AUSTRALIAN INDUSTRY GROUP

Faster, Smarter, Higher

TRADE OUTCOMES PROJECT **FINAL REPORT** AUGUST 2010

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1.1 National Project Overview

In late 2007, the Australian Industry Group commenced the *Faster, Smarter, Higher Trade Outcomes Project*. As the name suggests, the project was established to consider training options which would result in apprentices gaining their trade qualifications more quickly and/or supplementing their trade training to finish with a higher or broader skills outcome.

There were many drivers for this project including earlier Ai Group research which found that future business competitiveness would rely in large part on companies having access to higher level skills and a broader base of skills than had been available in the past[1].

These research findings were made after a long period of skills shortage that was particularly acute in the traditional trades. Over the course of the *Faster, Smarter, Higher Trade Outcomes Project* we have experienced the global financial crisis, which has reduced skills shortages. However, as our recent CEO survey found for 2009/10, skills shortages are anticipated across a range of occupations and the most prominent category identified was technicians and trades workers (28.1% of companies)[2], demonstrating that skills shortages are still part of our economic landscape. In early 2010, when economic improvements appear to be firming, widespread skills shortages are again feared.

Concerns about shortages of trades workers and technicians in good economic times and bad underscore the need to develop these skills as efficiently as possible, indicating the ongoing relevance of the outcomes of this project.

In proposing this project, Ai Group developed the following guiding principles. The approach:

- must be attractive and rewarding to participants;
- must have genuine employment outcomes;
- must have the support of employers and industry; and
- must embody excellence in training delivery arrangements.

This approach to trade skills development must be built upon the key reforms of the national training system, including:

- competency-based delivery with genuine competency progression;
- utilisation of nationally endorsed training package qualifications with clearly articulated vocational outcomes;
- compliance with the Australian Qualifications Framework;

[1] *World Class Skills for World Class Industries*, Australian Industry Group, 2007
[2] *Skilling in Tough Times*, Australian Industry Group, 2009

- integration of learning and work to ensure true workplace outcomes in accordance with Training Packages;
- employer and employee negotiated training agreements;
- mandatory upfront skills recognition, as appropriate; and
- flexible, valid, reliable and fair assessment.

1.2 Project Description

Ai Group proposed several pilots to deliver faster, smarter, higher trade outcomes. These pilots would refine strategies to deliver significantly improved outcomes to industry and individuals, as well as informing Registered Training Organisations (RTOs) and the training systems of existing impediments and the need for further reforms.

Essentially, individuals were to be identified at an early point for eligibility and suitability for accelerated and/or higher trade outcomes. These arrangements could be structured as:

1. Trade Plus – Certificate III plus additional technical training
2. Higher Trade Outcome – Certificate III (trade outcome) plus Certificate IV (post-trade qualification)
3. Advanced Trade Outcome – Certificate III (trade outcome) plus Diploma level post-trade outcome, Diploma of Engineering – Advanced trade
4. Technology cadetship – encompassing Certificate III – Diploma in Manufacturing Technology.

It was originally proposed that this project would comprise six individual pilot projects across four States; two in each of Victoria and New South Wales and one in Queensland and South Australia. The pilots were to operate:

- across the manufacturing sector, in skills shortage areas;
- across the range of company sizes from an international company operating nationally in Australia to SMEs;
- across the full range of combinations of acceleration and higher qualifications – new entrants; existing apprentices; concurrent trade level qualifications; concurrent trade and higher level qualifications; and upfront training, combined on and off the job training; and
- across a variety of training organisations – RTOs, group training companies, other training organisations.

The only significant change was that five projects, not six were established. One of the New South Wales projects – which focused on small companies – did not generate sufficient employer support to be viable. Efforts to replace this project with another were not successful.

1.3 Summary Findings: Results of the Project

The opportunity to develop supplementary skills is valued by new entrants to the trades and established tradespeople. Apprentices at varying stages of their apprenticeship demonstrated an interest in building on and expanding the skills gained through the contract of training; first year apprentices in New South Wales, and fourth year apprentices in Queensland and South Australia all volunteered to take part. Established tradespeople were also enthusiastic participants in this project, as seen in the Queensland project.

