



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

CREATE CHANGE

# Teaching and Learning 2018



# Teaching and learning for the work of the future

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*“What is certain is that the future is uncertain. . .What is important is to build resilient and adaptable labour markets that allow workers and countries to manage this transition with the least possible disruption, while maximizing the potential benefits of the three mega trends [demographic change, technological progress, globalization].”*

*Future of Work and Skills,  
OECD 2017*

A BRIEF LOOK at the changing demands for skills in the workplace

# READY...

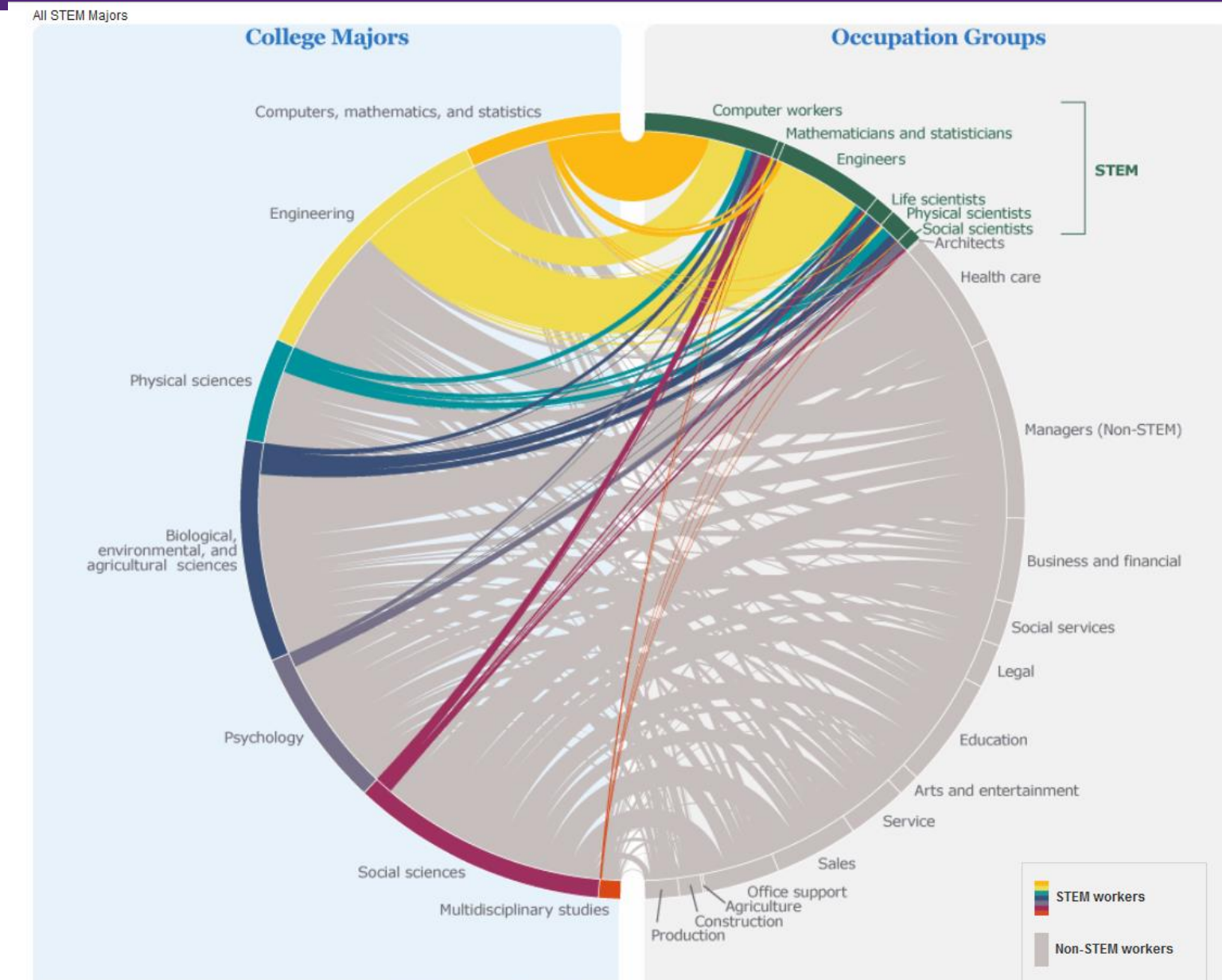
...for a world of new and changing skills?

