



uOttawa



# Open Scholarship: steps, challenges, and opportunities

Alison Flynn

FlynnResearchGroup.com

Twitter: @alisonbflynn

#OER #OpenEd

Please go to [menti.com](https://www.menti.com) and answer the questions using code: 70 25 36



**Goal: Graduation and  
toward career goals**







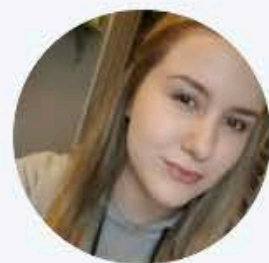
Many barriers stand in the way





blogTO @blogTO · Jun 19

OSAP cuts are more significant than #Ontario students anticipated  
[bit.ly/2RqIExD](https://bit.ly/2RqIExD)



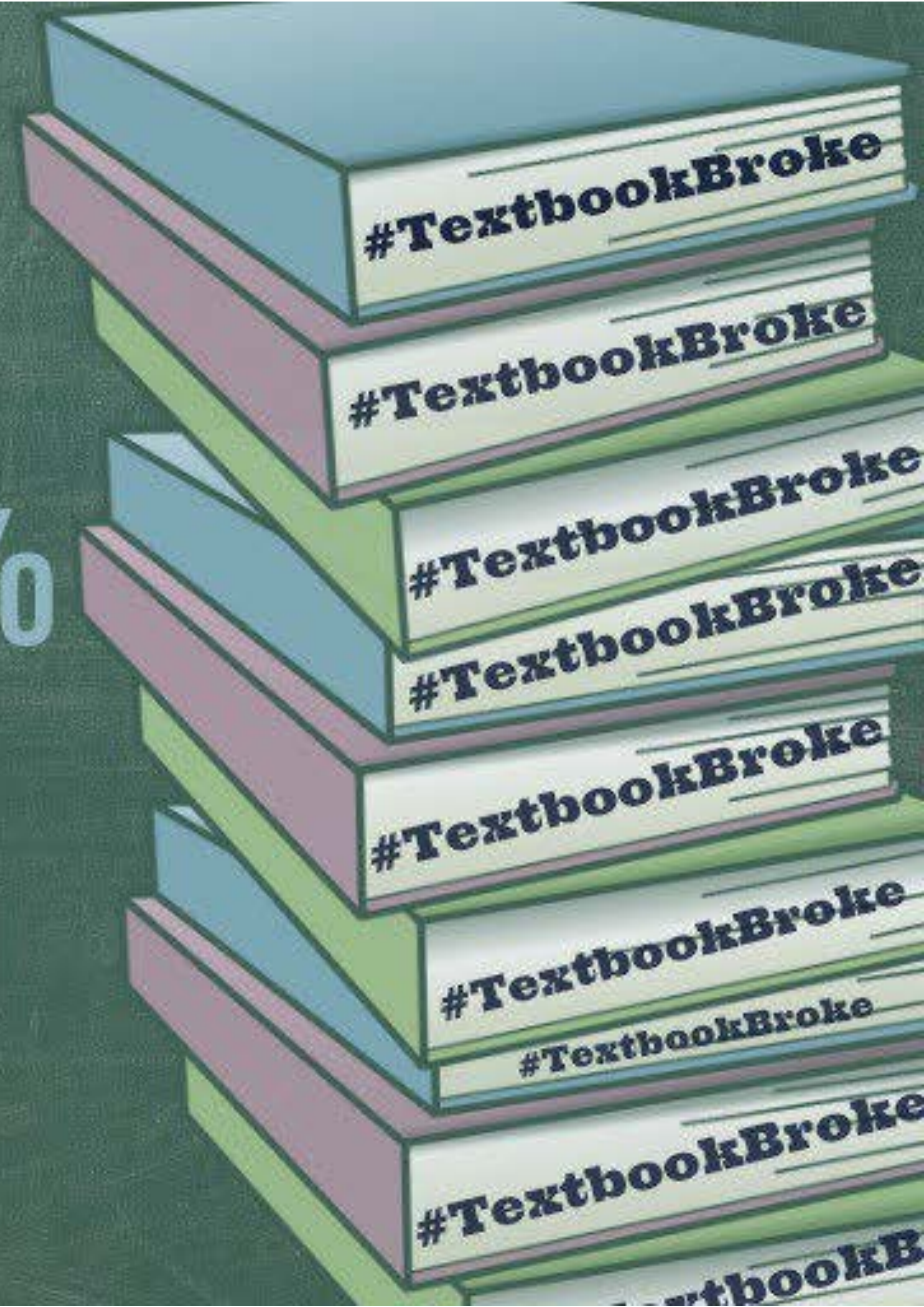
Marianne @Mariann84249936 · Jun 18

I am receiving HALF the amount of #OSAP funding that I received last year. I'm nearly in tears, as I worry about being able to afford school this year. So thank you @fordnation for making it nearly impossible to go to school and shaping our future for the worse.

EDUCATION  
IS A RIGHT



THE COST OF COLLEGE  
TEXTBOOKS HAS RISEN BY 82%  
OVER THE LAST DECADE OR 4  
TIMES THE RATE OF INFLATION



DURBIN.SENATE.GOV



# Ontario Undergraduate Student Alliance Campaign

## #TextbookBroke

**OUSA**  
Ontario Undergraduate Student Alliance







"I just spent **\$952** on textbooks.  
I could have spent that on  
**rent & food.**"



"I just spent **\$650** on textbooks.  
I could have spent that on  
**groceries & rent!**"



# SUSTAINABLE DEVELOPMENT GOALS

## 4 QUALITY EDUCATION



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



# Goal: more equitable, diverse, and inclusive institutions





# Open scholarship takes many forms

Teaching materials are made openly available

Open data is used

Openness in sharing research outputs

Open educational resources are incorporated in coursework

Data produced is open and available for reuse

Involvement in Open Government initiatives

Use of Creative Commons licenses

Students are encouraged to share their work online

Open access publishing

Use or creation of open source software



# Leaders, you are needed!



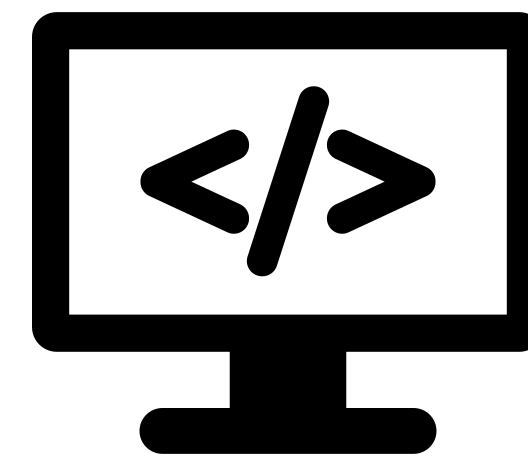
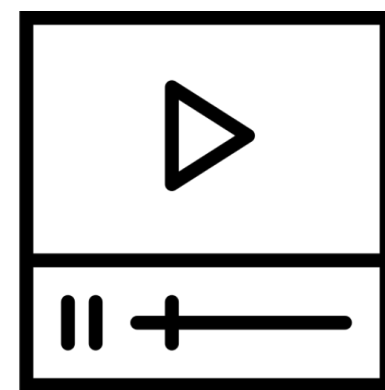


# Open Education Resources (OERs)

“Teaching, learning, and research resources in any medium  
— digital or otherwise—

that reside in the **public domain** or have been released  
under an **open license** that

permits **no-cost access, use, adaptation, and redistribution**  
by others with no low limited restrictions.”