Apprentices can cope with an increased training workload with employer support. A variety of delivery options were tested through this project – one additional night per week (South Australia), two days per week (New South Wales) and a five day block (Queensland). In all of the pilots employer support was an important prerequisite to involvement and this usually involved flexibility around work hours and the opportunity to practise new skills. The successful completion of the training indicated that the participants are able to cope with the additional training load, with employer support.

An accelerated program is not suitable for all apprentices. While only one apprentice formally withdrew from an accelerated program, it is important to note that the apprentices involved were not a typical cross section. They were selected to be involved on the basis that they were already coping well with their training and would likely be able to take on the additional training load.

Employers will support an accelerated program. An accelerated program can result in increased wages and employers demonstrated that they could see the benefits of the acceleration and so were willing to support their apprentices in pursuing this approach to the extent they were able. The deteriorating economic conditions over the course of this project and weaker demand had an impact on some employers and while in principle they continued to support acceleration it was more difficult for them to continue with this approach when they were under extreme cost cutting pressures.

Training quality is an issue. The quality of training was of concern in two of the pilots where the apprentices, in particular, had much higher expectations of their training and were very critical of both training delivery and training resources. Training quality was an issue in both new and traditional areas of delivery.

State Training Package implementation issues have a considerable impact on the speed with which new qualifications can be made available. The commencement of the South Australian pilot was delayed considerably because of the state-based processes around the implementation of new training packages. Local industry demand was evident, the apprentices were enthusiastic, the TAFE was appropriately equipped but the training could not commence because the new training package had to go through a local process which had the effect of delaying the availability of this qualification by 12 months. The same training package qualification was used in the Queensland pilot and while there were similar delays there was a state-based course which could be used and the competencies could be mapped across to the new qualification when it was available.

Take up of training is linked to funding: The training provided under this pilot was largely without direct cost to the participants or their employer. Outside the project the additional training would be on a user pays basis and in the face of uncertain demand this will have a significant impact on take up.

Take-up of training influenced by many factors beyond the training system: Government policies can have an unintended and unforeseeable impact on training demand. This was clear in the Queensland pilot where original numbers were dramatically reduced when demand for the installation of solar cells (the area in which the apprentices were being trained) plummeted after the introduction of means testing on government incentives. The skills shortage in this area disappeared overnight. The company remained committed to the training but in the absence of short-term demand for its services was not in a position to fund the extra training.

Changed training arrangements require administrative flexibility: In one state (NSW) student records showed the accelerated students who had completed their off-the-job training more quickly than usual had not passed because the training administrative system didn't have an option which allowed one component of a competency to be finished ahead of the rest.

The project prompted the faster delivery of selected green skills and drove significant RTO investment: While green skills were the focus of only two of the pilots it is significant that in each case the project prompted the faster delivery of the units required for a national licence than would have been the case without the pilot and that this offering is being expanded. It also prompted the Queensland RTO involved to make a considerable capital investment.

1.4 Key Messages and Recommendations

There is a need for targeted funding in strategically important skill sets. The project demonstrated apprentices, tradespeople and their employers value the opportunity to expand the traditional training received; in many instances this training took the form of a skill set. But the current funding arrangements mean that, outside projects such as this, the provision of this training is only available on a fee-for-service basis.

Public funding options should include the flexibility for apprentices to access financial support to cover the cost of skill set training in areas, such as green skills, which are recognised as being areas of importance for our future economic prosperity over and beyond trade training.

State-based Training Package implementation processes must be streamlined. The development of new and revised training package qualifications is triggered by the demonstration of demand for the training. National processes have been streamlined in recent years, but this project demonstrated that some state processes can delay the implementation of industry-needed qualifications by 12 months and more. The state implementation bottlenecks need to be addressed.

Acceleration options are possible, but need to be promoted. The existing flexibility around training packages is not well understood. The acceleration options pursued in this project were able to be accommodated largely within current arrangements but this is not well known, or understood by industry, the apprentices involved and often by

the RTOs. It is important that this option be promoted, especially to the highly able apprentices who see this as an opportunity to advance their careers and extend their training into higher levels. This will undoubtedly help to attract more able students into the trades and be of interest to their parents.

