The Future isn't A Straight Line from the Past: Next Generation Learning

Stephen Murgatroyd, PhD

Collaborative Media Group Inc.

This Presentation

- The Context for Change - 5 Change Forces
- Institutional Level Responses - Best / Next Practices from Around the World
- Supports Required to Enable Next Practice
- Challenges for
  - Policy Makers
  - Quality Assurance Agencies
  - Funders

Setting the Context

Understanding context is essential to understanding the dynamics of change

Demographic Shifts

- The profile of the population in New Zealand is changing:
  - The Māori population will make up 16.2 percent of the New Zealand population by 2026 compared with 14.9 percent in 2006.
  - The Asian population will make up 15.8 percent of the New Zealand population by 2026 compared with 9.7 percent in 2006.
  - The Pacific population will make up 9.6 percent of the New Zealand population by 2026 compared with 7.2 percent in 2006.
  - **The European or Other population will make up 69.5 percent of the New Zealand population by 2026 compared with 76.8 percent in 2006.**
- Dependency ratio in New Zealand shifting from 4:1 to 2:1 by 2050
- More seniors in the work force and more multi-generational / multi ethnic workforce.
- **Constant training, retraining, unlearning and re-learning**

Global Demographic Shifts

- **By 2050:**
  - Global population will exceed 9 billion
  - The proportion of the world's population over 65 will double
  - There will be over 400 million persons over 80 – 4x the present number
  - 80% of those 65 or older will live in low or middle income countries
  - For the first time in history, there will be more people over 65 than under 14
  - In Italy, Japan and Spain 1 in 3 will be over 65
- **Sustainable Development Goals are more than "nice to have's"**
- **Significant challenges which require constant learning / development**

Shift Happens - Shifting Markets

- 2.3 billion new middle class consumers will emerge by 2030, mainly in Asia, India and Africa

- By 2025 50% of the world's billion dollar companies will be headquartered in emerging markets, not in North America or Europe (44% of them are already Asian based)

- 425 major cities will fuel the global economy – 315 of them are in Asia

- Competitiveness, productivity and innovation will drive economic growth but much of this growth will be driven by technology, *not* people.

- Learning about other cultures, markets, ways of living/working an essential for an export focused nation

New Zealand's Competitive Position

"New Zealand's robust economic growth and high levels of well-being are enviable, even among the highest-performing OECD countries," OECD Chief Economist Catherine Mann, June 2017.

- New Zealand
    - Ranks 13th on the World Economic Forum's 2017-18 Index of Competitiveness
    - Ranks 19th on the Bloomberg Innovation Index, 2017-18
    - Has low productivity relative to competitor nations - growth is basically flat over time
    - 1 in 4 in the workplace have literacy skills below those required for the work that they do (IALS Data).
    - New Zealand PISA scores "stable" in 2016 versus 2012 - The proportion of New Zealand students that are top performers in at least one of science, reading and mathematics is above the OECD average and we still have one of the largest proportions of students that are top performers in all three subjects.
    - **Learning to be productive, competitive and innovative a key to sustainable economic future - constant skills upgrading, closing the skills gap.**

The "Gig" Economy

- Worldwide, 45% of the world's workforce are contingent workers and this number is expected to rise to 60% by 2020.

- In the Fortune 100 companies, contingent workers make up 30% of the workforce, but predictions are that will soon rise to 50%.

- In some countries - Canada, US and UK - the "gig" ecomony is becoming the economy..

- **Constant upskilling, resilience and adaptive capacity building + small business skills and competencies are essential for "survival" in the gig economy**

Gig Based Businesses - the "Uberization" of Organizations

- **Uber** – matches drivers with those needing a ride..

- **99 Designs** – matches designers with those needing design work

- **Rent-a-Coder** – matches those with coding capabilities with those who need purpose built software / applications

- **Trendwatching** – trend analysts track small and large data and patterns and offer their services against challenges

- **Amazon Go** – a shop without tellers or check-out

- **Alibris** – global bookseller which is actually a brokerage

- **Lynda** - learning on demand (also Creative Live..)

