The strategic planning for future workplace learning and assessment innovation in New Zealand

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Presentation Structure

1. LITERATURE REVIEW
   - Future workplaces - Drivers of change
   - Impacts of changes on innovation
   - Global trends in learning and assessment innovation
   - Challenges to innovation

2. RESEARCH
   - Working definitions and context
   - Research findings
   - Recommendations

3. POST-RESEARCH
   - Learning and assessment initiatives in NZ
Future workplaces

Drivers of change

- Technological advancements
- Globalisation
- Changes in demographics
Future workplaces

The modern learner

Untethered

On-demand

Collaborative

Empowerment
The modern learner
Impact of changes on learning and assessment innovation
21st century skills

Foundational literacies
1. Literacy
2. Numeracy
3. Scientific literacy
4. ICT literacy
5. Financial literacy
6. Cultural and civic literacy

Competencies
7. Critical thinking
8. Creativity
9. Communication
10. Collaboration

Character qualities
11. Persistence
12. Adaptability
13. Curiosity
14. Initiative
15. Leadership
16. Social and cultural awareness
Delivery
Learning innovation
Personalised learning

Traditional pathway:
- Topic 1
- Topic 2
- Topic 3
- Topic 4
- Assessment

Personalised pathway:
- Diagnostic Assessment
- My Plan
- Topic 1
- Topic 2
- Topic 3
- Assessment
Adaptive learning
Virtual reality

An artificial environment which is experienced through sensory stimuli provided by a computer, and in which one’s actions partially determine what happens in the environment.
Augmented reality

An enhanced version of reality created by using technology to overlay a digital image of something being viewed through a device.
Micro-learning

**Traditional learning**
Whole qualifications

**Micro-learning**
Small chunks or bite-sizes
Game-based learning

Collaboration  Engagement  Role play

Choices  Badges  Leaderboards
Affective computing

The programming of machines to recognise and simulate human emotions and facial expressions.
Artificial intelligence

The capability of a machine to imitate human behaviour.
Makerspaces

Makerspaces are physical learning environments that are equipped with new technological tools and resources needed to help people carry out their creative ideas.
Assessment innovation

Assessment sits at the heart of the learning process.

- Digital evidence
- Online platforms
- Holistic or integrated
Challenges to innovation

Unforeseen future

Preparing people for change

Technology itself

Learning innovation

- Learning is not enhanced by environments
- Games detract from serious learning

Assessment innovation

- Regulatory settings and processes
- Balancing flexibility with rigour
- Limited time but additional skillsets
About the research

- 5 Industry Training Organisations
- 8 individual interviews
  - 2 Senior level
  - 6 Mid-level
- Qualitative
Working definitions

**Workplace learning** is lifelong learning: the acquiring of knowledge, skills and abilities gained through formal, informal and non-formal learning that is assessed in the workplace and contributes to the achievement of qualifications or skillsets.

**Workplace assessment** is the process of assessing a learner’s knowledge, skills and competencies on the job.
Working definition: Innovation

“The use of inventive ideas and **novel** ways to act and create solutions.”

“Includes both **new** technology and new ways of doing things.”

“Innovation = New

“**New** combinations of ideas.”

“An invention in the form of a **new** technical or technological product, as well as an idea, a new practice, or a new object which people consider to be new.”
Industry Training Organisations in New Zealand

What is an ITO?

Reforms

Scope

Role
Regulatory influencers on ITO strategy

Be responsive to change!
1. In what ways do Industry Training Organisations interpret Tertiary Education Commission’s strategy with reference to future workplace learning and assessment innovation?

2. What is the strategic planning for future workplace learning and assessment innovation in Industry Training Organisations?

3. What are the challenges experienced by Industry Training Organisations in relation to the strategic planning for future workplace learning and assessment innovation?
Key findings: Interpreting innovation

- New approaches
- Integrate technology
- Continuous improvement

Learning innovation
- Learner engagement
- Meeting learner needs

Assessment innovation
- Verify learner competency

- On the-job
- Personalised

Different ways of doing things
### Key findings: Strategy

#### All
- Direction guidance
- Technological advancements
- Demographic changes
- Collaboration industry, clients and learners

#### Most
- TE Strategy had an impact on ITO
- Globalisation
- Technology triggered qualification reviews

#### Few
- Strategic planning a regulatory requirement
- Lifelong learning

#### One
- Commercialisation of objectives
- Lack of honest self-assessment

### Impact of strategy

- Workforce development plan
- Personalised learning
- Digital strategy
Key findings: Learning innovation

- **All**: Learning management platform or online tool
- **Most**: Supported learners with additional skills
- **Some**: Offered or intended to offer micro-learning packages
- **Few**: Considered augmented reality
- **One**: Considered virtual reality

**Challenges**
- Financial restraints
- People's reluctance to change
- Communicating across diverse clients including busy learners
- Pace of changing technology

**Response to challenges**
- Workforce development plan
- Leadership role
### Key findings: Assessment innovation

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<th>Most</th>
<th>Some</th>
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<td>Verbal discussions</td>
<td>Integrated or holistic assessment</td>
<td>Workshops that included self-peer-industry assessment</td>
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<td>Online repository</td>
<td>Customised solution</td>
<td>Different way of writing qualification</td>
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<td></td>
<td>Digital evidence</td>
<td>Online question banks</td>
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<td>Online assessment, moderation and credit reporting</td>
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Talk-to-text applications, 3D images, videos
Key findings: Assessment innovation

**Challenges**

- **Most**
  - Changing people’s mindsets
  - NZQA’s moderation requirements

- **Some**
  - Training assessors to adapt to new ways
  - Financial constraints

- **Few**
  - Adapting moderation practices
  - Academic fraud
  - Generating new ideas
  - Selecting people and processes to support innovation
  - Balancing quality and innovation

**Response to challenges**

- Change mindsets slowly
- Review moderation concept
- Communicate
- Collaborate
- Review options in budget
Recommendations

1. Have a shared understanding of what the concept of innovation means.

2. Collaborate with other ITOs and work towards national and international partnerships.

3. Adapt moderation practices alongside assessment innovation.
Post-research: Initiatives in New Zealand
Post research: Initiatives in New Zealand

Why six major businesses and Government invested in a video game

'Gamification' to be offered in schools next week, encouraging students to go into trades
Questions