Training quality must be improved through improved trainer skills and training resources. The project found examples of good training but too often participants spoke of very poor training. Individual RTOs had professional development practices in place but a more systemic approach needs to be taken. A national vocational education and training professional workforce strategy must be developed as a priority to provide national direction and to explicitly set out the expectations of stakeholders across both technical currency and educational expertise. A suite of qualifications needs to be developed that is tailored specifically for the context in which the trainer is delivering the training and the needs of those being trained.

Innovative projects can act as catalysts for change and are worthy of ongoing support. This project was a catalyst for change – it accelerated the provision of green skills training; it prompted the development of a national trainer network; it pushed RTOs to work across traditional factional boundaries; it demonstrated to employers that the training system is able to accommodate aspects of flexibility in the training system which they have been calling for. These results showcase the value of projects such as this is in bringing about change and indicate the potential value of ongoing investment in innovative projects.

2 South Australian Pilot: Certificate III in Electrotechnology plus renewable energy licence eligibility

2.1 Project overview

The South Australian pilot of the *Faster, Smarter, Higher Trade Outcomes Project* provided the opportunity for a group of third year electrical apprentices to take on additional units of competency and complete their training with a Certificate III in Electrotechnology (Electrician) and the additional units of competency needed to satisfy the requirements of the Clean Energy Council to become an accredited installer of Renewable Energy Systems.

'Green skills' including those in renewable energy have been identified as skills which will be in high demand so it was appropriate that this project explore options around how these skills may be more quickly attained and made available to industry.

(To encourage greater uptake of renewable energy technologies, the Department of the Environment, Water, Heritage and the Arts provides rebates to owners of stand-alone and grid-connected systems using renewable energy as the primary energy source. These programs are the Solar Homes and Communities Plan (SHCP), the National Solar in Schools Plan (NSSP) and the Renewable Remote Power Generation Program (RRPGP). One of the conditions of eligibility for the rebates is that the systems are designed and installed by a person accredited with the Clean Energy Council to carry out the required work.)

After some considerable delays due to the protracted processes around the implementation in this state of the new Electrotechnology Training Package (UEE07), training commenced in February 2009.

The Clean Energy Council has determined that once electrical apprentices complete two units – UEENEEK025B Solve basic problems in photovoltaic energy apparatus and UEENEEK026B Install and set up grid connected photovoltaic power systems – they satisfy the accreditation requirements for grid-connected solar photovoltaic system designers and installers. Tradespeople who hold this accreditation are able to install renewable energy systems for consumers allowing them to claim applicable Government rebates. The holding of this accreditation means new business opportunities will be opened up for the employers of the young people in the pilot who successfully complete the training. These units can form part of a higher level qualification in this much needed area, which should improve the project participants' overall productivity and employability.

The units are delivered consecutively; the first unit, *Solve basic problems*, was completed on Tuesday 31 March 2009. The second unit, *Install and set up*, was completed in June 2009.

2.2 Apprentice involvement and selection

Thirteen apprentices were involved in the pilot across 12 employers. The employers ranged in size from small electrical contractors to a national building and construction firm and included a group training company.

The training was delivered by Regency TAFE. An 'Expression of Interest' document was circulated to all current third year electrical apprentices studying at Regency TAFE asking for an indication of interest from those who wished to undertake additional studies required to gain the accreditation.

Around 100 students responded which far exceeded expectations and the capacity of the project. All of the 'Expressions of Interest' were considered and places offered to students who had a previous record of above average results and a demonstrated aptitude for their current studies.

Prior to notifying successful applicants, the employer of each prospective participant was contacted and their support was sought in providing opportunities for relevant work-based activities and in assisting and encouraging their apprentice in their additional studies.

2.3 Feedback from employers and apprentices

Feedback from employers to this pilot has been positive. Some consider having their apprentice trained in the area of Renewable Energy as supporting their future business growth plans. For others, it is seen as a means of supporting the South Australian Government's objective of generating more electricity using renewable energy.