# Advantages go beyond free and online

Digital ++

Immediate

Choice

Current

Reuse — Retain — Redistribute — Revise — Remix

Create

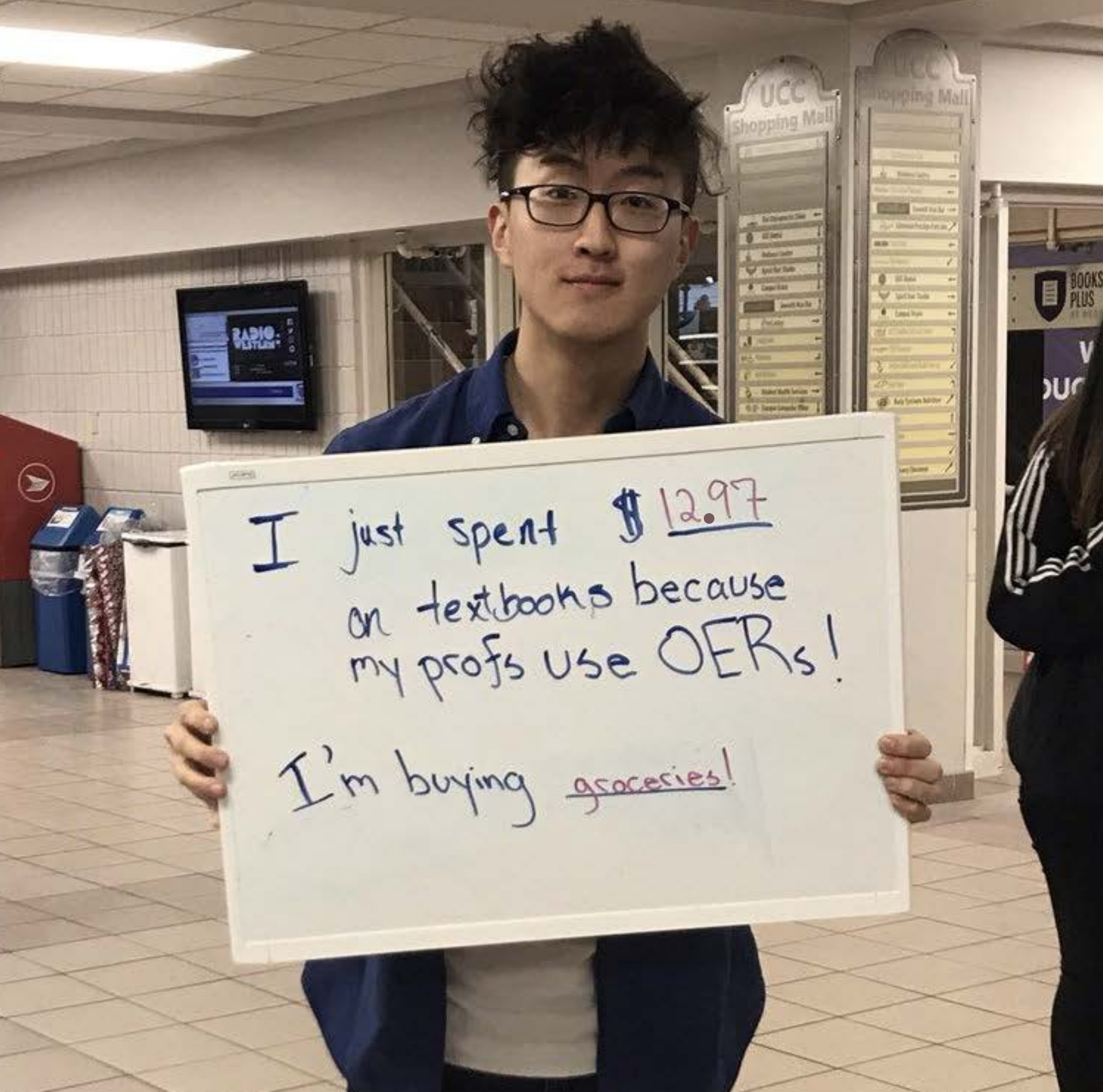


# Students' reactions to a cost-free course: \_\_\_\_\_

 **syl·la·bus**  
/ˈsɪləbəs/







“I just spent **\$12.97** on  
textbooks because  
**my profs use OERs!**

I’m buying **groceries!**”

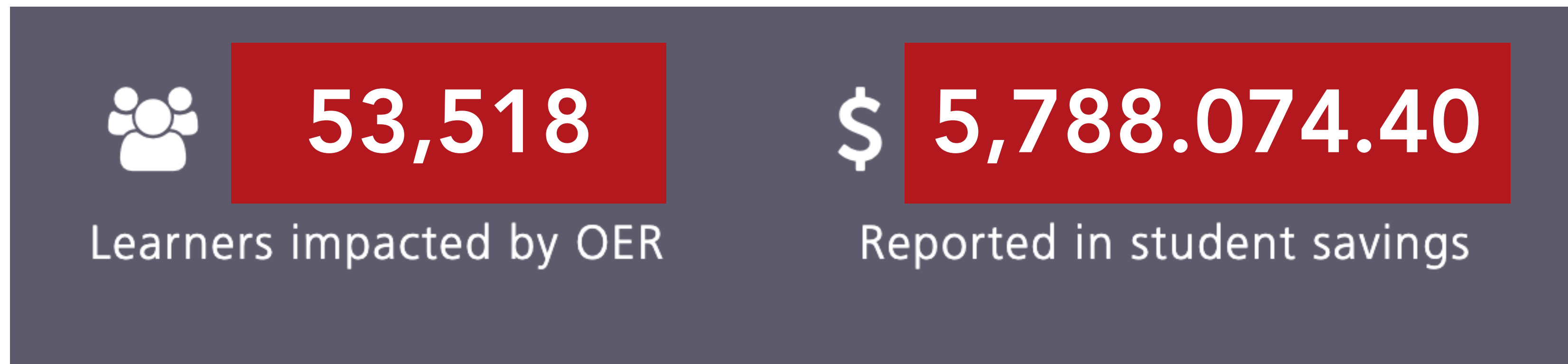
—Danny Chang  
twitter/channydang



# Savings achieved using OERs



*eCampus*  
Ontario



\*OER cost savings are calculated based on adoption reports from educators at Ontario colleges and universities. Adoption reports include number of students in a course and dollar value of textbook being replaced by a free resource.



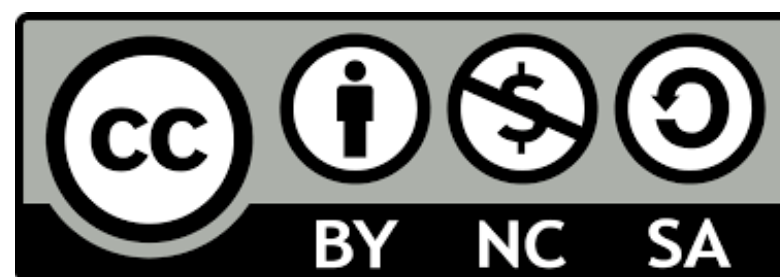
# Student-driven, bilingual, interactive OERs

**chimieorg101**  
Labod'apprentissage

**CROISSANCE**  
**et OBJECTIFS**

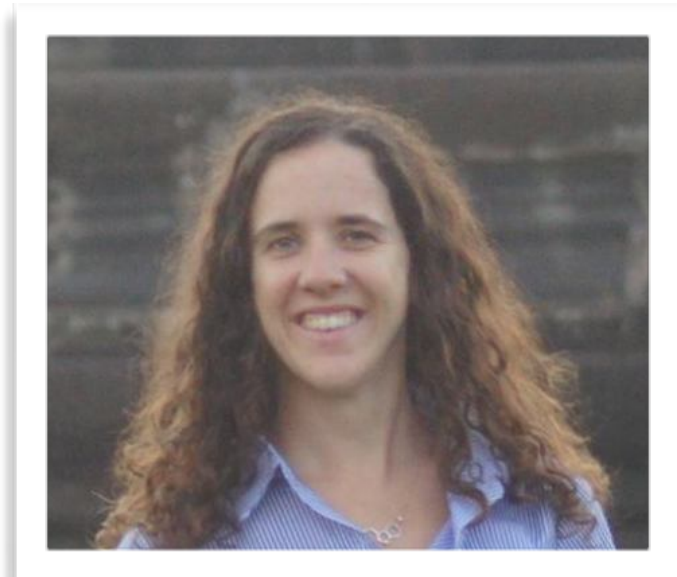
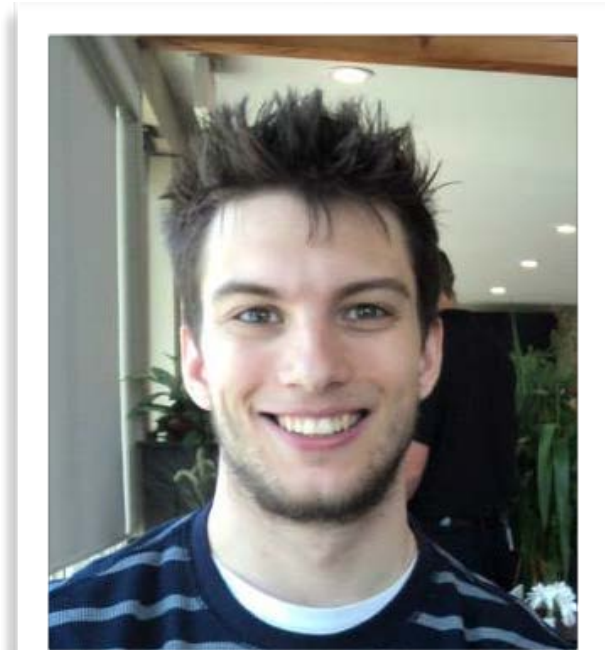
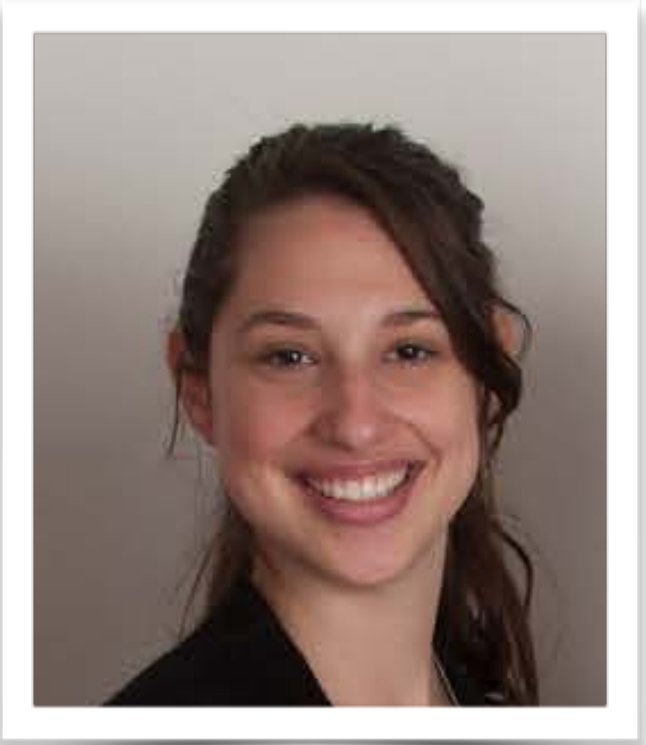
**orgchem101**  
LearningLab