The OECD “Ready for Tomorrow” campaign aims to spark policy action to ensure that changes in the world of work create new opportunities for all rather than increasing inequalities.

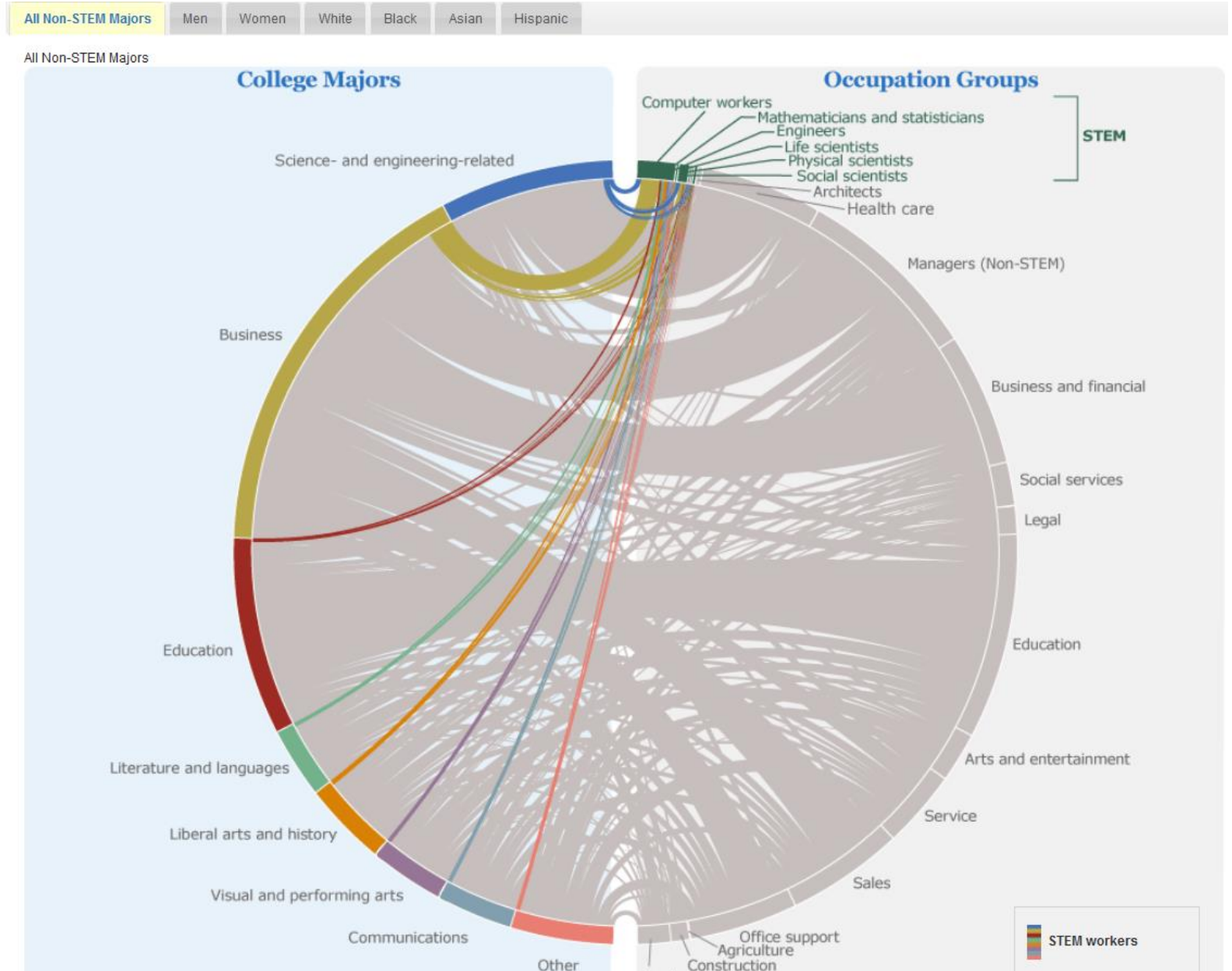


Our graduates  
already shift  
career paths

e.g. STEM Majors



e.g. non-STEM Majors



Disruption is  
already here...