Of the 13 apprentices involved in the pilot, one withdrew and two failed to complete this additional training. Of the apprentices who completed the training, their feedback has been generally positive. They see it as a sector that will provide significant future job and career prospects and welcome the opportunity to broaden their studies. At least one of the apprentices has elected to continue his studies and gone on to the Certificate IV in Renewable Energies.

Concerns were raised over the quality of the training, with apprentices reporting that their lecturer wasn't as well versed in the subject matter as they would have liked and training materials were not adequate. There were also teething problems with the new facilities, which teaching staff were familiarising themselves with as the course rolled out. Some of these problems were partially overcome by drawing on the skills of course participants, some of whom were already working in this field and able to share their workplace experiences with the group. It also meant there was a need for participants to undertake a higher level of independent study than they had expected.

Another concern of the apprentices was that they were encouraged to undertake the training by the opportunity to gain an additional licence. But it wasn't until the end of their training that they were advised that a provisional licence would cost each person $600 and that a number of supervised projects needed to be undertaken before a full licence would be granted and then there are ongoing annual fees. While

this is not a training issue per se the apprentices were clear that they would have preferred to have this information upfront and that for some this would have been the difference between opting in or opting out of this course.

2.4 Project outcomes

- *Supplemented qualification outcome for apprentices*: The apprentices involved in this pilot completed the Certificate III in Electrotechnology (Electrician) under their original contract of training. The completion of the units above and beyond this contracted training resulted in their eligibility for accreditation under the requirements of the Clean Energy Council's rules.

- *Faster availability of new sustainable energy qualification*: These units, and a range of broader renewable energy qualifications, are now part of the mainstream training offering by Regency TAFE, South Australia. This project is responsible for accelerating the implementation of these units and qualifications; the new Training Package which included this qualification is very large and without the impetus this project provided it would have taken considerably longer for this training to have become available.

- *Demonstration of demand for sustainability skills coming from both young people and their employers*:
    - Successful involvement in the project was contingent on employer support. Every employer approached was supportive of their apprentice's involvement and to the fullest extent possible made available opportunities for institution-based learning to be practised at the workplace.
    - Ai Group is aware from other research and project work that there is a strong push for skilling for sustainability coming from young people – they are pushing their supervisors and managers to be more aware of green issues and are asking for a greater consideration of green issues to be recognised in their training programs. This was clearly demonstrated in this project with the young people who had been advised that they would be able to take part in the pilot keeping the pressure up as the state-based implementation processes dragged on. This is a key group to involve in green skills development as interest levels and expectations are so high.
    - The TAFE is now delivering these units of competency as part of their mainstream offering and there is a waiting list for this training, though the demand is coming more strongly from existing trades people than from apprentices.

- *Quality of training delivery and facilities issues:* Training in renewable energies is a new field for RTOs and this posed understandable challenges for Regency TAFE. Apprentices were concerned that trainers were not as well prepared and resources were not as detailed as they had expected and as compared to other areas of their training. This is an issue for any new subject areas introduced by RTOs and steps need to be taken to ensure that teaching staff are suitably qualified and have appropriate levels of expertise in this area.

3 Queensland Pilot: Renewable Energy - Solar Panel Installation Qualification and Licensing

3.1 Project overview

Originally the Queensland pilot was to look at the fast tracking of CSR Sugar electrical apprentices to the Certificate IV in Instrumentation across several sites in North Queensland with SkillsTech Australia (STA) as the delivering Registered Training Organisation. This pathway proved so attractive to the company that they took up this training option more quickly than the project could respond, which meant an alternative needed to be found.

In consultation with local industry, a second qualification was identified. The second pathway aimed to deliver a skill set of formally accredited competencies for the installation of solar panels that met the national licence requirements for the Clean Energy Council. Quite independently of the South Australian pilot, Queensland industry contacts identified the same skilling need.

The Queensland pilot focused on training for the employees of one company, Stowe Australia (Stowe). Stowe is an electrical and communications installation and service contractor. The company commenced operations in 1910 and now has annual revenues in excess of $340m and directly employs 1400 people across NSW, Queensland, Victoria and ACT.

