hantent la vie de nos étudiants racisme systémique, violence domestique, pour n'en citer que quelques-unes. Il a également mis à rude épreuve le système éducatif et révélé la fissure des disparités socio-économiques qui ont toujours existé, mais qui, auparavant, auraient pu passer inaperçues. Aujourd'hui, avec l'utilisation omniprésente de la technologie dans l'apprentissage scolaire, ces défis se présentent sous des formes différentes.

Bien que nous n'ayons pas affronté les inégalités sociales, nous avons, à bien des égards, senti un besoin croissant de réflexion. Ce faisant, nous pensons que notre communauté a survécu et qu'elle prospère. Des progrès remarquables ont été accomplis, car nous avons dû faire face à ces nouvelles réalités en exploitant les possibilités offertes par les technologies de la communication pour l'enseignement et pour la promotion des méthodes d'apprentissage. Le passage massif et forcé à l'enseignement en ligne a suscité une prise de conscience et une remise en question de nombreuses hypothèses que nous considérions comme pourtant bien établies. Quelle est l'efficacité de nos pratiques d'enseignement et d'évaluation? Nombreux sont ceux d'entre nous qui ont commencé à s'interroger sur nos méthodes d'enseignement et sur le paradigme séculaire selon lequel notre rôle consiste à transmettre des informations. D'autres ont commencé à s'interroger sur nos façons d'évaluer. Nous avons entendu des collègues, certains pour la première fois, demander : «Comment puis-je savoir si mes étudiants apprennent?»; «Comment puis-je m'assurer que mes évaluations favoriseront l'apprentissage chez mes élèves?». Ces questions sont importantes et ont été stimulées et nourries par le passage forcé à l'enseignement en ligne.

SALTISE continue aussi à susciter d'autres questionnements et soutenir le déploiement de pratiques dont l'efficacité est démontrée empiriquement. Plus précisément, les collègues continuent à demander : «Comment puis-je faire pour susciter une plus grande participation de mes étudiants?»; «Quels moyens puis-je prendre pour faciliter la collaboration et multiplier les occasions d'échanges entre les étudiants?»; «Comment puis-je concevoir des évaluations valides et rigoureuses de l'apprentissage sans dépendre d'un équipement de surveillance?». Nous pensons que cette année de pandémie a donné naissance à une nouvelle appréciation de la réflexion et de l'apprentissage à partir des succès et des échecs de chacun.

À SALTISE, nous sommes convaincus dela pertinence de ce 10e colloque, dont le thème est Avancer ensemble : Opportunités et défis pour l'innovation pédagogique. Nous avons établi un programme de conférences et de présentations passionnantes qui reflètent les valeurs de SALTISE — la promotion de connaissances pédagogiques fondées sur des preuves et affinées par la pratique et les outils issus de la mise en œuvre. Nous espérons que ces séances et ateliers apporteront des réponses, des solutions et ouvriront de nouvelles voies de communication. En outre, nous utiliserons de nouvelles façons d'échanger les uns avec les autres en ligne. Nous espérons que ces formats interactifs rendront ces trois jours mémorables.

Nous rendons également hommage à ceux qui ont été nominés par leurs pairs et sélectionnés pour recevoir les prix SALTISE Innovation. Nous espérons que cette publication vous sustentera au cours de l'année prochaine, jusqu'à ce que nous nous rencontrions à nouveau.

SALTISE réaffirme sa gratitude envers ceux qui ont été en première ligne tout au long de l'année de lutte contre la COVID-19 : les travailleurs de la santé et des services essentiels, qui risquent leur vie pour aider à préserver la nôtre. Et les éducateurs de tous les niveaux (primaire, secondaire et postsecondaire) qui ont donné des cours en personne et en ligne. À bien des égards, vous avez été les héros méconnus de la pandémie, car vous avez relevé tous les défis et les changements qui se sont présentés à vous. Nous sommes vraiment privilégiés de vous compter parmi nos collègues.

Enfin, nous sommes redevables à notre équipe SALTISE : le personnel du bureau, y compris les étudiants diplômés, nos collègues, les boursiers SALTISE, le comité du colloque, les représentants des collèges anglophones SALTISE, les équipes de recherche et de développement technologique et, enfin et surtout, à notre comité exécutif. Ces personnes ont consacré d'innombrables heures de travail cette année pour s'assurer que nous continuions à avancer et à atteindre nos objectifs.

Meilleurs vœux à tous et soyez prudents,

Liz Charles & Nathaniel Lasry, (co-directeurs de SALTISE)





# Lifetime Achievement Award Reconnaissance pour l'ensemble de la carrière

TRADITIONALLY, WE HAVE RESERVED THIS HONOUR FOR AN INDIVIDUAL, OR INDIVIDUALS, who have played a significant role in supporting the growth and well-being of our SALTISE community. Some of these individuals have been there from the very creation and naming of SALITSE - Silvia d'Apollonia (awardee 2014), Ken Ragan (awardee 2016) and whom we consider founders. Others have played critical roles as early supporters, having recognized our potential even before we knew — Jim Slotta (awardee 2015), Maria Orjuela-Laverde (awardee 2019). While others have lent strategic support doing so quietly and behind the scenes - Thérèse Laferrière (awardee 2018), Laura Winer (2020). And, then there were those who took bold steps to secure resources and position us so that we could grow - Richard Filion & Erich Schmedt (awardees 2017), Rob Cassidy (awardee 2019). To all these individuals who have helped us grow into a strong and vibrant community, we say "Thank You" once again.

This year, as we celebrate a milestone with our 10th Annual Conference, we wish to honour the individuals without whom SALTISE would not have gotten off the ground in the first place. While we have lost direct contact with several of these individuals, we owe them an immense debt of gratitude and wish to express our sincere appreciation and thanks. Like a true community, we held our meetings around tables in formal and informal settings. Often, these events involved sharing not only our visions of the future but also sharing personal stories around tables of good food—in most cases, we remembered to capture these occasions in the photos we share with you (see on page 10-11).

### Past recipients of the SALTISE Lifetime Achievement Award

#### 2020

• Laura Winer (McGill University)

#### 2019

- Maria Orjuela-Laverde (McGill University)
- Rob Cassidy (Concordia University)

#### 2018

• Thérèse Laferrière (Université Laval)

#### 2017

- Erich Schmedt (John Abbott College)
- Richard Filion (Dawson College)

#### 2016

• Kenneth Ragan (McGill University)

#### 2015

• James Slotta (University of Toronto OISE)

#### 2014

• Silvia d'Apollonia (Dawson College)



# SALTISE Honours these individuals for 2021!

Listed in reverse alphabetical order, our founders, and our earliest supporters, whose careers, and lives, have taken them to new locals but who are always close to our hearts.

# **Founders** (members of the Chantier 3 grant that created SALTISE - involved between 2010–2014)

- Gale Seiler (McGill, 2010-2014)
- Ken Ragan (McGill, 2011-present)
- Nathaniel Lasry (John Abbott, 2010-present)
- Elizabeth (Liz) Charles (Dawson, 2010-present)
- Robert (Bob) Bracewell (2010-2014)
- Roger Azevedo (2010-2014)
- Silvia d'Apollonia (2010 present)

# **Project assistants** (supporting the work of the grant and committees between 2010-14)

- Manisha Phadnis (McGill, MA, Faculty of Education)
- Jonghwi Park (McGill, PhD, Faculty of Education)
- Maria Orjuela-Laverde (McGill, PhD candidate)
- Nicole Mardis (McGill, PhD candidate)
- Joy Morgan (McGill, MA, Faculty of Education)

#### Dawson Administrators & Professionals

(supported our early efforts at Dawson -involved between 2011-2014)

- Donald Walker
- Alain Stewart
- Maeve Muldowney
- Julie Mooney
- Brenda Lee
- Bob Kavanagh
- Barbara Freedman
- Ray Bourgeois

#### Friends of SALTISE

(early supporters - involved between 2010-2014)

- Cynthia Weston (McGill, TLS)
- Francesca Theriault (Dawson)
- Jim Sparks (Champlain College, SALTISE Executive 2012–2014)
- Brian Seivewright (Dawson)
- Greg Mulcair (John Abbott)

- Suzanne Kunicki (Dawson, SALTISE Executive 2012–2014)
- Marcia Knutt (McGill)
- Andrew Katz (Dawson)
- Calving Kalman (Concordia)
- Karim Jaffer (John Abbott)
- Jailson De Lima (Vanier, SALTISE Executive 2012–2014)
- James Coulton (McGill)
- Patricia Castillo (Champlain College)
- Robert Cantin (VTE)
- Gary Boyd (Concordia, deceeded 2011)
- Torsten Bernhardt (McGill, T-PULSE)

#### Friends of SALTISE long-standing

(these individuals have been there from the start and continue to play significant roles - involved since 2011 to present)

- Chris Whittaker (Dawson, SALTISE Executive 2013-2017)
- Jonathan Sumner (Dawson)
- Chris Roderick (Dawson)
- Kevin Lenton (Vanier, SALTISE Executive 2012-present)
- Nathaniel Lasry (John Abbott, SALTISE Executive 2012-present)
- Karl Laroche (Vanier)
- Azra Khan (Dawson)
- Phoebe Jackson (John Abbott)
- David Harpp (McGill, T-PULSE)
- Chris Greg (Vanier)
- Adam Finklestein (McGill, TLS)
- Michael Dugdale (John Abbott, SALTISE Executive, 2017-present)
- Alice Cherestes (McGill)
- Murray Bronet (John Abbott, SALTISE Executive 2012-present)
- Jean-François Brière (Dawson)
- Sameer Bhatnagar (Dawson)
- Marielle Beauchemin (Vanier, SALTISE Executive 2012–2017)
- Edward Awad (Vanier)

# Images are from 2011-2014





















# 2021 SALTISE Best Practices & Pedagogical Innovators Award Prix d'excellence et d'innovation pédagogique

The SALTISE "Best Practices & Pedagogical Innovators Award" recognizes educators (instructors and educational designers) who stand out as leaders in the promotion of academic excellence, use of innovative pedagogies, and support of their academic communities.

We are happy and proud to present these three recipients who truly represent the best among us!

### Congratulations to our 2021 winners

#### **Carmen Leung**

DAWSON COLLEGE

Carmen Leung is an instructor of Chemistry at Dawson College. For over four years, she has been involved in the work of community-building as part of the Dawson Active Learning Community (DALC) and the SALTISE community of practice; and she has served as a SALTISE Fellow, providing



mentorship to peers. She has been a champion of innovative tools such as myDALITE and CourseFlow, co-authoring over 600 questions for the online peer-instruction platform myDALITE and including them in her course curriculum and homework. At the same time, she ensures that these new tools are meaningful to her students' learning by assessing their use.

She dedicates herself to teaching in ways that keep her students engaged and she contributes to all aspects of College life. She significantly improved labs by using techniques such as 2-stage exams, which is proving to reduce students' stress and improve mental health. Her initiative and sense of community led her to co-create three series of pre-lab experimental videos that have helped Pre-university Chemistry students better prepare for their laboratory periods and increase awareness of potential chemical hazards. These videos have reached beyond the walls of Dawson College and accumulated over 100,000 views, to date.

During the COVID-19 pandemic, Carmen Leung invested significant time and effort to design new ways to support and accommodate the new demands of online instruction for both students and colleagues. She co-created the Student Evaluation Survey, using myDALITE, to assess the needs of high school science students entering college and provide them with valuable resources to solidify their prerequisites. She also co-created eight chemistry at-home experiments (CLAW) to provide hands-on experience to students while access to the laboratories was limited; these can be found on the SALTISE website. Carmen is a true faculty innovator!