**GROWTH**  
**& GOALS**





# Students are partners in the development teams





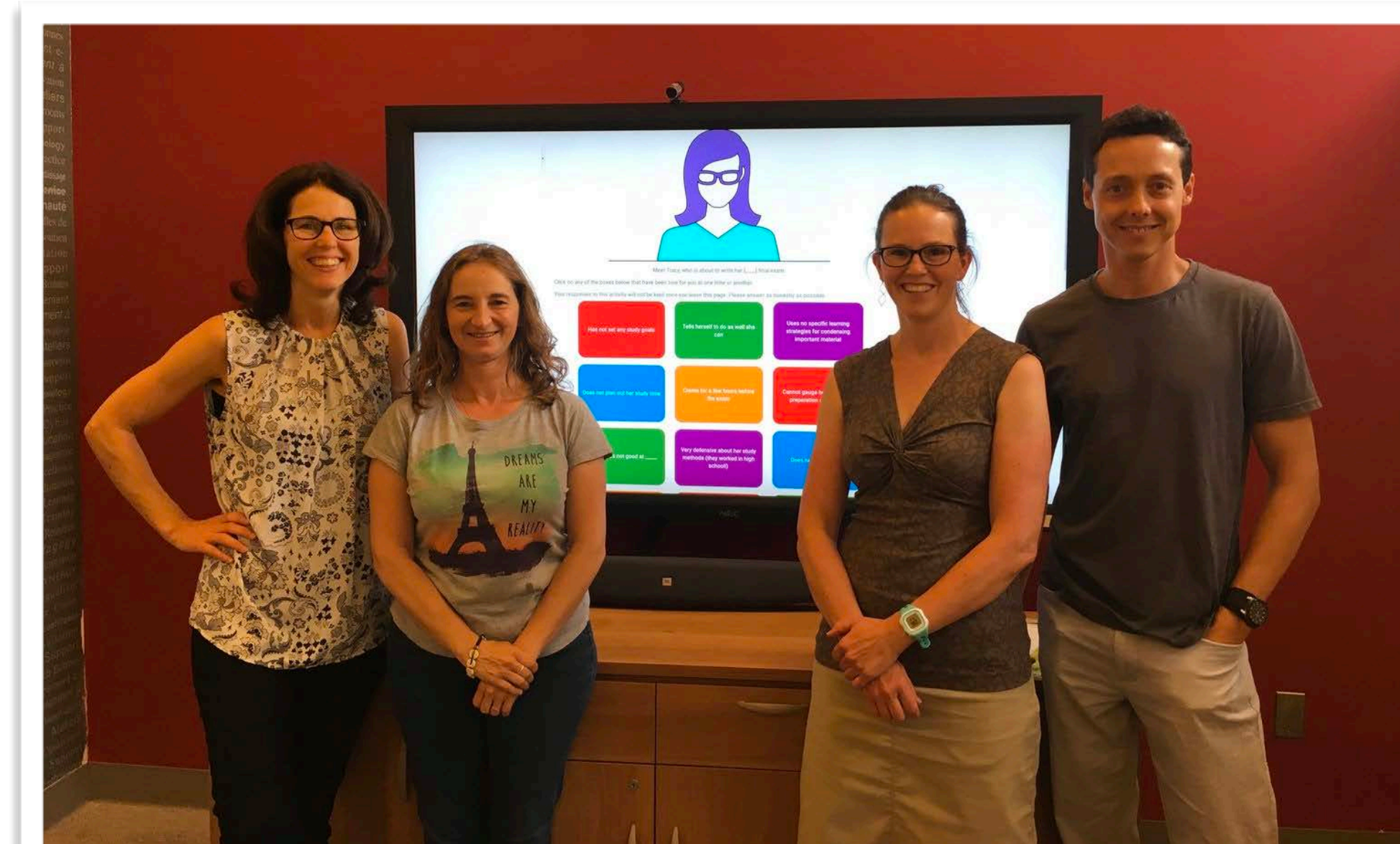
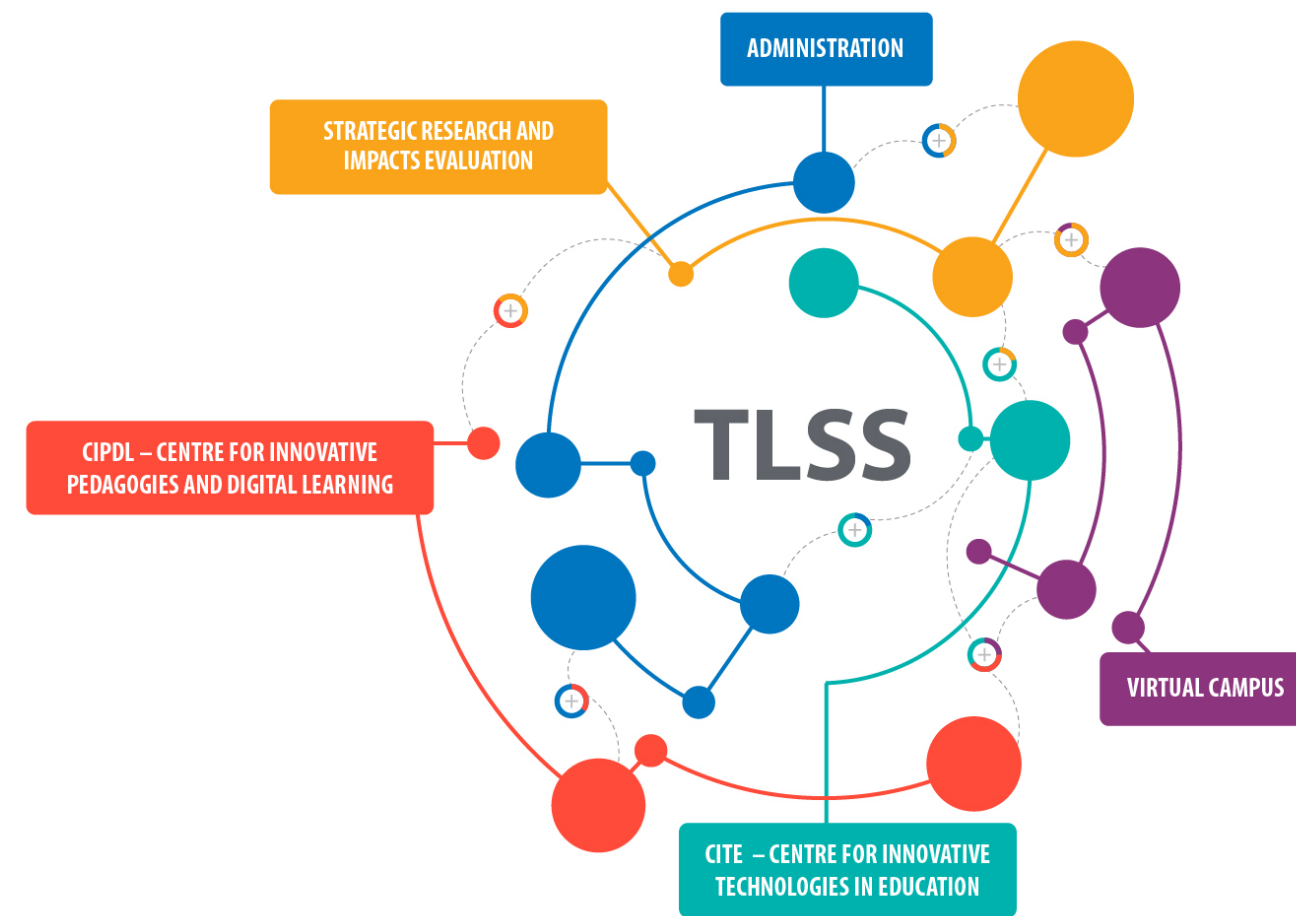
# Students are consulted early and often



Focus groups, workshops, surveys, *etc.*



# Collaborations: Teaching and Learning Support Service and other experts





## rganic NO<sub>2</sub>menclature

Name it + Draw it → Master it

Learn to identify functional groups, and name and draw molecules.