Stowe had recognised the growing market demand for the installation of solar panels on domestic dwellings. In order for a home owner to receive government subsidies towards the cost of installing solar panels the work must be carried out by installers licensed under the Clean Energy Council. At the time discussions around this project began (early 2008) Stowe did not have any staff licensed under the CEC and made a commitment to upskill 20 of their staff with the required qualifications and licences through the project. The General Manager of Stowe also sits on the board of the National Electrical and Communications Association of Australia (NECA) and through discussions with the Board generated interest in a further 30 training places in the program. With this level of industry support for the program STA began upgrading their resources and building new training facilities at the Brisbane North TAFE Campus.

In May 2008 the Commonwealth Government announced that it was means testing the $8000 solar panel rebate and only people who earned under $100,000 would be eligible. Under this new rebate arrangement the demand for the installation of solar panels decreased dramatically and the 30 training places promised earlier through the NECA network disappeared.

3.2 Apprentice involvement and selection

Stowe was also not immune to the effects of the rebate review and whilst deciding to continue with 11 people in the first course in October 2008 the participants they chose to attend included only two 4th year electrical apprentices. The remaining participants were all trade qualified electricians with the majority of them working in the tendering, estimates and design sections of the business. From a business perspective the first priority was to have qualified staff in the areas of the business that could bring in more renewable energy work to the company.

STA ran additional courses in November 2008 and February and April / May 2009. Stowe sent along a further five 4th year apprentices to the November program whilst other employers made up the balance of participants in this and the other courses. The table below summarises the project training outcomes:

COURSE DATE	NUMBER OF 4TH YEAR APPRENTICES	TOTAL NUMBER OF PARTICIPANTS (TRADESEPERSONS AND APPRENTICES)
6/10/08 – 10/10/08	2	11
10/11/08 – 14/11/08	6	10
16/2/09 – 21/02/09	9	9
27/04/09 - 1/05/09	11	11
TOTAL	**28**	**41**

3.3 Feedback from employers and apprentices

Feedback from Stowe and their participating apprentices has been very positive. STA surveyed the apprentices who went through this training and they were strongly supportive of the training, particularly the practical components. There were some frustrations with enrolment processes which were cumbersome because this was a special project and STA staff were not fully aware of the project and how to process the enrolments. A number of the apprentices commented that they would have liked more time for pre-reading. In response, STA is putting the theory components of the course online, which will give students much greater opportunity to undertake pre-course reading. The online learning will be supplemented by blogs and it will be possible for students located in regional areas to do much of the training in their region, only needing to travel to the Brisbane campus for the practical components. STA is working to improve the practical offering by building on its capacity to have students going up on to roofs.

Stowe company representatives considered the training to be good and the facilities suitable, with their employees demonstrating a good overall understanding of the area. All staff who participated 'enjoyed the course and the subsequent work they've done'. The company felt the five day block training was a good approach as it encouraged participants to build and consolidate their knowledge over the week. The company felt that its apprentices went well and while there was ongoing interest from the apprentices to be involved the considerable licence fees, which Stowe pays for the apprentices, will limit the number of apprentices they put through the

training. The other limiting factor is the uncertainty of demand; the sensitivity of demand to government subsidies and the very aggressive marketing of installation services by some companies mean it is difficult for companies to accurately forecast levels of demand and so it is difficult to predict the levels of trained and licensed people who will be required.

3.4 Project outcomes

- *Apprentices complete their apprenticeship with a broader range of in-demand skills and an additional licence*. The apprentices involved in the pilot completed their apprenticeship with an extra string to their bow – they are eligible to apply for the licence to install photovoltaic cells and this is an extension of the training set out under the contract of training. They have done this within the timeframe of the apprenticeship.

