



Micro-credentials for NZDE graduate attribute tracking

Morgan Look – Unitec Institute of Technology

Micro-credentials

Small is good

Issuer backed credentials

Achievable

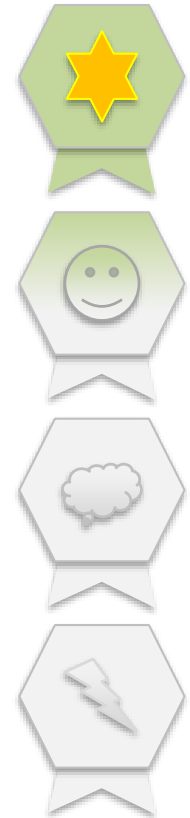
Similar to existing unit/achievement standards

Receiving significant attention

Verifiable

Linked back to issuer

Employers and moderators



All or nothing?

A gentle approach to achieve a specific result

Proposals already exist

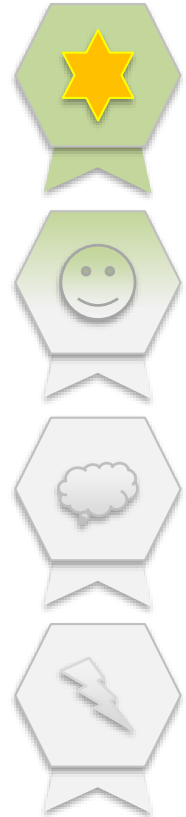
Full or partial NZDE programme

Supplementary or bridging credentials

Another possibility

Not mutually exclusive to other proposals

Outcomes beneficial to staff, students, institutes



Graduate Attributes

Dublin accord:

Differentiating Characteristic	Dublin Accord – NZDE Graduate
1. Engineering Knowledge	Apply knowledge of mathematics, natural science, engineering fundamentals, within specialist discipline to wide practical procedures and practices
2. Problem Analysis	Identify and analyse well-defined problems reaching substantiated conclusions using codified methods of analysis specific to specialist field
3. Design development of solutions	Design solutions for well-defined technical problems and assist with design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural and societal and environmental considerations
4. Investigation	Conduct investigations of well-defined problems, locate and search relevant codes and catalogues, conduct standard tests and measurements
5. Modern Tool Usage	Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems with an awareness of the limitations

All courses contribute

But explicit assessment through two courses

Evidence collection

The burden of recording and assessing evidence of student attributes falls on course coordinators

Micro-credentials could shift the focus to the student

Shared burden of assessment

Students carrying more responsibility

ENGINEERING NZ TECHNICIAN ATTRIBUTES

	IEA Graduate Attributes	Outcomes
1.	Engineering Knowledge	✓
2.	Problem Solving	✓
3.	Design /Development of Solutions	

Student ownership of progress

Progress visible to students

Course work contributes to attribute (micro?) portfolios

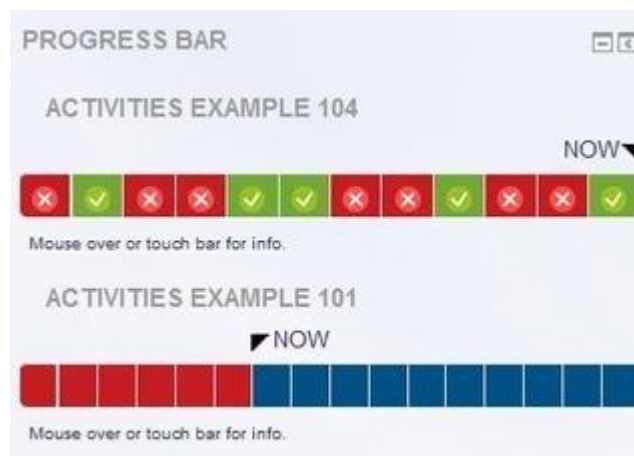
Links from courses for students to contribute material to portfolios

Portfolio is assessed and credential awarded

All credentials must be awarded for student to graduate

Progress through each attribute visible to students

Students are aware that they must complete them all



Implications

Micro-credentials imply certification

We are already certifying these capabilities

- Dublin Accord
- Graduate Profile
- Curriculum Document

Evidence will be easier to moderate

Each attribute has an assessed portfolio of evidence

Additional assessment effort required?

More explicit than embedding all evidence into two courses

Technology requirements

Learning management systems must have capability to issue, store, retrieve

Discussion

Could this work?

Disadvantages and challenges

What difficulties might be faced?

Advantages

How could this help: staff, students, admin?

Further discussion

Questions?

