THE FUTURE OF
AUSTRALIAN APPRENTICESHIPS

Australian Government
Department of Education and Training

The future of Australian apprenticeships

Report of the stakeholder forum
Canberra, 25 October 2016

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Publisher's note

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About the forum

The future of Australian apprenticeships forum

'The future of Australian apprenticeships' stakeholder forum was hosted by the National Centre for Vocational Education Research (NCVER) in conjunction with the Australian Government Department of Education and Training in Canberra on 25 October, 2016. The forum was attended by over 60 key stakeholders from across the vocational education and training (VET) sector, including representation from the business community, industry peak bodies, unions, training providers, government agencies, and VET researchers.

The aims of the forum were to stimulate thinking and robust discussion on the future of apprenticeships in Australia and to identify the potential future activities and actions that would enable apprenticeships to continue to service industry workforce needs and contribute to national productivity and growth.

Discussions were structured around three main themes: Benefits and value; Attraction; and, Retention and completion. To encourage informed debate, NCVER commissioned three discussion-starter essays which were provided to participants prior to the forum. Participants considered apprenticeship reform from the perspective of industry, educators, policy makers, career professionals and unions. Their wide ranging views are captured in this summary report.

Key messages

- The core of the apprenticeship model continues to be highly relevant in today's modern economy. However, the system and architecture surrounding the model, including funding and regulatory arrangements, were described as complex, inconsistent and confusing. This is particularly so for national employers, despite long efforts to harmonise and streamline them.

- There is an identified need for a continued focus on the employment relationship in training, particularly the integration of on- and off-the-job training, and the strengthening need for the tri-partite involvement and commitment of the employer, apprentice and training provider.

- A significant opportunity and challenge exists as to how the whole of the VET sector can work together to raise the profile of apprenticeships and the reputation of vocational careers and pathways. This includes applying new thinking as to how to effectively reach and inform the key influencers for young people — parents, career professionals and classroom teachers.

- There is a continued and growing need for in-depth and contemporary data and research analytics that will provide improved understanding of the reasons apprentices and employers are attracted, or not, to apprenticeships and why they chose to stay in or leave the system. It was recognised that there could be significant value in recommissioning the 2010 Apprentice and Trainee Destinations Survey.

- Extending the concept of apprenticeships to higher-level qualifications, such as diploma and associate degrees, was seen as a logical progression of the model to meet the needs of the fourth wave of industrial development and to ensure we are preparing for the skilled workforce of tomorrow.

- Investigating strategies for engaging small enterprises more holistically in the apprenticeship system, and identifying how widely the support services offered through the Australian Apprenticeship Support Network and third party intermediaries are recognised and utilised.

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Contents

Figures

ⓘ Introduction

Apprenticeships in the Australian context are defined as a system of training, regulated by law or custom, which combines on-the-job training and work experience while in paid employment with formal training (usually off-the-job). The apprentice enters into a contract of training or training agreement with an employer, which imposes mutual obligations on both parties. Traditionally, apprenticeships were in trade occupations (declared vocations) and were of four years' duration, but the duration of contracts has been formally reduced in some trades and the apprenticeship system broadened (VET Glossary, 2017).

A traineeship on the other hand combines off-the-job training, with an approved training provider, with on-the-job training and practical work experience, generally taking one to two years (VET Glossary, 2017).

Apprenticeships are a crucial employment pathway for many Australians and have long been a feature of our national approach to skills development. They have formed the cornerstone of training skilled workers in many small and large businesses, however in recent years the number of people entering into apprenticeships has declined. Meanwhile completion rates remain lower than desirable, despite persistent efforts by governments and industry to arrest the decline. An increase in commencements and completions is essential to maintaining a supply of skills as Australia looks to lift economic growth and productivity.

Aim of the forum

'The future of Australian apprenticeships' stakeholder forum was held in Canberra on 25 October 2016, and was co-hosted by the National Centre for Vocational Education Research (NCVER) and the Australian Government Department of Education and Training.

The forum aimed to:

- stimulate discussion on the future of apprenticeships in Australia

- identify strategies and potential actions to ensure apprenticeships continue to support industry workforce needs and contribute to productivity and growth in a changing economic environment.

This report outlines the approach to the forum and summarises the key issues and strategies identified by participants that they believed would make a positive contribution to the value, strength and growth of apprenticeships.

Approach

Sixty key decision makers attended the forum. Invited guests were drawn from a wide spectrum across the vocational education and training (VET) stakeholder group, representing employers and industry; peak industry groups; unions; peak training provider bodies; registered training organisations; academics; government agencies; group training organisations; and, Australian Apprenticeship Support Network providers. The list of participants is included as appendix 1.

Participants were encouraged to be bold and ambitious in the discussions and to consider fresh perspectives in order to generate ideas that could be used to shape and influence the future of apprenticeships and the apprenticeship system. Further, it was suggested that participants put aside the issue of apprenticeship incentives, which generally attracts passionate debate, as incentives had

recently been the subject of advice to the Australian Government from an Apprenticeships Reform Advisory Group and was currently under consideration and discussion.

Discussion starter essays

To stimulate thinking and provide focus to the discussions at the forum, NCVER commissioned three essays from authors with different industry perspectives. Participants were provided with these three discussion starter essays in advance as pre-reading.

Each essay was based on a key theme (as indicated below):

- **Benefits and value**
  What is required for Australia to strengthen its value and commitment to a quality apprenticeship system? prepared by Megan Lilly, the Head of Workforce Development at the Ai Group.

- **Attraction**
  In the future how can apprenticeships be designed to make them more attractive to individuals and employers? prepared by David Carney, the Executive Director of the Career Industry Council of Australia.

- **Retention and completion**
  What needs to happen for retention and completion to be increased and who is responsible? prepared by Alan Waldron, the National Training Manager at Hutchison Builders.

These discussion starter essays confirmed the valued contribution and long history of apprenticeships in Australia along with their strong links to industry needs and the broader world of work. However, each of the essays also established, from their different perspectives, that for the apprenticeship model to remain relevant in today's labour market, the model and system must be considered in the context of the changing economic and skills environment. A continued commitment is also required from government, employers, unions, the training system, parents and apprentices themselves. The discussion starter essays can be viewed at appendix 2.

Opening address

To set the scene for roundtable discussions, the forum commenced with an address by the Assistant Minister for Vocational Education and Skills, the Hon. Karen Andrews MP. The Minister emphasised the need to build on the strengths of apprenticeships while focusing on addressing key issues of:

- raising status

- achieving job ready graduates who gain meaningful jobs

- lifting the quality of the vocational education system.

Strengths of the model were identified as the opportunity to be in productive paid employment while undertaking on- and off-the-job training and the excellent career outcomes attained by apprentices as demonstrated by data. Minister Andrews stressed the importance of both current data, and of ongoing, relevant research that continues to inform our understanding of the apprenticeship system and the labour environment. This ensures decision making and government policy is based on contemporary evidence. She urged participants to challenge the status quo and identify strategies and initiatives to lift both commencements and completions.

Data snapshot

NCVER provided participants with a precis of the current data trends in apprenticeships, derived from NCVER's National Apprenticeship and Trainee data collection, 2015.

The analysis of the data paints a compelling picture. Figure 1 (over the page) provides a trend analysis of apprenticeship commencements since 2006. It indicates that there was a significant dip in commencement numbers in 2012 especially in the non-trades following the removal of some apprenticeship incentives and funding rates for training. Commencements in the trades however, have been more stable and appear less affected by changes to the incentives.

Apprenticeship completions have shown a similar decline, closely reflecting declines in commencements. Although there are some differences in trade and non-trade data, and across industry sectors and jurisdictions, overall the latest contract completion rates are 53%.[1] Trade completions have been steady over time but declining slightly since 2014 (figure 2). It was noted that the individual completion rates for apprentices were generally higher. It is concerning though, that attrition remains high during the first year of training, despite continued efforts by parties from across the VET sector to positively shift the number of first years leaving the system.

Figure 1   Commencements (12 months to 31 December 2015)
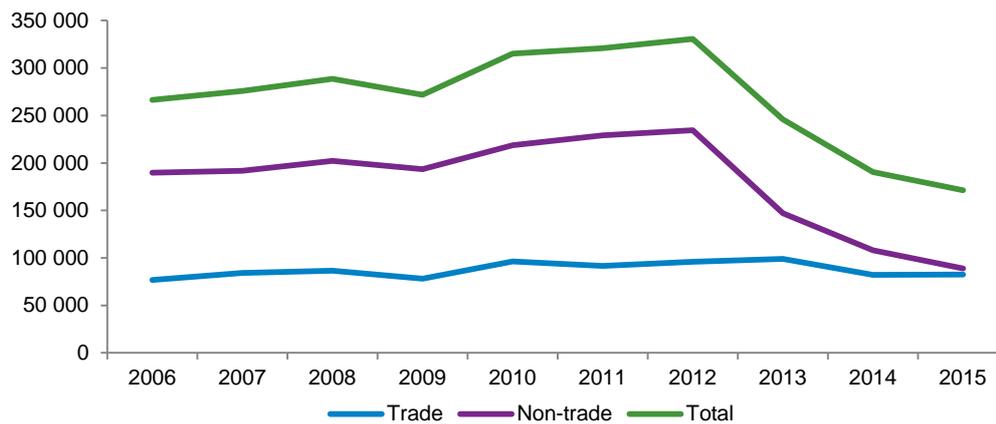
Note: Apprentices commencements for the year to 31 December.
Source: National Apprentice and Trainee Collection, Annual 2015.

Figure 2   Completions (12 months to 31 December 2015)
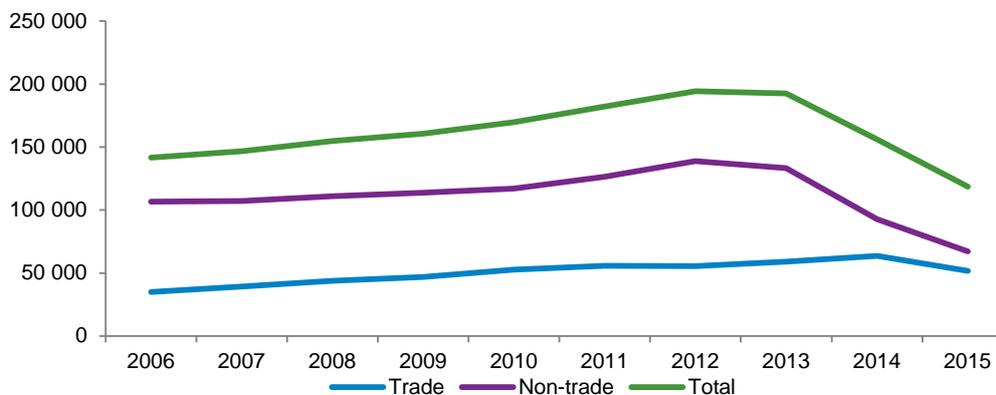
Note: Apprentices completions for the year to 31 December.
Source: National Apprentice and Trainee Collection, Annual 2015.

