

Colloque Ressources Numériques, MOOC et FAD:
enjeux et collaborations en enseignement supérieur
Montréal
28-29 May, 2018



- **Re-designing Teaching for a Digital Age**

Dr. Tony Bates

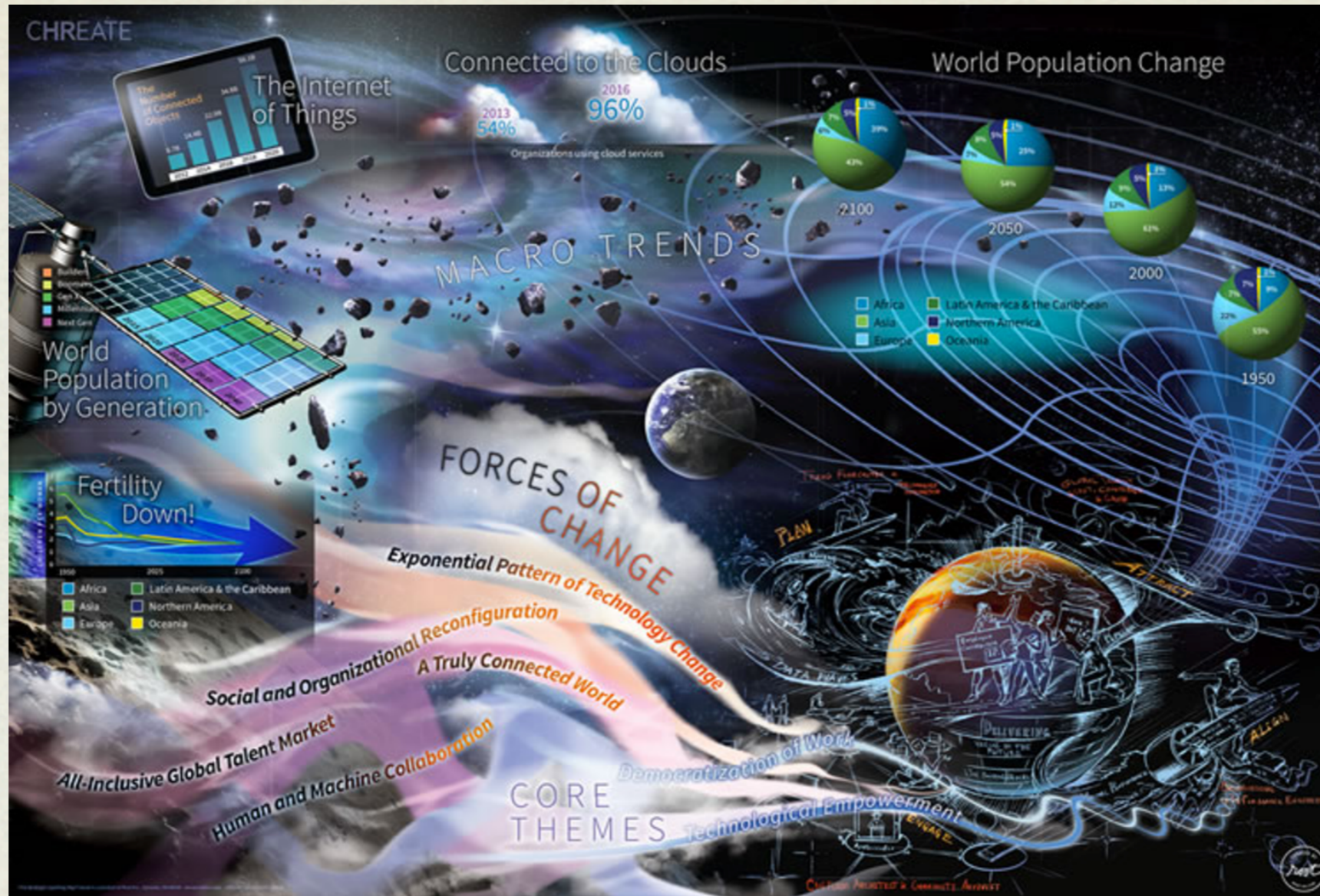
Distinguished Visiting Professor,
The G. Raymond Chang School of Continuing Education
Ryerson University

Overview

1. Key forces of change
2. Online learning in Canada
3. Current trends in online learning
4. Pockets of innovation
5. Implications for teaching
6. Conclusions



1. KEY FORCES OF CHANGE (affecting university teaching)



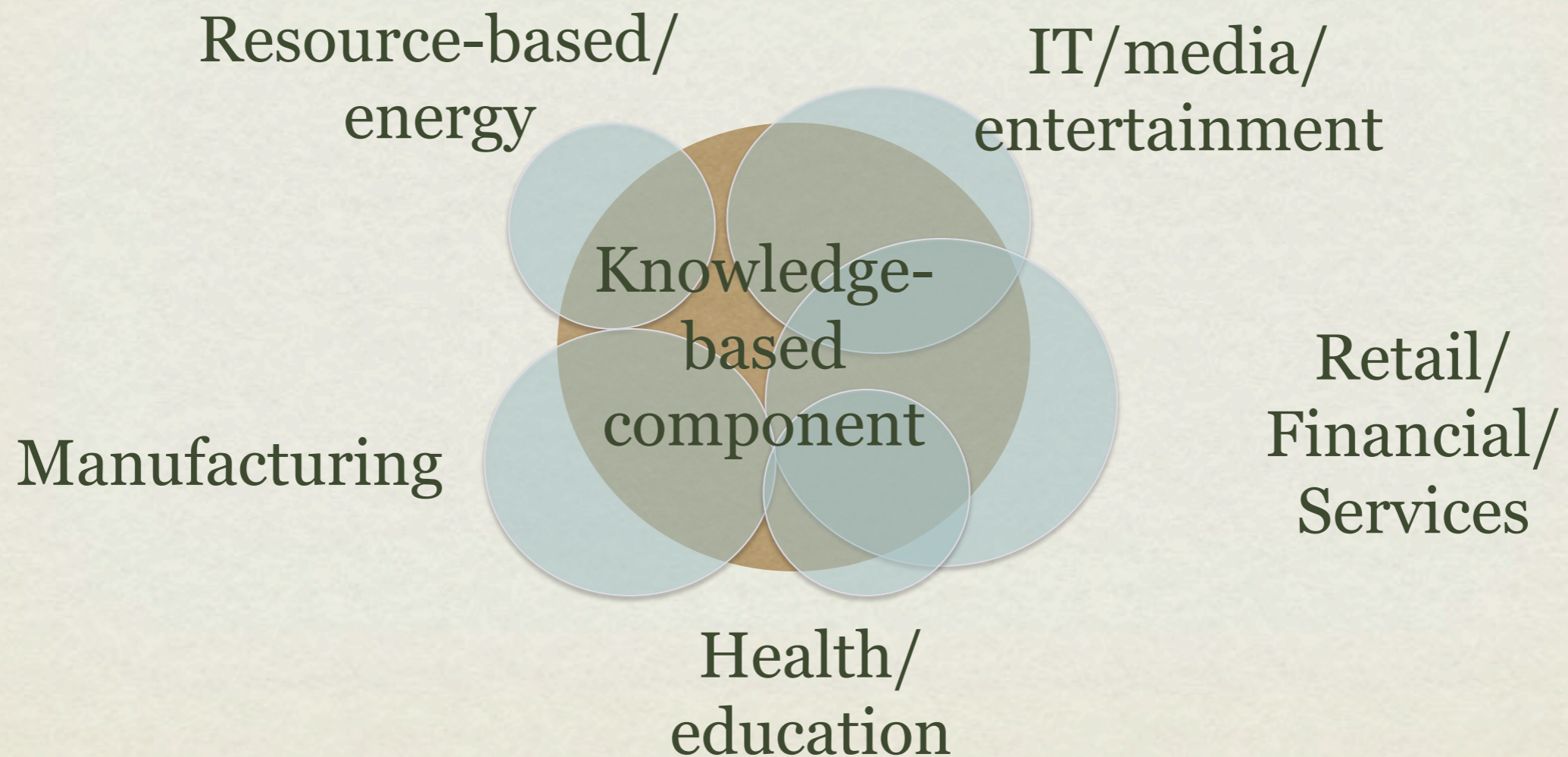
1. Key forces of change

- Changing workforce; new work and new knowledge/skills
- Changing students; more diversity
- Need for more individualized learning (personalization)
- New modes of delivery: blended, online, OERs, MOOCs
- New technologies: video, social media



1. Key forces of change: a. Demands of a digital economy

Where will the jobs be?