[learn more](#) [launch module](#)

## rganic Mechanisms

Mastering the arrows

Master the electron-pushing arrows and symbols used to describe reaction mechanisms.

[learn more](#) [launch module](#)

## Acid-base Reactions

Mastering the protons

Acid-base chemistry is everywhere. Master the key concepts here.

[learn more](#) [launch module](#)



# Create a quiz aligned with the learning outcomes

[Home](#)

[Nomenclature rules](#)

[About](#)

[Help](#)

## Try a quiz

Select one of the options below to try a quiz of this level. Upon selecting an option, the corresponding categories to the different levels will be identified. Please note these categories can be modified in the section "**Create your own quiz**".

- Level 1       Level 2       Level 3       Randomized

## Create your own quiz

### 1 Select a question type:

- Identifying the functional groups
- Naming molecules
- Drawing molecules

### 2 Select structures with:

- No functional groups; alkanes only
- Only one functional group
- More than one functional group
- Stereogenic centres (*R/S*)

### 3 Select a category of compounds ([More info](#))

Available questions:  
243/944

[Start Quiz](#)



# Guided and interactive

 **Organic  
Mechanisms**  
Mastering the arrows

 **Acid-base  
Reactions**  
Mastering the protons



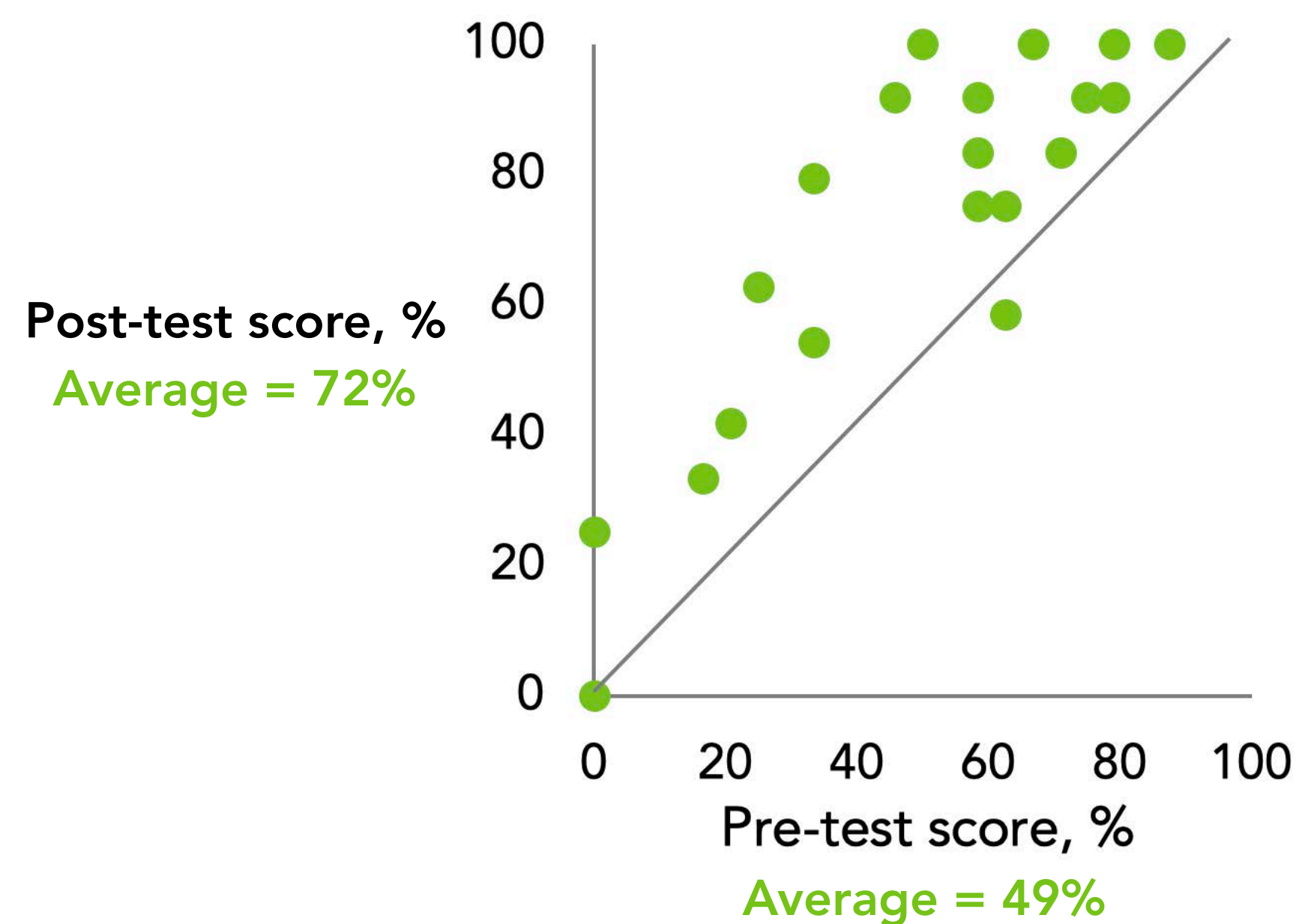
Get started

----- **Self-assessment** —> **pre-test**

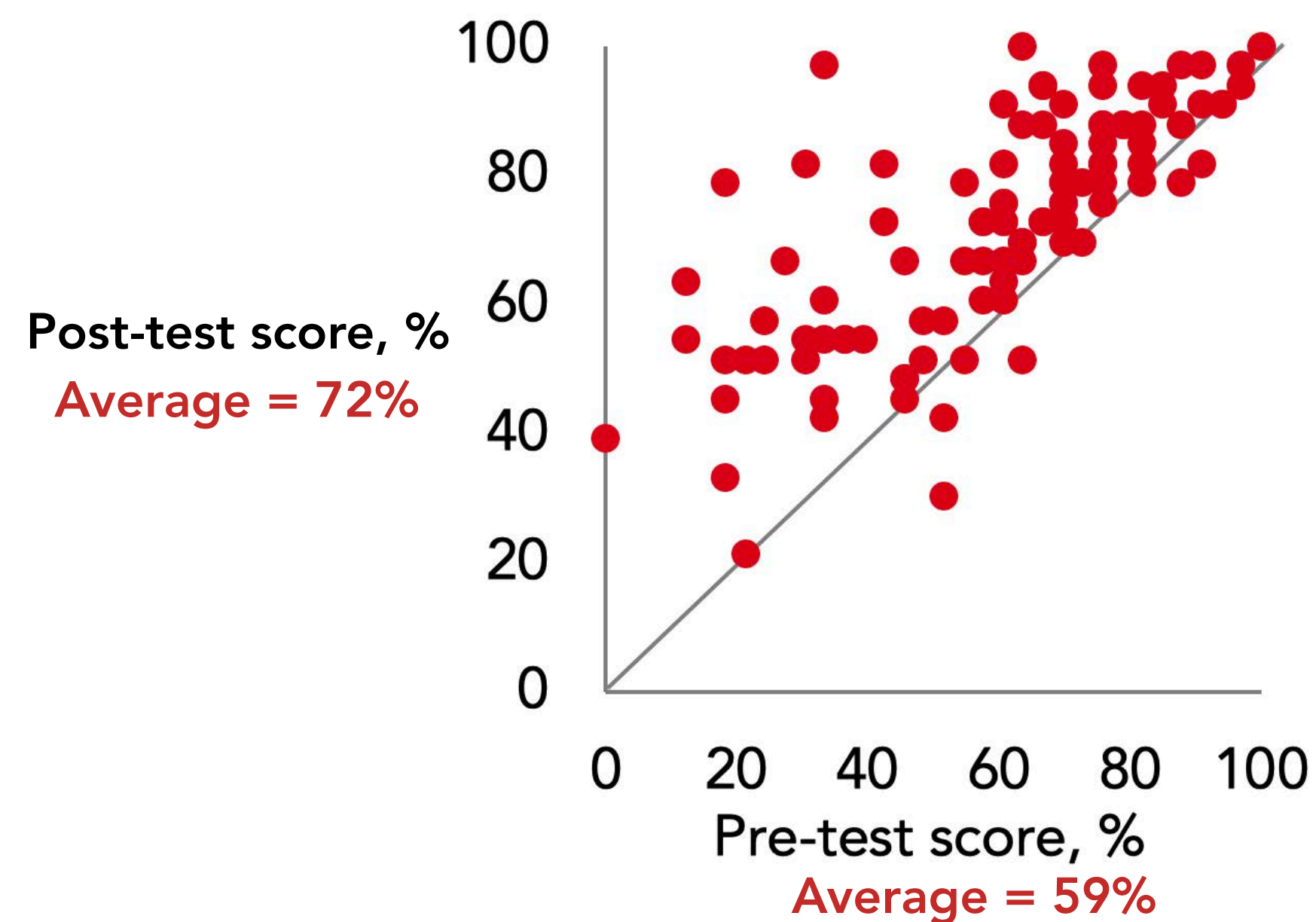