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1   Source: NCVER 2016, *Completion and attrition rates for apprentices and trainees — 2015*, NCVER, Adelaide. Available from <http://www.ncver.edu.au/publications/2881.html>.

Presentations and roundtable discussions

Presentations from the authors of the discussion starter essays were followed by interactive roundtable discussions. Each table had a suite of thought provoking questions for a facilitated discussion. The views of each table were then shared with all forum participants. Following the forum, participants were provided with an opportunity to give additional insight and opinion through email.

This report represents the consolidated views and opinions of the participants around the themes of:

- Benefits and value

- Attraction

- Retention and completion.

In addition, the report also captured participants' observations of the apprenticeship system and model, and highlights the overwhelming need to raise the reputation of VET within the wider community.

Synthesis of views

There was a pervasive, cross-cutting issue raised in all three discussion themes — the need for increased and current data, trend analysis and evidence derived from targeted research to help answer the continuing questions surrounding why apprentices and employers are attracted, or not attracted, to the apprenticeship model and the reasons apprentices stay in or leave the system.

It was acknowledged that there have been many reviews in the area of apprenticeships over recent years and there is a solid base of research that identifies some of the critical factors, both in Australia and internationally. Recently, major reports in Queensland (Jobs Queensland 2016) and New South Wales (NSW Business Chamber 2016) spell out clearly some of the important factors in re-invigorating apprenticeships including early apprenticeship participation, sound industry-led career advice and restoring consistency, coordination and an outcomes focus to the system.

However, there are still ubiquitous questions surrounding the future success of the system. Many participants expressed the need for a more comprehensive understanding of the factors most open to influence, which would assist in informing cost-effective interventions at the right time.

There was a view that much of the current research focuses on specific elements of the apprentice experience rather than the whole picture, which doesn't provide the linkages and ramifications that may be experienced by all players within the apprenticeship system. It was thought that the focus of future research could consider a more holistic picture of the impact on, and perspectives of, the three core parties involved — employer, apprentice and training provider — throughout the entire apprenticeship life cycle.

Participants agreed that the Apprentice and Trainee Destinations Survey provided valuable and comprehensive information about outcomes, underlying reasons for non-completion and levels of satisfaction from involved parties. This enabled key decision makers from government and industry to look at potential initiatives that could address issues and take up opportunities for enhancement of apprenticeships. However, the Apprentice and Trainee Destinations Survey was last conducted in 2010 so the information is now dated given high rates of change in industry and the labour markets, as well as the then impact of the Global Financial Crisis.

Another key source of information that some participants identified was the NCVER Pod Network (NCVER 2016b), a recent development which captures current international research and initiatives on a range of topics including apprenticeships and traineeships. Other key sources included the Australian Industry and Skills Committee website, with updates on training packages, and the Australian Apprenticeship Support network website (although some participants felt that while solid information was available through this website it was not utilised to its full benefit).

It was recognised that while there is significant information available for both potential apprentices and employers, there still seems to be lack of awareness of information and how to access it. This was particularly identified as an issue for people outside of the secondary school environment, and small and medium sized enterprise (SMEs) employers, as well as parents and career advisors in schools. Therefore, an opportunity exists to explore the channels required to disseminate information to different stakeholders and to also understand more fully how to raise awareness of where to locate support for diverse audiences.

Theme 1 – Benefits and value

Discussions clustered around a number of sub themes which are set out below.

There is much to lose if we lost apprenticeships

If we lost apprenticeships, Australia would be poorer — training would lack consistency and national portability, be narrower in focus and not strongly linked to employment outcomes. Small and medium enterprises in particular would bear the biggest with of a lack of access to skilled workers, and we would lose the safeguards currently in place for apprentices. In the longer term there were concerns that skill shortages in key occupations could occur.

Apprenticeship model versus apprenticeship system

It was clear that participants differentiated between the apprenticeship model and the architecture that sits around it — the system. The core of the apprenticeship model — the integration of on- and off-the-job training and a strong three way relationship between the employer, apprentice and training provider — is widely seen as having stood the test of time and is still valuable.

However the system and architecture surrounding the model including Commonwealth, state and territory funding and regulatory arrangements were described as complex, inconsistent and often confusing, particularly for national employers, despite long efforts to harmonise and streamline them. Stakeholders also described a level of frustration by the policy 'churn' — continual shifts in policy settings which undermine employer confidence and engagement.

The view was that the process for design and development of qualifications has been too slow to keep up with rapid changes in industry and skill requirements, even withstanding the establishment of the Australian Industry Skills Committee and associated Industry Reference Committees. In addition, complex stakeholder engagement arrangements block quick action.

There was a plea to 'de-clutter' the system but in doing so, not to 'throw the baby out with the bathwater' — be clear about what is working in the apprenticeship model and preserve these aspects.

Employer, employee and training provider relationship

There was an identified need for a continued strong focus on the employment relationship in training, and that for successful outcomes there needs to be three way involvement and commitment between the employer, apprentice and training provider.

A true quality measure of apprenticeships is that of job performance following the apprenticeship, not just achieving the qualification. People need to be both competent and proficient in their role to add value in an employment context and to facilitate career satisfaction.

Full qualifications versus skill sets

The ongoing issue of full qualifications versus skill sets was raised, and is a key issue in rapidly changing work environments where employees may need to be upskilled or reskilled in response to structural adjustments. Then the question arises regarding who is responsible for funding initial, and ongoing, training, and who benefits.

Enhancing benefits and value

Other strategies which would enhance the benefits and value of apprenticeships and increase employer engagement in apprenticeships were identified during discussions.

Ensuring apprentices are more productive when they commence their apprenticeship enhances their economic viability for employers. Pre-apprenticeship programs were considered optimal for this purpose as they ensure apprentices possess some 'job readiness' and industry understanding from the outset. Ensuring strong recognition of, and support for, the role of employers in providing meaningful work placements was identified as essential as was mentoring support.

More screening of both employers and apprentices at the outset to build realistic expectations of both parties was identified as a crucial step — recognising that the Australian Apprenticeship Support Network providers currently offer support services such as mentoring and front end services to employers, apprentices and potential apprentices.

It was argued that changing the focus on STEM (science, technology, engineering and maths) to STEAM (with the inclusion of arts or creativity) will significantly enhance employability, adaptability and problem solving skills — making apprenticeships more rounded.

An option was identified to use new, non-traditional, higher level models of apprenticeships to reinvigorate interest in what has become (for some) an outdated brand.

A 'back to basics' approach was mooted and to consider whether the nexus between industrial relations and qualifications is as good as it could be to promote uptake and pathways. Open conversations between all stakeholders were recommended to consider the best design that is fit for purpose.

Third party intermediaries are important but there are some questions

The role of third party intermediaries such as Australian Apprenticeship Support Network providers and group training organisations (GTOs) were seen as important in providing a clear, coherent and simplified front end for employers and apprentices. This is particularly the case in relation to engaging with small and medium sized enterprises.

The discussion centred on the important role that the group training support model plays in maximising apprenticeship completions. With its focus on employer and trainee support there was an opinion that, given these strengths, completion rates would be higher than those experienced by some GTOs. It should be recognised that GTOs often engage with a more disadvantaged cohort of apprentices, adding layers of complexity to the operating model and an inherently higher risk of non-completion that needs to be managed by the GTO. A key outcome from the forum discussion was the need to understand how this model can best be leveraged to optimise apprenticeship completion, while still supporting individuals with disadvantaged backgrounds to complete their training.

Interest was shown in tracking and evaluating the impact of Australian Apprenticeship Support Network providers — the service is still too early to assess fully but has the potential to make a difference to the engagement of both employers and apprentices.

It should be noted that there is complexity inherent in the third party intermediary space with the potential for them to 'trip up over each other' and be competitive. There is a knowledge gap around who knows what and who does what. Strategies need to be in place for the key third parties to have meaningful conversations with each other to promote coordination, avoid duplication and minimise

confusion for employers and apprentices. This could also enable identification of good practices, gaps in services and the formation of collaborative partnerships for the benefit of clients.

Extending the model and learning from others

There is value in investigating and considering international models which extend the apprenticeship model to new industries and higher qualification levels, including degrees. Australia needs to be open to learning from others. Israel's investment in innovation was suggested as an example to examine for lessons in the Australian context.

In Australia the project being led and managed by the Ai Group, in collaboration with Siemens Ltd and Swinburne University of Technology, as outlined in the first discussion starter by Megan Lilly, will also test the apprenticeship model's application to higher level qualifications. The project is using an apprenticeship framework to deliver a new diploma and associate degree in Applied Technologies, a response to the need for higher skills required for the emerging fourth industrial revolution in the knowledge economy.

Australia should identify and capitalise on good pilots within different jurisdictions which could be considered for broader application. There is frustration that our learnings from pilots and effective models are hindered by a lack of national focus and funding continuity.

There were some reservations about the impact of implementing new and extended models in any broader rollout. It is important that any new models are not transplanted or replicated without a robust evaluation to ensure widespread implementation is informed by evidence, so that the extension of the model to higher level skills does not compromise the strengths of the traditional trades model.

Using the term 'apprenticeships' in a non-trade context risks complicating the marketing of apprenticeships, which is already challenging, by mixing up messages and the products on offer. Perhaps consideration needs to be given to differentiating products through the use of different terminology such as 'cadetships'; especially where these involve existing workers.

There may be challenges in engaging with the higher education sector to build apprenticeships in higher level qualifications. Many university courses are built on to focus on theory up front, and practice later in the program. Evaluation of the Ai Group's project to identify how any barriers addressed will be important for similar projects in the future.

Features of the United Kingdom's new apprenticeships model (Sainsbury et al. 2016) considered worth exploring include:

- using a framework of occupational groupings that share training requirements for common, core skills

- offering up to 12 months of tailored and flexible support (a transition year) to 'at risk' groups to increase access and retention

- creating parallel technical and academic options both with high status, proceeding to high level qualifications and enabling pathways between the two

- introducing end point assessment, covering both practical and theoretical elements, was strongly supported as a way of introducing greater rigour into our system and considered potentially workable in both trade and non-trade qualifications.

Theme 2 – Attraction

Career advice and information, along with clever marketing are critical

Vocational education and training, and in particular the concept of apprenticeships, is often poorly perceived, considered 'old-fashioned' and an alternative for individuals who are not equipped for higher education. There is a significant opportunity and challenge for the whole of the VET sector — governments, industry, employers, unions, providers and peak bodies — to work together to raise the profile of VET and the reputation of vocational careers and pathways.

In terms of attraction, accurate and accessible career advice and clever marketing were seen as critical elements.

There was a call to apply some innovative thinking to determine how to more effectively reach the key influencers, parents, career and classroom teachers (who are seen as significant agents of change) and peers. It was suggested to develop new messages, drawing from other effective marketing such as:

- those used by the higher education sector

- good practice examples such as Future Print used in the printing industry and the New South Wales pre-apprenticeships in construction.

The VET sector can learn a great deal from marketing approaches used in the higher education sector in terms of student and parental engagement, supporting student aspirations and promoting access to training for under-represented learners. Engaging with young people and their parents early (such as while they are still in primary school) was identified as an important step in promoting awareness of VET options.