1. Key forces of change

b. the need to develop 21st century skills

communication skills

independent learning

ethics/responsibility

teamwork and flexibility

thinking skills (critical thinking,
problem-solving, creativity)

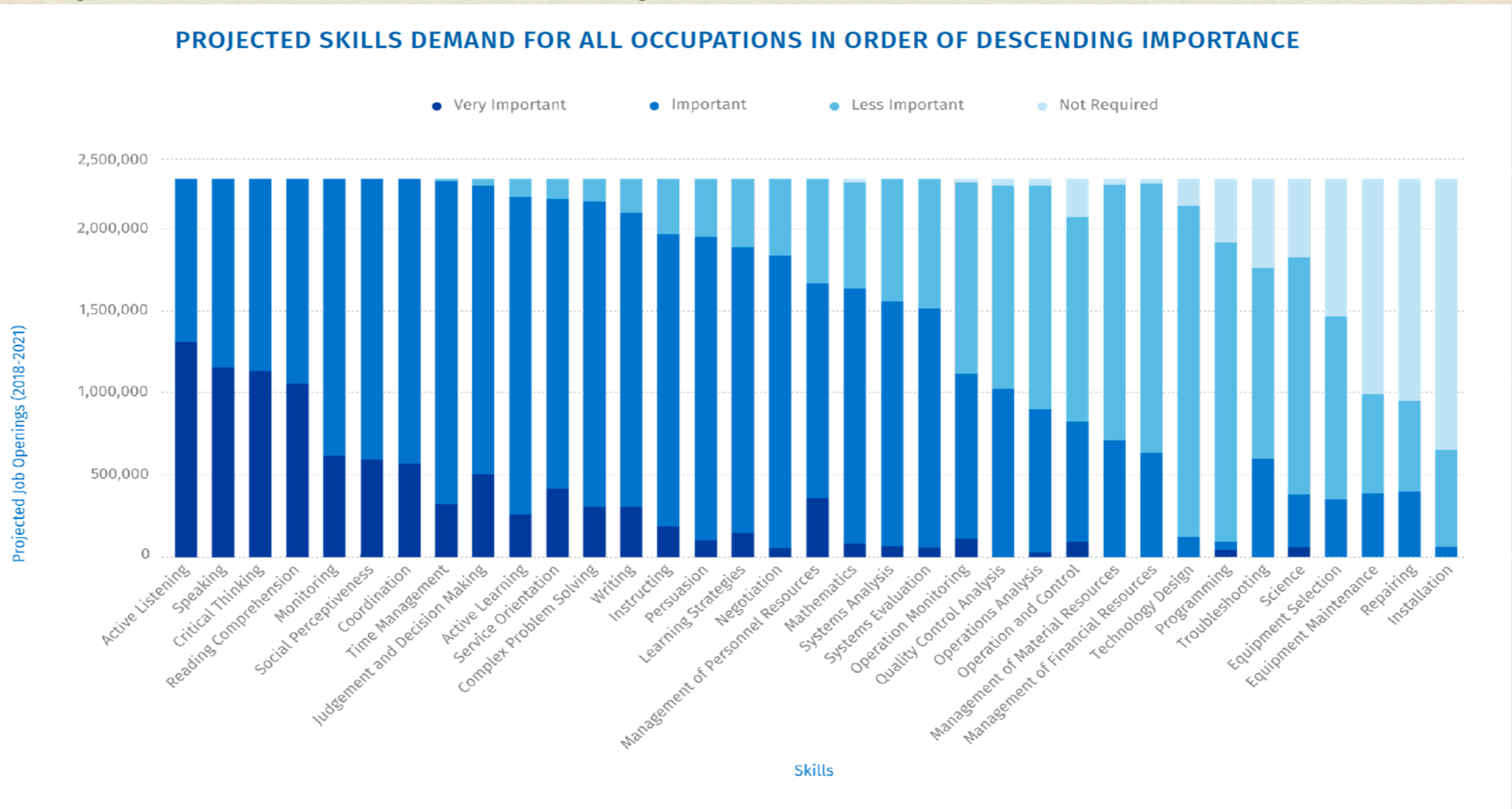