# DIGITAL DISRUPTION AND THE LAW

Balancing tradition with innovation in a fast-changing industry is a  
challenge for legal educators

**Online lawyers and digital disruption  
is shaking up the legal profession.**

**How digital disruption is  
changing the game for small  
law firms**

THE COMING SKILLS REVOLUTION

# Humans Wanted

How Canadian youth can thrive in the age of disruption



And the deepest  
changes are  
yet to come...





# LIVING PRODUCTS ARE AT THE CORE OF THE TRANSFORMATION



A combination of product features, services and (new) experiences

Core of the change – **Connected and Smart**

Business models – **Combination, Disrupted, AaS**

**Re-invention** of the product:

- Hardware – Container
- Software – Continuous reconfiguration, value
- UI – Hyper-personalized, context based

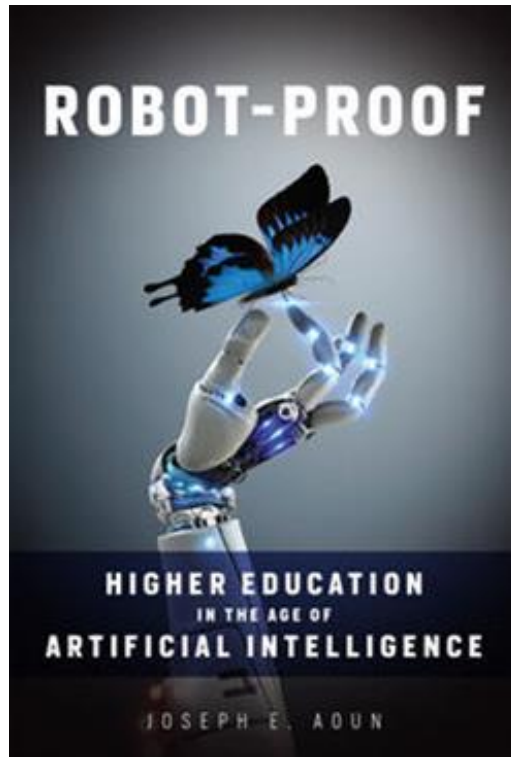
**Ecosystems** – Drive competition vs. features



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4

We can try to project out  
from current trends....



**“All our students should  
develop Capability in  
*Humanics***

***(data analytics + human-centred design)”***

**Joseph Aoun  
President  
Northeastern University**



# But most new workplace roles will require new capabilities...

“...new learning approaches are needed... that boost innovation in manufacturing by improving...**systems thinking capability**”

*Learning Factories for research, education and training  
5<sup>th</sup> Conference on Learning Factories 2015*

## About Systems Thinkers

The Waters Foundation identifies these 14 habits of system thinkers:



Seek to understand the big picture



Observe how elements within systems change over time



Recognize that the system's structure generates its behavior



Identify the circular nature of cause and effect relationships



Make meaningful connections within and between systems



Change their perspective to gain increased understanding



Find, examine and test assumptions



Resist the urge to come to quick conclusions



Ask how current mental models advance results or hinder efforts



Pay attention to accumulation in systems, and their rates of change



Recognize the impact of time delays and adjust their logic



Measure and assess results and make changes throughout the process

These traits can be nurtured across curriculum. Collaborative projects can be implemented to build these skills. Having these skills will prepare adult learners to innovate alongside machines, rather than be replaced by them.