In addition, the sector under-utilises the positive messages that can be created from part-time work many young people undertake while at school. We need to identify and acknowledge the significant skills built through work in areas such as retail and hospitality by building messages that these skills are respected and valued.

Strategies for delivering information and marketing need to consider the 'impenetrable plethora' of information that currently exists, and create a single source of information with simplified nationally consistent messages about apprenticeships which has been tested with employers and apprentices. The use of social media in particular to extend reach cannot be under-estimated.

There was a strong view that Australia is lacking a national approach to career advice and to building career management skills and that as part of a national approach, careers education should commence in primary school as research shows this is when career aspirations are formed. In this respect, classroom teachers and school career advisors were recognised as significant 'influencers' on the development of young peoples' attitudes toward apprenticeships.

Within a national approach, systems of accountability and incentives need to be applied to schools to lift performance in career advice which is currently ad hoc and fragmented, and largely falls to individual school principals to find and allocate a budget. It was proposed that career development be included as a measurable item on 'My School' so parents and students can see which schools excel in the provision of career advice and development.

It was suggested that the discussions to formulate the new National Partnership Agreement for VET could be the vehicle for achieving leadership and commitment around a national approach to career advice.

It was noted that the Australian Government has committed to developing a National Career Education Strategy and that the ideas from this forum could be used to shape the strategy (Liberal Party 2016).

A key role for pre-apprenticeship programs and work placements as part of the system

The use of pre-apprenticeship and preparatory programs were seen as a key strategy for attracting apprentices and employers — benefits identified included engaging employers early in the process of work-based training, providing a 'taster' of the industry and workplaces to young people, and building work-readiness skills.

A number of strategies were suggested for creating meaningful work experience and work placements, including:

- better preparing school students for work experience through exposure to a combination of industry specific and employability skills before they enter the workplace

- using third parties such as registered training organisations (RTOs) to design and run simulations before work placements and to provide information about career pathways in the industry

- providing a senior apprentice in the workplace as a 'work buddy' — the importance of role models

- using a sample training plan for students to work through with an RTO or an industry association as the facilitator

- implementing a strategy for connecting employers and schools at the local level, potentially coordinated and supported by industry associations, similar to the model in the United Kingdom which could provide the missing link between school and work.

It was also discussed that more analysis is needed to clearly identify the range, purpose, impact and value of pre-apprenticeships and to take a broad view of what success looks like, as it can extend beyond work outcomes. It was suggested that the availability of the unique student identifier and total VET activity will together enable better tracking and matching to the apprenticeship database, providing a better understanding of pathways and whether those who do a pre-apprenticeship program are more likely to commence and complete an apprenticeship.

Attracting mature age apprentices

The issue of whether the apprenticeship model is suitable to attract mid-career and mature age entrants was also discussed. Participants suggested that strategies to attract different groups need to be customised and informed by market analysis which identifies people's motivations to change careers, but that wage rates will often act as a barrier for mature age entrants. Focusing on existing workers in a firm was indicated as a potential source of new apprentices.

Theme 3 – Retention and completion

Acting on what works and what doesn't

There was a strong sense of the need to increase our understanding of what works and what doesn't, and then apply the learnings throughout the life cycle of an apprenticeship. A significant emphasis was placed on appropriately matching and preparing apprentices and employers up front, as outlined in Essay 3 (see appendix 2) regarding the model applied by Hutchison Builders. There is a view that this will pay

off in higher completion rates. The importance of the employer looking at, and talking to, the apprentice as a future employee, who can build a career in the enterprise, was also seen as very important to a sustainable relationship.

Other important learnings include:

- Understanding the key factors that both the employer and apprentice contribute to completions and non-completions, identifying those which can be effectively influenced and putting effort into strategies to address them. Participants referred to a Western Australian survey of employers and apprenticeship non-completers about the reasons for the non-completion. The critical points identified included the need to identify suitability and the fit of both employer and apprentice, the importance of induction for both parties, and the availability of peer mentoring (both technical and pastoral).

- Identifying relationships where there is a high risk of breakdown, for example by examining the factors at play in employers with high rates of apprentice 'churn' and ensuring that third party intermediaries have systems in place for 'early intervention' when issues are emerging. This is in addition to ensuring strong mentoring and in-company support exists for apprentices.

- Looking at models that have been successful and assessing their applicability to the apprenticeship context. The National Workforce Development Fund had high completion rates (ACIL Allen, 2014) and although this focused on a different cohort (existing workers), the success generated by greater upfront effort to identify and match needs, and closely monitor RTOs could be translated to the apprenticeship model. In a similar vein, South Australia has the highest completion rates in the nation for traditional trade apprentices and anecdotal evidence suggests this is related at least in part to the upfront screening of employers so they understand their role and the expectations of them.

- Trialling and evaluating different approaches to create a meaningful workplace training experience through a more 'organic' implementation of training plans — documents which evolve based on conversations between the employer, apprentice and training provider — and 'holistic' training that combines business, trade and life skills.

- Considering a program to mentor and train workplace supervisors to over time build skills in working with apprentices and RTOs to integrate on- and off-the-job training. This was considered particularly important given that research shows (for example, Bednarz 2014) that employment-related factors contribute more to non-completions than other factors such as dissatisfaction with the training.

- Examining the impact on completion rates of having access to an advocacy/student representative voice such as the Queensland Training Ombudsman, the South Australian Training Advocate and the Victorian Education Commissioner.

What about small and medium sized enterprises?

Participants debated whether the holistic model applied by Hutchisons Builders could feasibly be applied in small and medium sized enterprises (SME). Research by Jobs Queensland (2016) for example finds that larger firms with more than 50 employees, a human resources department and have been in operation for longer than ten years have higher retention and completion rates than very small businesses with few staff — and often requiring support.

The forum discussion concluded that while there are some good practice examples in small businesses, this group of employers will probably always need the additional support provided by bodies such as

group training organisations, Australian Apprenticeship Support Network providers and industry associations. Similarly apprentices in SMEs can be isolated from supports, and strategies are needed to ensure they can access the mentoring and support they need.

Efforts should focus on a systematic support strategy for this cohort of employers and apprentices which joins up a number of initiatives recognising that there is no 'one size fits all' solution. Examples of SME supports identified by forum participants included:

- The teaming up of large businesses with SMEs, with government acting as the facilitator. Hutchisons and other large employers have signed up to the Employment Parity Initiative which aims to achieve more Indigenous employment in industry (DPMC 2016). Big employers have committed to targets and Hutchisons, together with their networks of subcontractors and suppliers (many of which are SMEs), have in the first year organised the employment of 107 people, most being apprenticeships.

- A facilitator could bring groups of SMEs and apprentices together in a support network to problem solve and identify good practice. However participants acknowledged this is resource intensive for both governments and small businesses.

→ Next steps

Some further steps were identified for action during the forum which could be taken up by stakeholders:

- There is value in organising additional discussions with 'sub-sets' of forum participants to consider specific opportunities for pursuing reform and improvement in the apprenticeship system. In particular, this could look at the issues of consistency, adequacy of supports and strategies as well as investigate promising practices and new models.

- There is a need for more data and information to help answer the big questions — like why apprentices and employers are attracted to the apprenticeship model and the reasons they stay or leave. There is potential to develop a new research approach based on some of the key questions identified as most critical by the roundtables; including currency and a comprehensive understanding of both employer and apprentice perspectives throughout the entire apprenticeship life cycle.

- Greater analysis is required to clearly identify the range, purpose, impact and value of pre-apprenticeships and to identify whether those who do a pre-apprenticeship program are more likely to commence or complete an apprenticeship or not.

- Evaluation of the merits and benefits to a wide stakeholder group of repeating the Apprentice and Trainee Destination Survey (in a more updated form), to provide greater knowledge of factors that influence apprentice decision making to commence and complete, as well the factors that influence employers to take on apprentices.

- Undertaking investigations of what marketing strategies, communication channels and promotion of information pathways are currently in use and what would be of most value to help raise the profile of apprenticeships with a range key influencers and potential apprentices and employers.

- There is value in:

  - conducting broader analysis to identify the underlying reasons why some group training organisations are not achieving desired levels of completions and identifying strategies to rectify the causes

  - exploring why delivery under the former National Workforce Development Fund resulted in higher completion rates.

- In relation to small and medium sized enterprises, what would a systematic support strategy for SMEs look like and could we better utilise the forum expertise to identify this?

- And finally, using ideas generated from the forum around career advice issues to shape the new National Career Education Strategy — especially as these relate to schools and career advisers — should be a focus.

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Appendix 1: Delegate list

NAME	POSITION	ORGANISATION
Alan Waldron	Training Manager	Hutchison Builders
Alice Clements	Manager Engagement and Client Services	Chief Minister, Treasury and Economic Development Directorate
Andre C Diez de Aux	Director, Quality Services, National Secretariat	TAFE Directors Australia
Andrew Dettmer	National President	Australian Manufacturing Workers' Union
Anna Payton	Policy Analyst	NCVER
Ben Matheson	Training Payment Policy, Workforce and Apprenticeships Policy	Department of Education and Training
Bill Galvin	Chief Executive Officer (and AISC NSW nominee)	Tourism Training Australia
Bob Paton	Chief Executive Officer	Manufacturing Skills Australia
Craig Fowler	Managing Director	NCVER
Darren Cocks	Managing Director	Apprenticeship Support Australia
David Carney	Executive Director	Career Industry Council of Australia
David Collins	Executive Director, Training Services NSW	NSW Department of Industry
Dean Luciani	Chief Executive Officer and Secretary	Westvic Staffing Solutions
Ed Auzins	Education Program Director	Australian 3D Manufacturing Association
Erica Smith	Professor of VET	Federation University Australia
Fiona Yule	Director, Reform Policy and Evaluation	Department of Education and Training
Gabrielle Deschamps	Executive Officer	Enterprise Registered Training Organisation Association
Gary Workman	Executive Director	Apprenticeship Employment Network
Gavin Lind	Director Workforce Skills	Minerals Council of Australia
Gavin Manning	Chair	Mechanical Heavy Vehicle IRC
Gemma Sandlant	Policy Advisor, Employment, Education and Training	Australian Chamber of Commerce and Industry
George Giuliani	Chief Executive Officer	Heidelberg Training and Resource Centre
Georgina Atkinson	Research Officer	NCVER
Isabel Maurer	Director, Traineeship and Apprenticeship Services	Department of State Development
Jane McIntyre	Acting Director, Workforce Strategies, Workforce and Apprenticeships Policy	Department of Education and Training
Jason Foster	Manager, Australian Apprenticeship Support Network	VERTO Ltd