#### Saul Carliner CONCORDIA UNIVERSITY

Saul Carliner currently serves as Graduate Program Director of the Educational Technology program in the Department of Education and the Graduate Certificate in University Teaching and Continuina Education, through the School of Graduate Studies Concordia at University.



He teaches central courses for the Graduate Diploma in Instructional Technology and MA in Educational Technology at the Department of Education and is a recipient of the Jay Gould Award for Excellence in Teaching and the Concordia University Alumni Teaching Award.

Saul Carliner continually innovates and takes advantage of the latest technologies and pedagogies such as workshopping and flipped classroom, to name a few. Having served as Director of Concordia's Department of Education doctoral program for five years, he developed and documented the procedures in the program and facilitated inclusive curriculum revision processes including major restructurings of the comprehensive exam and the overall curriculum. Enrolment in the program grew while he was director. During the COVID-19 pandemic, he has organized and co-organized a number of studentcentered activities, including Grab Bag networking night and EdTech Heroes.



#### The Dawson Faculty HUB DAWSON COLLEGE



The collaborative and innovative pedagogical counsellors from Dawson's Faculty Hub, Madeleine Bazerghi, Ildikó Glaser-Hille, Einat Idan, Karina Leonard, Julia Lijerón, Monica Lopez, Azra Khan and Rafael Scapin have been instrumental in providing inter-service support to faculty on course design, student engagement, assessment, technology, one-on-one consultations and more.

Launched in January 2020 the Faculty Hub quickly pivoted its focus two months later to developing solutions to support teachers as they shifted to online instruction. By pooling their pedagogical knowledge and their experience as teachers, they were able to anticipate faculty needs and provide essential support. Among their many achievements, they developed a Moodle course to help teachers teach with Moodle, organized and/or delivered over 70 webinars that modelled strategies for online teaching, prepared guides for using Zoom video conferencing software, and for shifting teaching materials online. By fall 2020 their focus has been on curation and development of webinars and resources related to student engagement and assessment. These webinars and resources have been made available and accessible to the College Network. Their collaborative working spirit and innovation has been a shining example throughout this past year!

#### Andrea Cooperberg JOHN ABBOTT COLLEGE

Andrea Cooperberg is a pedagogical support and innovation specialist at John Abbott College. In this role she has been instrumental in guiding instructors and helping them navigate the online educational environment. Andrea has been a constant and reassuring presence throughout



the trials, tribulations, fears, and frustrations brought about by the pandemic and pivot to online teaching. Her steading influence has helped faculty achieve successes despite the challenging times. Throughout her career, Andrea has demonstrated inspirational and innovative pedagogical practices, dedication, and resilience. At the same time, her pedagogic, academic, curricular, and institutional experience have been invaluable as she supports those who require her assistance. Her patience, confidence, and ever present commitment has kept instructors reassured and steadfast throughout the uncertainty. Andrea has become the lead in John Abbott's COVID-19 task force for the Faculty Online Support Team (FOST). Throughout the last year she has conducted online workshops and drop-ins sessions to train faculty on new and ever changing digital platforms and systems, while supporting the use of alternative assessment strategies, and the adapting of pedagogical practice. Andrea's workshops were welcoming, supportive, and interactive - a place where instructors were exposed to authentic examples of pedagogical solutions that help to promote student engagement, participation, and learning. Her efforts and mentoring have promoted a sense of well-being among John Abbott's faculty and given them the confidence to transform their teaching.





# Past recipients of the SALTISE Best Practices & Pedagogical Innovators Award

#### 2020

- Alice Cherestes (McGill University)
- Laura Pavelka (McGill University)
- Phoebe Jackson (John Abbott College)
- Ian MacKenzie (Dawson College)

#### 2019

- Yann Brouillette (Dawson College)
- Nadia Naffi (Université Laval)
- Dominique Piotte (Ecole de Technologie Superieure (ÉTS)
- Roberta Silerova (John Abbott College)

#### 2018

- Louis Normand (Collège de Rosemont)
- Claire Trottier (McGill University)

#### 2017

- Ann-Louise Davidson (Concordia University)
- Michael Dugdale (John Abbott College)
- Karl Laroche (Vanier College)

#### 2016

- Marielle Beauchemin (Vanier College)
- Jean-François Brière (Dawson College)
- Lynda Gelston (John Abbott College)
- Rosemary Reily (Concordia University)

#### 2015

- Rhys Adams (Vanier College)
- Samantha Gruenheid (McGill University)
- Lawrence R. Chen (McGill University)

#### 2014

- Kevin Lenton (Vanier College)
- Sean Hughes (John Abbott College)

#### 2013

- Edward Awad (Vanier College)
- Murray Bronet (John Abbott College)
- Chris Buddle (McGill University)





## 2021 SALTISE Students as Educational Innovators Award Prix Saltise pour les etudiants comme innovateurs en éducation

The SALTISE "Student as Educational Innovators Award" recognizes students (undergrad and graduate) who stand as contributors to the SALTISE community through their actions in achieving academic excellence, promoting innovative pedagogies, as Teaching Assistants (TA), Research Assistants (RA), Course Lecturers, and in other tasks that support and/or are consistent with the goals of the SALTISE community.

### Congratulations to our two Awardees

#### Rebecca Brosseau

MCGILL UNIVERSITY

Rebecca Brosseau has begun a MA degree in the Faculty of Education at McGill. Over the last three years, as an undergrad, she has contributed significantly to supporting the implementation of studentcentered pedagogies including assessing their effectiveness and positive impact on student



learning. She began this journey as a member of the organizing committee for McGill's Physics Hackathon, an annual event of the Physics Department Outreach Committee. Her passion for helping students drew her to becoming a TEAM mentor where she worked with Professor Nik Provatas on his implementation of a Flipped Classroom approach. Her contribution in the Introductory Electromagnetism physics course, which has ~600 students, helped to make this implementation a success. At the same time Rebecca worked at Building 21 (B21), a studentdriven think-tank at McGill, and supported the Blue Fellows throughout their fellowships. Rebecca has also made contributions to teaching at the faculty level and the broader academic community, including presenting at the SALTISE conference. She is an active member of the SALTISE graduate student interest group (SIG) and has contributed actively to group readings/ studies and discussions.

#### Past recipients of the SALTISE Student as Educational Innovator Award

2020

#### 2019

- Jasmine Chahal, PhD in Microbiology and Immunology, McGill University
- Armin Yazdani, PhD in Neuroscience, McGill University
- Franco La Braca, MSc in Physics Education, Concordia University

Cynthia Feng MCGILL UNIVERSITY

Cynthia Feng has recently completed her MSc in the Faculty of Science (Biochemistry). She began her journey as a TEAM peer mentor for the freshman physics course, working for Professor Ken Ragan. Her involvement in student-centered pedagogies deepened when she was



selected for the Students as Partners (SaP) in Higher Education Change Institute at McMaster University, part of the OSE project under the guidance of Professor Tamara Western and Director Marcy Slapcoff. Based on this experience, and still an undergraduate, Cynthia continued as a volunteer member of the Working Group on Students and Staff as Partners, the report presented at the SALTISE 2019 conference. She is a founding member of the SciComm Collective, growing out of the Microbiology undergraduate student society.

Cynthia has been involved with the FRezCa (Freshman Residence Cafeteria) initiative almost since its inception: first as a participating student learner, then as an undergraduate mentor, and upon graduation as a member of the administration team. Cynthia has been a key contributor to the creation of a Virtual FRezCa platform. She created a sense of community in an online environment by leading engagement and learning activities in a Virtual Café. As a graduate student, Cynthia became one of the central organizers of the entire FRezCa (Freshman Residence Cafeteria) program and expanded her efforts to support faculty in promoting learner-centered strategies and evidence-based pedagogical practice, on top of conducting her own MSc. research project in Biochemistry. She has been a student fellow at the Office of Science Education since 2019, and most recently involved in the design and implementation of the Virtual FRezCa TA and peer mentoring space. She has been a co-facilitator to SciLearn, McGill's first Undergraduate Poster Showcase and involved with the BUGS (Biochemistry Undergraduate Society).

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# Schedule at a Glance - Day 1 - June 2

9:00							
9:30							
9:45	-						
10:00	-						
10:15	-						
10:30	-		PRE-CC	<b>NFERENCE WORI</b>	KSHOPS		
10:45	-						
11:00	-						
11:15							
11:30	-						
12:00							
12:15				Lunch Durach			
12:30				Lunch break			
12:45							
13:00	-			Welcome & Keynote			
13:15	-		Nadia	Bhuiyan (Concordia Univ	versity)		
13:45			Openi	ng Remarks: SALTISE Exe	ecutive		
14:00			openi	Break			
14:15	S01	S02	R01	R02	R03	P01	N01
	Invited Symposium International Panel	Café Style Symposium	New assessment strategies	Lessons for online instruction: pivoting from COVID	Novel tecchnologies for learning	Designing for online teaching and learning:	Meeting on EDI concerns (Part 1) (in Gather Town)
14:30	invited Symposium: Peer Assessement: Taking this approach to the next level	Café style symposium: How to Accompany Change Resistance to Innovation	Supporting students' self- regulated learning in an introductory physics course Georg Rieger UBC	Comodal/Hyflex Teaching and Learning at John Abbott College Andrea Cooperberg, Teresa Berghello & Wilma Brown JAC	Worldchat.live Education: let your students do the talking! Anne-Marie Lafortune Cegep de la Gaspesie et des iles	1. Transitioning to Emergency Online Teaching: The Experience of Spanish Language Learners' and Teachers' in a US University 2. Scaling the Investigative Science Learning Environment (ISLE) Online	Facilitated Discussion on the question: How to move forward and take ownership of ED!? (in Gather Town)
14:45	Jackie Stewart, Anka Lekhi, UBC, Chris Schunn, UPittsburgh, Phoebe Jackson, Michael Dugdale, JAC	Joan Butterworth & Marie- Pierre Clavette, McGill	How I taught rationale- writing and learned to grade myDalite questions Jason Lapointe JAC	Teaching and Learning Online in Higher Education during the COVID Pandemic: Who did We Leave out and Can We Do Better? Eva Mary Bures Bishops	Corriger avec un cellulaire pour orienter la réussite étudiante. FRENCH Stephanie Granger Cégep Saint-Jean-sur- Richelieu	<ol> <li>Using Desmos to monitor students group work in synchronous online teaching 4. Quality Framework for the Design of Online Courses (QF-DOC)</li> <li>Design pédagogique d'un dispositif de ludicisation à l'aide de SAM2 : le cas d'un projet de formation à distance dectinée à dec</li> </ol>	
15:00			An experience with allowing group work in assessments in the remote teaching and learning context Lawrence Chen McGill	A Reflective Exploration of our COVID PANDEMIC Teaching Experiences Rita Yu & Jane LeBrun Champlain Regional College	Applications of Emerging Wearable Technologies: From K-12 to Higher Education Antonia Macris Concordia	étudiants de 1er et 2e cycles universitaires 6. E-learning design for higher skill acquisition in the undergraduate biomedical sciences	
15:15	Chair:	Chair:	Chair:	Chair:	Chair:	Chair:	Chair:
15:30				Break			
15:45	S03 Symposium	S04 Symposium	S05 Early Career Teachers Symposium	R04 Teachers as learners	R05 Enhancing collaboration in design spaces	PO2 Teaching, learning & assessment:	N02 <b>Meet &amp; Greet</b> (in Gather Town)
16:00	Reflections on two new and innovative courses where everybody teaches and learns	Cross-cutting Perspectives on Active Learning among Researchers and Practitioners	Special Discussion Session for Early Career Teachers	Bridging the Practice to Research Gap for In-Service Teachers Heather McPherson McGill	Teaching the social considerations of materials engineering through podcasts Natasha Jacobson & Mark Driscoll McGill	1. The Future of (Art) Education: Including Activities Towards Well- Being 2. Improving Student Perception of Active Learning through Changes to the Delivery of Instruction 3. Susteine Status	Join us for a Meet and Greet networking event that introduces you to new people. Explore the Gather Town space, including the games room and the beach. In Gather Town
16:15	Hélène Nadeau & Sylvia Cox Dawson	Chao Zhang, Bojana Krsmanovic, Preeti Raman, Michael Dugdale, Joel Wiebe, Rubaina Khan, Garrick Burron, Elizabeth Charles and James D. Slotta Dawson, UofT (OISE)	Phoebe Jackson & Dario Guiducci JAC	Teachers' Noticing of Eliciting and Responding Practices: A Comparison across Mathematics and Science Vandana Chandrasekhar McGill	Pushing the boundaries of maker fundamentals to unleash innovation in higher education Ann-Louise Davidson, Nadia Naffi, Nathalie Duponsel Concordia	virtually supported inter- disciplinary, multi-college collaboration towards campus green-space expansion. 4. Observing innovative learning assessment practices 5. Improved access to	
16:30				New literacies, social practices and active learning in e-discussions Elementary Novice Lesley Wilton UofT	Acknowledging the problem of the problem statement: A new assignment in an undergraduate engineering capstone course Michael Wood, Anne Kietzig, Maria Orjuela-Laverde McGill	education through Open Educational Resources 6. Exploring the Role of Post- Secondary Instructors in Promoting Student Mental Health 7. A three-step approach to pre-class reading and writing	
16:45	Chair:	Chair:	Chair	Chair:	Chair:	Chair:	Chair:



#### 9:00 R06 R07 9:30 S07 S08 P03 N03 Designing for Coffee & Networking **Facillitating discourse** Enhancing in new learning spaces Inclusivity: (in Gather Town)" engagement Supporting Student Learning Beyond Discomfort: Building AI at Dawson College oin us for morne coffee and 9:45 The Allegorical Build: RezCa: Adapting 1. ADHD Challenges: Get by chat at the Coffee Bar in line and Hybrid cours ection and Agency in Ainecraft as the Collaborative Learning vith a Little Help from Your isited he Classroom Undergraduate Classroom Communities for the Virtual Apps Gather Town 2. Are Al-Based Virtual Norld Assistants Such as Siri, Darren Wershler and Bart Cynthia Feng, Whittley Alexa, and Google Assistant Ready for College? 3. What is it really like to be imon (Concordia University Deleveaux, Iris Guo, Oulin Yu, Tamara Western and ennifer Mitchell, Andrea Pukteris (Vanier College) Anita Parmar a Student during the COVID-Pat Romano and Kim Simaro oel Trudeau, Samee McGill 19 pandemic? Bhatnagar, Myriam and Henry Tsang (Athaba Dawson College) 4. From "Click and Read" to Dimanche, Java Nilakantar "Play and Practice" - Using Jniversity) aurent Ruhlmann, Carl Saucier-Bouffard, Robert Let's keep the conversation Authoring Tools to Create 10:00 going: Engaging instructors Unique E-Learning Stephens, Jonathon Sum n pedagogical discussion Experiences Dawson College) during and beyond remote 5. A Picture Can Be Worth A Thousand Words. Except earning When It is A PDF! An Analysis of Purposes and /eronique Brule and Rhond Interactions in Small Group Amsel Configurations around a McGill Large Results of an action-research 10:15 with flipped classrooms in 6 nstitutions; lessons learned Chen Yaari and Yotam Hod and implications for practice (University of Haifa) Bruno Poellhuber, Normand and Vincent (UdeM) Chair: 10:30 Chair: Chair: Chair: Chair: Chair: Chair 10:45 Break Keynote: 11:00 Breakdowns and Breakthroughs of Transactive Knowledge Co-Construction 11:15 11:30 Armin Weinberger (Saarland University) 11:45 11:00 - 12:00pm (11h-12h) 12:00 12:15 Lunch Break 12:30 12:45 13:00 Keynote: The evidence-basis for inclusive teaching in undergraduate STEM majors 13:15 Scott Freeman (University of Washington) 13:30 1:00 - 2:00pm (13h-14h) 13:45 14:00 Break 14:15 R08 R09 N04 P04 Meeting on EDI Symposium Enhancing feedback Discussing roles of Machine learning & Al Symposium Symposium technoology in concerns Part 2 in education: learrning (in Gather Town) Developing 21st Century A repeated evaluation Stop Scrolling and Start acilitated Discussion on the 14:30 ciLearn, learning how to Reflections from Dawson's 1. Artificial Intelligence in earn in STEM using skills with Online Curatio earning Through Social Education: The fine line uestion: How to move vs: CoP-er's journey esting format encourages euroscience and a citizen cience framework nd Social Annotation mastery based on feedback Networks between a system's and a orward and take ownershi earner's performance f EDI? Sofia Skromne Carrasco & vry Zagury-Orly, Fontaine, 2. Small Data: A humble Maheu-Cadotte, Lapierre, et nquiry into online learning Joseph Dent McGill al. behaviour of students Université de Montréal through LMS logs 3. Artificial Intelligence Stop Scrolling and Start 14:45 Active Rubrics Chris Whittaker and Selma Armin Yazdani, Christina Patti Kingsmill, Judy Competency Frameworks: A Ingerman, Heather Roffey, Toby Moneit, Lissiene Neiva and Nick Park earning Through Social opescu, Kira Smith, Cynthia success pipeline from college lamda Tim Campbell Networks eng and Janette Barringtor Dawson College to university & beyond Gill University Vanier 4. PolyTeam : Quand Antonia Macris /anier College l'intelligence artificielle Concordia s'invite dans le processus formation d'équipes Orchestrating Feedback Making online course 15:00 5. Earlier detection of at-ris naterials accessible: students through artificial mpactful guidelines Dugdale, Lenton, Adams, neural networks Brouillette, et al. Jennie Ferris, Maggie Vanier, John Abbott, McGill Lattuca, Claire Walke McGill 15:15 Chair: Chair: Chair: Chair: Chair: Chair: Chair: 15:30 Break S12 S13 S14 R11 P05 NO5 15:45 R10 Symposium Symposium Changing Teacher Giving students active **Emerging Issues in** Afternoon Tea & Practices STEM teaching Networking Symposium roles in learning (in Gather Town) 16:00 eveloping Foundational What is Learning Experience Design Engage and Assess ir Supporting faculty mproving students 1. Advancing Creativity in oin us for tea and games o Programming and Maker Skills to Foster Creative Design (and Does It Render Instructional Design our Discipline supervisors to foster the understanding of the Nature Postsecondary STEM ome relax on the beach in eflective practice of studer Contexts: Students' of Science and supporting ather Town Obsolete?) teachers STEM identity development Understandings and in a Grade 11 Biology class: Experiences of Creativity Eva Mary Bures A learning community ind Risk in Science Learning 2. "Moving Analytical Bishops approach Chemistry courses to an Elena Boldyreva, Jim Slotta online format and lessons UofT learned for in-person Saul Carliner, Leelan Farhan teaching FSCI 396 brings 16:15 nn-Louise Davidsor and Giuliana Cucinelli Azra Khan (Dawson College) 3. Engaging students in pee (Concordia University) and Tannia Ditchburn undergraduate students into collaboration. Use of Visual Concordia University) el Trudeau (Dawsoi lassrooms learning platform for providing quality peer feedback. Collaborative Team Learning design process College) as a PD to Manage Challenges in an Inquiry-Tamara Western 4. Six principles for Based ESD classroom McGill embracing gender and sexual diversity in biology Using Collaboration 16:30 Shanmugavalli Narayanan classrooms Technology to Transform 5. Discipline-based educatio Anila Asghar Anatomy Education for McGill specialists: big impact, one Health Professionals course at a time Krista S. Johansen, Leslie Schneider Iohn Hopkins/ Tuffts

16:45

Chair

Chair:

# Schedule at a Glance - Day 2 - June 3

Chair:

Chair:

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# Schedule at a Glance - Day 3 - June 4

9:00								
9:30	S15	S16	S17	R12	R13	P06	N06	
	Symposium	Symposium	Symposium	Importance of	Online and blended	Emerging Issues in	Coffee & Networking	
				communication in	strategies	STEM teaching II:	(in Gather Town)"	
				STEM				
9:45	CoPs everywhere: Changing	The future of STEM	Communicating Instructional	OCLaRE A platform for	Learning Strategies to Keep:	1. A Global Virtual Teams	Join us for morne coffee and	
	Professional Development	education	Content: A Workshop in	scaffolding student lab	Lessons from a year of	Approach to Inclusive	chat at the Coffee Bar in	
	Practice		Opening and Closing Lessons	development	Online Lectures	2. Fostering self-regulated	Gather Town	
					Pallavi Sirjoosingh	learning in the classroom		
				Petra Turkewitsch, Murray Propet and Michael Dugdale	McGill	3. Lab Adaptations for		
				Cégep de la Gaspésie et des		Online Setting		
				Îles, John Abbott		4. Disrupted Lessons in		
	Chris Whittaker and Selma		Saul Carlier			Engineering Robotics:		
10:00	Hamdani		Concordia University	Safe, Convenient and Hands-	Blended Learning design: a	Experiences with Virtual		
	Dawson College			On At-Home Chemistry	critical solution for	Labs and Open-source		
		Yazdani. Anita Parmar		experiments	precarious teaching times	Hardware 5. The Threshold Concepts in		
		McGill University		Yann Brouillette & Carmen	Meghan Marshall	the three main Physics		
				Leung Dawson	Marianopolis	Courses of the CEGEP		
10.17				Oral communication in		sacher rogram		
10:15				Science: Self-efficacy and	Education With Warp Zones			
				other factors influencing				
				performance of college	Nadia Naffi, Ann-Louise			
				science students	Diongue			
				Caroline Cormier and Simon	UofLaval			
				Langlois Cégen André-Laurendeau				
				and Cégep Marie-Victorin				
10.20	Chair	Chair:	Chair:	Chair	Chair	Chain	Chair	
10:30		Chair.	Cildii.	Cildir. Brook	Chair.	Chair:	Chair.	
11:00				Kenote:				
11:15			Tł	e Future Learning Initiati	ve			
11:30				Manu Kapur (ETH Zurich	)			
11:45			11:	00am -12:00pm (11h - 1	, 2h)			
12:00								
12:15			Award	s Ceremony & Closing Re	emarks			
12:30								
12:45				(in Gather Town)				
13:00				Due 1				
13:15				Break				
13:30								
14:00								
14:15								
14:30	POST-CONFERENCE WORKSHOP							
14:45								
15:00								
15:15								
15:30								



### Conference Program Abstracts / Résumés du programme de la conférence

### DAY 1 ~ June $2^{nd}$

#### 9h30

#### Pre-conference workshop A

DAVID TOPPS (University of Calgary), KRISTA BULOW AND CATHERINE ROY (Dawson College), JASON LAPOINTE (John Abbott College)

#### Learning From Error: Design Virtual Case Studies and Branching Scenarios Using Open Labyrinth

"Remember those 'choose your own adventure' books that used to be all the rage? What if your students could play out different narratives based on real-world applications of your discipline in the safety of the online environment? Across the disciplines, case studies represent the possibility to create authentic learning situations where students can apply skills and knowledge to real-life situations, or transfer their abilities across different domains.