- **Fiverr** - rapid professional services on demand

- **Task-Rabbit** – matching local skills with local needs (e.g. odd jobs, gardening, window cleaning, catering, tutoring…)

- **Learning to create, run and sustain uber-like organizations and constant hiring processes will become essential - moving uber-like organizations into gazelles and unicorns requires constant managerial / leadership learning**

Disruptive Technologies

- 3 Printing
- Artificial and machine intelligence
- Stem-Cells
- Robotics
- Learning to love, use and leverage technology - learning to "dance with robots" - an essential feature of our next three decades
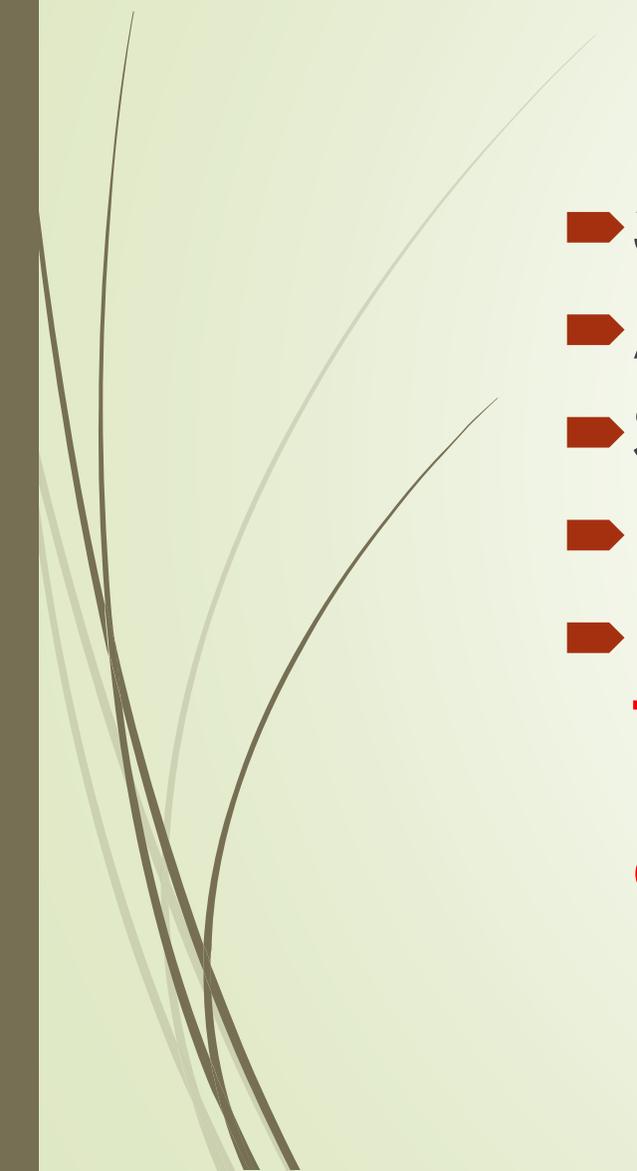
Implications of Disruptive Technologies

- 30-40% of Canadian jobs, 32% of US jobs and 40% of UK jobs likely to go between now and 2030 linked to technology - e.g. transport as a service, AI financial services, robotic and 3D printing manufacturing (*Oxford-Martin Study / McKinsey*).

- One forecast for New Zealand suggests 46% of current jobs (885,000 persons) are "at risks" from technological displacement (*Chartered Accountants of Australia and New Zealand*)

- While new jobs will be created, the modeling suggests that these will not be equivalent in scale / scope to job creation in the past - we will not be replacing 100% of these workers..

- 65% of those who started primary education this year will occupy jobs that do not yet exist

- A need to focus on essential skills, resilience and creativity and to avoid the "hype" of STEM

Identity

"The biggest enigma of the post-work society is what happens to the self when it cannot define itself against corporate identity, skill set or seniority".

➡ *Paul mason writing in the guardian, February 17th 2016*

"…and it is our fulfillment, rather than the satisfaction of our appetites that is threatened by the slow decline of work.." Ross Southat, New York Times, 2016

Learning to be, to live and work with one another, learning to live with frequent change, developing compassion are key to building a strong sense of "selt" in a fast changing environment

Implications for Tertiary Education

What Institutions Are Doing - Best and Next Practices

What this means in practice

1. **A focus on learners, learning and success…**

   - **Learning to learn, learning to be, learning to do and learning to live together**

   - **Personalizing learning journeys, learning processes and the assessment of learning**

   - **Enabling innovative routes to credentials..**

2. **A focus on outcomes, competencies and capabilities..**

   - **Competencies and capabilities _not_ courses, programs of study**

   - **Assessment as the new "currency" for colleges and polytechnics – anywhere, anytime assessment for competencies and capabilities leading to certification**