Jenny Lambert	Director, Employment, Education and Training	Australian Chamber of Commerce and Industry
Jo Hargreaves	Team Leader, Research Program Management	NCVER
Jodieann Dawe	National Manager, Research and Engagement	NCVER
John Hart	Chief Executive Officer & NCVER Board member	Restaurant and Catering Australia
John King	Executive Director, Skills and Employment	Department of State Development
Joyce Vandermaas	Manager, Training Operations, Training NT	Department of Trade, Business and Innovation
Juliet Zeiler	Assistant Director, Reform Policy and Evaluation	Department of Education and Training
June Ingham	Team Leader, Communications and Events	NCVER
Kathryn Nunn	National Government Relations Manager	Sarina Russo Job Access (Australia) Pty Ltd
Kathryn Shugg	Branch Manager, Industry Advice Branch, Industry Skills and Quality Group	Department of Education and Training
Kelly Adamcewecz	Industrial Relations Manager	Canberra Business Chamber
Kira Clarke	Academic, Melbourne Graduate School of Education	The University of Melbourne
Larry Moore	Chair	Electrotechnology IRC
Laura Jackson	Stakeholder Engagement Officer	NCVER
Lauren Tiltman	National Executive Officer	Group Training Australia
Linda White	Branch Manager, Industry Skills	Department of Education and Training
Malcolm Richards	Chief Executive Officer	Master Electricians Australia
Margo Couldrey (Facilitator)	Director	Lista Consulting
Marie Minslow	Manager, Apprenticeships and Traineeships, Market Quality and Operations	NSW Department of Industry
Megan Kirchner	Executive Director, Human Capital	Business Council of Australia
Megan Lilly	Director, Education and Training	Australian Industry Group
Michael de Souza	Chief Executive Officer	Australian 3D Manufacturing Association
Neil Miller	National Manager, Policy and Programs	Australian Council for Private Education and Training
Nerida Coulter	Director, Skill Shortages	Department of Employment
Paul Miles	Chief Executive Officer	The Busy Group Ltd
Peta Skujins	Research Officer	NCVER
Peter Keenan	Manager	AMA Apprenticeship and Traineeship Services (WA) Pty Ltd

Phil Loveder	Manager, Stakeholder Engagement	NCVER
Philip Le Feuvre	Head of Engagement	Skills for Australia, PwC Australia
Poul Bottern	Chief Executive Officer	MAS National Ltd
Robert Adams	Chief Executive Officer	Australian Industry Standards Limited
Robert Wilson	National Director Workforce Development and Training & Chair Construction IRC	Master Builders Australia
Ross Kelly	Director, Policy Planning and Research	Department of Training and Workforce Development
Steve Balzary	Managing Director	Business Group Australia
Stuart Hollingsworth	Director, Workforce Development	Skills Tasmania
Suresh Manickam	National Chief Executive Officer	National Electrical and Communications Association
Suzi Hewlett	Group Manager, Industry Skills and Quality Group	Department of Education and Training
Toni Cavallaro	National Collections Manager	NCVER
Tracey Murphy	Director, Apprenticeships Pathways, Workforce and Apprenticeships Policy	Department of Education and Training
Troy Parkee	State Manager, NSW/ACT	MEGT (Australia) Pty Ltd
Victoria Johnson	General Manager, Program Delivery	Education Services Australia Ltd
Viv Mallison	Executive Officer	National Association of Australian Apprenticeship Centres
Wayne Stephens	Director, Queensland Apprenticeship and Traineeships Office	Department of Education and Training
Wendy Blair	Board member	The Australian Hairdressing Council (& Council member of COSBOA)
Wendy Walker	Director, VET Stakeholder and Channel Management, Governance and Engagement Branch	Department of Education and Training

📎 Appendix 2: Discussion papers (essays)

ESSAY 1 – BENEFITS AND VALUE

What is required for Australia to strengthen its value and commitment to a quality apprenticeship system?

Megan Lilly, Head of Workforce Development at Ai Group

What is the current state of our apprenticeship system?

The Australian apprenticeship system has a long and proud tradition. It has been responsible for training many men and women in traditional and non-traditional trades over many decades. Individuals who have progressed through the apprenticeship system have gone on to have sustained careers within various trades and be employed, self-employed or manage companies. Key parts of the Australian economy, notably manufacturing, construction and the resources sector, have relied on skills developed through apprenticeships. We can fondly look back and see an apprenticeship system that has been highly valued and enjoyed a strong commitment from employers, unions, the training system, parents, and of course the apprentice. Yet, if asked the same question today, we are unlikely to draw great comfort from the myriad of responses likely to be given.

Declining participation, low completions and poor perceptions have challenged the apprenticeship system. To understand what is required for the Australian system to be more highly valued and for an increased commitment to a quality fit-for-purpose apprenticeship system requires us to explore its current state and suggest areas for reform.

The apprenticeship model is widely understood to be an employment-based training agreement.[2] An individual is employed as an apprentice in a defined occupation while undertaking a related qualification. This qualification is specifically designed to be achieved over time, by means of the integration of training, often off the job, with work. The apprenticeship system itself encompasses a broad array of components. On the supply side this includes: specific funding arrangements; qualifications and their design; training delivery; and state-based delivery systems. Systemic supports for the demand-side include employer incentives; loans and other payments; and support network arrangements. What we do need to consider is how to build the system so that it is fit for the needs of individuals and employers, now and into the future.

Apprenticeships are also commonly understood to be focused on the development of trade skills, usually but not always at the certificate III level. Traditionally, the attainment of a certificate III level qualification within a training plan has formed the basis of the employment agreement, the heart of the apprenticeship system. I contend that the nexus between the certificate III qualification and the

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2 Traineeships were added to the mix in 1985. While the employment model is the same, traineeships tend to be in different occupations not identified as 'trades', in different parts of the economy and of lesser duration. In some economies, traineeships are considered to be preparation for an apprenticeship. For the purposes of this essay, the focus will be on apprenticeships.

employment agreement can be uncoupled: the model can be successfully applied more broadly than trade-based or certificate III qualifications and has great potential to be adapted as a major work-based learning pathway at technician and paraprofessional levels and beyond. Graduates from such a model would develop highly valued skills and employability, blending the best from vocational and higher education.

The Australian apprenticeship system is underperforming. Data compiled by the National Centre for Vocational Education Research (NCVER) record that there were 278 600 apprentices and trainees in training (December 2015), down 11.8% for the same time the previous year. This is compared with 390 700 in training a decade ago and a high of 445 000 in 2012 (NCVER 2016a). The national data collection combines apprentices and trainees, but does differentiate trade and non-trade qualifications. The 2012 high point notably includes existing worker trainees, a category no longer available. Over time the level of trainees-in-training has moved up and down, according to business conditions, policy changes and funding mechanisms. Traditional apprenticeships have trended down, but at a slower pace. Trade commencements decreased by 10.8% in March 2016 compared with the previous 12 months. Early trend estimates suggest that the trade commencements series shows five consecutive quarters of decline (NCVER 2016b). Yet, at the same time, skills shortages began emerging in the November 2015 Australian Bureau of Statistics (ABS) data, identifying that 61% of trades and technician occupations are now experiencing shortage. Furthermore, the completion rate for both apprentices and trainees remains unacceptably low at 58.3%.

Despite considerable investment in the apprenticeship system by both levels of government, it remains bedevilled by layers of complexity and overlap, leading to unnecessary duplication, inefficiencies and confusion. Variable funding models across the jurisdictions, different durations for identical qualifications and differing approaches to regulation are examples of the complexities and confusions within the system.

Attempts to reform the system have been occurring for over two decades. In 1985 the apprenticeship system was expanded to include traineeships as a result of recommendations made through the Kirby Review (Committee of Enquiry into Labour Market Programs 1985); in 1997 the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) endorsed the Principles and Framework for New Apprenticeships for School Students (Australian National Training Authority & Australian Ministerial Council on Education, Employment, Training and Youth Affairs 1997). In 2006 New Apprenticeships was relaunched as Australian Apprenticeships. In 2011, growing concern about the apprenticeship system saw the establishment of a group to investigate it, leading to the report, A shared responsibility: apprenticeships for the twenty-first century (Apprenticeships for the 21st Century Expert Panel 2011). Most recently, the federal government has released the report from the Apprenticeship Reform Advisory Group (2016). Over this period also, many state jurisdictions have reviewed traineeships (normally a delivery-related review), the Council of Australian Governments (COAG) has attempted to tackle occupational licensing, particularly relevant to many trade occupations, and of course the Apprenticeship Harmonisation Group has existed since 2011.

The striking feature of all of this work is that, despite very good intent, any change has been iterative at best and has done little to prevent decline in apprenticeship numbers, completion rates or perceptions related to quality.

The world of work

To tackle the question of how to strengthen the value of, and commitment to, a quality apprenticeship system, we must first consider what is happening to the world of work. This is especially important as work is the organising principle upon which an apprenticeship is built. Therefore, an apprenticeship model fundamentally created in a previous century will inevitably need to evolve, if not be overhauled, in order to meet the needs of the digitised economy.

We live in a rapidly changing world. The fourth industrial revolution, known as 'Industry 4.0' or 'The Internet of Things', is transforming manufacturing, once again making it the source of global growth. Driven by digitisation, Industry 4.0 is concerned with the next stage in manufacturing and will connect the impacts of emerging technologies and digitisation across all industries, such as energy, transport and infrastructure. Automation, sensors, cloud computing, big data analytics and machine-to-machine communication are driving new business opportunities through integration with the global supply chain.

Germany is the global leader of the Industry 4.0 movement. Automation and off-shoring caused an 18% decrease in Germany's manufacturing workforce from 1997 through to 2013, although at the same time production volumes increased (Lorenz et al. 2015). The Boston Consulting Group's analysis of the impact of Industry 4.0 on German manufacturing found that it will stimulate a 6% growth in the workforce over the next 10 years (Lorenz et al. 2015). Manufacturing is also vital for Australia's economic future. But much needs to be done to enable Australian industry to participate in the fourth industrial revolution — and indeed benefit from it.

The competitiveness of Australian companies in the future will be largely determined by the scope and penetration of new and yet-to-be-developed technologies and how professionally and consistently they are utilised; it will also depend upon companies embracing a holistic approach across their value chain. Germany, for example, is racing towards a digitised value chain. By 2020, 86% of horizontal and 80% of vertical value chains will achieve a high level of digitalisation and will therefore be closely interconnected. Where does Australia stand on this measure?

Our economy faces a number of challenges to ensure we maximise the benefits of the fourth industrial revolution. Two keys things stand out. Firstly, we will need to adopt global digital platforms and standards. Although this will merely get us a ticket 'into the game' in a globalised and digitised world, it is an essential precursor to participation. The World Economic Forum (WEF) notes 'new technologies are driving winner-takes all dynamics for an increasing number of industries [therefore] getting there first matters' (World Economic Forum 2016).

Secondly, we will need to retool the nation. Developing new and different skills utilising the right digital technology will be vital. This has major implications for our education and training provision, as well its intersection with work. The apprenticeship system sits neatly in this space. It is capable of providing a high-quality, fully integrated learning and employment experience at the leading edge of economic transformation. The education and training system should not always have to chase the future; it should be part of it.