OpenLabyrinth is an open-source online tool for developing interactive multimedia virtual scenarios that emphasize decision-making, flexible narratives and exploration, and can support different instructional formats and pedagogical strategies, including problem-based learning, simulations, and gamification. Participants will be introduced to the basics of using the program to create scenarios with demonstrations to highlight the unique features of OpenLabyrinth, including how it can help teachers gain insight into the decision-making processes and reasoning abilities of their students. Related topics such as principles and challenges of good scenario design and various methods for providing feedback to learners will also be explored in a small-group discussion/interactive format.

#### Come into the labyrinth: pick your path for learning!

Intended audience: This workshop is designed for college and university instructors from all disciplines who are interested in teaching thinking and decision-making related to open-ended complex problems—ethical dilemmas, clinical cases, etc."

#### 10h30

#### Pre-conference workshop B

MATTHEW OHLAND (Purdue University), KELLY MILLER (Harvard University), SIDNEY OMELON (McGill University), PHOEBE JACKSON AND MICHAEL DUGDALE (John Abbott College)

#### A Solution to the Teamwork Challenge: CATME, A Research-Based Tool for Forming and Helping Groups Work Effectively

"There are many reasons to put students in teams such as teaching them teamwork, the learning benefits of collaboration, the diversity benefits of finding out other students' perspectives, and the teacher's ability to provide a deeper level of feedback on the smaller number of assignments submitted by teams. For all these benefits, having students work in teams introduces other issues for instructors to manage, including forming teams, dealing with teams in crisis, and evaluating how much each student contributed to team assignments. Fortunately, CATME can help!

CATME is a set of web-based tools designed to support multiple aspects of the teamwork challenge, helping us to form groups and keep them working effectively. CATME has helped instructors around the world form and manage teams for over 1.6 million students.

In this workshop, you will be introduced to CATME and how it supports group work. Guided by experienced CATME users, you will gain hands-on experience with the tool. You will also glean important insight into the more general issues of how to form teams, administer peer evaluations, and identify dysfunction in teams. The role of team formation and peer evaluation in improving student team experiences will be discussed.

Intended audience: Practitioners, education staff, and administration from any level who are interested in supporting group work."

#### 13h00

#### **Opening Session**

NADIA BHUIYAN (Concordia University), ELIZABETH CHARLES (Dawson College), ROB CASSIDY, CAROL HAWTHORNE, SUELI BONAFIM, AND BOJANA KRSMANOVIC (Concordia University), MICHAEL DUGDALE (John Abbott College)

#### SALTISE 2021 Opening



#### 14h15

#### P01 - Designing for online teaching and learning

ANA RUIZ ALONSO BARTOL, CLAUDIA SÁNCHEZ GUTIÉRREZ, SHELLEY DYKSTRA, AND PALOMA FERNÁNDEZ MIRA (UC Davis), DIANE QUERRIEN (Concordia University)

#### Transitioning to Emergency Online Teaching: The Experience of Spanish Language Learners' and Teachers' in a US University

This study documents the 2020 emergency online transition in a Spanish-language program at a US University, and reports how 210 learners and their educators experienced this unique term. Drawing on two mid-term and one final questionnaires for the students, and on data from teachers' journals and interviews, the results show how participants' preparation to digital practices and multimodal teaching, students' development of autonomy, and institutional flexibility were critical to make this term a success.

#### CAROLYN SEALFON (University of Toronto)

# Scaling the Investigative Science Learning Environment (ISLE) Online

I will share my experiences and lessons learned implementing the inquiry-based Investigative Science Learning Environment (ISLE) approach in a 500-student online physics class. Significant challenges included how to foster class community, how to facilitate collaborative learning and co-creation of knowledge, and how to fairly assess higher-order learning outcomes.

#### JEAN-FRANÇOIS BRIÈRE (Dawson College)

# Using Desmos to Monitor Students Group Work in Synchronous Online Teaching

With online teaching apps (Zoom, Teams, ...), teachers cannot efficiently monitor students working in small groups. Desmos Activity is a free and powerful tool allowing to provide targeted written feedback as well as to view real-time progress of all groups at a glance. With Desmos, it is easy to create various types of engaging activities including graphing and card sorting. By the end of this session, you will be ready to use Desmos in class.

#### MAGGIE LATTUCA AND LAURA WINER (McGill University)

#### *Quality Framework for the Design of Online Courses (QF-DOC)*

Designing an online program requires expertise in instructional design. However, most existing design frameworks do not provide explicit support to the instructional designers for the creation of pedagogically sound and engaging courses and

programs. The Quality Framework for the Design of Online Courses (QF-DOC) is based on principles of UDL and the Community of Inquiry and provides a practicable approach to course and program design and development.

# MARIE-CLAUDE PETIT, THIBAUT COULON, AND SIMON BOURDEAU (UQAM)

Design pédagogique d'un dispositif de ludicisation à l'aide de SAM2 : le cas d'un projet de formation à distance destinée à des étudiants de ler et 2e cycles universitaires

Cette affiche expose le processus de design pédagogique suivi à partir de SAM2 afin de transposer dans Teams et Minecraft : Education Edition un dispositif conçu à des fins d'apprentissage de la gestion de projet agile par des étudiants de 1er et 2e cycles universitaires. Les effets engendrés par ce dispositif de ludicisation sur l'apprentissage des étudiants et les leçons apprises de ce projet par les enseignants à titre de concepteurs technopédagogiques sont aussi partagés.

#### MEGANE PEPIN AND MAXIME DENIS (McGill University)

# E-Learning Design for Higher Skill Acquisition in the Undergraduate Biomedical Sciences

Scholarly literature suggests that alignment between success factors in Instructional Design, Pedagogy and Technology are key to e-Learning efficacy. We applied those success factors in a backward design strategy to develop active-learning resources that comply with good practice in pedagogy. Five e-Learning activities that aim at higher skills (e.g. 'Apply', 'Analyze', and 'Evaluate' from Bloom's Taxonomy) were designed and served as frameworks to further implement up to 50 e-Learning activities in a large-size Biochemistry class.

#### R01 - New assessment strategies

#### GEORG RIEGER (University of British Columbia)

# Supporting Students' Self-Regulated Learning in an Introductory Physics Course

We describe our efforts to engage students more in our interactive physics course, in particular students that are seemingly passive. The approach is based on supporting students in their self-regulated learning and the adoption of a cognitive resources view by both instructors and students. I will describe how two relatively simple modifications to our pedagogy led to an overall improvement in students engagement and in classroom climate.



#### JASON LAPOINTE (John Abbott College)

#### How I Taught Rationale-Writing and Learned to Grade myDalite Questions

myDalite uses a peer instruction format to help students practice argumentative knowledge construction in an online and private space. myDalite is commonly used for formative assessments, as grading student answers has been difficult. By developing a suitable rubric and using error-detection questions, I learned how to train students in rationale-writing without compromising too much in-class time and effectively grade their rationales.

#### LAWRENCE CHEN (McGill University)

#### An Experience with Allowing Group Work in Assessments in the Remote Teaching and Learning Context

We describe using group work in assessments (midterm and final exams) in the remote teaching and learning context. We compare performance of students in the same course from separate cohorts: those involving teaching and learning conducted in-person to those conducted remotely. We also examine the student responses to reflective writing exercises to evaluate the impact of promoting collaborative work in such assessments on student learning (e.g., in terms of achieving specific learning objectives or outcomes).

#### R02 - Lessons for online instruction—pivoting from COVID

ANDREA COOPERBERG AND TERESA BERGHELLO (John Abbott College), WILMA BROWN (Vanier College)

#### Comodal/Hyflex Teaching and Learning at John Abbott College

The goal of this project is to conduct pilot classes with teachers and students implementing comodal teaching and learning at John Abbott College in Montreal. This presentation will address: the definition of comodal modality and its main characteristics; steps and people involved in this project; initial questions and answers; results gathered from surveys disseminated to teachers and students; lessons learned on equipment and other technology needed; and best practices in terms of pedagogical strategies.

#### EVA MARY BURES (Bishop's University)

### Teaching and Learning Online in Higher Education during the COVID Pandemic: Who did We Leave out and Can We Do Better?

Literature from the 1980's onward provides rich analyses of learning online, investigating issues including attrition, motivation, and encouraging active learning. During the COVID pandemic, much of education went online, and pressures to act quickly meant much valuable guidance from the online literature was not drawn on. What could have we learned from the literature to guide the process during the next crisis? What aspects of emergency remote teaching limit the applicability of the online literature?

#### RITA YU AND JANE LEBRUN (Champlain Regional College)

#### A Reflective Exploration of our COVID PANDEMIC Teaching Experiences

This presentation focuses on reaffirming the importance of reflective practice, communities of learning, and communities of practice among educators from within. Five sociology teachers were intrigued by their teaching experiences during the pandemic. Throughout their pedagogical reflections, they identified five themes that highlighted their experiences and serve as their pedagogical pillars of future practices. This presentation discusses the process, the results, and the recommendations of this reflective exploration that can enrich other communities of practice.

#### **R03** - Novel tecchnologies for learning

#### ANNE-MARIE LAFORTUNE (Cégep de la Gaspésie et des Îles)

#### Worldchat.live Education: Let your Students do the Talking!

Designed by a Canadian ESL college teacher, Worldchat.live is a pedagogical tool for second language professors around the world to design authentic speaking activities for their students. We will explore the platform features, including how to match students, access their conversation recordings, and connect with fellow teachers across the globe!

#### ANTONIA MACRIS (Concordia University)

# Applications of Emerging Wearable Technologies: From K-12 to Higher Education

With current trends in emerging digital technologies, people can sometimes feel consumed with the number of devices we use that have become an extension of ourselves. A recent focus on wearable technology has transformed the use of computers and has become more integrated in everyday life. This discussion is based off of a literature review that examines scholarly trends of the emergence of wearable technology to situate its functionality and applications in pedagogy and the classroom.

#### STEPHANIE GRANGER (Cégep Saint-Jean-sur-Richelieu)

#### Corriger avec un cellulaire pour orienter la réussite étudiante

Stéphanie Granger (enseignante en Arts visuels) corrige avec un téléphone cellulaire. Elle utilise un formulaire en ligne produisant des fiches de rétroaction. L'évaluation et la rétroaction sont simplifiées par ce dispositif. L'étudiant retrouve ses documents ainsi que les fiches de rétroaction sur une même



plateforme. C'est avec la collaboration du conseiller pédagogique TIC qu'elle a pu automatiser une partie du travail à l'aide d'applications accessibles et populaires des plateformes Office 365, Moodle ou G-Suite éducation. Cette communication présentera les grandes étapes pour développer cette méthode, les ressources disponibles, des conseils pour les enseignants, l'appréciation des étudiants de ces fiches de rétroaction ainsi que leur effet en matière d'apprentissage.

#### S01 - Invited symposium

JACKIE STEWART, ANKA LEKHI (Univeristy of British Columbia), CHRIS SCHUNN, (University of Pittsburgh); DISCUSSANT: ARMIN WEINBERGER (Saarland University); CHAIR: PHOEBE JACKSON, (John Abbott College)

#### Peer Assessement: Taking this approach to the next level

A panel of experts leads this symposium, which will explore the research on Peer Assessment (PA) while providing practical examples. Focusing on PA as a mutual and reciprocal process in which students give and receive feedback, we will show how PA can be used to promote learning rather than simply for grading. All panelists have significant experience implementing PA in their practice as well as engaging in research. Participants will have the opportunity to engage in discussion with the panelists.

#### S02 - Café style symposium:

# JOAN BUTTERWORTH AND MARIE-PIERRE CLAVETTE (McGill University)

#### How to Accompany Change Resistance to Innovation

The intention of this session is to bring people together to reflect on our blind spots as educators and learners in our highly challenging context. By engaging in the lively open format of a Café Conversation structure and using our own challenges of how to accompany change resistance to learn by doing, participants will experience a true active-learning session! Rather than theory or relating information, the Conversation Café format features hosted, structured, drop-in conversations that take place in public places. Desirable outcomes include: 1) Experiencing a deepening conversation methodology; 2) Sharing with peers our emergent practices; and 3) Delving into what we are not learning right now. Experiential learning at its best!