- *Identification of funding issues*: The skill set undertaken in this project is currently not funded under User Choice and outside this project would normally be offered under a full fee for service arrangement. The uptake, expansion and promotion of the same or similar 'green' skills will be more quickly achieved if these programs could be included in apprenticeship training plans and funded under normal apprenticeship arrangements with no additional cost to the apprentices or their employer. On top of the training fees there are also considerable initial licensing and licence renewal fees payable to the national regulator ,which also serve as a financial barrier to the uptake of the relevant qualifications. The employer would like to see changes made to the licensing arrangements to reduce the high fees, which are a disincentive for individuals, or perhaps the introduction of the option of a corporate licence rather than only individual licences.

- *Training Package implementation processes:* For most of the life of this project, STA and other RTOs in Queensland had not been able to implement the UEE07 Electrotechnology Training Package. The new Training Package was available for implementation since 16th January 2008 but it was not on the scope of STA until October 2009. The numerous new qualifications and training pathways are not available to industry until RTOs gain registration in the new training package and then develop programs based around the new requirements.

  In the area of renewable energy, UEE07 offers a range of new qualifications that do not always recognise credits gained for similar competencies from the previous UTE99 Training Package or similar state-based qualifications. Stowe was interested in but declined to undertake higher level qualifications in the renewable energy field (Certificate IV and Diploma) because they could not enroll under the UEE07 Training Package and any competencies or modules completed under UTE99 or a state-endorsed program would not be able to be credited into the new UEE07 qualifications when they came into play in the near future. The only reason this pilot was able to proceed was the Clean Energy Council recognises both the Queensland state-based competencies and the nominated competencies from UEE07 as being acceptable for issuing a licence. Currently other states in Australia may not have any state-based alternatives to the prescribed UEE07 competencies under the national

licensing requirements and will therefore not be able to enroll in the required training until a local RTO becomes registered and develops a suitable program.

By the conclusion of the project in December 2009, STA was registered for the UEE07 Training Package and delivering these qualifications. STA is in the teach-out phase of the old Queensland course and no new participants could be registered into the old course after October 2009. Those participants who had not completed by 30th October will go through an RPL process into the UEE07 program.

There is another layer of complexity with this training package: there have been three new versions of this training package produced in 12 months and STA has been advised that there are another two versions being prepared now. The extensive changes to this large and diverse training package have been difficult for RTOs to keep up with and difficult for industry to keep across.

- *Faster availability of green skills training*: Prior to the project STA had no capability to deliver an intense targeted course that delivered the required licensing outcomes. This project has been a catalyst for STA moving from only offering a full qualification via a self paced correspondence mode to having the capacity to deliver a high quality, industry friendly full-time 5-day workshop that successfully delivers the accredited training skill set required to obtain the solar panel installer's licence from the national licensing body.

  At the time of writing (December 2009) STA had 140 people registered to undertake this training with apprentices making up around 10% of this total. A recent industry night focused on green skills attracted more than 100 employers interested in building the green skills of their workforce, indicating strong, ongoing interest.

- *The project drove the RTO to make a significant investment in green skills training infrastructure*: Considerable investments have been made by STA in order to upgrade its practical facilities at Bracken Ridge TAFE to enable live work to be undertaken and power generated by the project to be fed back into the main electricity grid. Substantial new equipment purchases and facilities upgrades have been undertaken along with a complete review of training materials and assessment items. As part of the training facilities upgrade, STA constructed three miniature houses (photo over page) upon which students could install the solar panels and thereby replicate real world installation scenarios. The estimated cost for the facility upgrade is $110,000. STA also purchased three different types of inverters, specific solar panels and other equipment.

- *The project has driven an expansion of green skills training in the RTO*: STA is planning to build upon the successful outcomes of the *Faster, Smarter, and Higher Project* and expand its renewable energy offering by registering in the near future to deliver the following qualifications:

  - UEE42009 Certificate IV in Electrotechnology Photovoltaic Installation
  - UEE 51007 Diploma in Renewable Energy

These two courses will align with what other states are planning to offer.

Experience gained as a direct result of participating in this pilot will ensure a much more streamlined and efficient roll out of new pathways in the renewable energy sector.