Configuring our education and training system to meet the needs for the future

Historically, our education and training system has been built and developed around public training institutions. They have been the institutions providing formal credentialled learning. That has been their expertise and they have been funded on this basis. However, just as the world of work is rapidly transforming, education and training is receiving the same level of disruption. Education has not been

the exclusive prerogative of training institutions for some time. The acceleration of digital applications and solutions, as well as skills and knowledge requirements emanating from work, has compounded this pattern. We are now seeing micro-credentialling, digital badging, e-portfolios and the proliferation of open source learning platforms. In this world, the design of a qualification is challenged, as are funding models, the role of institutions and the relationship between learning and credentialling. On the surface many of these seem to pull in a different direction from that of the apprenticeship model. But not necessarily. The organising principle for education and training systems into the future needs to continue to shift to the individual and work. Some individuals will train in order to gain work; others will build their learning through work. Either way, the strength of work-based learning models will be important. Qualifications will need to be designed differently, chunked differently and be accessible across contexts in many more varied and timely ways.

The challenge for this new world is to ensure that all learners, including apprentices, gain a robust and rigorous base upon which to build skills and experience over the course of their working life. Some will become workers typified by the 'gig economy' — workers who will abandon the traditional 9.00 am to 5.00 pm employment in favour of working independently on a task-by-task basis for various employers, including in high-skill areas. These workers will be supported by digital talent platforms, linking workers with employers. They will accumulate a range of skills, experiences, credentials (micro and traditional) and digital badges over decades. Others will need to build a strong initial platform upon which they can continue to grow and extend their skills and experiences.

The importance of the science, technology, engineering and maths (STEM) disciplines for the future economic and social wellbeing of Australia cannot be underestimated. International research indicates that 75% of the fastest growing occupations require STEM skills and knowledge (Becker & Park 2011). Furthermore, occupational structures are also changing. Different blends of skills are required for many occupations, and completely new jobs are frequently emerging. The Foundation for Young Australians estimates that 60% of students are currently being trained in jobs that will be radically changed by automation over the next 10 to 15 years. If we focus on vocational students alone, this figure jumps to 71% (Foundation for Young Australians 2015). Many of the growth industries increasingly require higher levels of skills. The tacit limitation of the apprenticeship model — the delivery of certificate III trade skills alone — will render the apprenticeship system unable to meet many of the challenges of the digitised economy.

Is the apprenticeship model well placed to meet the challenges of developing skills in this rapidly changing world?

I would contend that the core principles of the apprenticeship model are well placed to develop many of the skills required into the future, but I am less confident that our apprenticeship system is up to the task.

The apprenticeship model can combine the strength of work-based learning for individuals while in employment in its traditional areas, as well as in new and emerging areas. The recent UK report, Post-16 skills plan (Department for Business, Innovation and Skills & Department of Education 2016), building upon the Sainsbury Panel recommendations (Independent Panel on Technical Education 2016) and the Richard review of apprenticeships (Richard 2012), followed by the English apprenticeships: our 2020 vision (Department of Business, Innovation and Skills 2015), all outline plans to increase both the quality and quantity of apprenticeships in the UK, with the aim of reaching three million apprenticeship commencements by 2020. The central feature of this model is to place employers in the driving role of

the system. This will be achieved by focusing upon the needs of businesses through employer-designed standards that extend through to degree-level apprenticeships. This will be supported by the establishment of the Institute for Apprenticeships, a new independent employer-led body to regulate the quality of apprenticeships, by 2017.

The German dual system embraces expanded models of apprenticeships. Dual study programs, which transfer the principles of practice-oriented learning to university studies, are available. The University of Applied Science in Munich provides a program that consists of several practical blocks at a company, together with study phases at a university. Students gain considerable practical knowledge at a company alongside their studies and can earn a vocational diploma, as well as a university degree.[3]

An example of a project that heads in this direction in Australia is the recently announced Industry 4.0 Higher Apprenticeship project. Ai Group is leading this project, in conjunction with Siemens and Swinburne University.

Industry 4.0 Higher Apprenticeship project

The project utilises an apprenticeship framework to deliver a new Diploma and Associate Degree in Applied Technologies. The aim is to create an apprenticeship model that will support the higher skills needed for the emerging fourth industrial revolution, or what has become known as Industry 4.0.

The project is led and managed by the Ai Group and will be implemented in collaboration with Siemens Ltd and Swinburne University of Technology. It is anticipated that other companies closely associated with Siemens will also join the project. Jeff Connolly of Siemens Ltd is the chair of the Prime Minister's Digital Taskforce.

The program will enable employers to train future technicians to a higher skills level to meet their increasing needs in the knowledge economy. Up to 20 school leavers will be employed as apprentices at Siemens for the duration of the project, from 2017 to 2019, inclusive.

Swinburne University of Technology will design and deliver the program, which will include a range of elements, including Industry 4.0 and the Internet of Things, IT Disruptive Technologies, Engineering, Design and Business. The program will directly articulate into a bachelor's degree, which will also be developed during the life of the project. It is anticipated that the greatest part of the program will be delivered in the workplace and be supported by the latest digital platforms.

The project will provide higher-level qualifications and appeal to a broader cross-section of young people than the apprenticeship model currently does. The young people will gain these qualifications while working in a company that is a technology leader. The qualification will meet the particular needs of industry, with a focus on the adoption of high-level technology skills and the tools required for the future workforce. The qualification brings together key industry initiatives and policies, such as the National Science and Innovation Agenda and the Growth Centres initiatives, into a practical experiential learning environment to address real industry needs. The pilot combines the best of university and vocational learning models and aims to improve the STEM skills of technically minded participants. It also incorporates skills for the new millennia in business and design.

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3 The example is taken from the University of Applied Science in Munich,
 <https://hm.edu/en/course_offerings/dual_2/index.en.html>.

The real challenge of reforming the apprenticeship system

For the apprenticeship system to realise its potential as being the most effective skills-development pathway while individuals are in employment, considerable reform is required. Building the supply of candidates and participants is essential and will involve reconsidering pathways into apprenticeships, as well as the apprenticeship models within the system itself. The qualifications undertaken will need to evolve to include new skills and different jobs. Not only will these need to be closely linked to our transforming workplaces, they will increasingly require integration across vocational and higher education. A tertiary education sector that values both the strengths of vocational education and higher education is required. Similarly, qualification design comes into question, as does the need to explore a more coherent and equitable funding system across the entirety of the tertiary sector.

Ensuring national consistency of product and delivery, supported by appropriately funded, flexible and quality provision, will assist in building employer confidence in the system. This would include fully embracing high-quality, industry-endorsed work-based delivery models and strengthened assessment arrangements and a much stronger model of national coordination, one that fully understands the impact of the various federal and state government elements that influence the decision to take on apprentices. Indeed, the establishment of a national oversighting body to drive Australian apprenticeship policy, perhaps similar to the proposed UK Institute for Apprentices, would be timely.

Employer incentives and Apprentice Support Network arrangements are significant demand-side considerations. While these are important features of our apprenticeship system, they too need to be considered in regard to how they best assist a reformed and expanded apprenticeship system. The demand side can be further supported through group training. Group training companies are unique to the Australian apprenticeship system, in that they are demand-side third-party platforms that could be utilised to drive greater innovation and reform in apprenticeship arrangements. Their ability to aggregate demand, thereby creating critical mass for supporting innovative approaches and overcoming thin markets, is another potential area to be tapped.

There are many challenges to be tackled. The time is nigh!

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The views and opinions expressed in this essay are those of the author and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER.

ESSAY 2 – ATTRACTION

In the future, how can apprenticeships be designed to make them more attractive to individuals and employers?

David Carney, Executive Director, Career Industry Council of Australia

The federal and state and territory governments have for some time now been grappling with an apprenticeship system experiencing challenges around attraction and retention.

Apprenticeships have historically enjoyed solid support from employers and industry alike for delivering industry-specific skills development, quality outcomes and pathways to employment.

The challenge we face in Australia is to ensure that the decision to choose an apprenticeship becomes the new norm alongside other forms of further education. It is important that all options are seen as just as valuable and are just as valued and allow individuals to reach their full potential.

While significant and sustained efforts have been made over the years to raise the profile and status of vocational education and training (VET), including apprenticeships, unrealistic and unfair perceptions of apprenticeships still exist.

A strong apprenticeship system is essential to developing a highly skilled and qualified workforce, one that increases productivity and drives economic growth. There is a concern that there is a skills gap in Australia – that the future talent and skills pipeline is not as strong as it needs to be to ensure future economic success.

In working towards designing an apprenticeship system that makes choosing an apprenticeship an attractive first-choice option, some bold steps must be taken by government, industry, education and other stakeholders.

What role does career development play in a successful apprenticeship system?

Career development, which is the process of managing life, learning, and work over the life span, is an important element in relation to improving the attractiveness of apprenticeships. Career advice that is unbiased and of high quality can reduce the stereotypes and prejudices relating to apprenticeships among young people and their parents/guardians/carers.

Career development services are 'intended to assist people, of any age and at any point throughout their lives to make educational, training and occupational choices and to manage their careers' (OECD 2004a). These services include: career education; career information; career assessment and self-assessment tools; career advice; work experience programs; work integrated learning; mentoring; work; and transition services.

High-quality career development assists individuals to make well-informed and sustainable educational choices that match their capabilities. In order to support well-informed choices, it is important that individuals from an early stage, in primary school, are introduced to a broad range of educational paths and career opportunities, including apprenticeships.

Over recent years, governments across the world have devoted new attention to the issue of careers education enriched by work-related interventions. This combination is essential in improving the

attraction of apprenticeships. As the Organisation for Economic Co-operation and Development (OECD; 2010) observed, such interest responds to change in the operation of the labour market:

> More complex careers, with more options in both work and learning, are opening up new opportunities for many people. But they are also making decisions harder as young people face a sequence of complex choices over a lifetime of learning and work. Helping young people to make these decisions is the task of career guidance [Career professionals] need to be able to call on a wide range of information and web-based resources.
>
> Strong links between schools and local employers are very important means of introducing young people to the world of work. Individual career guidance should be part of a comprehensive career guidance framework, including a systematic career education programme to inform students about the world of work and career opportunities. This means that schools should encourage an understanding of the world of work from the earliest years, backed by visits to workplaces and workplace experience.

A report by the OECD in 2004 confirms that if good career development is not available, poor employment choices and a mismatch between the skills required and those that people actually possess often result. Lack of good career development can lead to dissatisfaction with choices and careers, as well as with existing skills being under-utilised or ignored (OECD 2004b). These findings are consistent with the data on the Australian apprenticeship system. Individuals are making decisions to undertake apprenticeships in a particular industry without a good understanding of their own skills, attributes and work preferences, in tandem with a limited understanding of the apprenticeship system. This is resulting in higher than acceptable numbers of apprenticeship non-completions.

With no formal or legislated requirement for Australian schools to provide high-quality career development services, the delivery across the country is ad hoc and patchy at best. This lack of a national approach is resulting in young people making poor and ill-informed decisions in relation to undertaking an apprenticeship.

We want to improve the status of apprenticeships and ensure that individuals who decide to undertake such a path as a further education option are doing so equipped with the knowledge and skills that can lead towards successful completion. To achieve this, these individuals must be equipped with career management skills, as defined in the *Australian blueprint for career development* (Ministerial Council on Education, Employment, Training and Youth Affairs 2010).