# Large learning gains in short time

 rganic  
**NO<sub>2</sub> nomenclature**  
Name it + Draw it → Master it



 rganic  
**Mechanisms**  
Mastering the arrows



All studies approved by  
uOttawa Research Ethics Board



# Used in a course

## rganic NO<sub>2</sub>omenclature

Name it + Draw it → Master it

Learn to identify functional groups, and name and draw molecules.

[launch module](#)

## rganic Mechanisms

Mastering the arrows

Master the electron-pushing arrows and symbols used to describe reaction mechanisms.

[learn more](#)

## Acid-base Reactions

Mastering the protons

Acid-base chemistry is everywhere. Master the key concepts here.

[learn more](#)

Part of class activities

An external resource

Align with learning outcomes & assessment

Will this be  
**ON THE TEST?**



# Learning to learn: a module for courses

GROWTH  
& GOALS



## Common challenges for students

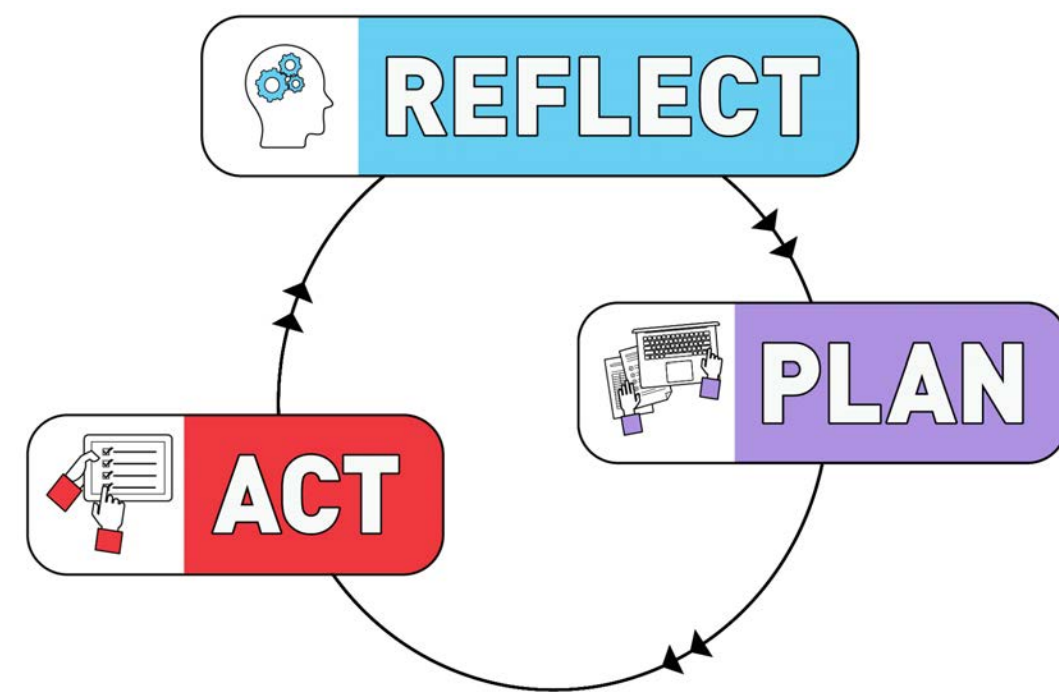
1. Managing course and life goals and demands
2. Dealing with failure
3. Identifying what to learn and how

## Undergraduate Degree Level Expectations

- 5: Awareness of limits of knowledge
- 6: Autonomy and professional capacity



# Learning to learn: a module for courses



**Self-regulated learning**  
**Goal-setting**



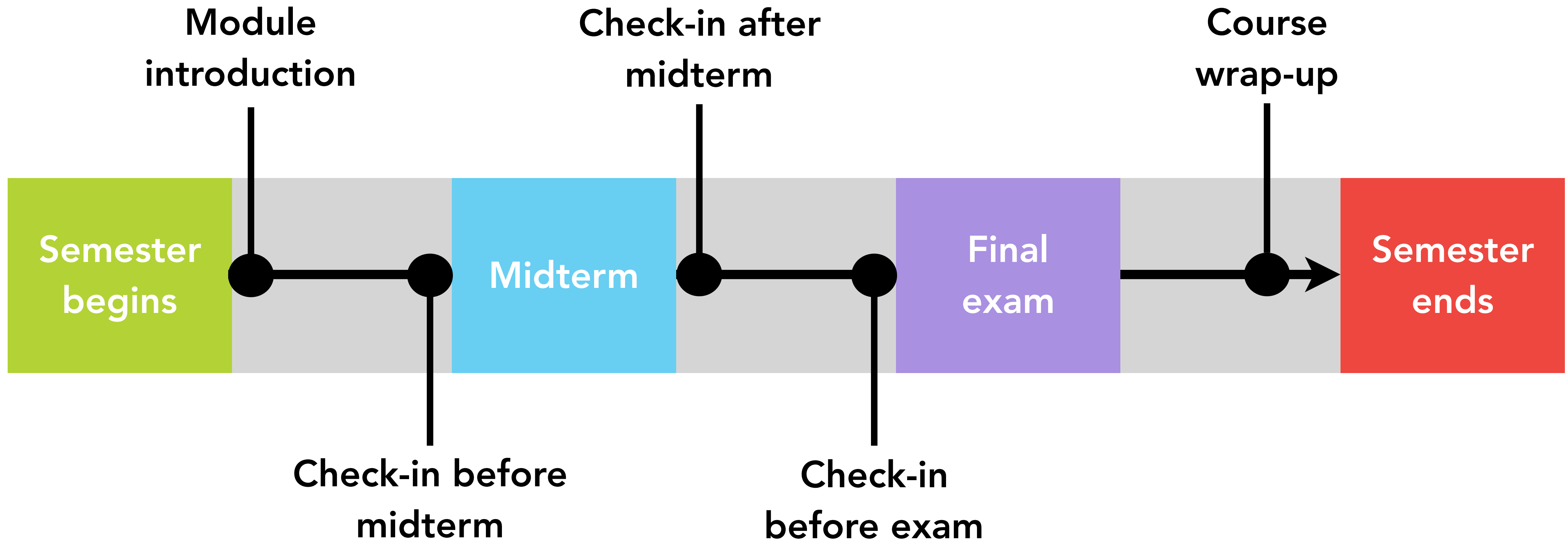
**Growth mindset**



**Metacognition**  
**Learning outcomes**



Integrated in courses. Aligned with learning outcomes.