#### 15h45

#### P02 - Teaching, learning, and assessment

CECILIA TORRES (Vanier College)

The Future of (Art) Education: Including Activities Towards Well-Being

Québec began their campaign towards well-being based on the ever-increasing levels of anxiety and depression amongst students in higher education. Considering the future of education and the consequences attached to the pandemic, including students' well-being within the curriculum might be needed. As an art educator, I propose crafts as a process to reduce anxiety and improve focus and self-awareness while fulfilling aspects of critical thinking, problem solving, and creative outcomes related to the program's requirements.

CLAIRE NORMAN AND MAXIME DENIS (McGill University)

# Improving Student Perception of Active Learning through Changes to the Delivery of Instruction

The documented resistance to active learning (AL) makes "broccoli" an apt metaphor for AL - it's good for students but not well-liked. To make AL "palatable" to students, changes to AL delivery were implemented in a large undergraduate class informed by qualitative data analysis of course evaluations. These adaptations greatly improved student perception of AL, decreasing resistance by 30%, demonstrating that studentinformed changes to AL delivery are a substantiated method of mitigating resistance and improving student motivation.

# DAVID HOIDA (Vanier College) AND GABE FLACKS (Champlain Regional College)

#### Sustainability in Action: A Virtually Supported Inter-Disciplinary, Multi-College Collaboration Towards Campus Green-Space Expansion.

Sustainability is a key issue and our relationship with nature enhances well-being. Share in an ongoing, ECQ-supported project that challenged 300 diverse students to develop multidisciplinary approaches to explore and address contemporary sustainability issues. Highlighted will be the experiential virtual collaborations of Vanier, Champlain, Heritage, and John-Abbott College students across multiple programs in co-creating campus green-space proposals. Participants will receive project perspectives and access to the virtual space where one can explore collaboration opportunities. DIANE LEDUC, JULIE ROSE, BÉDARD ALEXANDRE, MARIE-CLAUDE PETIT, CHANTAL TREMBLAY, AND EDITH POTVIN-ROSSELET (UQAM)

#### **Observing Innovative Learning Assessment Practices**

The Interuniversity Observatory on Innovative Learning Assessment Practices (OPIEVA)'s mission is to document, at all levels of education, innovative learning assessment practices in order to support practitioners' initiatives towards improved student engagement. Among its various activities, four consist in collecting data on the assessment practices of teachers to offer them avenues of action and reflection to innovate: Boussoles, PRADES, a serious game, and drawings.

#### IVAN SAVOV (Minireference Co.)

#### Improved Access to Education Through Open Educational Resources

The growing number of Open Educational Resources (OERs) have the potential to increase access to education and learning for students around the world. OERs can be re-organized and remixed freely, and this presents a unique opportunity for teachers to build learning experiences adapted to their students' needs, which is not possible with traditional textbooks. This interactive poster describes the possibilities and challenges for the adoption of OERs based on the author's experience with the Kolibri platform.

#### KIRA SMITH (McGill University)

## Exploring the Role of Post-Secondary Instructors in Promoting Student Mental Health

Post-secondary instructors are uniquely situated to promote student mental health; they are in direct, regular contact with students yet no research has been conducted to directly examine how instructors engage in this work. This session will showcase a master's research conducted on instructor promotion of student mental health at McGill, culminating in a discussion on lessons learned and practical strategies that can be implemented. Attendees will be invited to consider the ways they can meaningfully incorporate mental health promotion into their work in teaching and learning.

#### STEPHEN COHEN (Vanier College)

#### A Three-Step Approach to Pre-Class Reading and Writing

Pre-reading and reflective writing are essential tools in a teacher's arsenal when trying to optimize a flipped classroom approach. This presentation will detail the finely-tuned reflective writing process that has become integrated into all of my physics courses. I have built a small library of reading materials and run reflective writing assignments that consist of three parts: summarize, elaborate, ask. Subsequent classes address common questions students have posed in their writings.

#### **R04** - Teachers as learners

#### HEATHER MCPHERSON (McGill University)

#### Bridging the Practice to Research Gap for In-Service Teachers

Education reforms encourage teachers to leverage student thinking through active learning. These practices focus on critical thinking strategies, including proposing solutions to real-world problems, research, open-ended experiments, and engaging students with interdisciplinary projects. However, teachers need meaningful professional development to develop these pedagogies. In this study, I present an analysis of a collaborative learning community that provided a yearlong professional development model that generated the space for teachers to co-construct active teaching practices.

#### LESLEY WILTON (University of Toronto)

# New Literacies, Social Practices and Active Learning in E-Discussions

Active learning opportunities in online environments are growing in K-12 and higher education. Yet there are gaps in our understandings of effective pedagogical and design practices to support active learning in online discussions. Articulation and sharing of ideas foster learning, but new literacies and social practices in e-discussions have not been deeply investigated. These concepts are explored through the analysis of 137 online learning participants' interactions and perceptions. A selection of best practices is proposed.

#### VANDANA CHANDRASEKHAR (McGill University)

#### Elementary Novice Teachers' Noticing of Eliciting and Responding Practices: A Comparison across Mathematics and Science

A critical aspect to learn the practice of eliciting and responding to students' thinking (E&R) entails noticing how these practices are enacted. This presentation focusses on similarities and differences in elementary novice pre-service teachers' (NTs') noticing of E&R across mathematics and science. In addition, I will explore the ways in which NTs' attention was drawn to the practice of E&R across mathematics and science.

#### **R05** - Enhancing collaboration in design spaces

MICHAEL WOOD, ANNE KIETZIG, MARIA ORJUELA-LAVERDE (McGill University)

#### Teaching the Social Considerations of Materials Engineering Through Podcast

The act of materials engineering brings about many ethical and social considerations. This is especially true when the engineer starts to consider the end-of-life of their design. Nonetheless, traditional materials engineering classes seldom



give the student an opportunity to reflect on these important issues. Here we present our efforts to incorporate some social considerations of materials engineering in a chemical engineering class through the recording of podcasts and subsequent recall exercises.

NATASHA JACOBSON AND MARK DRISCOLL (McGill University)

Acknowledging the Problem of the Problem Statement: A New Assignment in an Undergraduate Engineering Capstone Course

Given inconsistencies in engineering students' understanding of the problem statement, it was the objective of this research to better prepare students for problem definition with the introduction of a 1-page problem statement assignment. Assessment (both summative and formative) was made by teaching assistants. Though grades did not indicate significant change, student understanding of the importance of the problem statement in engineering was stressed and standardized across graduates.

#### **S03 - Symposium**

#### HÉLÈNE NADEAU AND SYLVIA COX (Dawson College)

Reflections on Two New and Innovative Courses where Everybody Teaches and Learns

Two new courses introducing students to research in neuroscience were given in Winter 2021 at Dawson. With this very fresh in our minds, we will reflect on the dos and don'ts, on how different clienteles call for different strategies, on the delicate balance between peer instruction and student-led inquiry and teacher guidance, and on how to evaluate the acquisition of skills.

#### **S04 - Symposium**

CHAO ZHANG (McGill University), BOJANA KRSMANOVIC (Concordia University), PREETI RAMAN (University of Toronto), MICHAEL DUGDALE (John Abbott College), JOEL WIEBE, RUBAINA KHAN, AND GARRICK BURRON (University of Tornoto), ELIZABETH CHARLES (Dawson College), JAMES D. SLOTTA (University of Toronto)

# Cross-cutting Perspectives on Active Learning among Researchers and Practitioners

This symposium examines perspectives of active learning through three presentations that comprise: (1) an analysis of active learning activities designed by practitioners, (2) investigations into the typologies of orchestrational flow in active learning classrooms, and (3) a preliminary synthesis of research findings of active learning approaches and strategies in the learning sciences. The purpose of this symposium is to advance the discussion of active learning, its definition, vocabulary, practices, and assumptions among researchers and practitioners.

#### **S05 - Special Issues Symposium**

PHOEBE JACKSON AND DARIO GUIDUCCI (John Abbott College)

#### Special Discussion Session for Early Career Teachers

Are you in the first five years of your Cégep teaching career? If so, please join us for this interactive discussion session in which we explore the career on which you have embarked. In small group discussions with other early career Cégep teachers, you will share challenges, successes, and goals for the future. You will meet some of the people behind SALTISE, find out what it's all about and how we can support you.

# DAY 2 ~ June 3<sup>rd</sup>

9h30

#### P03 - Designing for inclusivity

ANICK LEGAULT, SUSIE WILEMAN, AND ALICE HAVEL (Adaptech Research Network, Dawson College)

#### ADHD Challenges: Get by with a Little Help from Your Apps

Attention Deficit Hyperactivity Disorder (ADHD) impacts onethird of college and university students with disabilities. Having ADHD was hard on students before, but the challenge has been amplified by the pandemic and online learning. Inspired by Adaptech's interest in both disabilities and technology, we will explore apps that are recommended for post-secondary students with ADHD. Many of these apps could also prove useful to the general population, students without ADHD, and professors included.

CATHERINE FICHTEN, MARY JORGENSEN, ROSIE ARCURI, CHRISTINE VO, JILLIAN BUDD, ANICK LEGAULT, AND ALICE HAVEL (Adaptech Research Network, Dawson College)

# Are AI-Based Virtual Assistants Such as Siri, Alexa, and Google Assistant Ready for College?

We reviewed the literature on Siri, Google Assistant, and Alexa, and surveyed 51 college and university students without disabilities, and 121 students with disabilities. We will present the findings on how post-secondary students use these virtual assistants to do schoolwork. Are Siri, Google Assistant, and Alexa ready for college? The short answer, in spite of the hype in the popular media, is, "No!"

MARY JORGENSEN, ROSIE ARCURI, CATHERINE GRAVEL, MAEGAN HARVISON, ERICA RUFFOLO, OLIVIA RUFFOLO, FRANCESCO SALVO, AND CHRISTINE VO (Adaptech Research Network, Dawson College)

# What Is it Really Like to Be a Student During the COVID-19 Pandemic?

Given that most post-secondary institutions held their courses online in the Fall of 2020, it is important to explore the new challenges that have emerged for students. In working toward this goal, we will present students' responses to a question about problems they encountered in using the necessary technology for their courses. Furthermore, students currently in remote learning classes will provide testimonials to identify pedagogical practices and technologies that postsecondary institutions should sustain post-pandemic.

#### MAYY ELHAYAWI (The TEFL Academy)

#### From "Click and Read" to "Play and Practice" - Using Authoring Tools to Create Unique E-Learning Experiences

To turn the boredom of 'click, display and read' into an exciting expedition for intellectual discovery and skills development, this presentation will focus on how multiple authoring tools can be integrated to create a unique e-learning experiences. Through exploring ways for creating interactive content, animating storyboard characters, gamifying practice, and complying with UDL Guidelines, attendees will experience how to enliven virtual learning environments with the sparks of competitiveness, collaboration, motivation and enjoyment.

ROSIE ARCURI, CATHERINE FICHTEN, MARY JORGENSEN, ANICK LEGAULT, AND CATHERINE GRAVEL (Adaptech Research Network, Dawson College)

# A Picture Can Be Worth A Thousand Words. Except When It is A PDF!

Students who cannot access your teaching materials cannot succeed in your course. We will explore how educators can reduce barriers to accessing and understanding course materials, for all students, by quickly improving the accessibility of PDF documents. When PDFs contain images rather than



recognized (selectable) text, students cannot use many study tools or assistive technologies. We will provide a user-friendly guide for creating an accessible PDF or modifying existing ones to improve accessibility.