IT skills embedded in subject area

knowledge management

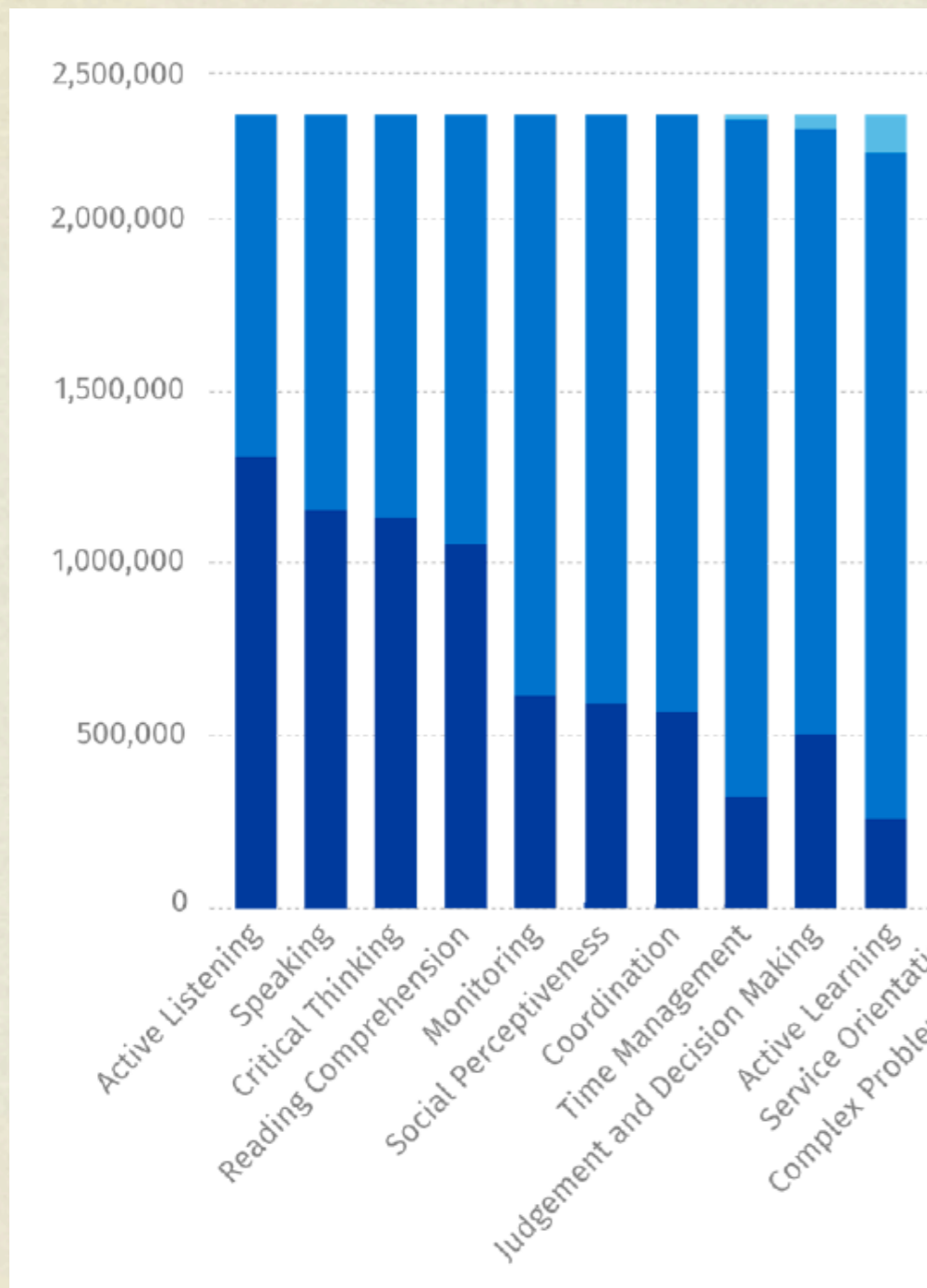


1. Key forces of change Skills in demand

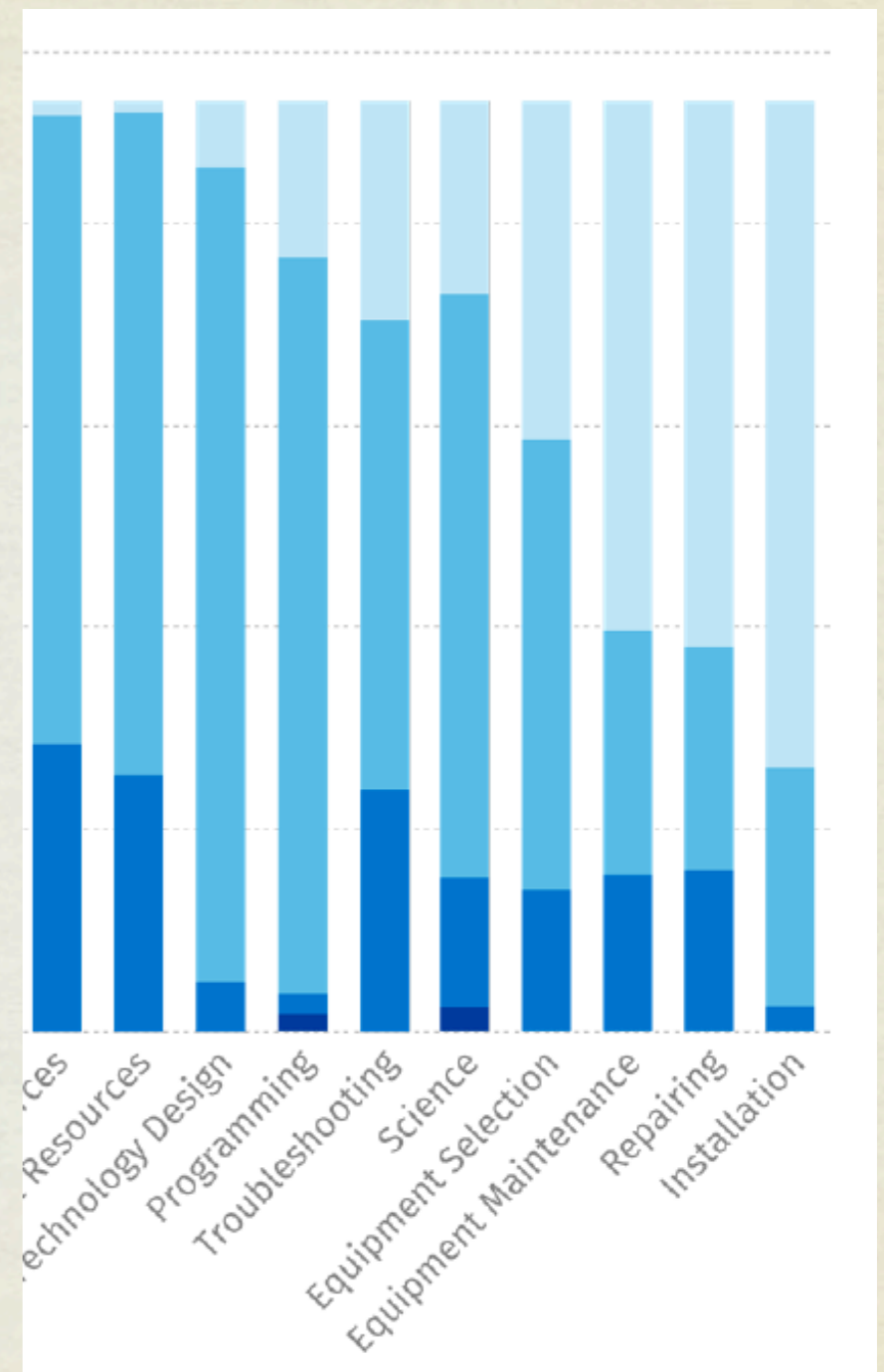
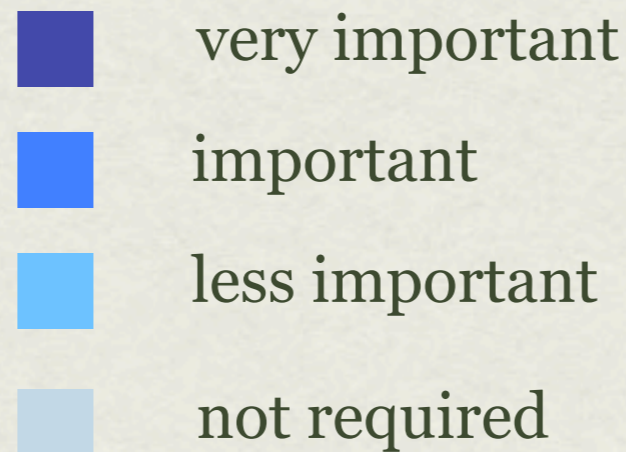
Royal Bank of Canada study ('Humans Needed'):