# Practical participatory evaluation model



Resources

Students

Instructors

Program Development



# Preliminary findings

**>2000** students

**>75%** completion rate\*

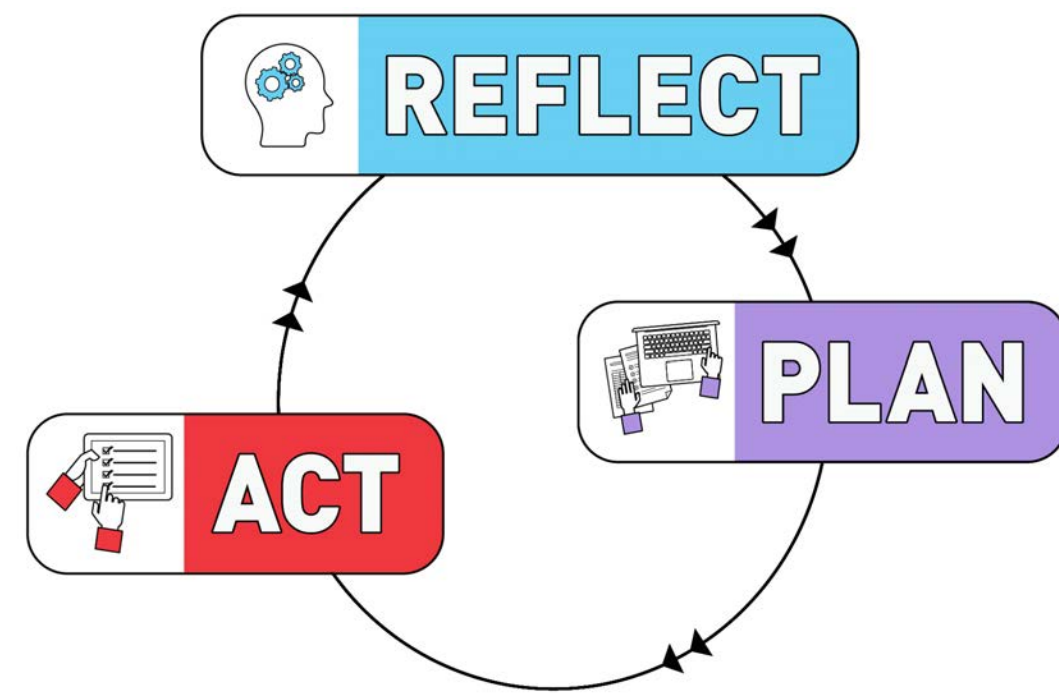
\*When given a course mark incentive

**>95%** using  
**aspects in next course**  
(N = 43)





# To what extent are students achieving the module's learning outcomes?



**Self-regulated learning**  
**Goal-setting**



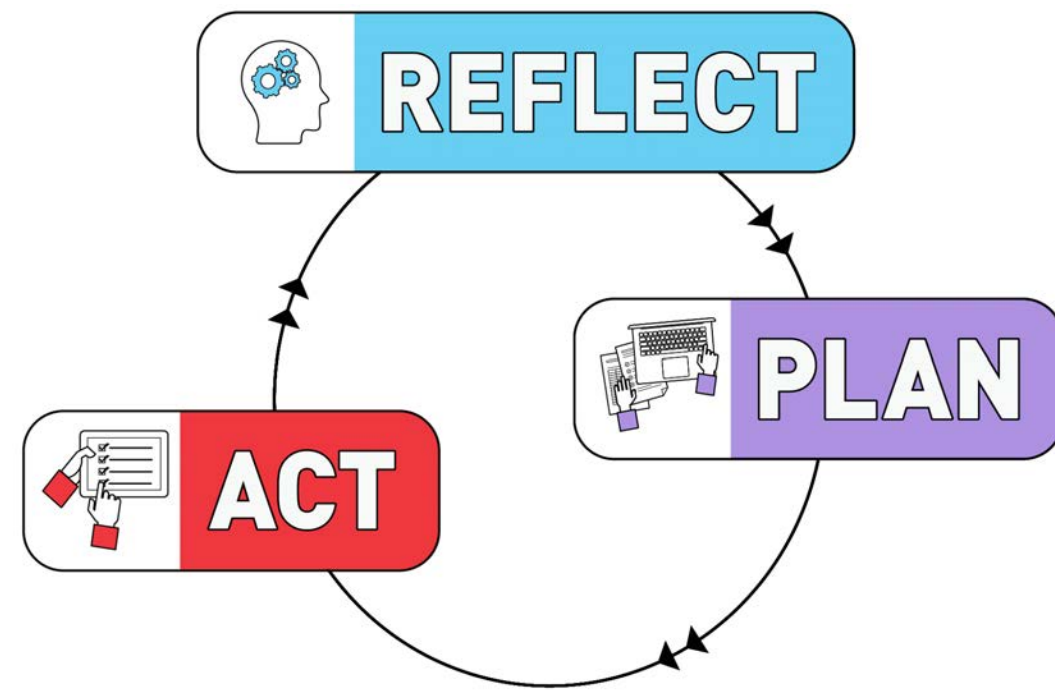
**Growth mindset**



**Metacognition**  
**Learning outcomes**



# Next steps



Self-regulated learning  
Goal-setting



Growth mindset



Metacognition  
Learning outcomes

Programs



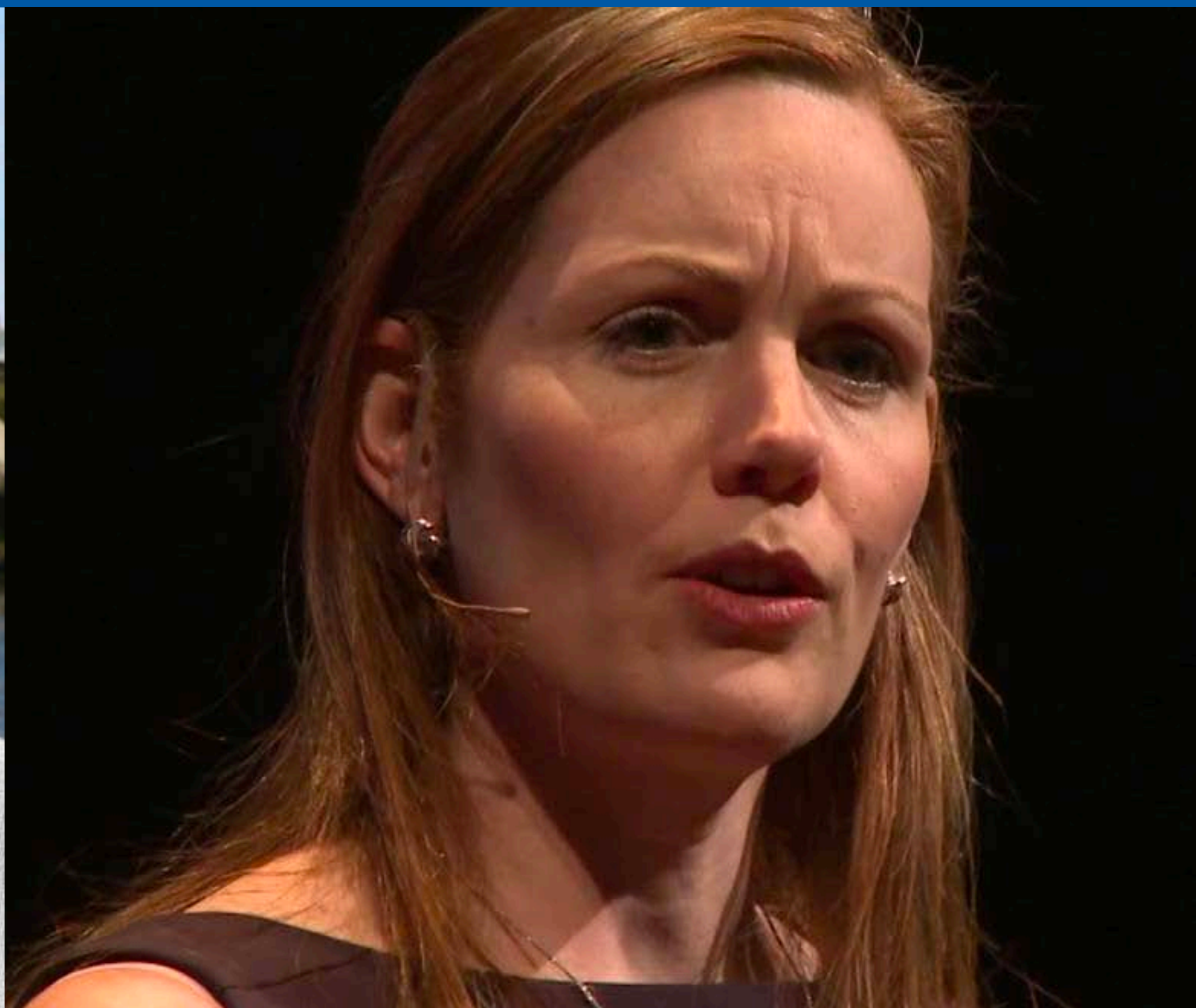


Next steps:  
Indigenous Knowledge, resilience, and wellness

**GROWTH**  
& **GOALS**



Mitchell Huguenin



Robyne Hanley-Dafoe



Fergal O'Hagan





# How can you support students through Open Scholarship?

Students  
Educators  
Presidents  
Media  
Chairs  
Librarians  
Directors  
Deans  
Vice-presidents  
Advisors  
Parents  
Developers  
Director



# Leaders, you are needed!





# Where to find OERs



**OPEN PEDAGOGY NOTEBOOK**  
Sharing Practices, Building Community





# OPEN LIBRARY

*eCampus*  
Ontario

## FIND

Search our collection of open textbooks and other open resources. The curated collection aligns with top subject areas in post-secondary education and features reviews from experts and educators across Canada.