Career management skills can be defined as a range of competences that enable individuals to gather, analyse and organise educational and occupational information, as well as the skills to make and implement decisions and transitions. In other words, career management skills empower the individual to 'self-manage' his or her choice of educational and career path. Given their important role, career management skills need to be embedded into the Australian Curriculum or into specific career development activities. This type of skill development has the potential to make apprenticeships more attractive to the young people who would otherwise consider leaving education and training.

If the role of the career adviser is important in increasing the awareness and status of apprenticeships and presenting them as an equal-status further education option for individuals, then career advisors need information from industry that ensures young people have a greater awareness of apprenticeships and pathways within industry, as well as opportunities to become work-ready. To this end, expansive collaborations with industry need to be established.

Industry also needs to be ready to support career advisers and other influencers by providing opportunities for individuals to experience the workplace and industry prior to making the decision to commence the apprenticeship. This can be done through work shadowing, work experience, structured workplace learning, school-based apprenticeships, industry days etc.

Career development services benefit individuals, but they also have economic and social benefits for the country:

- If individuals make decisions about what they are to learn in a well-informed and well-considered way and the learning is linked to their interests, their capacities and their aspirations, and they are informed realistically about the opportunities to which the learning can lead, then they are likely to be more successful learners, with positive outcomes.

- If people construct career paths and secure employment which utilises their potential and meets their own goals, they are likely to be more motivated and productive and therefore contribute to national prosperity.

- The achievement of social equity, equal opportunities and social inclusion outcomes in relation to learning and work are facilitated by career development services.

Improving the attractiveness of apprenticeships and ensuring they are seen as valued and valuable as alternative further education training options cannot be achieved without a greater emphasis on quality career development. Individuals exposed to high-quality career development and equipped with career management skills will make better-informed decisions about apprenticeships and apprenticeship pathways.

How do you inform the key influencers in the individuals' decision-making process?

Parents/guardians/carers are still the number one influencer of an individual's career decision-making process.

Improving the attractiveness of apprenticeships also requires influencing the mind-set of parents/guardians/carers, who may have outdated ideas about apprenticeships; for example, the technological changes in traditional occupations or new occupations in fields such as green energy, media or sports. Improving the attractiveness of apprenticeships also requires that social and cultural norms be influenced.

Traditionally, parents tend to be most engaged during the primary years of their child's schooling. This should be the time when schools start to build positive engagement strategies with parents, involving them in their child's career development journey. Sophisticated parental engagement strategies involve multiple elements and attempt to engage parents through a range of methods, thereby increasing their chances of reaching the parents at different points in time. Pursuing a multitude of simultaneous channels of engagement is a feature of successful strategies.

Hosting information sessions can be an excellent way of providing parents with information, empowering them to be involved in a positive way as part of their child's career journey, but, as the international literature argues, creating channels for two-way communication is essential to actively involving and engaging parents, as opposed to merely informing them. Information sessions are predominantly one-way exchanges, with hosts constituted as speakers and parents as a passive audience.

Engaging those currently studying an apprenticeship can be a great way for parents/guardians/carers to hear first-hand about what is involved in choosing an apprenticeship, how they work and the available career opportunities and outcomes upon the successful completion of an apprenticeship.

A well-informed group of parents/guardians/carers will lead to a more widespread understanding of the value of apprenticeships and the associated career opportunities. This in turn leads to a greater promotion and advocacy of apprenticeships and apprenticeship pathways.

Parents can also play a vital role in motivating students to remain in education and strive to achieve qualifications.

Why do employers want to get involved?

The engagement of employers is a crucial element for the success of an apprenticeship system. However, they often face a number of barriers to taking on apprenticeships, including a fixed length of training (often too long and with rigid start- and end-dates), which does not take into account the actual progress of apprentices; off-the-job training that is ill-adapted to the needs of employers; and high effective wage and non-wage costs associated with taking on apprentices, despite the fact that financial incentives are usually in place to reduce these costs.

Small-to-medium businesses (SMEs) can particularly struggle to identify the benefits of taking on an apprentice. Employers may find the return on their investment uncertain because apprentices may elect to move to another business or start their own business after their apprenticeship has been completed.

Although apprenticeships can be a challenge to some employers, they do offer benefits to employers, some of which the employers may not be aware. Some examples might include:

- Apprenticeships allow the business to secure a supply of people with the specific skills and qualities that the business requires and which may not be available in the external job market. Recruiting apprentices enables employers to fill the skill gaps that exist in their current workforce as apprentices begin to learn industry-specific skills from Day 1.

- Apprenticeships can help to secure a supply of skilled young employees – especially important for the replacement of an ageing workforce.

- If the apprentices have a positive training experience during the duration of the apprenticeship, they tend to be more loyal and stay with the business, which can reduce labour turnover.

- Apprenticeship training could increase interest in training among other employees and create a 'training culture'.

- Apprentices can bring new ideas and innovation to the business.

- Apprenticeship schemes could result in an enhanced reputation for the business both within the industry and in the local community.

Compared with large businesses, many SMEs have a less advanced training culture and limited training budgets. An apprenticeship should be regarded as an investment and, as such, efforts may be needed to make SMEs more aware of the benefits and support accruing from hosting apprenticeships, such as providing them with skilled employees tailored for the business. Employers hiring Australian Apprentices may be eligible to receive incentive payments under the Australian Apprenticeships Incentives Programme, which for SMEs may be an attraction.

Is it important to raise the quality and standard of the apprenticeship training?

The answer is yes.

Whether individuals find learning attractive largely depends on their relationship with, and the competences of, the teaching and training staff. This includes both on- and off-the-job trainers.

Trainers must be familiar with the demands of the world of work and the vocational skills the students need to acquire to meet these demands. Trainers must also ensure that they are updating their own skills and knowledge, incorporating what they learn into their teaching to ensure the apprentice completes the course with immediately useful skills.

A lack of confidence in the on-the-job training being provided is a significant contributor to non-completion or cancellation of apprenticeships by individuals.

What is the value of different models?

Pre-apprenticeships have significant potential to improve commencement and completion rates for trade apprenticeships. It has also been shown that pre-apprenticeships can help to prepare individuals (including at-risk and disengaged youth) for an apprenticeship, provide work-ready employees to enterprises and reduce costs for employers.

By signing on and completing a pre-apprenticeship the individual has shown a commitment to his or her career pathway, which is highly valued. The pre-apprenticeship course ensures that the individual is significantly better prepared to successfully complete both the workplace and off-the-job training of a full apprenticeship. It's a 'try before you buy' situation for both the apprentice and the employer.

Many people may have stereotyped and preconceived views of the professions and careers they consider pursuing. In order for people to make well-informed decisions, individuals need to be able to gain access to appropriate work shadowing and work experience. School-based apprenticeships provide school students with the opportunity to combine part-time practical experience in the workplace, formal structured training with a training provider, and completion of an individual's school studies.

How do we grow the supply pipeline?

The labour market is constantly evolving. The situation for employees today is radically different from that of a generation ago. Individuals in Australia are more likely than ever to switch careers, to work for a range of big and small employers across their lifetime and to establish their own businesses.

Projections on future skills supply and demand are essential for governments and industry investing in the development of a sustainable pipeline for the supply of talent. But, to enable potential apprentices to make well-informed decisions about their future careers, it is also important that data and information are accessible and available to all.

Apprenticeships are about planning for the future skills needs of Australia and play a crucial role in training and preparing the next generation of skilled workers. However, future planning is impossible without career information that is well integrated, well publicised, comprehensive and of a high quality; it also needs to be specifically tailored toward apprenticeships and readily useable and accessible. This information needs to have the capacity to be accessed easily and more widely by career development practitioners and the general public.

Career development practitioners need appropriate initial and ongoing training and professional development to ensure they have the most up-to-date information about apprenticeships and future career pathways. In addition, practitioners have a role in providing professional development or support to those with influencing roles.

While individuals may have had access to career development services, there is a particular need to focus potential apprentices' attention on the prospective career path prior to their signing up for an apprenticeship. In this way individuals will make the most appropriate choice of apprenticeship, while the amount of apprenticeship churn and drop-out will be reduced. Access to ongoing career advice and support throughout the apprenticeship is required to ensure that Australia has a first-class apprenticeship system.

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ESSAY 3 – RETENTION AND COMPLETION

What needs to happen for retention and completion to be increased and who is responsible?

Alan Waldron, National Training Manager at Hutchison Builders

If not you, then who?

A few years ago, the then Chief Executive of Master Builders Queensland wrote an editorial in their organisation's magazine that asked this reasonably simple question (If not you, then who?) when addressing the need to increase the number of apprentices in the building and construction industry. Although the question was targeted particularly at the builder membership of the association, it could easily have been applied to federal and state governments and their public entities; employers in general; school leavers and their parents; and the myriad others who influence career choices.

With trade commencements showing five consecutive quarters of decline (NCVER 2016) and with the potential for skilled labour shortages a concomitant outcome, it is time to, yet again, revisit the capacity of apprenticeships to assist in meeting the skill needs of Australia in the twenty-first century. If it is accepted that the traditional apprenticeship model (or modern effective variations) can assist in increasing Australian industry capability and capacity, then who is responsible for its strategic oversight, who should employ them, how should that occur to maximise the effectiveness of the apprenticeship and who should apprenticeships be targeted to and why?

The more things change, the more they stay the same?

The concept of an apprenticeship as involving a person bound by a legal agreement to work for another for a specific amount of time in return for instruction in a trade can be traced back to the Middle Ages. This institution came to Australia with the first European settlers and has flourished in various iterations ever since. It has allowed skilled tradespersons to mentor generations of new skilled workers over the years, with the common element always being 'buy in' by governments and employers, along with potential recruits willing to experience relatively low pay in return for time-honoured skills and an opportunity to gain a trade.

The key elements for success then, as now, were the opportunity to experience the breadth of the particular trade; continuous and patient support from the mentoring tradesperson/s; a willing, capable and committed student; clear and relevant expectations; and *time* to practise these new-found skills before attaining the capability expected of a 'tradie'.

In 1964, when I graduated from class 4B3 at high school with a reasonable Year 10 Junior Certificate, I had the choice of a number of apprenticeships, and I chose Fitting and Turning at the Queensland Department of Main Roads. For the next four years I lived at home, rode my bike or caught the train, worked in all the various departments at the base workshop and attended TAFE during the day, but also at night in my own time. Those apprentices who excelled also had the opportunity to work in the department's design office and had the benefit of working with engineers, who patiently explained the theory of applied mechanics, internal combustion engines and the composition and characteristics of the materials we would work with.

I use this example as a measure of the extent to which apprenticeships have changed in Australia over the past 40 years and, indeed, our experiences over the past 10 years at Hutchinson Builders, working with our own apprentices, who are students at our registered training organisation (the Gold Coast School of Construction) campuses, and our community of subcontractors and suppliers. The following list gives examples of the present-day characteristics of apprenticeships:

- Many apprentices now start following Year 12.

- Many of these recruits have little or no knowledge of the trade they have selected.

- Most need a car (mandatory in construction) to get to work.

- Many apprentices don't live at home.

- Most large state and federal government entities are not in the business of apprenticeships anymore and have outsourced to contractors.