# R06 - Facillitating discourse and using new learning spaces

#### CHEN YAARI AND YOTAM HOD (University of Haifa)

An Analysis of Purposes and Interactions in Small Group Configurations around a Large Screen

As educational systems design new learning spaces aimed for learning in the digital age, small group configurations around large screens have become a highly popular spatial feature. We analyzed 24 examples whereby small groups collaborated around a large screen, examining the purposes of their engagements as well as analyzing moment-to-moment interactions. The results show how large screens serve as collective monitoring devices for artifacts and documents, promote inclusive participation structures, and shape fluid turn-taking transitions.

DARREN WERSHLER AND BART SIMON (Concordia University)

#### The Allegorical Build: Minecraft as the Undergraduate Classroom

In January 2021, we began teaching a fully flipped undergraduate class staged entirely inside a dedicated Minecraft server, using a custom-modified version of the game. We call the process of using Minecraft's game procedures--to help explain readings from the theory and history of modernity--"the allegorical build." We will present preliminary findings from our research on the class, arguing that the allegorical approach creates high levels of student engagement and learning.

#### **R07** - Enhancing engagement

BRUNO POELLHUBER, NORMAND ROY, AND VINCENT LABERGE (Université de Montréal)

#### Results of an Action-Research with Flipped Classrooms in 6 Institutions; Lessons Learned and Implications for Practice

We realized a research-action on flipped classroom in 6 institutions. We will draw a portrait of the flipped classroom practices and describe students' reactions on different motivation and engagement scales. Finally, we will show how teaching practices influence students engagement. We will end by discussing our successes and challenges as well as the implications of our results for flipped classrooms and for teachers professional development.

CYNTHIA FENG, WHITTLEY DELEVEAUX, IRIS GUO, OULIN YU, TAMARA WESTERN, AND ANITA PARMAR (McGill University)

#### FRezCa: Adapting Collaborative Learning Communities for the Virtual World

Previously held in a residence cafeteria, FRezCa is a collaborative learning environment for first-year students in large science courses at McGill University. Our presentation will explore the unique challenges faced by collaborative learning spaces in the remote context and present how FRezCa made the transition to a virtual format via Microsoft Teams. We will discuss past and future adaptations to FRezCa and offer suggestions on creating successful remote student learning communities.

VERONIQUE BRULE, RHONDA AMSEL, AND MARCY SLAPCOFF (McGill University)

#### Let's Keep the Conversation Going: Engaging Instructors in Pedagogical Discussion during and beyond Remote Learning

This session will explore the Living Library, an initiative headed by the Office of Science Education. This initiative supports remote course adaptation and delivery by promoting pedagogical dialogue and the exchange of teaching strategies among instructors at McGill University. Participants will have the opportunity to reflect on how they might foster similar discussions across disciplines and class contexts within their own teaching communities.

#### S06 - Symposium

JENNIFER MITCHELL AND ANDREA PUKTERIS (Vanier College), HENRY TSANG (Athabasca University)

#### Supporting Student Learning in Online and Hybrid courses

In the context of a year of online and hybrid teaching, the question of how best to support students' application of their learning has become key. We are bringing together teachers from Vanier College and Athabasca University who have experience establishing which moments are best suited to leverage the benefits of classroom community in person in order to support student learning.

#### S07 - Symposium

#### PAT ROMANO AND KIM SIMARD (Dawson College)

# Beyond Discomfort: Building Connection and Agency in the Classroom

We will address the questions teachers have when addressing polarizing social issues in the classroom through a perspective that integrates creative expression and critical thinking. Inspired by interdisciplinary exchanges in the Resist Violence CoP, recent work in educational philosophy, the idea of critical hope, and the role of art and storytelling in social change, we ask the question: how can we breakthrough and promote connection and agency, without diluting the complexities of the issues?

#### S08 - Symposium

JOEL TRUDEAU, SAMEER BHATNAGAR, MYRIAM DIMANCHE, JAYA NILAKANTAN, LAURENT RUHLMANN, CARL SAUCIER-BOUFFARD, ROBERT STEPHENS, AND JONATHON SUMNER (Dawson College)

#### AI at Dawson College Revisited

At SALTISE 2019, Dawson College announced the launch of a three-year comprehensive plan in support of a strategy for the inclusion of AI in programs and certifications through curriculum, extra-curricular and cross-disciplinary activities, professional development, and research. This symposium reports on the progress of the Dawson AI initiative two years into its mandate and invites all stakeholders to a wide-ranging discussion on the outlook for the integration of AI in college education.

#### 11h00

#### Keynote - 01

ARMIN WEINBERGER (Saarland University)

Breakdowns and Breakthroughs of Transactive Knowledge Co-Construction

Approaches of learning together build on the idea of advancing knowledge in interaction with others. Learners elaborate together their respective domain understanding and consequently, the epistemic quality of learners' talk provides insight into learners' level of understanding, i.e., the adequacy of the concepts and conceptual models learners use to solve a task. But consistently, past research has shown that there is another quality of learners' talk that is a better predictor for learning together: transactivity, the extent to which learners operate on each other's reasoning. We will discuss the transactive foundations and mechanisms of how we think and learn together, how learning groups may take different trajectories converging and diverging on knowledge, what harms transactivity, and how learners can be scaffolded to engage in transactive talk.







#### Keynote - 02

SCOTT FREEMAN (University of Washington)

# The Evidence-Basis for Inclusive Teaching in Undergraduate STEM Majors

Respect for evidence is a foundation of modern democratic societies but is being challenged by global misinformation campaigns. STEM education has its own problems with implementing change in response to evidence: Traditional teaching methods still dominate instruction even though research has shown that more innovative approaches lead to increased student success. Recent research from our group has also shown that across undergraduate courses in STEM, intensive use of active learning reduces the performance differences that exist between racial and income groups under traditional teaching methods. Based on this result, evidence-based teaching is synonymous with inclusive teaching. SALTISE conference participants can become agents of change on their campuses, practicing and advocating for teaching methods that promise equitable outcomes long denied black, brown, and low-income students.

#### 14h15

#### P04 - Machine learning and AI in education

BÉRENGER BENTEUX AND TANYA CHICHEKIAN (Université de Sherbrooke)

# Artificial Intelligence in Education: The Fine Line between a System's and a Learner's Performance

Although much research has led to positive results regarding AI technologies used in educational contexts, few are actually implemented in classrooms. A review of 200 articles from the field of AIED concluded that most findings focused on system optimization and less so on enhancing the quality of learning. For AI-powered technologies to function optimally in education and not just from a computer science perspective, a complementary research design nested within an educational framework is needed.

#### ÉRIC FRANCOEUR (ÉTS)

Small Data: A Humble Inquiry into Online Learning Behaviour of Students through LMS Logs

A discussion of how LMS logs can provide insights into the online behavior of students with the aim of improving student engagement.

# JOEL TRUDEAU, ALICIA APOSTOLAKOS AND JONATHON SUMNER (Dawson College)

# Artificial Intelligence Competency Frameworks: A Success Pipeline from College to University & Beyond

Concordia University and Dawson College have undertaken a PIA-funded project to co-construct an Al competency framework for learners from college to university to life-long learning. To collectively address evolving Al talent needs, the framework will serve as a base for curriculum development with the goal of balancing technical, business, human and ethical skills. In this presentation we provide an overview of the Al competency framework and its potential applications.

LÉVIS THERIAULT, OLIVIER GENDREAU ET FRANCOIS GUIBAULT (Polytechnique Montréal)

# PolyTeam : Quand l'intelligence artificielle s'invite dans le processus de formation d'équipes

La formation de l'ingénieur met de plus en plus l'accent sur le développement des qualités professionnelles des futurs ingénieurs. Parmi ces qualités, la capacité de travailler en équipe apparait comme une compétence incontournable qui doit être développée par la pratique. Former des équipes représente cependant un défi tant pour les étudiants que pour les professeurs. Le système logiciel PolyTeam intègre plusieurs outils et méthodes intelligentes afin de former des équipes de travail productives et performantes.

MICHAEL DUGDALE AND DERRICK CHUNG (John Abbott College), ALEXANDER MAZUR, MARIE-ELYSE BERTRAND, AND YOUNES ZEROUAL (JACOBB)

# Earlier Detection of At-Risk Students through Artificial Neural Networks

Early identification of at-risk students allows institutions to target support interventions in a more timely manner, increasing their likelihood of success. However, the underlying reasons for students dropping out or experiencing significant academic difficulties (e.g., academic probation) are both complex and manifold. We explore a neural-network-based early-alert system that uses student records (secondary school and college) to help identify those students most in need of support.



#### **R08 - Enhancing feedback**

MICHAEL DUGDALE (John Abbott College), KEVIN LENTON, RHYS ADAMS (Vanier College), YANN BROUILLETTE (Dawson, College) NATHANIEL LASRY AND PHOEBE JACKSON (John Abbott College), CHAO ZHANG (McGill University), ELIZABETH CHARLES (Dawson College)

#### **Orchestrating Feedback**

Feedback is essential for learning. Receiving feedback promotes awareness of criteria, standards and norms, while giving feedback promotes the ability to monitor, evaluate, and regulate one's own learning. Our study examined the impact of forms of feedback within active learning pedagogy. We present results of different case studies focused on different types of feedback scenarios, each featuring a different technological tool.

# SOFIA SKROMNE CARRASCO AND JOSEPH DENT (McGill University)

A Repeated Evaluation Testing Format Encourages Mastery Based on Feedback

Students must anticipate the information and skills they will be evaluated on - if they guess wrong, there is often no opportunity or incentive to repair deficiencies revealed by an exam. Therefore, we instituted a system where students can be re-evaluated on the same material at a pace they determine until a suitable outcome is achieved. Our results indicate that student skills improve with re-evaluation, although improved ability to anticipate exam questions is unclear.

#### TIM CAMPBELL (Vanier College)

#### Active Rubrics

Providing rubrics is a well known best practice for assessment, however it is too often a static document. The presenter will share experiences of using active rubrics and video rubrics in the classroom and online environments for students to self- and peer-edit their written work.

#### R09 - Discussing roles of technoology in learrning

#### ANTONIA MACRIS (Concordia University)

Stop Scrolling and Start Learning Through Social Networks

In navigating today's increased use of online technologies, this discussion explores the web as an informal learning tool, related recent technological trends, and the theoretical concept and applications of personal learning environments (PLEs) created within social networks. This discussion uses scholarly literature to present an educational evolution from Web 2.0

and Social Computing to modern use of Social Networks, and will compare the use of social media in formal and informal learning environments.

IVRY ZAGURY-ORLY, GUILLAUME FONTAINE, MARC-ANDRÉ MAHEU-CADOTTE, ALEXANDRA LAPIERRE, NICOLAS THIBODEAU-JARRY, SIMON DE DENUS, MARIE LORDKIPANIDZÉ, PATRICE DUPONT, AND PATRICK LAVOIE (Université de Montréal)

#### Paper or Screen? Current Evidence on the Impact of Reading Media on Reading Comprehension in Health Professional Education

Despite significant advancement in e-learning research, little is known about whether learners should revert to paper-based reading. We conducted a systematic review to identify, appraise, and summarize current evidence on the effect of reading media on reading comprehension in health professional education (HPE). Our review shows a small, statistically significant advantage of paper over digital-based reading, when HPE learners were reading HPE-related texts compared to non-HPE-related texts. Future research is needed to confirm our findings.

