Industry 4.0 and Higher Apprenticeships

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Industry 4.0 and new opportunities

Today’s mechanic is tomorrow’s electric vehicle technician

Digitisation, digital tools and automation are changing the way Victoria operates – and creating new opportunities.

Many businesses are already operating under Industry 4.0 (the fourth industrial revolution) and implementing simulated systems for operations and maintenance.

In response, Victoria is investing in innovative solutions that expand opportunities and approaches for students to put theory into practice during their course

Higher Apprenticeships

Higher Apprenticeships extend the benefits of the apprenticeship and traineeship model to training at higher levels

Governments, industries, and education institutions are increasingly viewing work-integrated learning that brings together vocational education and training and Higher Education learning (such as Higher Apprenticeships) as a solution to produce highly skilled workers for the future Industry 4.0 driven economy.

Victoria's working definition is:

- ***Higher Apprenticeships combine a workplace-embedded program of ongoing, material and structured on-the-job training with formal study, with the study component leading to the award of a qualification at Australian Qualification Framework levels 5 (diploma) or level 6 (advanced diploma/associate degree).***

  A Higher Apprenticeship delivers training that is contextualised to an industry's needs. It may or may not be undertaken as a contract of training, but roles and responsibilities, and time release arrangements must be formalised.

The challenge: the definition differs across jurisdictions as does the regulatory framework

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Case example:

The Big Build Higher Apprenticeship Pilot

In late 2019, the government partnered with Swinburne University on the Big Build Higher Apprenticeship Pilot to upskill the civil construction sector with industry 4.0 and the management of new digital technologies in the sector.

Program highlights include:

- **Equip industry 4.0 skills:** Students gain innovative technical skills that civil construction organisations need to deliver the next frontier of industry 4.0 technology
- **Career development:** Work-integrated learning gives students a qualification and a pathway to learn critical future work skills in Industry 4.0 for civil construction
- **Return on investment for companies:** Students undertake a major project which investigates a field of Industry 4.0 that can be implemented in their workplace, to drive efficiencies and a return on investment

What have we learnt

- The concept of a higher apprenticeship in Victoria is not well understood
- A cohesive national strategy and policy architecture for higher apprenticeships across state and federal governments is important
- Both industry and learner needs must be captured in program design
- The training contract model that underpins traditional apprenticeships is preferred
- Higher apprenticeships are likely to be more successful targeting entry level

Is there a recipe for success?

Industry and employers have a critical role.

- The presence of a critical skills gap alone is not sufficient to support the success of a Higher Apprenticeship
- Industry needs to drive the delivery of the Higher Apprenticeships –
  - the apprenticeship must be broadly recognised by industry
  - employers must provide flexibility for release for formal and on the job training
  - industrial relations environment must support the apprenticeship
- Pathways to further qualifications make the higher apprenticeship more attractive

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Higher Apprenticeships - shaping the way forward

Next steps

- Evolving the Higher Apprenticeships program to support Industry 4.0 skills needs in the construction industry and digital services.
- Trial entry-level Higher Apprenticeships in the digital services sector, focused on systems engineering
- Exploring Industry 4.0 degree apprenticeships in Victoria
  - Business case and policy development
  - Consider appropriate regulatory arrangements
  - VET and HE coordination
  - IR arrangements
  - HE funding and wage subsidy issues

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Thank you

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