**FIND A RESOURCE**

## CUSTOMIZE

Did you know open educational resources can be adapted to suit your needs or your students' needs? Learn how to customize an OER for your course.

**GET STARTED**

## CREATE

There are many tools to create OER. Get started with Pressbooks or explore other options to create a resource for the Open Library.

**LEARN MORE**



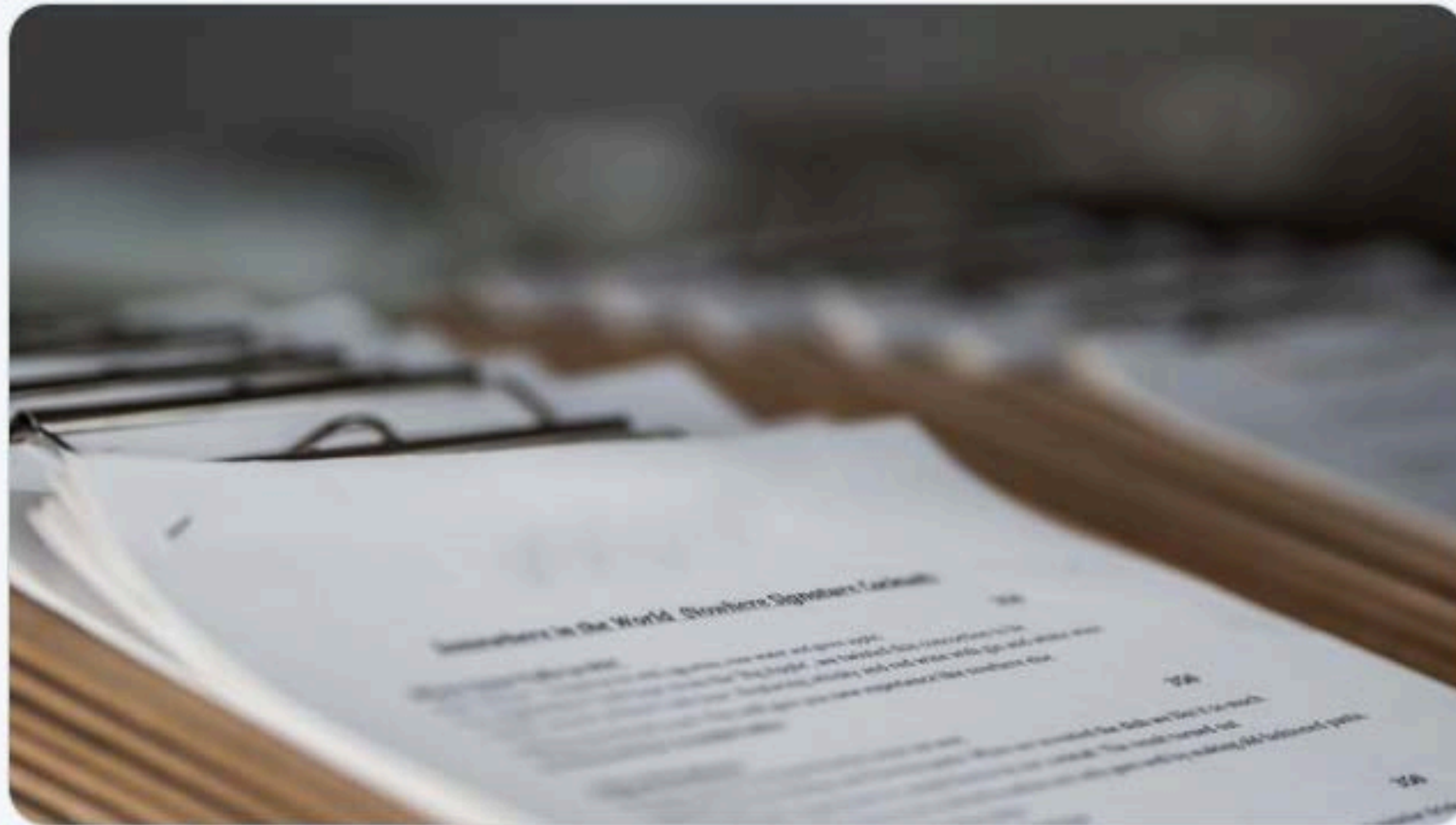
# BC Open Homework System



**BCcampus** @BCcampus · 18h

Work has begun on the BCcampus Open Homework Systems (OHS) project as part of the recent \$3.26 million in funding earmarked by the B.C. government for open educational resources! Read more:

[urls.bccampus.ca/6o9](https://urls.bccampus.ca/6o9) #OpenEducation #BCPSE #OER #OEP #OpenEd #OpenHomework





# OERs in tenure and promotion



uOttawa

APUO

TO THE  
ADVANCEMENT  
OF KNOWLEDGE



20.3.2.1: "Research activities describe:

(f) "preparing **innovative textbooks, and developing innovative teaching materials**

*to the advancement of knowledge"*

*For candidates in the Educational Leadership Stream:*

*"Contributions to the practice and theory of teaching and learning literature, including publications in peer-reviewed and professional journals, conference publications, book chapters, textbooks and*