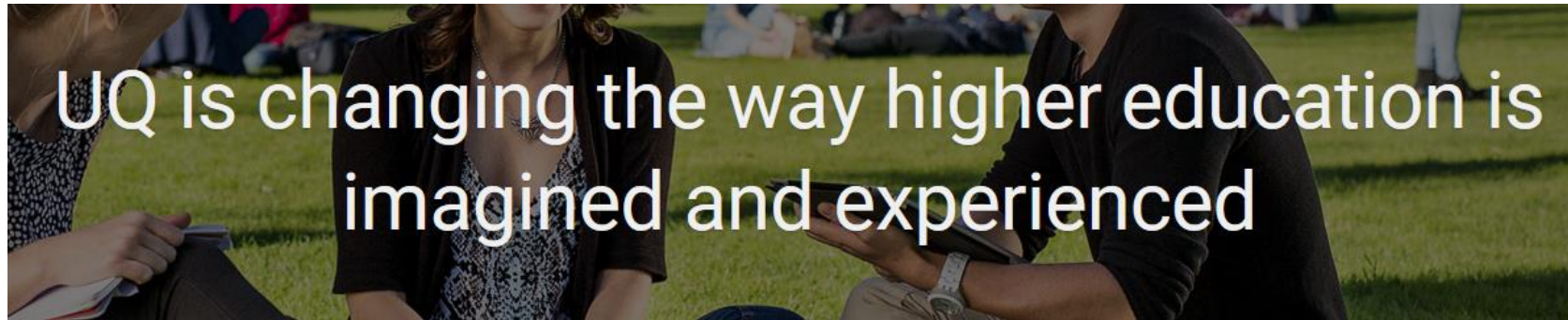
Abound Inc. *Adult Learners in the Fourth Industrial Revolution: Pioneers or a Lost Generation?* White Paper Jan 2018.  
<https://abound.college/advice/adult-learners-in-the-fourth-industrial-revolution-pioneers-or-a-lost-generation/>

Bottom Line:  
our graduates need to be  
better prepared to:



- *adapt to new workplace roles, involving...*
- *work with knowledge that doesn't yet exist,*
- *using knowledge practices that don't yet exist,*
- *with job definitions that don't yet exist...*
- ***as a new graduate attribute!***





### **Game-changing graduates**

The workforce is evolving at a rapid rate, presenting our students with both challenges and opportunities. Our graduates must have the knowledge and skills to compete for current and emerging roles, and be able to anticipate job opportunities that don't yet exist – many of which they will create for themselves.

**How are we doing? 5 minutes to discuss with a neighbour**

Bottom Line: our graduates need to be better prepared to:

- *adapt to new workplace roles, involving...*
- *work with knowledge that doesn't yet exist,*
- *using knowledge practices that don't yet exist,*
- *with job definitions that don't yet exist...*

Can our teaching and learning environments do this?

1

# Example: Developing Innovation Capability

## HIST 2390 Class notes for Mar 28, 2018



**Overview:** When you think about future employment, you know that employers will be interested in what you have learned at Kwantlen. They'll be interested in how what you learned will translate into skills and knowledge you can put to work for them (and develop further!).

### Preparation:

- Skim the attached overview on Building an Innovation-Enabled Workforce for B.C. (to be discussed further in the class session)

# Learn from your experiences

🏠 / About

Under  
develop

## SEAL: Situation, Effect, Action and Learning.

This process allows you to unpack any experience to consider why it was challenging, what you did to handle the challenges, and what the consequences were. Most importantly, it gives you a framework for understanding what you have learned from each experience.

Watch UQ student Emma reflect on her experiences using the SEAL process in this video from [EMPLOY101x "Unlocking your employability"](#).





# The SEAL process of self-reflection



## SITUATION

What was the new experience or challenge you faced and what happened to you?



## EFFECT

What impact did it have on you and what were the consequences of this impact?



## ACTION

What action did you take to deal with the new situation and any challenges, and why did you do this?



## LEARNING

What did you learn from the experience and how will you apply this in the future?