1. Key forces of change Skills in demand



High-end



Low-end

2. Main trends



2a The 2017 National Survey of Online Learning in Post-Secondary Education



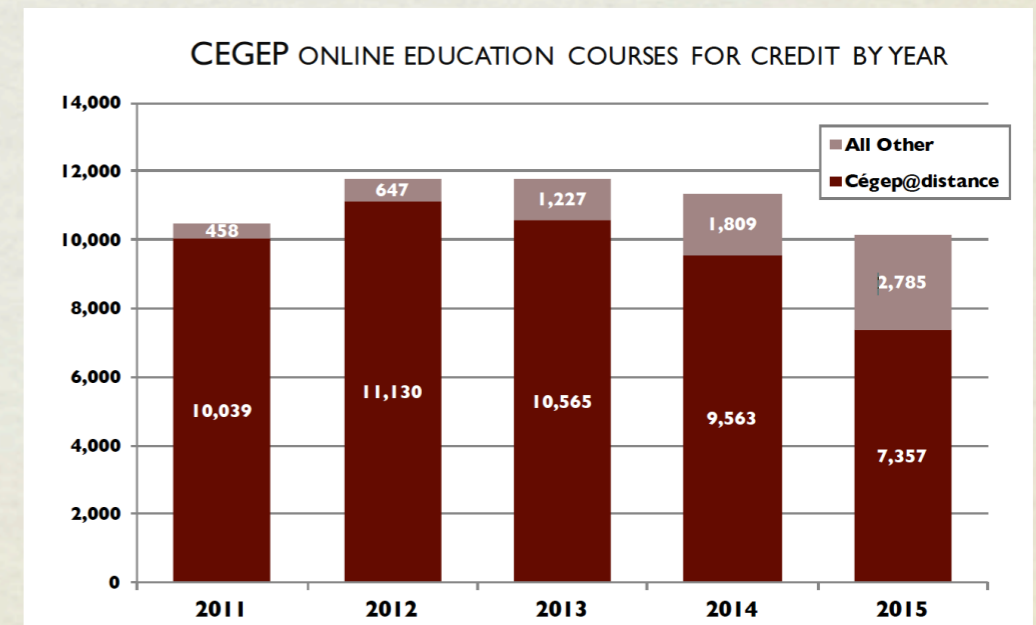
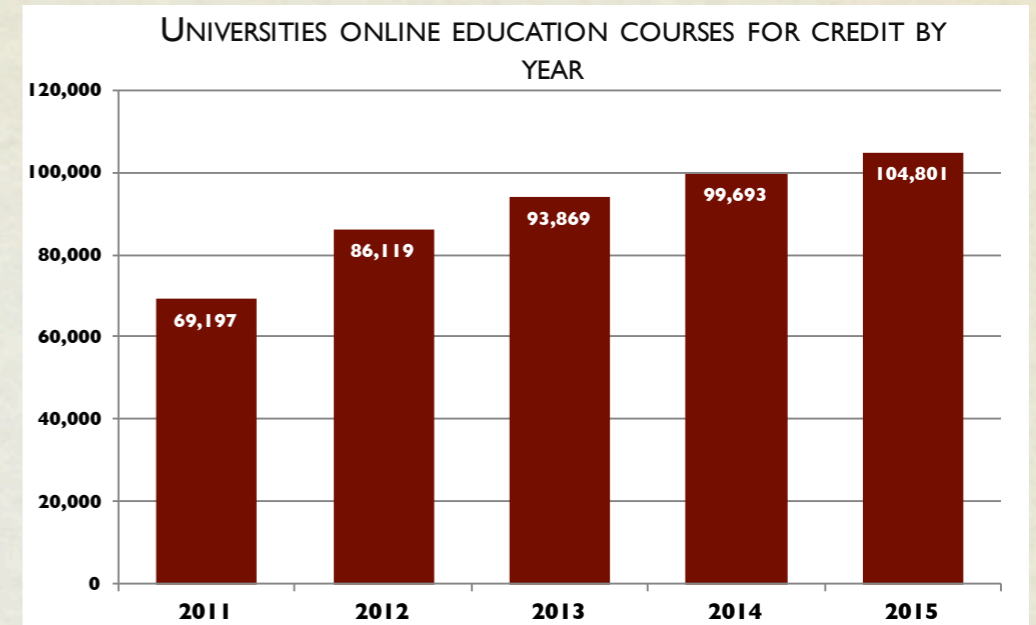
2a Main results: institutions

- Response rate: institutions 69%; student pop. 78%
- Nearly all PSIs offer DE for credit
- Online learning mature market in Canada
- Fully online courses: almost all universities; and all colleges outside Québec; 43% of CEGEPs



2a Main results: online enrolments

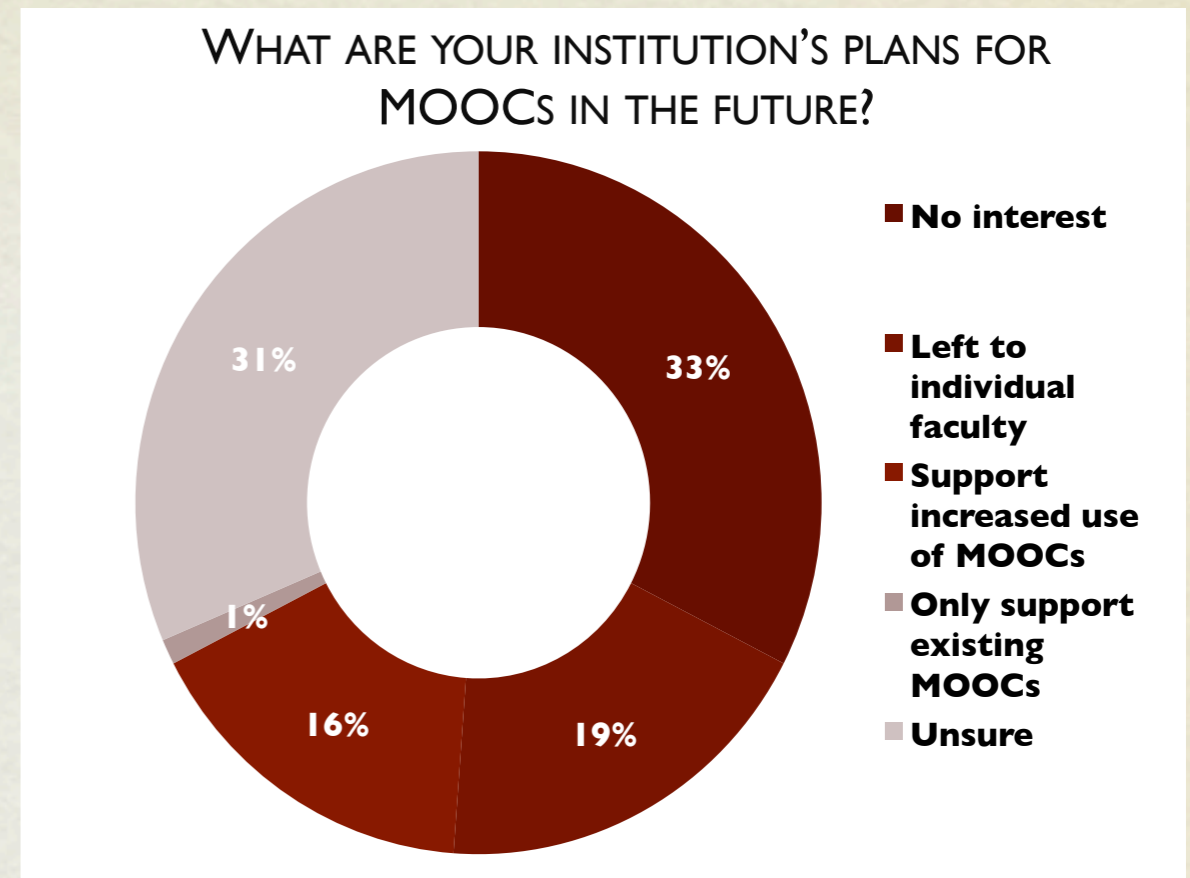
- Rapid growth except CEGEPs
- 16% fully online in universities;
12% in colleges except Québec
- Over two-thirds rated online learning very important for future
- Hybrid learning wide but thin
- Clear link between government funding and online enrolment growth



2a Main results: MOOCs and strategies



- no MOOC mania in Canada:
- <20% offered MOOCs;
- looking for ‘niche’/added value in future: UQTR; CBU
- 33% no interest in future