- Apart from group training organisations (GTOs) and some large employers, the responsibility for training apprentices has generally fallen on the shoulders of small to medium enterprises (SMEs), who are often subcontractors with slim margins, possess limited HR skills and have limited confidence that they have enough work to sustain a four year apprenticeship commitment.

- Employers who have apprentices are often disengaged from the TAFE institute and the now myriad of private registered training organisations (RTOs) who provide the necessary technical trade qualifications.

- Many employers see apprentices as a liability rather than an asset.

But some things never change: the proportion of females and Indigenous workers in some traditional trades (say construction) are still relatively low.

Definitional and quality issues

The introduction of the policy whereby certificate II and III qualifications can lead to traineeships and the 1998 federal government decision (ABS 2000) to place traditional apprenticeships and traineeships under the new, all-encompassing title of 'New Apprenticeships' meant that many employers (especially those SMEs without an HR capability) may have become confused by the new terminology and the complexities of modern-day HR and training. Recent front-page news of some RTOs allegedly conducting 'tick and flick' training and prematurely signing off students as 'competent' only adds to the disenchantment.

Apprenticeships – evolve or dissolve?

Given the concerns described above, it might be considered that apprenticeships have had their day. However, in the end the real issue is the efficient transfer of technical skills (including complex manual tasks and the understanding and application of technical knowledge, often in unfamiliar situations) from an expert to a novice. Apprenticeships have historically been an effective vehicle for this purpose and conceptually mirror the principles that were allegedly enunciated by the Chinese philosopher and reformer, Confucius (551 BCE to 479 BCE), who stated: 'I hear and I forget. I see and I remember. I do and I understand'.

While there are quite a few challenges to the concept, apprenticeships in their purest form are still a viable approach to developing trade skills that meet the criteria of qualifications at Australian

Qualifications Framework (AQF) levels III and IV, provided a number of elements are addressed effectively. These are:

- *Attract* and recruit the right people, for the right apprenticeship at the right time and match to the right employers.

- *Train* the apprentices in a consistent, innovative and flexible manner.

- *Retain* them in the apprenticeship to become future leaders and long-term employees.

- *Sustain* the strategy with long-term, consistent financial and political support.

Attracting the right recruits and the right employers

For apprenticeships to become a career option of first choice rather than a last resort, it is critical that we have a readily marketable 'product'.

This 'product' needs to be easily explained and understood, that is to say, we are selling a career concept to a young audience in an environment where a great deal of competition already exists. The current New Apprenticeship terminology is difficult to explain and is not readily accepted; for example, school-based apprenticeships and traineeships (SBATs) are widely promoted – why aren't school-based new apprenticeships (SBNAs)? These discrepancies make it more difficult to differentiate the 'product' from other options. Decoupling trade apprenticeships from traineeships would assist in marketing apprenticeships across a broad range of industries more effectively.

Readily understandable information would also assist in countering the influence of ill-informed peers (parents, friends) and misinformation on apprenticeships. Often, the duty of providing apprentice career advice falls on the shoulders of hard-pressed guidance officers, who have spent the majority of their lives in schools and university. This is further complicated by many high schools having a conflict of priorities: is their role job readiness or university preparation? Is career advice driven by matching a student's aptitude to particular industry streams and career options or is it still simply 'you aren't doing well, why don't you consider an apprenticeship?'

To avoid high cancellation rates and dissatisfied employers being 'burnt' by a poor apprenticeship experience, potential apprentices need to make informed career decisions. Hence, the critical role of pre-employment/apprenticeship courses is to enable these decisions to be made with the best possible knowledge of the career options available (Karmel & Oliver 2011). The construction industry, along with many others, is moving to make these courses a mandatory prerequisite to an apprenticeship, provided they are delivered in a way that realistically mirrors the industry they support and includes a significant component (80-160 hours) of structured workplace learning (SWL).[4]

These courses also assist in separating the 'pretenders' (those who are there simply to make up the numbers or satisfy their Job Active provider) from the 'contenders', who have potential, passion and a clear aptitude for the selected apprenticeship. However, RTOs and employers engaged in these programs need to accept that a 'quality before quantity' approach is needed; that is, not all potential students who enrol are suitable for the course and final enrolment decisions should be based on the participant's likelihood of success (completing the course and getting an apprenticeship) rather than on how much funding can be obtained.

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4   The concepts of structured workplace learning (SWL) and work experience (WE) are often used interchangeably. However, we would define SWL as WE (i.e. experiencing the work environment) along with a clear agenda of what skills have to be mastered on the job, skills that will contribute to a particular competency or course/qualification outcome.

This quality before quantity approach also extends to the volume of training involved. Whilst many parents, some high schools and RTOs believe higher qualification levels are more desirable; this is not the position of industry. In Queensland, construction industry pre-apprenticeship/pre-employment courses are pegged at AQF level I.

With national award rates of pay now tied to competency-based progression (Furniture Industry Association of Australia 2013) – the more competencies an apprentice has, the more pay they get – employers are looking for recruits with a small suite of competencies that make them safe and useful from Day 1, not instant tradespersons. It is unfortunately our experience in Queensland that construction recruits with a certificate II in Construction are virtually unemployable as they don't have the on-the-job experience to match the pay required and thus are not economically viable. This situation was further exacerbated by the decision to increase first year and second year apprentice rates by more than 10%.

Consequently, structured workplace learning is also critical to ensuring the student 'has the goods' – possesses the necessary skills and attributes. It provides the student, the RTO and the employer/s with an opportunity to 'try before you buy' and it is our experience at Hutchinson Builders' own RTO that a full-time employment placement rate of greater than 75% can be achieved if all the above conditions are met.

Further, if the pre-apprenticeship training displays the following characteristics, then it is feasible that apprentices can be productive from day 1:

- The training is conducted in as 'real' an environment as possible, for example, RTO campuses in industry settings or mirroring them.

- Equipment, practices and personnel are current.

- Employers are engaged and their needs are met.

Students who have undertaken pre-apprenticeship training that meets these requirements typically have 12 weeks of experience, including up to four weeks on the job, along with a basic understanding of how that industry/employer functions and their expectations.

NCVER recently published a paper comparing the motivations of German and Australian employers for taking on apprentices (Pfeifer 2016). While many trade-oriented Australian employers seem to share the German philosophy of apprenticeships being an investment in the future, other employers adopt more of a production (that is, substitution for 'regular' workers) model of apprenticeship training, which is focused on the short-term costs and benefits of training.

Some employers view apprentices as a liability rather than an asset and need support to understand how they play an integral part in the apprentice's development and ultimate level of productivity. If apprentices are pre-trained to a level where they are safe, have a positive attitude, are proficient in the use of the basic tools of their trade and are literate and numerate, then it is a fairly easy proposition to educate a potential employer on how they can engage with a first year apprentice (on a pay level at 55% of their mentor/tradesperson) and develop them into an effective, productive team member. Ultimately, an economic argument, not an expectation of altruism, will win the day.

While 'poaching' other employers' apprentices and skilled employees is an age-old tradition, particularly in construction, inevitably it leads to a shortage of skilled workers as the pool of competent workers decreases and labour costs increase. While 'If not you, then who?' is the central question, predatory recruitment practices are not the answer.

Training apprentices effectively

The modern training of apprentices has always involved three critical parties – a willing, committed apprentice, a competent RTO and an involved employer. If any of those three parties are not committed to the exercise, it will fail. RTOs have in some ways replaced much of the old historical master-apprentice relationship and many modern employers have a tendency to delegate the responsibility for the apprentice's progress and technical skills to the RTO. Consequently, the RTO needs to make the training process relevant, current and flexible in order to meet the needs of the learner and their employer. The structure of our modern-day competency standards, which make up apprentice/trade qualifications, have undergone continuous change since the days of the Australian National Training Authority (ANTA) and are currently being re-cast to reflect performance evidence, knowledge evidence and assessment conditions.

However, all of this change and abnegation of responsibility allows employers to disengage from the development of apprentices, believing they only need to focus on providing on-the-job experiences. Often missing for the apprenticeship are some or all of the structural elements given below:

- the RTO being cognisant of the employer's business characteristics and needs

- the RTO having the flexibility to match the training to the employer's workflow

- the employer being a willing, active participant in the training process and working closely with the RTO

- the RTO being willing to be innovative in the way they deliver the training and matching the mode of delivery to meet the needs of the apprentice and employer rather than applying a 'one size fits all' approach

- the need for the RTO to model modern productive practices and workplaces rather than retreating to simulated class environments in an effort to save money

- the need for all parties to not only understand and meet the requirements of the training materials but also develop the apprentice's capacity to adapt to evolving technologies.

Competency vs proficiency

While it is common for a particular apprenticeship to have an 'expected duration' or 'nominal duration' (Queensland Department of Education and Training 2015a), there is still a great deal of debate about when an apprentice should be signed off as a tradesperson. Some RTOs have taken quite a literal approach to the delivery of the required competency standards and cut corners, while some employers (because of a lack of understanding of the standards) criticise the quality of graduates but do little to facilitate a more acceptable standard.

The new standards reflect a need for performance evidence; however, there is room to eliminate much of the short-cutting and therefore criticism by simply setting proficiency levels as well as levels of competency. Using hanging a door as a context, a construction example is as follows:

> The competency of hanging a door could be described as being able to size the door to the opening, fix the hardware and hang the door so it opens and closes correctly. Proficiency is being able to do all those elements plus add components of quantity, quality and time. For example, the apprentice is required to hang four doors in one hour with a gap around the door to a tolerance of minus 3-5 mm.

Eliminating the 'quickie brickie' mentality

Occasionally when skill shortages emerge, the temptation arises to cut corners in relation to the time it takes to train an apprentice. The intention of competency-based training was to de-emphasise time and concentrate on the attainment of competence; however, it is crucial that an apprentice has adequate time to practise and gain experience. The 'quickie brickie' and other similar accelerated training programs inevitably seek to undertrain workers in order to get them into the workplace as quickly as possible, but such programs rarely result in the worker achieving full capability or recognition as a tradesperson. There is always room to make the delivery of trade training more effective and efficient but not at the expense of cutting corners on trade skills practice.

Retaining apprentices – it's not rocket science!

Depending on the trade and industry, the completion rates for apprentices stubbornly sit around the 50% mark (NCVER 2015), suggesting that nearly half of all the apprentices who start apprenticeships never finish. A number of reviews and investigations over the last 10 years into the reasons for the high rate of cancellations in apprenticeships share a common theme, as well as suggestions for increasing retention. John Mitchell and associates (Mitchell, Dobbs & Ward 2008), for example, in a study for the Australian Chamber of Industry and Commerce argued that: 'Retention pivots on recruiting committed apprentices and giving them meaningful work'.

A study into the factors which cause apprentice cancellations in the Queensland building and construction industry, undertaken by Debra Wilson and Associates (2004), identified a number of key factors that contribute to cancellations:

- A poor or inadequate understanding of the industry, occupations and job requirements by young people going into apprenticeships.

- A lack of initial preparation which results in young people starting apprenticeships without basic employability and workplace skills — placing pressure on the young person and on the employer.