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1

# Example: Developing Innovation Capability

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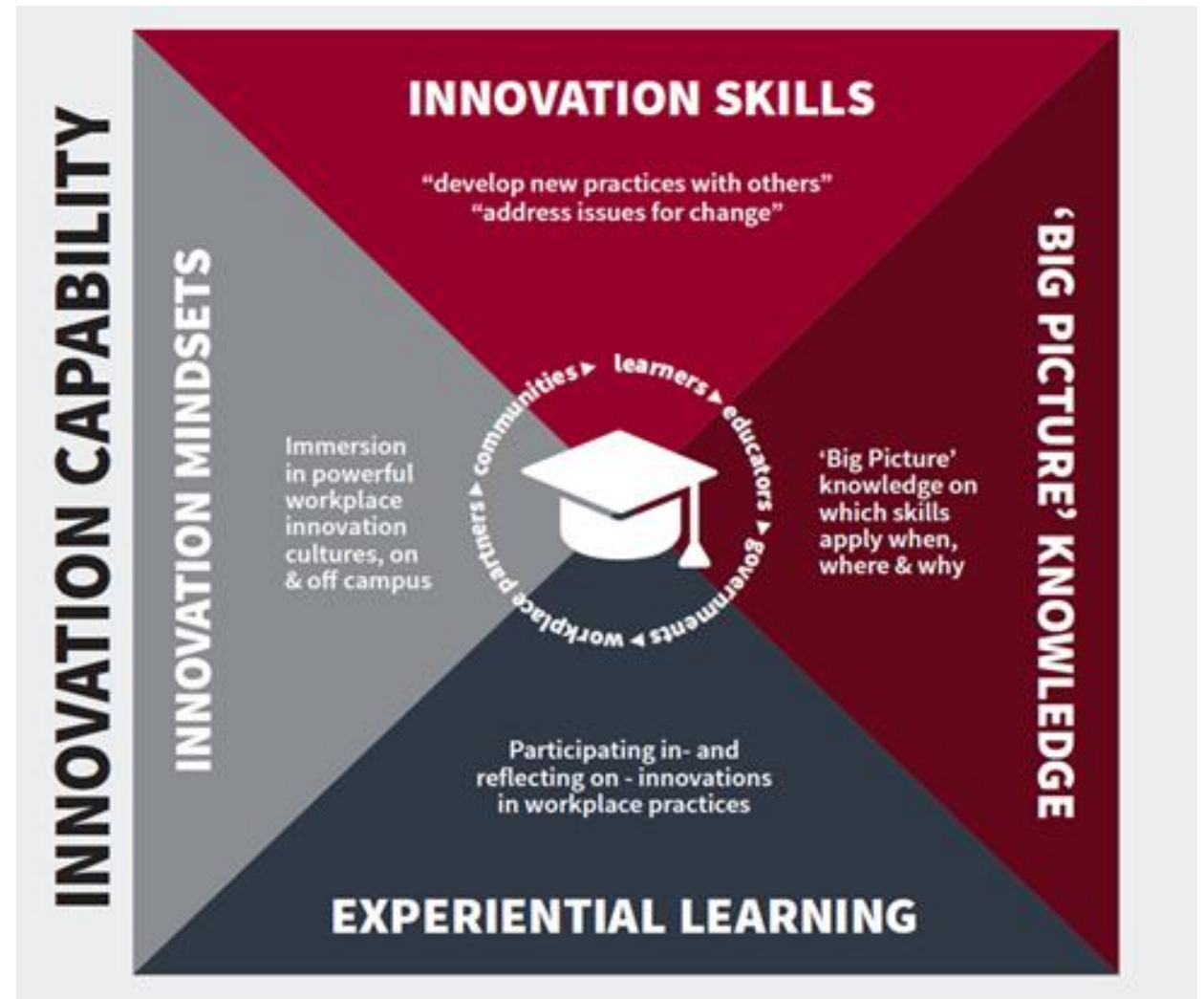
**Overview:** When you think about future employment, you know that employers will be interested in what you have learned at Kwantlen. They'll be interested in how what you learned will translate into skills and knowledge you can put to work for them (and develop further!).