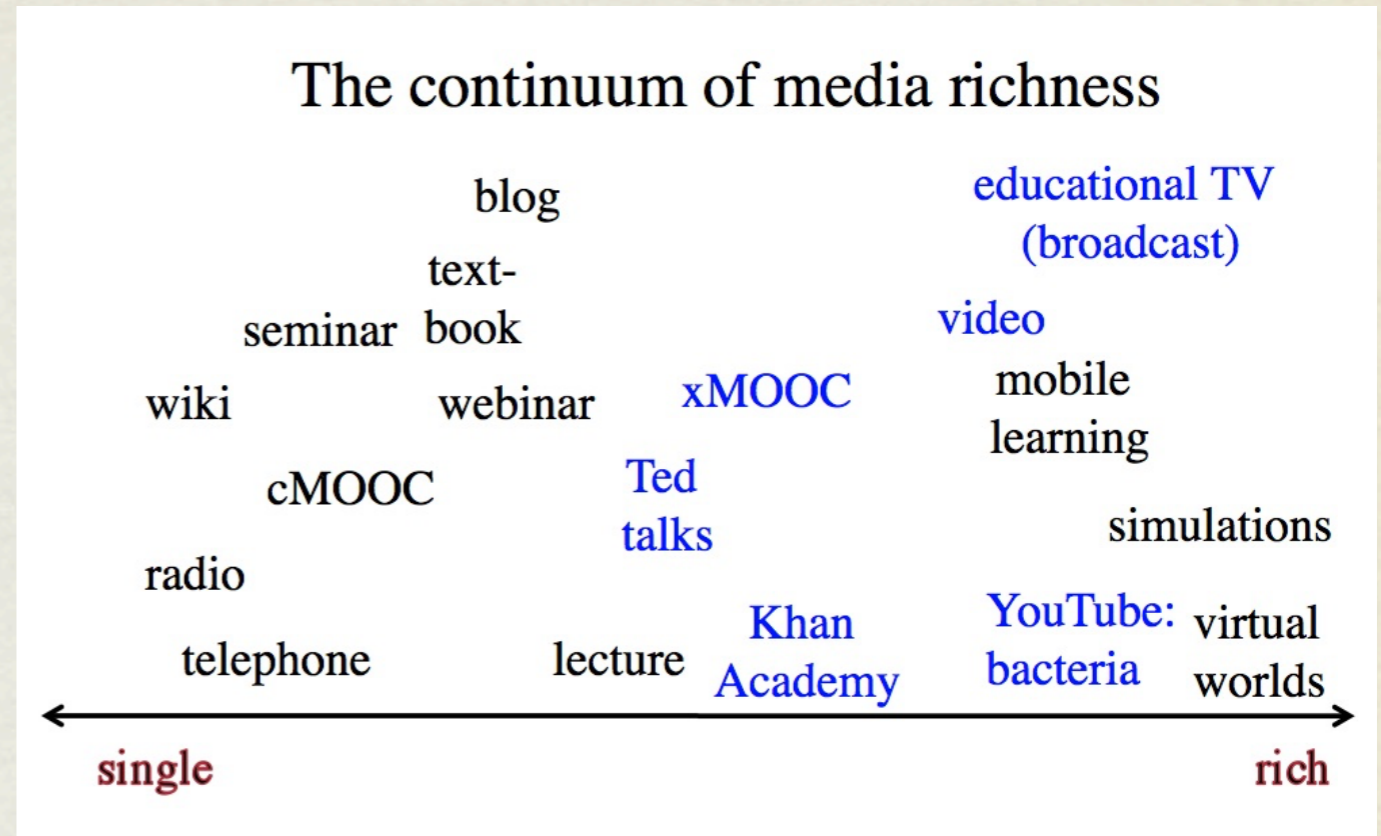
2b Open education

- open textbooks
- open research
- open educational resources (OER)
- content will be free, abundant and all online
- teaching + learner support key quality differentiator
- **the real game-changer**

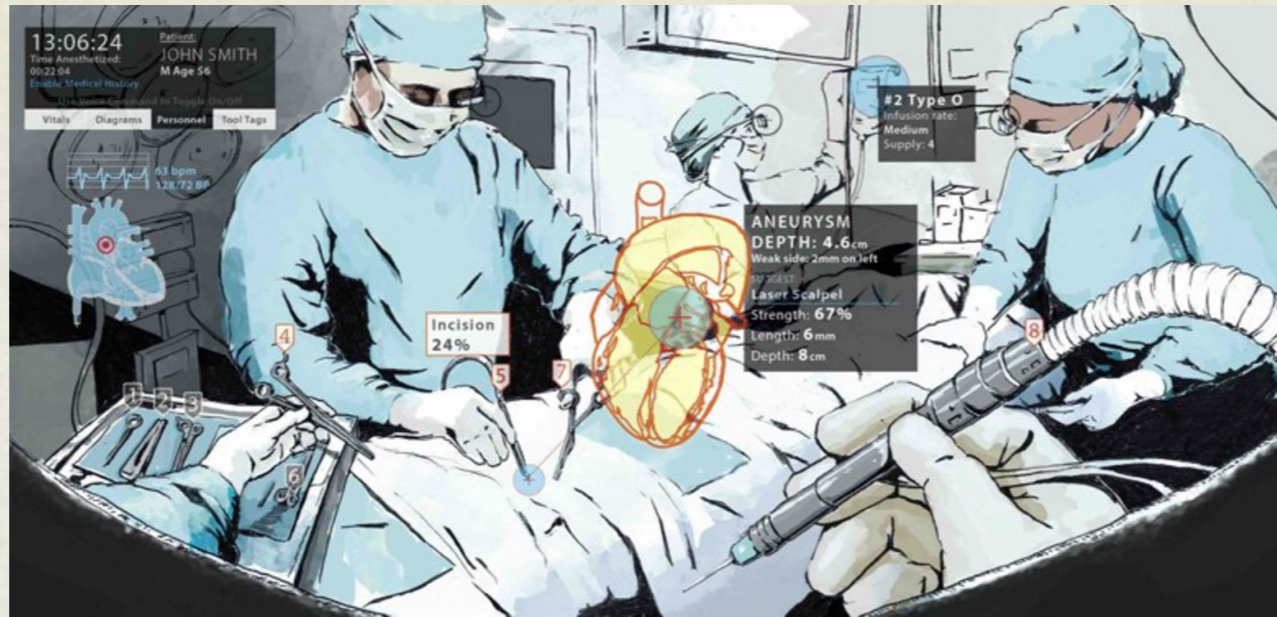


2c multi-media

- Print and talk historically dominant; abstract, linear
- Knowledge represented now through many different media: text, audio, video, computing, virtual reality
- Research shows learning enhanced by multiple representations of knowledge



2. Trends: multi-media



Virtual and Augmented Reality from the Augmentarium at the University of Maryland

- Importance of recording: stop/start/repeat
- Allows learners to work at their own pace
- Facilitate move from concrete to abstract and reverse
- Meets individual preferences for learning

2 Trends


- Increasing fully online enrolments
- Move to hybrid learning
- Open education
- Multimedia
- Digital society: skills for 21st century
- Implications for teaching



3. Pockets of innovation

••••• TELUS 5:01 PM

Back Toward Deciduous Stand




Continue straight along the road for 1 minute until you reach this small clearing on your left, where you will see a shallow soil pit about five steps off the road.