At the start of this project STA had nothing in terms of facilities and now has a state-of-the-art facility. The success of this project has prompted other activities in the renewable energy area; staff are now putting forward a business case for a wind generator and a dedicated roof to be used for installations; a group of trainers has been established with other states to share resources and a network is now developing; and Energy Skills Queensland, the state electrical industry training board, is now involved and helping to guide this expanded training effort in a national direction.

Figure 1.

New training facilities at Brisbane North TAFE - FSH Project, Renewable Energy Solar Panel Installation

4 New South Wales Pilot: Accelerated completion of the Certificate III in Engineering (Mechanical) trade qualification

4.1 Project overview

The pilot was run in South Western Sydney Institute of TAFE, Miller College. The qualification is the Engineering (Mechanical) Trade. The model involved the apprentices initially spending two days a week off-the-job with TAFE NSW, rather than the usual one day per week. The off-the-job training was conducted onsite at Broens Australia for the first six months. Broens is a high-tech engineering company that delivers precision engineering, tooling, special purpose machinery and automation solutions to the industrial, commercial and defence sectors.

The second stage of the pilot was delivered at Miller TAFE College. Usually each stage of the trade course is completed over two semesters. In this pilot, Stage 1 of the trade course was completed in semester 1 and Stage 2 completed in semester 2. Stage 3 will be completed in semester 1 and semester 2 of the following year, allowing the apprentices time to achieve competencies on the job. Participants in the Certificate III may be able to complete the trade at the end of two years if they have achieved all the on- and off-the-job competencies. A true competency-based outcome requires the agreement of TAFE, the employer and the apprentice. It is anticipated that the apprentices will progress to higher level outcomes such as the Certificate IV and/or Diploma of Engineering – Advanced Trade. Participants in the Certificate IV have a possibility of completing within two-and-a-half to 3 years, as long as true competency is achieved.

Participants who progress to the Diploma would probably require four years from initial registration as an apprentice to completion of the Diploma.

4.2 Apprentice involvement and selection

Twelve apprentices commenced and one subsequently withdrew. The participating companies are:

- Qantas
- Broens
- Nepean Engineering
- TYCO Goyen Flow Control
- My Gateway Group Training Organisation.

Employers were selected by Ai Group Education and Training Advisors on the basis that they have a strong commitment to apprentice training and are prepared to participate in innovative approaches to training. The employers selected the apprentices.

4.3 Feedback from employers and apprentices

Overall, the employers involved in the project are very happy with the outcomes. Following are a range of comments from the employers:

- 'Two days a week at TAFE is a good transition for young people who have just left school. It provides an easing into the world of work and they seem to be handling it better than our regular apprentices.'
- 'The two days at TAFE, rather than the standard single day per week, meant greater consolidation of the learning before the apprentices came to work and had the opportunity to apply their new skills.'
- 'It works. It made the boys better employees, earlier. They finish their training earlier and we have them full time when they're most productive. Because they have good trade skills earlier we can promote them earlier – at least 12 months earlier.'
- 'This approach has given our company an advantage; because they're young they soak in the learning faster and they have an increased commitment to skills, which matters with all the new technologies coming in.'
- By the end of the pilot all employers were in favour of acceleration. Initially one of the employers was a reluctant participant but over time that employer's view had changed from finding the two days away for the company to be inconvenient to finding they were much better off because the 'front loading' of skills had meant the apprentices could do more, sooner.
- Most employers had no problem with paying higher wages when competencies had been achieved both on-the-job and when the TAFE course had been passed.
- One of the employers in the pilot is concerned that signing off their apprentices early will lead to increased likelihood of 'poaching'.
- Employers raised the issue of the TAFE transcript – the TAFE administrative system had not previously needed to produce a record for an apprentice who had completed their off-the-job training well ahead of their on-the-job training and so the young people in the pilot were shown to have failed when what was needed was a code for 'not yet competent on-the-job'. This caused some early concern for both the employers and the apprentices and has now been rectified.
- One of the employers commented that the apprentices in the accelerated program were more aware of their environment and their interaction with other tradespeople is more mature.
- Some employers are conscious of the management issues that will arise as a result of the acceleration where the new apprentices will have 'caught up' with apprentices who started earlier and who have traditionally, and informally, been considered to be more senior and been assigned work accordingly.
- A disadvantage to this approach, experienced by one of the employers, occurs when an accelerated apprentice leaves before the end of their apprenticeship. Under the accelerated program the company has absorbed the reduced output which results from two days per week rather than one day per week off-the-job for a year but then doesn't have the 'payback' of having their apprentice present fulltime when the apprentice moves to another employer after the accelerated period but well before the end of the

apprenticeship. This wasn't cited as a major problem but was an outcome not identified at the commencement of the project.