### Preparation:

- Skim the attached overview on Building an Innovation-Enabled Workforce for B.C. (to be discussed further in the class session)
- Watch this [7 minute video](#) about the method we are planning to adapt to help you think about and demonstrate how your skills and knowledge will translate into the workplace. There's more about the SEAL process in the attached 3-page handout.
- Come prepared to discuss your experiences with innovations in your courses this term, such as the History GO! assignment in HIST 2390

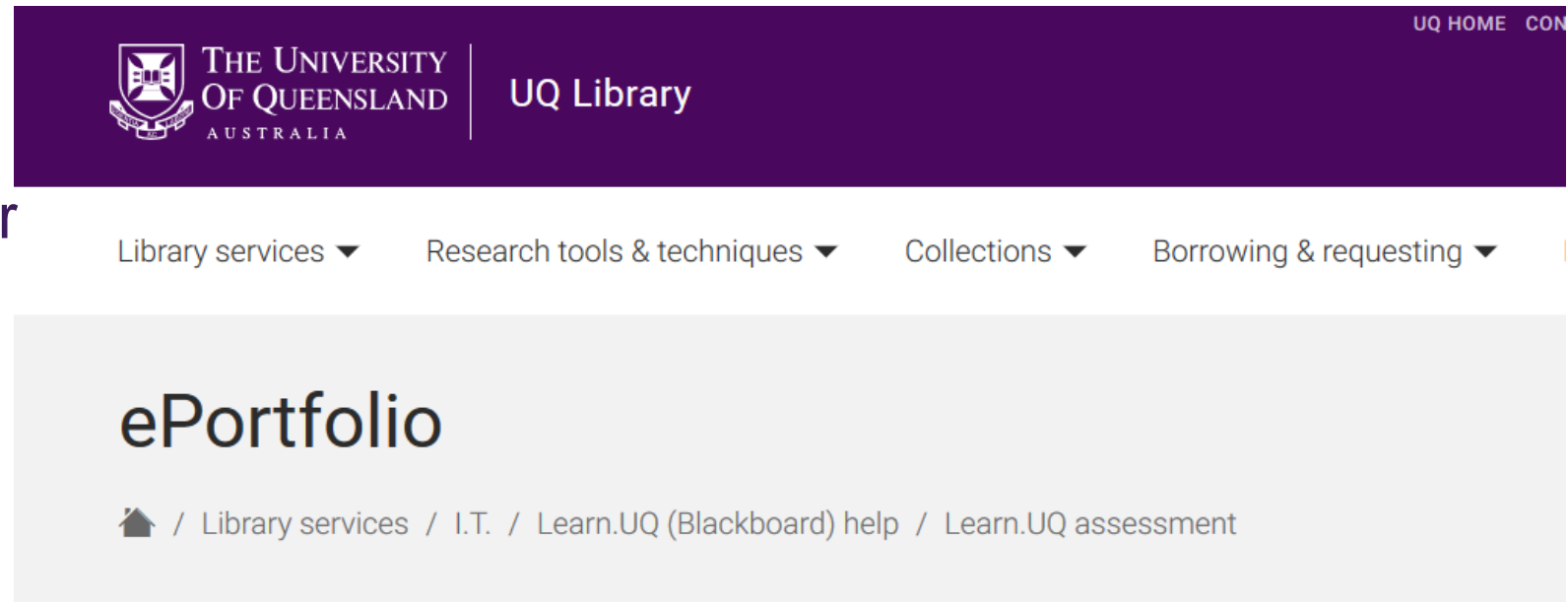
2 Reflections are mapped to a Capability specification...

for Workplace Innovation as a Social Process (and equally applicable to other roles as community members and global citizens...).



3

Reflections and other activities are added to ePortfolios...



## What is an ePortfolio?

An ePortfolio is an online collection of evidence that shows your learning journey over time. An ePortfolio may be used in your program or discipline to track your development of professional skills or graduate attributes. UQ uses the Chalk&Wire ePortfolio system.