Done

Hints

Military Lifestyle: The Impacts on Children

Braelyn Moore
University of Prince Edward Island, Charlottetown, PE, Canada



Introduction

A common saying in the military is that when one person joins, the whole family serves ⁽¹⁾


Deployment is the movement of military troops from their original locations to another specified destination for the purpose of carrying out a military mission ⁽⁸⁾

There are three phases of the deployment cycle:

- 1. Pre-deployment:** the notice of the impending deployment.
- 2. Deployment:** the time that the service member is away from home.
- 3. Post-deployment (reintegration):** is the time at home before news of the next deployment ⁽⁴⁾

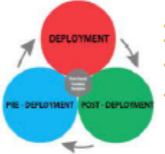
Deployments can last anywhere from 90 days to 15 months or longer. ⁽⁹⁾

The purpose of this poster is to outline current knowledge of the impact of deployments on a child's development and overall health.



ADOLESCENCES:

- Report conflicted feelings of anger and pride related to a parent's deployment ⁽²⁾
- More family responsibilities ⁽⁶⁾, increasing amounts of stress and anxiety ⁽²⁾
- Fear of a parent dying and/or returning as a different person ⁽¹⁾⁽²⁾⁽⁸⁾
- Increased rates of drug use and binge drinking ⁽¹⁾⁽²⁾
- Increased risk for peer victimization ⁽¹⁾
- Increased rates of sadness, hopelessness, and suicidal ideations ⁽¹⁾⁽²⁾
- Decreased academic performance, changes in sleep and eating, more frequent crying and difficulties controlling anger ⁽²⁾
- Impacted by own interpretations of media ⁽⁸⁾



Discussion

Child's age and developmental stage influences a child coping with deployment of loved ones. ⁽²⁾

The absence of a parent during pivotal transitions and critical moments elicit a range of emotions within children. ⁽¹⁾

Specifically, research has found that the post-deployment transition was harder than any of the other phases. ⁽⁷⁾

Adolescents become frustrated in relinquishing roles and responsibilities upon the deployed parent's return. ⁽²⁾

Younger children advance through developmental stages while the service member was deployed and formed a stronger attachment to at-home caregiver. ⁽²⁾

Many parents return from deployments with physical and/or mental health injuries that could magnify difficulties of reintegration ⁽²⁾

Overall, parental absences during childhood are associated with decreased childhood happiness, increased child illness and childhood mental health issues ⁽²⁾

The impact of a service members deployment on the emotional and behavioral health of children will continue to be a concern for families, school personnel, and healthcare professionals for years to come. ⁽²⁾

Literature Review

The impact of the deployment is largely based upon when it occurs in the course of a child's life. ⁽¹⁾

Research has focused on three specific age groups of children: young children (birth to age 5), school age (8-12) and adolescents (13 up).


A large number of studies has focused on children in military families and have found the following outcomes:


YOUNG CHILDREN:

- Greater externalizing behavior problems ⁽¹⁾
- Increased need for attention, clinginess, temper tantrums, questions concerning the parent's absence, defiance, appetite changes, and sleep problems ⁽¹⁾⁽²⁾
- Secure attachment to the at home caregiver ⁽¹⁾
- Confusion and anxiety ⁽¹⁾
- Incorrectly blaming themselves for the separation. ⁽⁴⁾
- Jeopardized parent-child relationship and the establishment of secure attachment with deployed parent ⁽²⁾
- Inability to recognize their parents ⁽⁴⁾

SCHOOL AGE:

- Limited ability to cope with a parent's absence due to less problem solving skills and concrete thinking ⁽¹⁾
- High rates of deployment-related fears, sadness, and concentration problems ⁽¹⁾
- Significant levels of anxiety ⁽¹⁾⁽²⁾
- Acute stress reaction/adjustment, mood, and behavioral disorders were common ⁽¹⁾
- Poorer future mental health ⁽¹⁾
- Uncertainty in relationships ⁽⁸⁾
- Difficulties in developing positive relationships with peers and other adults ⁽⁸⁾







Implications/Future Research

Learning about the experiences of children in military families will contribute to:

- a better understanding of the effects of stress, due to deployment, on young children and military families.
- helping families to better prepare children for disruptions in family life
- training those who work with children in military families about the range of developmental responses to separation that can be expected from children of different ages.
- The development of effective interventions and treatments to optimize young children's development
- The creation of parenting programs and support strategies that are specific to the experiences of military families.

Future research should focus on pre-existing vulnerabilities in relation to poor child adjustment in military families, impact of extended family in reducing stress and look at parental distress and how that impacts risks for children.





Pockets of innovation

- Contact North: 180 cases
- Mainly Ontario; 20 outside Ontario; some international
- Non-judgemental interviews with innovating instructor
- Chosen by Centre for Teaching and Learning
- Why? What? Outcomes/Lessons



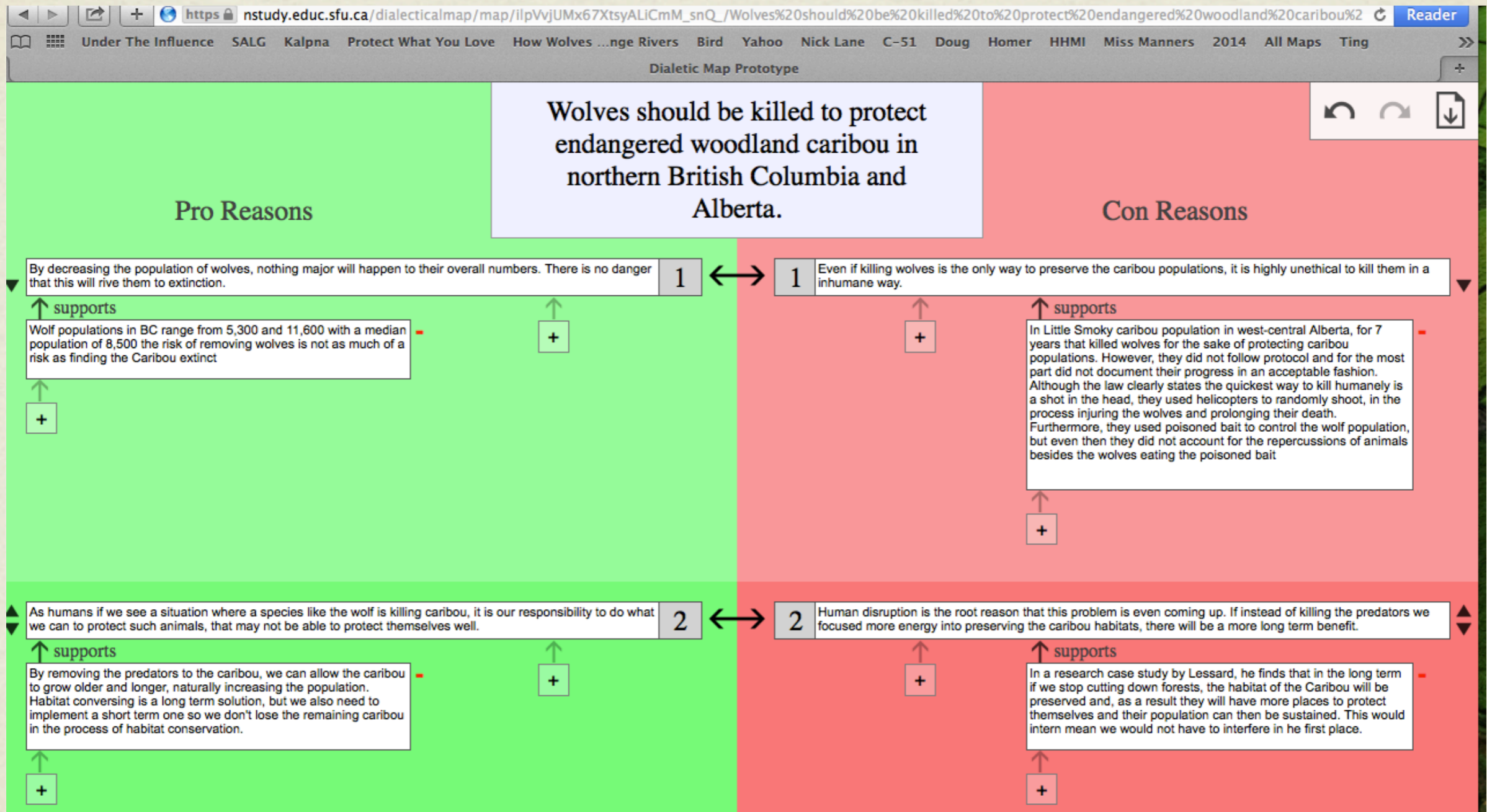
Loyalist College's Virtual Border Post

Scientific argumentation

- Teaching scientific argumentation
- Simon Fraser University biological sciences
- Students expect a 'right' answer for every scientific question
- Poor skills at scientific argumentation
- Simple web-based tool