JENNIE FERRIS, MAGGIE LATTUCA, AND CLAIRE WALKER (McGill University)

Making Online Course Materials Accessible: Impactful Guidelines

Have you ever wondered whether your online course materials are accessible to all learners? Web accessibility is the inclusive practice of ensuring that no barriers prevent access or interaction with online content by people with disabilities. A university working group operationalized the Web Content Accessibility Guidelines (WCAG) 2.1 into checklists for instructors, developers, integrators, and instructional designers, to promote the development of accessible materials. Participants will consider the checklists application to their context.

#### **S09 - Symposium**

ARMIN YAZDANI, CHRISTINA POPESCU, KIRA SMITH, CYNTHIA FENG, AND JANETTE BARRINGTON (McGill University)

## SciLearn, Learning How to Learn in STEM Using Neuroscience and a Citizen Science Framework

The Office of Science Education at McGill University launched the SciLearn Program in Fall 2020 to support the transition of incoming science students from high school/CEGEP to the university-level. Over 100 students participated as co-investigators in a citizen science-inspired project aimed at providing them with a metacognitive toolkit for academic success, using key concepts and findings from neuroscience. In addition to improving self-awareness and study skills, students also reported a healthier lifestyle.

#### S10 - Symposium

PATTI KINGSMILL, HEATHER ROFFEY, TOBY MONEIT, LISSIENE NEIVA, AND NICK PARK (Vanier College)

#### Developing 21st Century Skills with Online Curation and Social Annotation

Online curation (OC) and social annotation (SA) are useful strategies for engaging students and developing 21st C skills: OC involves collecting, selecting, organizing, annotating and publishing content online. SA entails learning to read critically through commenting on discourses in a collaborative online environment. Both can help engage students and help them develop critical thinking, research, communication, and collaboration and support peer learning. We will introduce these strategies and share resources created to support their implementation.

#### S11 - Symposium

CHRIS WHITTAKER AND SELMA HAMDANI (Dawson College)

#### CoPs Everywhere: Changing Professional Development Through Communities of Practice

Join the coordinators of Dawson's faculty-driven Communities of Practice (CoPs) for a round-table discussion on supporting change and innovation. Participating CoPs include initiatives who promote/support Active Learning, paired and co-teaching initiatives, e-learning, Universal Design for Learning, AI and more. Coordinators will briefly share what their initiatives do and how they do it, then there will be a free-form period for reflections and exchanges by the panelists, and finally there will be time for questions.

#### 15h45

#### P05-Emerging issues in STEM teaching I

CLAIRE PATON, JENNIFER ADAMS, AND KRISTAL TURNER (University of Calary)

Advancing Creativity in Postsecondary STEM Contexts: Students' Understandings and Experiences of Creativity and Risk in Science Learning

Students are resistant to engage in active learning and creativity due to a perceived risk of failure. The goal of this research project is to address the student perspective on supportive classroom environments and identify whether there is a disconnect between what scientific creativity means to educators and students. The risks students take in classroom settings generally fall within the following categories: presenting, asking and answering questions, participating in activities, and trying something new.

#### GREGOR KOS (Concordia University)

Moving Analytical Chemistry courses to an online format and lessons learned for in-person teaching

Teaching during the SARS-CoV-2 pandemic required the introduction of alternative teaching methods to engage students to meet learning outcomes. Using undergraduate Analytical Chemistry courses, the shift to asynchronous collaborative online activities and formative quizzes in preparation for live class sessions is described. Just in time teaching of challenging problems during live sessions with contribution from students (peer instruction, group presentations of applications of the discussed concepts) is discussed, including feedback from students.

#### KAUTHAR RIFI AND MAGDA MLEK (Dawson College)

Engaging Students in Peer Collaboration: Use of Visual Classrooms Learning Platform for Providing Quality Peer Feedback.

Research shows that quality peer feedback improves students' learning and their performance (Cho and Shunn, 2007; Shunk and Zimmerman, 2007; Zong, Shunn and Wang, 2020). This presentation will outline how we used SALTISE Courseflow and Visual Classrooms (VC®) online peer collaboration platform for a multi-stage assignment in a first-year nursing course. The goal of this project was to help students design and implement a teaching activity taking advantage of quality peer feedback.

SHAUN TURNEY (Project Biodiversify, McGill University), ASH ZEMENICK (Project Biodiversify, Michigan State University), SARAH JONES (Chicago Botanic Garden), MARJORIE WEBER (Project Biodiversify, Michigan State University), ALEX WEBSTER (Project Biodiversify, University of New Mexico)

# Six principles for embracing gender and sexual diversity in biology classrooms

Biology instructors face unique challenges in creating inclusive classrooms, particularly relating to teaching topics surrounding sex and gender. We provide six principles for improving traditional teaching approaches to embrace gender and sexual diversity in postsecondary biology classrooms. As more methods for inclusive and effective teaching continue to be developed and tested, these principles provide a tangible starting place for instructors striving to create more scientifically accurate and inclusive classrooms.

#### WARREN CODE (University of British Columbia)

#### Discipline-based Education Specialists: Big Impact, One Course at a Time

We will present the model and key findings from the 10-year Carl Wieman Science Education Initiative which has transformed undergraduate science education at the University of

British Columbia and inspired similar work elsewhere. The core model for change consisted of hiring and training disciplinebased education specialists (educational developers operating in departments) to partner with faculty members in bringing the principles of scientific teaching to courses across the curriculum.

#### **R10-Changing teacher practices**

ANDRÉ VILLENEUVE ET YAMINA BOUCHAMMA (Université Laval)

La prise de décisions pédagogiques appuyée sur les données locales de sources multiples : analyse réflexive sur l'implantation d'une pratique professionnelle en CAP

Cette communication présente les résultats d'une démarche réflexive d'un praticien-chercheur (Leitch & Day, 2000; Albarello, 2004) portant sur l'implantation d'un processus de la prise de décisions pédagogiques appuyé sur les données locales de sources multiples qu'il a développé dans une communauté d'apprentissage professionnelle au secondaire. Les analyses en mode écriture et thématique (Paillé, 2007) ont permis d'identifier sept facteurs qui ont contribué à implanter le processus. La discussion aborde la conception d'un outil technologique.

#### EVA MARY BURES (Bishop's University)

# Supporting Faculty Supervisors to Foster the Reflective Practice of Student Teachers

This action research study explores how to support faculty supervisors who supervise student teachers during practicums to foster their student teachers reflective practice. The research involves a formative evaluation of the project to improve it in subsequent years and also to inform the literature on approaches to sustain reflective teaching practices through the development of a community of practice supported by the use of computer mediated communication involving student teachers, faculty supervisors, and instructors.

SHANMUGAVALLI NARAYANAN AND ANILA ASGHAR (McGill University)

# Collaborative Team Learning as a PD to Manage Challenges in an Inquiry-Based ESD classroom

Education for Sustainable Development (ESD) becomes a pressing need in this unprecedented century of environmental breakdown. The multifaceted nature of ESD pose challenges for teachers in designing an inquiry-based sustainability lesson. Deeper understanding of integrative concepts of ESD and professional development in inquiry-based practices will help teachers manage challenges. Collaborative team learning can be an effective professional development model to support teachers in an ESD classroom.

#### R11 - Giving students active roles in learning

ELENA BOLDYREVA AND JAMES SLOTTA (University of Toronto)

Improving Students' Understanding of the Nature of Science and Supporting STEM Identity Development in a Grade 11 Biology Class: A Learning Community Approach

We will report on an on-going study of a Grade 11 Biology classroom, which focuses on students' understanding of Nature of Science (NOS) and their development of STEM identity and career directions. The Knowledge Community and Inquiry (KCI) model is applied to design a curriculum addressing a diet and nutrition theme. Students work together in a technologyenhanced learning environment to co-construct understandings of NOS, build connections to real-world issues, and explore their STEM identities and careers.

KRISTA S. JOHANSEN (John Hopkins University), LESLIE SCHNEIDER (Tufts University)

# Using Collaboration Technology to Transform Anatomy Education for Health Professionals

This study aimed to determine whether the use of CSCL technologies can play an important role in preparing learners for clinical practice. Visualclassrooms.com was piloted in a new interactive workshop-based clinical anatomy course for Physician Assistant students at the Tufts Medical School. Students used Visual Classrooms to discuss a series of cases and interact with radiologic findings. They scored higher on mid-term and final exams compared to students who only received didactic lectures.

#### TAMARA WESTERN (McGill University)

# FSCI 396 Brings Undergraduate Students into the Course Assessment and Design Process

Many STEM professors have not switched to evidence-based pedagogy due to a lack of time. To address this, we have implemented the Students as Partners in higher education (SaP) framework as FSCI 396 Research Project in Science Teaching and Learning, a course in which students collaborate with faculty to engage with the pedagogical literature for the course (re-) design and/or assessment. Here we will explain the structure of FSCI 396 and former students will present their projects.



#### S12 - Symposium

#### ANNE-LOUISE DAVIDSON, ET AL. (Concordia University)

Developing Foundational Programming and Maker Skills to Foster Creative Confidence

This panel discusses the development of the knowledge and skills needed to help users of makerspaces build the creative confidence to engage in ill-defined projects and prototyping. It will include discussions around developing a series of workshops that help the development of 21st skills, lessons from facilitating maker projects with youth, recommendations drawn from computer programming scenarios, the development of advanced maker skills through electronic fabric, and notes on a STEAM pilot at Dawson College.

#### S13 - Symposium

SAUL CARLINER, LEELAN FARHAN AND GIULIANA CUCINELLI (Concordia University)

# What is Learning Experience Design (and Does It Render Instructional Design Obsolete?)

In recent years, the term "learning experience design" has crept into the instructional design lexicon. But what is it really? This session provides an overview. Taking a design-sprint approach, this session engages participants in performing some essential practices of learning experience design, including the development of use cases and personas, learning journeys, and prototyping; explains the benefits of these practices; and suggests how these practices integrate into the I4PL Competencies and existing instructional design processes.

#### S14 - Symposium

AZRA KHAN (Dawson College), TANNIA DITCHBURN (Vanier College)

#### Design Engage and Assess in Your Discipline

This participatory session, which brings together teachers from the same or related disciplines, will provide teachers with opportunities to reflect, share, and learn from each other on current and perennial considerations about course design, student engagement, and assessment. Building on the first discipline exchange held during the Intercollegiate Pedagogical Days event in January 2021, we will welcome new voices as well as familiar faces, offering a unique opportunity to forge ahead with a productive pedagogical and community exchange. Discipline groupings include Science, Health Sciences, Creative Arts, Social Sciences, Business Administration and Management, Modern Languages, Care Counselling, and more!

### DAY 3 ~ June 4<sup>th</sup>

9h30

#### P06-Emerging issues in STEM teaching II

ANULI NDUBUISI (University of Toronto)

A Global Virtual Teams Approach to Inclusive Engineering Education

Disruptions to traditional global engineering education programs have led educators to seek digitization solutions to help future engineers build global perspectives that can prepare them for a post-COVID labour market. This study explores the International Virtual Engineering Student Teams (InVEST) initiative that supports engineering students' development of global competencies within global virtual team projects. InVEST enables diverse students from various international universities to work together on authentic problems and engage in interactive Intercultural Competency Modules (ICM) around intercultural communication and sensitivities.

#### COSTANZA PICCOLO (University of British Columbia)

#### Fostering Self-Regulated Learning in the Classroom

We present a pilot project aimed at incorporating classroom activities in a Calculus 1 course where students actively engaged in self-regulation, including reflecting on their own understanding of the material and developing deliberate strategies to adapt their work to achieve success.