   - **End of time-based learning (Carnegie Unit) and focus on what learners need to be able to do / can do: no more 200 hour learning units.**

Flexibility and Simplicity on the Other Side of Complexity

3. **A focus on flexible, modular, stackable learning**

   - **Micro courses (1,2,3,4, 8 weeks)**
   - **Stackable courses which can accumulate to transferable courses**
   - **Anytime, anywhere**
   - **365 day admission – fixed time to complete**
   - **E-portfolio "passports" for learning**

4. **A focus on multiple routes to success**

   - **Online, in class, through work, by assessment only**
   - **Work-based learning partnerships for credit**
   - **Prior Learning Competency Assessments**
   - **MOOC's for credit and credentials - FutureLearn's 50+ degrees**

Collaboration, Impact and Constant Change

5. **A focus on innovative approaches to partnerships and collaboration**

   - New partnerships local, regional and global
   - New collaborations for learning and credit
   - Embracing Artificial Intelligence as a way to personalize learning - Jill Watson
   - Embracing "unusual suspects" for new kinds of pathways for learning

6. **A focus on institutional impact and sustainability**

   - Think personal impact - identity and the search for meaning
   - Think social impact
   - Think economic impact - productivity, competitiveness, innovation
   - Think of the impact you have on a trade, profession, firm, community and measure it..
   - Think organizational capability / sustainability

"Collaboration is the DNA of the knowledge economy.."

Enabling Supports for these Changes

Integrated Technology Enabled Systems

Learning Experience Platforms (Video, AR, VR)	Delivery Platforms / Mechanisms (Anytime, Anywhere)	Micro Learning Platforms E-Portfolios / Learning Bank
Assessment Engines and Delivery Systems		Content Libraries (OER)
Learning Management Systems	Analytics & Support Systems	Machine / Artificial Intelligence Supports

Related Supports

Work-Based Learning and Accreditation Partnerships	Competency Banks Driven by Industry / Professions	Rapid Certification and Credentialing Systems
Collaborative Institutional Partnerships for Value Creation	Flexible Funding and Public:Private Partnership Funding	Investments in Professional Development and Training
Agile Leadership	Lean Processes	Rapid Decision Making

Implications for Policy Makers

Policy

- Access not sufficient as a policy focus- access *with* success is…do not want an open door to be a revolving door.

- Systems management has unintended consequences - model the system using system modeling tools and develop future focused scenarios to better look at system dynamics, especially regarding the supply side

- Enabling innovation:
  - Credentials (micro-credentials, learning credit banks, work-based learning)
  - Flexibility - varied routes to learning outcomes - e.g. assessment only based credentials
  - Technology enabled learning - "SMART" learning
  - Going "glocal" global transfer credit and credit recognition
  - Fast prior learning assessment and recognition of international qualifications

- Rethinking accountability - moving to public assurance and rich accountabilities

Implications for Funding Agencies

Implications for Funding

- **Shifting funding from a time-based models of funding to funding learning outcomes: from programs to learning pathways**

- **Lifting limits to learning - as economic shifts and change happens, capacity needs to managed in agile and adaptive ways - old supply:demand thinking is getting in the way**

- **Capacity planning very problematic - more "buffer" funds less reliance on skills predictions and more support for part-time, life-long learners, work-based learning, competencies**

- **Need to enable innovation and change - risk taking and institutional level empowerment**

- **Need to focus more on outcomes, impacts and opportunity funding rather than process and time**

Implications for Quality Assurance

Quality as "Fit for Purpose" - Rich Accountabilities

- Not possible to "inspect quality in", it's not about "compliance" - self-assurance and public assurance appear to be the emerging model.

- Quality as "fit for purpose" and mission related, not "one size fits all".

- Peer review is not peer review if the peers do not practice the same kind of learning models - e.g. Who will quality assure Ecole42?

- Much more focus on student experience, student engagement, student outcomes and institutional impacts

- Rich accountabilities as a basis for quality assurance

Conclusion

- ➧ **"The future isn't what it used to be…" (Yogi Berra)**
- ➧ **Think back from the future..**
- ➧ **Collaboration *not* competition is essential - global collaboration as well as local**
- ➧ **"Teach less learn more.."**
- ➧ **Assessment is the new currency for learning**