Scientific argumentation



Scientific argumentation

https://nstudy.educ.sfu.ca/dialecticalmap/map/ilpVvjUMx67XtsyALiCmM_snQ_/Wolves%20should%20be%20killed%20to%20protect%20endangered%20woodland%20caribou%20

Reader

Under The Influence SALG Kalpna Protect What You Love How Wolves ...nge Rivers Bird Yahoo Nick Lane C-51 Doug Homer HHMI Miss Manners 2014 All Maps Ting

Dialectic Map Prototype

3 There is no guarantee that wolf culling will have the same impact in every environment in Canada, it will be meaningless if the population of caribou don't rise after the culling of wolves.

↑ supports

In a study conducted by Hervieux he observed the caribou population in two different environments and how wolf culling had an impact in the two environments.

He looked at the data from Little smoky wolf population and Redrock prairie creek to see what effect the culling had on the caribou. He found that although in the little smoky wolf population, the caribou numbers increased, in redneck prairie the numbers of caribou continued to decline steadily.

↑

Add Pro Reason

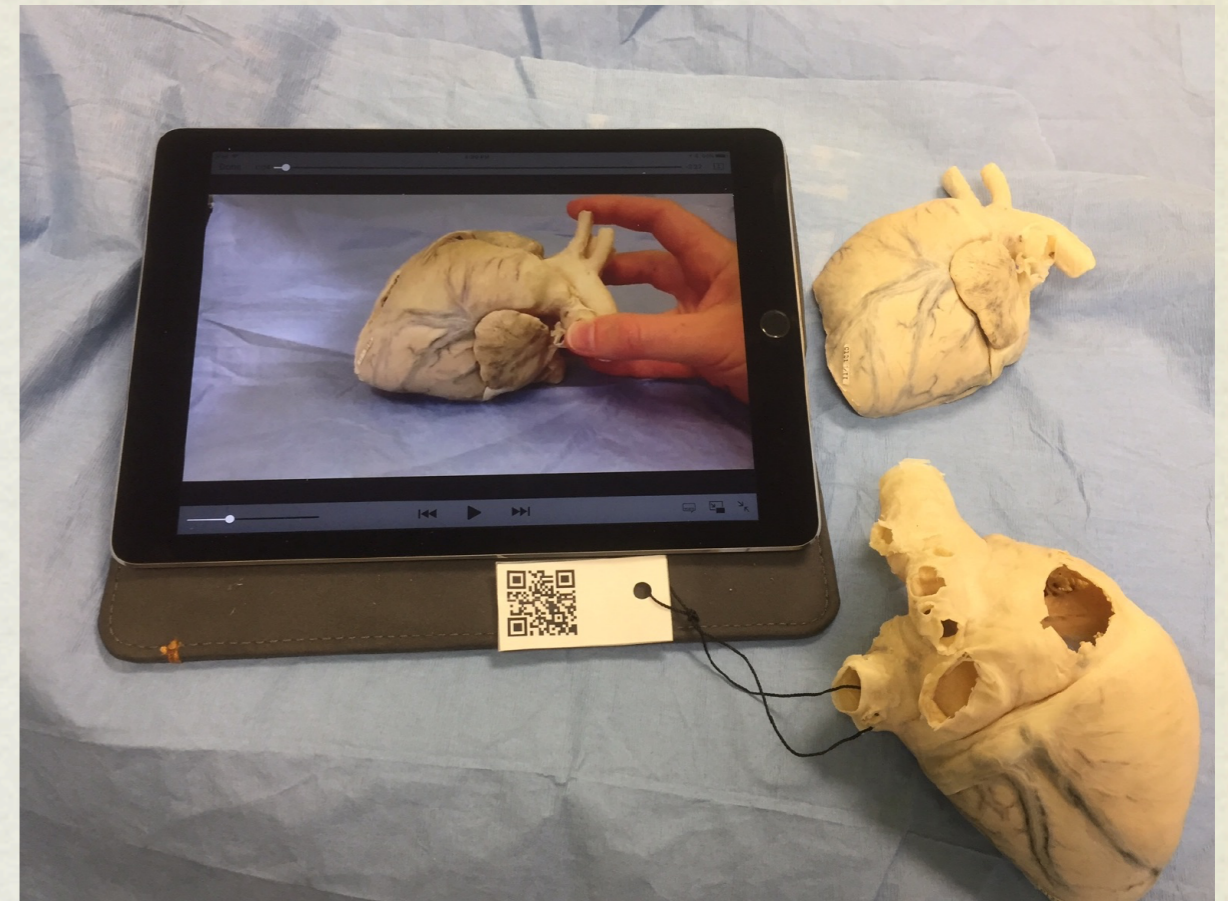
Add Con Reason

The extinction of the caribou is a major problem today. On the one hand, it can be argued that we should act immediately and it may seem as though wolf culling is the only option. On the other hand, you have to wonder why we have any right to interfere with nature.

In the process of killing the wolves, we may protect the caribou, but endanger

Simple video for demonstration

- Use of rare specimens in gross anatomy
- University of Prince Edward Island veterinary school
- Only one plastinated model of dog's heart
- Use of mobile phone and QR tags for simple video explanation



Lessons learned

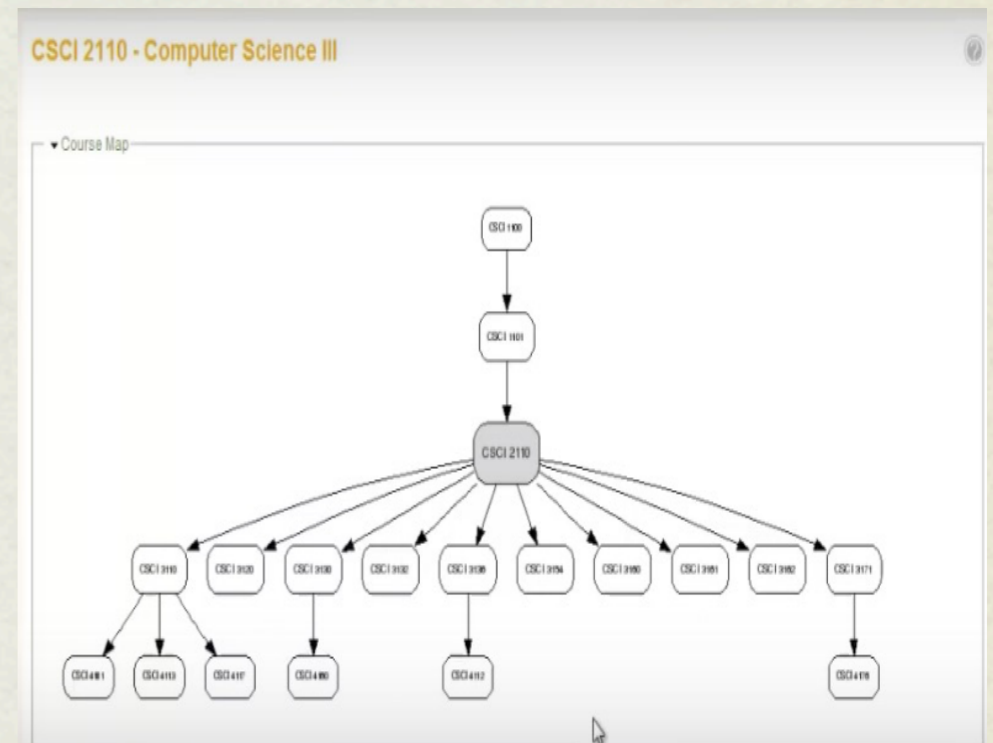
Why?