EMILY TYHURST, NARIMAN KHAZAI AND CAROLYN SEALFOM (University of Toronto)

#### Lab Adaptations for Introductory Physics in an Online Setting

With enrollment frequently exceeding 800 students, introductory physics (PHY 131/132) at the University of Toronto is a hugely-subscribed course with a varied audience. Following the Investigative Science Learning Environment (ISLE) approach necessitates student exposure to a lab environment with agency over their own scientific reasoning and hard evidence of the theory that students are engaging with. We reflect on the successes and challenges throughout 2020-21 of adapting labs of this scale online.



JOEL TRUDEAU AND TANYA CHICHEKIAN (University of Sherbrooke), TAWFIQ JAWHAR (Dawson College)

#### Disrupted Lessons in Engineering Robotics: Authentic Learning Experiences with Virtual Labs and Open-source Hardware

Over the last two years we have developed and tested engineering robotics modules utilizing Arduino, an open-source hardware platform, in classroom learning environments. The Covid-19 pandemic necessitated a shift from in-person laboratory activities to custom simulation environments conducted as virtual labs. Recently we have reintroduced robotics hardware designed for home use. This presentation reports on learning outcomes and provides a guide to running the sequence of labs as blended learning engineering robotics activities.

STEFAN BRACHER (Vanier College), SEAN HUGHES (John Abbott College)

#### The Threshold Concepts in the Three Main Physics Courses of the CEGEP Science Program

In this study, the threshold concepts of the three CEGEP-level physics courses of the Science Program were identified by physics teachers. The result showed that, while NYA and NYB have more threshold concepts than NYC, there is no significant difference in the number of threshold concepts in NYA and NYB. Threshold concepts can form roadblocks to student success and persistence. Identifying them is a critical exercise ahead of implementing the newly revised Science Program.

#### R12 - Importance of communication in STEM

CAROLINE CORMIER (Cégep André-Laurendeau), SIMON LANGLOIS (Cégep Marie-Victorin)

#### Oral Communication in Science: Self-Efficacy and Other Factors Influencing Performance of College Science Students

Oral communication is a source of stress for most people. Nonetheless, some college students display a real ability and feel enthusiastic when they must give an oral presentation while others are literally sick when faced with that perspective. We studied college Science students to document their selfefficacy and actual ability to communicate orally on scientific topics. In this presentation, we will present results on those aspects that were collected through questionnaires, interviews, and classroom observations. PETRA TURKEWITSCH (Cégep de la Gaspésie et des Îles), MURRAY BRONET AND MICHAEL DUGDALE (John Abbott College)

#### OCLaRE - A Platform for Scaffolding Student Lab Report Writing: Update on Development

OCLaRE is a free online platform designed to help students improve their lab report writing through a scaffolded writingto-learn pedagogy. Students participate in completing partially written laboratory report templates provided by their teacher, while OCLaRE automates selected tasks that are inessential to a given evaluation (e.g., performing lengthy calculations, producing graphs, and formatting). We report on the latest developments of this platform.

YANN BROUILLETTE AND CARMEN LEUNG (Dawson College)

#### Safe, Convenient and Hands-On At-Home Chemistry Experiments

CLAW (Chemistry Laboratory Alternative Work) At-Home experiments were designed for students to acquire hands-on experience during the COVID-19 pandemic by performing multiple experiments using household chemicals and materials. Eight experimental protocols for college level in-person laboratories are on the SALTISE website as open education resources. These procedures may still be used post-pandemic as experiments that students can carry out in the lab or for student projects.

#### R13 - Online and blended strategies

#### MEGHAN MARSHALL (Marianopolis College)

Blended Learning Design: a Critical Solution for Precarious Teaching Times

A Blended Learning (BL) Design was implemented into CEGEP General Chemistry I and II to offer predictability in precarious times while providing an environment to encourage student engagement, connection, and self-directed learning. The BL design comprised twelve learning experiences which each used a variation of team-based learning. Many students experienced connection through teamwork activities and exhibited selfdirected learning. The design reduced instructor stress through the flexibility of the design towards effortlessly switching between learning environments.



NADIA NAFFI (Université Laval), ANN-LOUISE DAVIDSON, NDÈYE ROKHY DIONGUE (Concordia University)

#### Leveling-Up Higher Education With Warp Zones

What happens when we transform graduate students' learning environments into simultaneous warp zones? It enables us to take what we usually define as distinct learning spaces and mode of delivery and make them interchangeable interaction and collaboration dimensions. In this presentation we will share two cases in which we applied the concept of "warp zones" in learning experience design and the pedagogical approach we adopted, and we will discuss the challenges we faced and the lessons we learned.

#### PALLAVI SIRJOOSINGH (McGill University)

Learning Strategies to Keep: Lessons from a Year of Online Lectures

The presentation will focus on the strategies employed in midto large-enrollment chemistry courses to mitigate some challenges associated with student engagement in online learning. The strategies include traditional examples like using in-class clicker questions and novel strategies that are possible due to an online format (concept videos and small group tutorials). The presentation will be looking at how to adapt/employ such strategies for future in-person or online classes.

#### S15 - Symposium

#### CHRIS WHITTAKER AND SELMA HAMDANI (Dawson College)

#### Reflections from Dawson's Fellows: CoP-er's journey

Fellows of Dawson College's Communities of Practice (CoPs) discuss on the benefits of participating in a CoP. What have they gained from their experiences and what have they contributed to the CoPs. There will be a free-form period for reflections and exchanges by the panelists, and finally, there will be time for questions, comments, and discussion by the audience.

#### S16 - Symposium

VÉRONIQUE BRULÉ, ARMIN ALEX YAZDANI, AND ANITA PARMAR (McGill University)

#### The Future of STEM Education

What could the future of STEM education look like? In this panel discussion, a team from McGill University, Dawson College, and Concordia University will briefly present common and novel areas of interest among STEM-focused teaching and learning units. Following this, the panel will discuss the following questions: (a) What Universities and Colleges are doing to better prepare their students for a rapidly changing world? and (b) How are our institutions reconceptualizing STEM education?

#### S17 - Workshop Symposium

#### SAUL CARLINER (Concordia University)

#### Communicating Instructional Content: A Workshop in Opening and Closing Lessons

"You only get one chance to make a great first impression." More than mere expressions, such sayings stress the importance of the first and last moments of individual lessons and entire courses. This workshop explains why these moments play an outsize role and provide participants with opportunities to plan introductory and closing sequences for use in teaching so they engage learners at the start and close by encouraging learners to apply the new skills.

#### 11h00

#### Keynote - 03

MANU KAPUR (ETH)

The Future Learning Initiative

One thing is clear. Future advances in learning cannot be achieved by learning scientists alone. True to the original intent of the learning sciences, advances in our understanding of learning as a complex phenomenon will require interdisciplinary efforts. I will discuss how, at ETH Zurich, we have embarked on such efforts to advance the science of learning in and across the physiological, neural, cognitive, embodied, and socialcultural layers of learning. I will situate these efforts in actual interdisciplinary research projects that have started to reveal significant findings, with some having direct implications for practice. I will end my talk by describing three scientific bets for the future of learning.

#### 12h00

#### **Closing & Awards**

ELIZABETH CHARLES (Dawson College), ROB CASSIDY, CAROL HAWTHORNE, SUELI BONAFIM, AND BOJANA KRSMANOVIC (Concordia University), MICHAEL DUGDALE (John Abbott College)



#### 13h30

#### **Post-conference workshop C**

SEAN HUGHES AND MICHAEL DUGDALE (John Abbott College), KEVIN LENTON AND RHYS ADAMS (Vanier College), CAROLINE CORMIER AND VÉRONIQUE TURCOTTE (CEGEP André-Laurendeau), KARL LAROCHE (Vanier College)

Structuring the New Science Program to Better Prepare Our Students for University – Encouraging Them to Think More Like Scientists Via More Authentic Lab Experiences / Développer le nouveau programme de Sciences de la nature pour mieux préparer nos étudiants à l'université : expériences plus authentiques en laboratoire pour penser comme un scientifique

"What skills do our students need for working in science-based fields in the 21st century? In this workshop, we invite you to revisit with us the elements of the exit profile; what do we want Science program students to be capable of doing after completing the newly-revised program? A report produced in the initial stages of the science program revision (ÉduConseil, 2014) suggested that our current model was quite effective in preparing graduates for university studies, yet pointed out some gaps in their ability to both implement scientific processes and to think critically. With the new program upon us, it is time to reassess what skills our graduates should leave the program with and improve upon the pedagogical foundation currently in place.

Recognizing that science is inherently tied to the laboratory, we will also explore how best we can support student development as scientists. What kinds of authentic, practical, and hands-on experiences can we design for our students to best engage them in scientific reasoning and deduction? How can we help them think more like a scientist? How can the comprehensive assessment be designed to ensure the student has developed these skills?

The session will be capped with a panel discussion focused on how some colleges have successfully implemented a coherent approach to developing experimental engagement skills within the current program, and what lessons can be learned from their design process.

De quelles compétences nos étudiants ont-ils besoin pour travailler dans des domaines scientifiques au 21e siècle? Dans cet atelier, nous vous invitons à venir réfléchir avec nous sur le profil de sortie que nous souhaitons pour nos étudiants, dans le cadre du nouveau programme de Sciences de la nature. Un rapport rédigé lors des premières phases de la révision du programme de sciences (ÉduConseil, 2014) suggérait que notre modèle actuel était assez efficace pour préparer les diplômés aux études universitaires, mais il soulignait certaines lacunes en matière de leur habileté à prendre en charge une démarche scientifique. Avec l'arrivée du nouveau programme, il est temps d'examiner attentivement ce que nous souhaitons que nos étudiants soient capables de faire lorsqu'ils entrent à l'université, en nous appuyant sur les bons coups pédagogiques que nous faisons déjà.

Reconnaissant que la science est intrinsèquement liée au laboratoire, nous chercherons également à savoir comment soutenir au mieux leur développement en tant que scientifiques. Quels types d'expériences authentiques, pratiques et concrètes pouvons-nous concevoir pour nos élèves afin de les engager au mieux dans le raisonnement et la déduction scientifiques? Comment pouvons-nous les aider à penser davantage comme des scientifiques? Et comment l'épreuve synthèse de programme peut-elle être conçue pour témoigner de l'atteinte de la compétence d'intégration?

La session se terminera par un panel sur la façon dont certains collèges ont réussi à mettre en œuvre une démarche cohérente pour le développement des habiletés de prise en charge de la démarche expérimentale dans le cadre du programme actuel, et sur les leçons que l'on peut tirer de leur processus de conception.

Intended audience:CEGEP Science teachers, science program coordinators, university professors, Science program deans, students (I certainly hope we bring the RAs to the session), lab coordinators"



# Words of Appreciation / Mots d'appréciation



SALTISE wishes to thank the Entente Canada-Québec relative à l'enseignement dans la langue de la minorité et à l'enseignement des langues secondes (ECQ), managed by Ministère de l'Éducation et de l'Enseignement supérieur, for their contribution towards the funding of the SALTISE/S4 project that has allowed this Community to grow. We greatly appreciate the generosity and confidence they have shown in supporting the vision of our many inter-institutional and interorder collaborations and partnerships. Thank you! Le comité d'organisation du SALTISE tient à remercier Entente Canada-Québec relative à l'enseignement dans la langue de la minorité et à l'enseignement des langues secondes (ECQ), gérée par le Ministère de l'Éducation et de l'Enseignement supérieur, dont le soutien a permis de financer le projet SALTISE/S4 grâce auquel notre communauté ne cesse de croître. Nous apprécions grandement leur générosité ainsi que la confiance qu'ils manifestent envers nous en soutenant nos collaborations interinstitutionnelles, nos partenariats et notre vision. Merci!



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Tomlinson Project in University-Level Science Education



# SALTISE 2021

Acknowledges the support of its network partners and look forward to future collaborations