- Poor or haphazard recruitment processes which can result in a poor match between the young apprentice and the employer.

- Low wages in years 1 and 2 of the apprenticeship – a disincentive for young people to enter apprenticeships and stay in apprenticeships.

- Poor treatment of apprentices by employers and poor or unreliable behaviour by apprentices – conflict in the workplace.

- Poor or inconsistent training.

- A lack of familiarisation which can result in some young people cancelling an apprenticeship because it is not what they want to do as a job or a career.

- A negative image of building and construction industry careers. At present, these careers are seen as a second choice and a choice only for those who do not achieve a sufficient OP (Overal Position) score to pursue other options including university.

This study also came to the conclusion that 77.8% of cancellations occur in the first two years of the apprenticeship. Although this study was confined to construction apprentices in Queensland, its findings are useful in testing what retention strategies may be effective, given that the physically demanding construction trades will inevitably be the litmus test of any blanket approach.

Ten years ago at Hutchinson Builders, we had similar completion statistics as those described above. We were recruiting based on referrals from company members and networks; we were locked into a block release training system with little flexibility; and we relied heavily on our tradespersons to manage our apprentices. Even to this day, we continue to get enquiries from hopeful recruits who demonstrate that they have a limited understanding of the trade apprenticeship they are seeking, let alone the other 70+ careers available in this industry. Hence, Hutchies determined that it would adopt the Queensland study's findings and implement a number of actions for retaining our apprentices:

- We adopted the stringent recruitment and pre-trade training process described earlier in this essay. This includes a personal development program with subjects such financial management, nutrition and interpersonal skills.

- We developed a 'task based' model of clustering trade qualification competencies together to enable our field coaches (tradespersons) to better engage with the training requirements.

- We eventually set up our own RTO (Gold Coast School of Construction) to deliver the training, as we found that existing RTOs couldn't provide the flexibility, innovation and responsiveness we required.

- We developed our own Apprentice Development Coordinators, who as trainers and mentors work with our apprentices (internal and external) and their tradesperson/subcontractor coaches to ensure the apprentices meet their training goals and assist them to overcome any personal issues that might impact on their apprenticeship.

- We engage the apprentices in a career-planning process that lasts for six years and takes them from apprentice to 'future leader'.

Consequently, our completion rate stands currently at higher than 95%.

Direct hire vs group training

It would seem logical that, if employers are not in a position to adopt the approach described above, they could become a host employer of an apprentice from a group training organisation, with higher completion rates a likely consequence. The model given above could easily apply to group training organisations, which have at their core the pastoral care of their apprentices. Suprisingly, however, completion rates with group training organisations are only fractionally higher than those with private employers (Bednarz 2014). The reasons for this are unclear, but if apprenticeship numbers are to increase, it is important that the reasons be identified and addressed to provide SMEs with an alternative employment model for apprentices that can dramatically increase retention rates.

Sustaining the strategy

Change for change sake?

The endless changes that have marked the training sector partly explain the reason for the concept of apprenticeships being under pressure. It seems that every incoming state or federal government feels the need to scrap the previous government's plans in favour of a new, more improved model, regardless of whether the old one was working or not. Consequently, it is difficult to successfully prosecute an apprenticeship strategy that involves a contractual commitment over four years if the 'goal posts' keep changing. Examples that spring to mind include:

- New Apprenticeship Centres (NACs) to Australian Apprenticeship Centres (AACs) to Australian Apprenticeship Support Networks

- industry training advisory bodies (ITABs) to industry skills councils (ISCs) to skills service organisations (SSOs)

- the various iterations of Tools for your Trade

- Apprenticeships and Traineeships to New Apprenticeships

- the endless changes to national training packages, their content, nomenclature and funding.

When you couple these with other structural changes in the government departments responsible for training and the endless procession of new state and federal ministers responsible for training, it is little wonder that apprentices, RTOs and employers are more than a little confused.

What these three parties need from government is consistency and certainty: consistency in terms of how apprenticeships will be promoted, managed, delivered and funded, while providing certainty that what is being said and done will not change tomorrow.

Leveraging apprenticeships

Governments are in the position to leverage apprenticeships via their various capital works and other extensive purchasing programs. Some states have various iterations of Queensland's Building and Construction Training Policy (Queensland Department of Education and Training 2015b), which requires principal contractors to ensure that a proportion of work (via a deemed number of labour hours related to the project's value) on any capital works project is carried out by apprentices; for example, on a project valued at $20m there would be a compliance requirement of 12 000 hours of on-the-job apprentice training. This policy could be extended to include relevant non-construction work and furthermore be adopted by the Australian Government. An added incentive for employers would be a positive weighting in the tender process for tenderers who have their own apprentices.

In addition, governments also have the resources to promote good practices and the efficacy of apprentice training to increase the capacity and capability of Australia's workforce at large.

Large employer responsibility

As Karmel (2012) notes: 'Overall, a reasonable conclusion is that greater support for apprentices is needed if completion rates are to be improved. But the distribution of apprentices, with most undertaking their training with small employers, makes this a very expensive proposition'.

Large employers, by means of their own large workforces and equally large networks of suppliers and subcontractors, are in a position to influence the uptake of apprentices and demonstrate/encourage best practice models of apprentice development. This factor, in combination with the 'Attract, Train, Retain and Sustain' initiatives discussed previously, enables apprenticeships to be promoted and sustained and overcome the costs mooted by Karmel and Roberts (2012), irrespective of the industry context.

Hutchinson Builders[5] takes this role seriously and has demonstrated over the past 10 years that apprentices continue to be the backbone of its future capacity and capability. The company is now rolling out its apprentice training program and other workforce development strategies to its 'family' of over 10 000 subcontractors and suppliers, and this will ensure that Hutchies continues to be an iconic link in the sustainability of the construction workforce both in Queensland and throughout Australia.

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5 Hutchinson Builders were the recipient of the Australian Training Awards-Employer of the Year in 2011.

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The views and opinions expressed in this essay are those of the author and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER.

Appendix 3: Questions guiding group discussion

Session 1: Benefits and value

- Is the time right to re-frame the apprenticeship system from what is seen as predominantly a work-based learning approach in trades training, and broaden it to include models such as higher level trade apprenticeships and degree /professional apprenticeships in higher education? If so, how?

- Megan's essay distinguishes between the apprenticeship model and the apprenticeship system. What is it about the apprenticeship model that works well? Is there anything about the current Apprenticeship system that needs to change to ensure the overall model remains relevant?

- How can third party intermediaries help to innovate the apprenticeship model and play a greater role to increase the supply of employers and apprentices?

- What hinders employer engagement in the apprenticeship system? How can we better promote to employers the benefits and value of apprenticeships for 'their companies, in order to increase their engagement?

- Should the Australian system aspire to any of the ideals outlined in the UK 'Post-16 Skills Plan' Reforms?*

*For context – The UK 'Post-16 Skills Plan' reforms include:

- ✓ introducing a common framework of 15 occupational groupings, which have shared training requirements for both technical knowledge and practical skills

- ✓ delivering a 'common core' of transferable skills to all individuals studying in a particular occupational grouping, followed by specialisation towards a skilled occupation, to allow for greater flexibility in the emerging job market/workforce

- ✓ offering up to 12-months of tailored and flexible support (a 'transition year') to young people and to other 'at risk' groups, in order to increase access and retention, across all sectors, to degree level

- ✓ creating parallel 'technical' and 'academic' learning options, leading to the highest levels of study; and offering flexibility through bridging courses to allow movement between the two

- ✓ introducing end point assessment, which covers both theoretical and practical elements

- ✓ maintaining the relationship between employer and apprentice as the core, and ensuring that employers remain at the heart of design and delivery, with employers (supported by education experts) setting the standards required in technical education

- ✓ creating new 'National Colleges' to lead the design and delivery of technical skills training in five key industry sectors (nuclear, digital skills, high-speed rail, onshore oil and gas, and the creative and cultural industries); and

- ✓ establishing an independent, employer-led body to regulate the quality of apprenticeships at a national-level (*the Institute for Apprenticeships and Technical Education*).

- What needs to change about the apprenticeships model to equip people for jobs and trades that are evolving rapidly and will continue changing? How can this be balanced against the importance of 'training for today'?

- If apprenticeships were abolished tomorrow, what would be the impact on current or future skills in the Australian workforce? What would you replace apprenticeships with, and what features would you keep (if any)?

Session 2: Attraction

- Research continues to show that parents remain the number one influencer in the career decision making process of their children. How do we make apprenticeships a valued and valuable proposition in the eyes of the influencer (in this case, the parents), as well as an attractive choice to all young people (including non-traditional trade apprentices like women and people with disability)?

- School-based apprenticeships and pre-apprenticeships offer valuable workplace exposure for prospective-students and an opportunity for individuals to 'try before they buy', prior to committing to/commencing a full apprenticeship. What are the key features of pre-apprenticeship programs that are working well for students and what should be done to increase their attractiveness and accessibility?

- How do we best support career advisors, to improve young people's understanding and attraction to Apprenticeships? What kinds of information do they need in order to effectively guide prospective students to an apprenticeship pathway (where appropriate)? We know an abundance of information exists – So what is the barrier?

- Access to good information is important to ensure people make informed choices. What strategies are needed to make it clear what Apprenticeships offer, why they are attractive, and how they differ from other career paths available? What effective strategies currently exist? How can we expand on these examples?

- In his essay, David raises the importance of employers providing opportunities for individuals to experience the workplace and industry prior to making a decision to commence an apprenticeship. What actions can we take to engage employers in this role and to support them to develop a meaningful workplace experience for prospective students? What do employers need to feel supported and confident in this role?

- Attention is often focused on the school-leaver. But what is required to attract those taking on an Apprenticeship mid-career? What would motivate an experienced worker to take on a competency-based Apprenticeship?

- Increasing the supply of students into the apprenticeship system is essential, including attracting new entrants and individuals from less represented groups. How can we grow the apprentice supply pipeline?

Session 3: Retention and completion

- What actions could governments, industry and employers and the training community take together, in order to increase retention and completion? And how could these be implemented?

- Building on the examples in Alan's paper, along with knowledge amongst your group, what other examples do you have of successes in retention and completion of apprentices and how can these be replicated more broadly?

- Besides World Skills; and State and National Training Awards, what other programs/strategies could be implemented to promote the benefits of completing an apprenticeship, in order to retain students at risk of dropping out? And who should be responsible?

- There is a wealth of information available, based on research and reviews, about strategies that work to increase retention and completion. What can be done to pull the threads of successful approaches together to inform a comprehensive implementation of good practice?

- Some have suggested that Australia adopt a more 'European' approach to apprentice training – By offering large amounts of institutionalised trade-training, interspersed with periods of work experience. How workable are these strategies in the Australian context? Are there more effective local models?

- Alan makes the point that retaining apprentices to completion is not 'rocket science' and he outlines the holistic approach adopted by Hutchison. What can be done to engage other employers to adopt this proven model?

- How hard would it be to consistently implement across a range of industries, the Attract, Train, Retain and Sustain strategies discussed in Alan's Essay?