- To increase student access/flexibility
- To solve specific teaching problem

Rarely driven by pedagogy/technology

What? About half changed teaching method as a result; wide range of technologies in studies

Rarely wider adoption: no innovation strategy



B. Computer Science,
Dalhousie

4. Implications for teaching and learning



4. Implications for teaching and learning: New modes of delivery



← blended →

fully online

face-to-face **classroom** **flipped** **hybrid** **(distance)**
 aids

← no technology (mode of delivery) all technology →

4. Implications for teaching and learning: content and skills

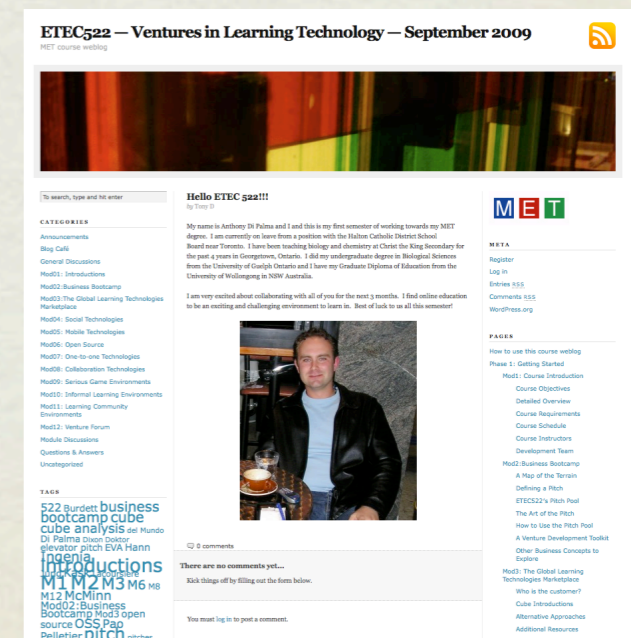
- Content = facts, ideas, principles: 'knowing'
- Skills = understanding, analysing, evaluating, applying: 'doing'
- Both necessary in today's society
- BUT: content has been the traditional priority in HE



4. Implications for teaching and learning: content and skills

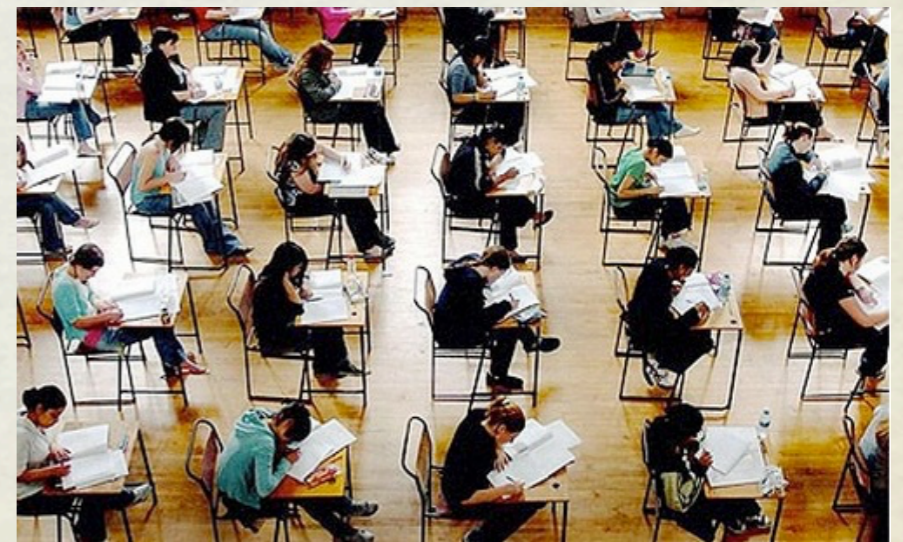
We know a lot about how to teach skills:

- Context-specific
- Learners need lots of practice
- Small steps
- Regular feedback from expert
- Develop over a program rather than one course



4. Implications for teaching and learning: content and skills

- How do you develop skills? What teaching methods?
- Relationship between content and skills
- What role can technology play in developing and assessing skills?
- What do we assess – and how?



4. Implications for teaching and learning: New teaching approaches

- from information transmission to knowledge management
- skills development + content
- lecture-based courses replaced by student projects, problem-based learning, collaborative learning
- goodbye written exams: replaced by e-portfolios demonstrating student's knowledge/skills



DANIEL SHAFFER
The Pennsylvania State University

ABOUT ME	RÉSUMÉ	EDUCATION	EXPERIENCES	ASPIRATIONS	CONTACT ME
Introduction	PDF Version	General Information	Extracurricular Activities	Short-Term Goals	Standard Methods
Personal Statement	Interactive Version	Sample Coursework	Previous Employment	Long-Term Goals	Electronic Methods

EDUCATION: Sample Coursework
All files in Adobe PDF format

EXPERIENCING A CROSS-FUNCTIONAL BUSINESS SCENARIO Apple Inc. Corporate Report: Industry Mega Trends (BA 411: Analyzing Business and Industry, Fall 2007): With the main purpose of exposing students to a cross-functional business scenario, this report combines the knowledge of marketing, accounting, finance, supply chain, and economics from each of my four group members enrolled in different majors across the Smeal College of Business. As the sole marketing representative of my group, I helped in both the collaboration of the written section of the report and by taking the initiative in creating a unique aesthetic report layout in regards to Apple's brand associations of sophistication, prestige, and simplicity.
Apple Inc. Corporate Report

COLLABORATING WITHIN A SMALL GROUP Marketing Research Project for the Penn State Iceers Hockey Team (MKTG 342: Marketing Research, Spring 2007): While working with four other group members to achieve the highest graded project in our class, this project involved researching different marketing characteristics for the Penn State Men's Hockey Team in order to



4. Implications for teaching and learning: New instructor roles

- Teaching performance will be a major competitive advantage
- Instructors need pedagogical knowledge + technology skills
- Requires pre-service + in-service training + tenure/promotion reward
- Learning technology support (instructional designers + media designers) + team-work



5. Conclusions



- Digital economy requires high-level intellectual skills
- Teaching methods must include skills development
- Technology enables more flexible delivery/ways to practice skills
- But all within a specifically designed learning environment that supports learners

Questions

- Are you convinced of the need for change in your teaching?
- What is the most relevant of these developments for your teaching?
- What are the main barriers you face in changing your teaching?



- Teaching in a Digital Age:
<https://opentextbc.ca/teachinginadigitalage/>
- Blog: Online Learning and Distance Education Resources:
<http://www.tonybates.ca/>
- E-mail: tony.bates@ubc.ca