***open education repositories / resources"***



# Small steps or a big leap



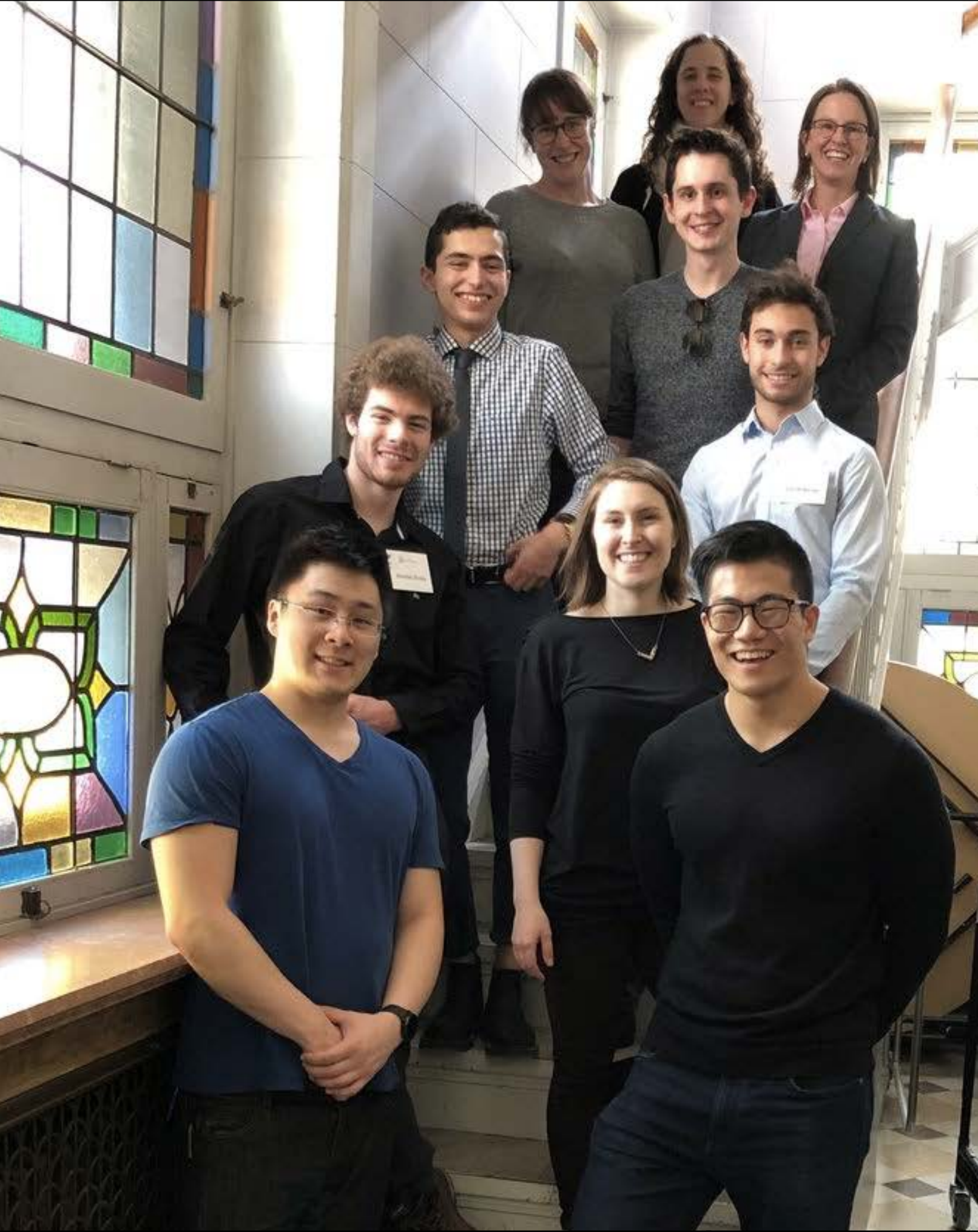




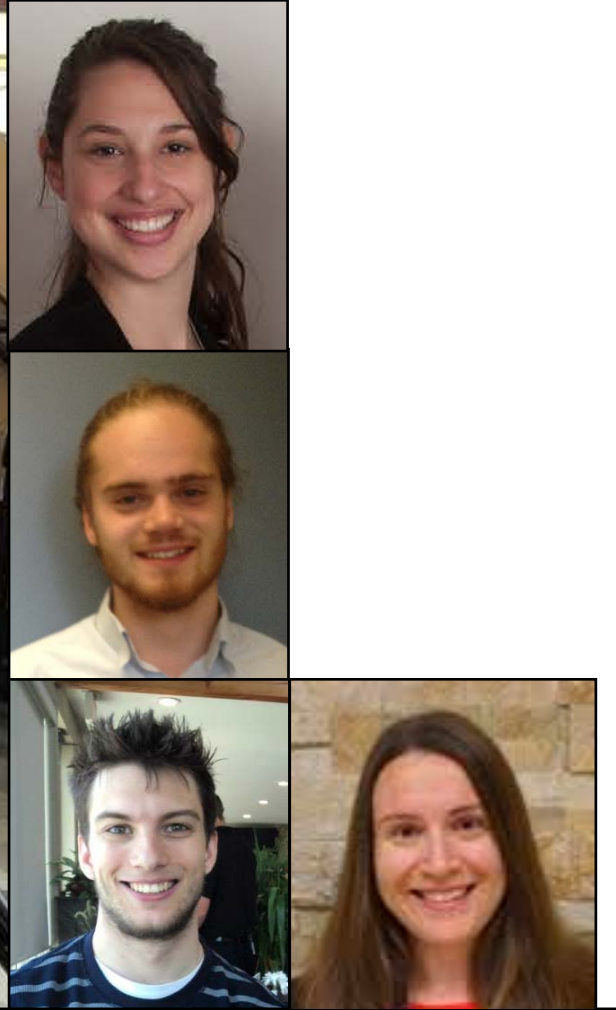
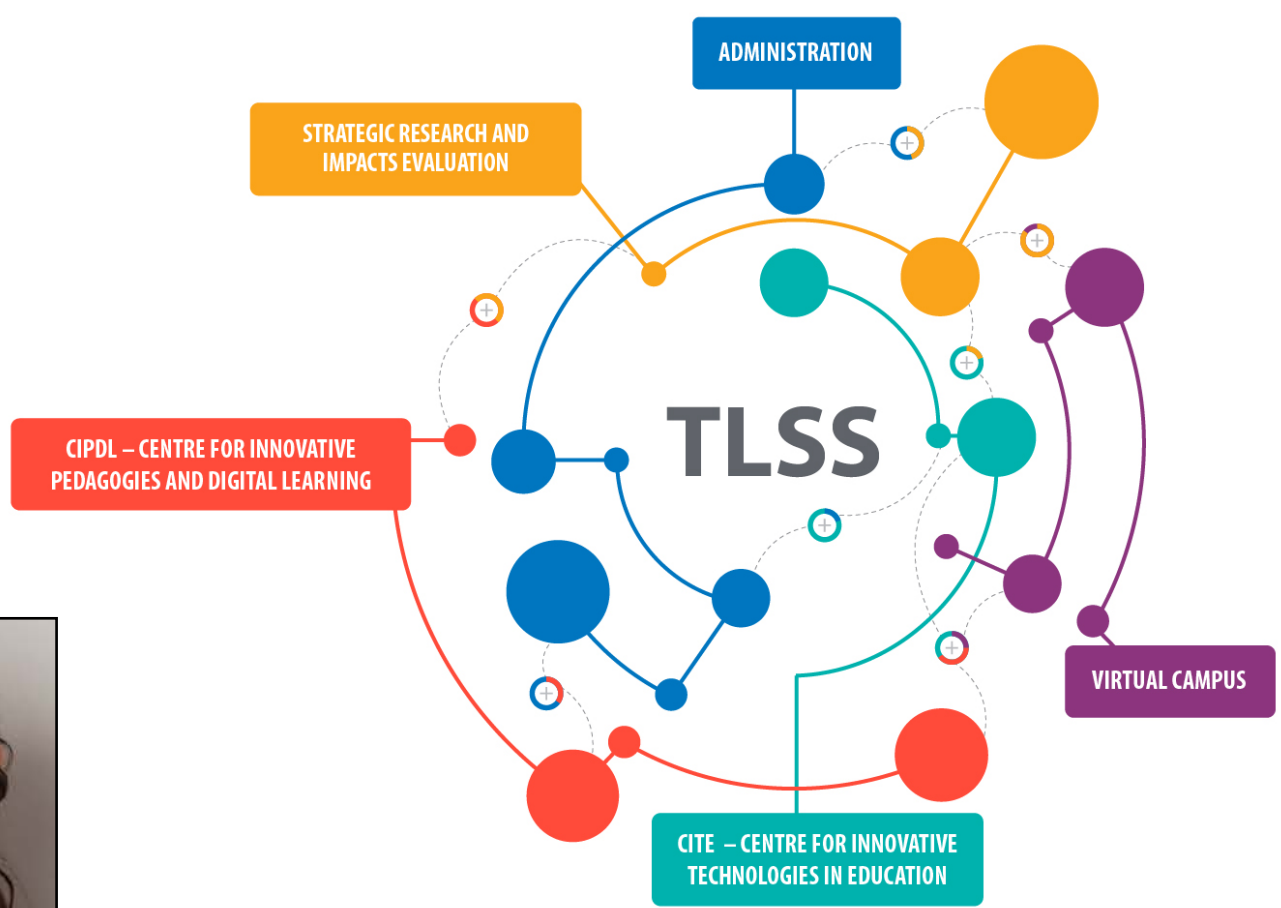
Let's help  
more learners  
achieve their  
goals, better







[menti.com](https://www.menti.com)  
code 70 25 36



*ecampus*  
Ontario

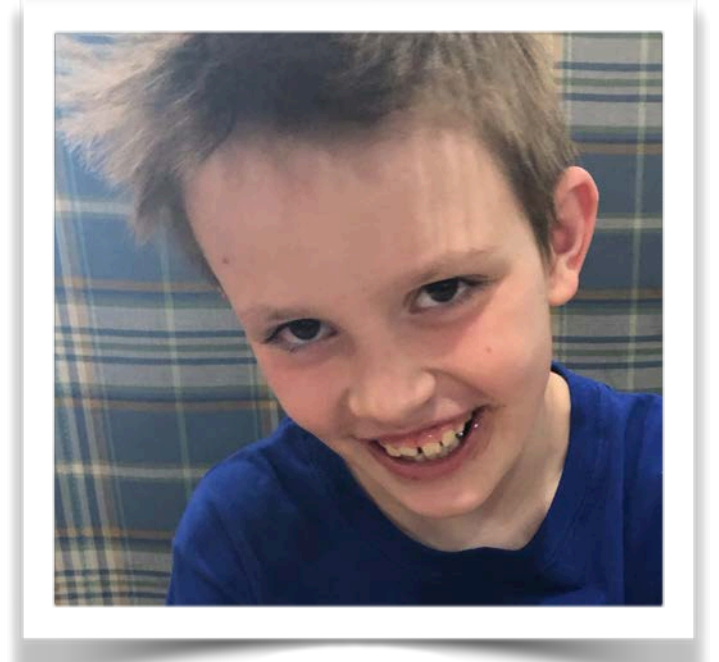


Centre de recherche sur les services  
éducatifs et communautaires  
Centre for Research on Educational  
and Community Services



TRENT  
UNIVERSITY

uOttawa



FRG  
FLYNN RESEARCH GROUP