The ePortfolio also includes a [Collaboration Workspace](#) tool. Workspaces are collaborative or shared environments that contain portfolios, artefacts and discussions.

If you are using an ePortfolio in your course or discipline you also have access to '[my ePortfolio](#)': a tool to create new personal ePortfolios to showcase yourself as a professional.



# All enabled by new academic-workplace collaborations

4



## Specifications developed by a *Capability Innovation Network*

Preparing our workforce for the *Future of Work* is a shared challenge:

- Academic institutions preparing graduates...
- Workplace organizations preparing their workforce...
- Common challenge is to define, shape and develop capabilities

Requires a new form of academic-workplace collaboration



# All enabled by new academic-workplace collaborations



## Workplace Partners

Craig Thornton, Hatch Ltd.; Mississauga ON  
Karel Vredenburg, IBM Canada; Markham ON  
Andrea Ross, Shopify; Ottawa ON

Dhaval Shah, Bank of Canada; Ottawa ON  
Cassandra Bernard, CMHC; Ottawa ON  
Oswald Zachariah, OMAFRA; Guelph ON  
Carol McAulay, York University; Toronto ON

## Developmental Evaluation Partners

Cathexis Consulting, Toronto ON

## Academic Partners

Vicki Lowes, McMaster University  
David Potter, McMaster University  
Tania Del Matto, University of Waterloo  
Colin Furness, University of Toronto  
Eileen DeCourcy, Humber College  
Richard Wiggers, Mohawk College  
Valerie Lopes, Seneca College  
David Trick, David Trick and Associates; Toronto ON

Sharon Brodovsky, Liz Martin



## + Course content targeted to Workplace Innovation

5

❖ Teaching for skills, knowledge etc. on Workplace Innovation

✓ PSYC 4900: Psychology Research in Workplace Innovation (Spring 2018)



✓ DESN 2004: Design Thinking and Innovation (Fall 2018)





## + Course content targeted to Workplace Innovation

5

### ❖ Teaching for skills, knowledge etc. on Workplace Innovation

✓ PSYC 4900: Psychology Research in Workplace Innovation (Spring 2018)



✓ DESN 2004: Design Thinking and Innovation (Fall 2018)



✓ Humanities Perspectives on Workplace Innovation (Spring 2019?)

✓ Prepare students for transfer to external workplaces:

- EDUC 1100, EDUC 4100



### ❖ Work-integrated learning (*Students as Partners in Knowledge, Learning & Innovation*)

# 6 Same approach applies to other *future work* capabilities



Learning analytics

Key priorities

Institute for  
Teaching and Learning Innovation

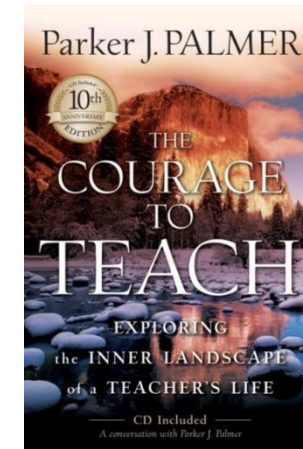
## 2. Enabling students to access and interpret educational data

We develop student-centred and user-friendly visualisations to enable students to develop a better

for Mindsets: we must use Faculty Work in Teaching as a Model



***Good teaching cannot be reduced  
to just technique: good teaching  
comes from the identity and  
integrity of the teacher:***



**How we teach is a key part of what we teach**

**How can our UQ educators engage with innovation in teaching & learning to be models for our students' engagement with innovation in the workplace (and in their other roles...)?**



# Thank you

## Dr. Thomas Carey

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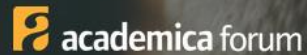
<https://www.linkedin.com/in/drthomascarey/>



What Capability for Innovation Should Every Graduate Develop?

Preparing Graduates for Future Knowledge Practices

Is the Future of Liberal Arts Programs “K-Shaped”?



Four ways PSE can treat the classroom  
as an innovative workplace

Industry 4.0: accelerating evolution in employee capability