The approach was also supported by the apprentices:

- The apprentices liked the idea of compressing stage 1 and 2 into the first 12 months.

- The apprentices in this group are highly articulate and seem to have a clear understanding of Competency Based Progression. The main speakers for the group clearly understood that to achieve full competency they would have to pass their TAFE course and achieve workplace competency to be deemed fully competent. They also understood that full achievement of the competencies would take longer than the six months to complete Stage 1 of the TAFE course. This was because they had been on-the-job for less time than the apprentices in the standard release pattern where Stage 1 is completed in 12 months. The group understood this and were less interested in going to the next pay level and more interested in showing how smart they were to have progressed through the learning at a rapid pace. The group seemed to understand that it could still take them four years to be a competent tradesperson.

- The apprentices were also very concerned that the TAFE records showed them to be 'not competent'. The TAFE representatives informed the group that their transcripts would be amended to remove the 'not competent' recordings with 'competent' as soon as competency was achieved; apprentices had expressed a concern that their employers had thought they had failed.

- Some apprentices spoke about how their employers will allow them to enroll in the Diploma course in 3rd year and some have been told that they will still be able to have a day away from their workplace as a TAFE day to be used to pursue higher level training.

4.4 Project outcomes

- *This model works well for medium sized firms but poses difficulties for small firms:* Small firms aren't as able to release apprentices for two days per week as medium and larger firms. This was shown at the commencement of this project when Ai Group attempted a second pilot for small firms; while there was strong interest in the approach small firms were not able to make a commitment to the project because they could not afford to have their apprentice(s) away for twice as long as usual. An additional financial incentive may help to overcome this.

- *This approach is attractive to the higher achieving young people*: They enthusiastically supported the pilot and at its conclusion were keen to build on what they had learned by extending their training into higher level qualifications. At this stage employers have indicated that they are willing to

support this. Other apprentices in the companies involved have said they'd like the opportunity to accelerate too.

- *Apprentices were able to successfully reduce the term of their apprenticeship by a full year*: the apprentices involved in this project were able to clearly demonstrate they could cope with the accelerated delivery arrangements, halving the time taken to complete the first two off-the-job stages of the apprenticeship. If they continue now at the normal pace and successfully complete all on- and off – the- job aspects of the training they will have completed the apprenticeship 12 months ahead of the typical term.

- *Employers recognised the benefits of accelerated training*: All of the employers were pleased with the outcomes of this pilot as it resulted in more productive workers sooner. Most of the employers were not concerned that this acceleration meant that they would probably need to pay higher wages sooner. This project has caused one of the employers to change its recruitment practices; this company intends to continue following this approach and so it is now looking for higher achieving young people who will be able to cope with the accelerated first year as a priority. An unanticipated outcome of this work was improved relationships between the companies involved in the pilot who came to better understand each others' businesses through the interactions around training and found opportunities to work co-operatively.

- *Completing off-the-job apprenticeship training early has encouraged apprentices to go on to higher level training*: Two of the employers in this pilot have agreed to support their accelerated apprentices to go on to undertake Certificate IV studies in hydraulics and welding.

- *This project will prompt others*: This project is driving change as employers are keen to continue to support this option and have asked that other areas, such as boiler making, be considered for acceleration. NSW TAFE is also now considering new projects around acceleration.

- *NSW TAFE is now able to appropriately code apprentices engaged in accelerated programs*. NSW TAFE has responded to the issue of not having a code for where the TAFE course has been completed but the on-the-job competencies have not been signed off by the employer. This is 'progressing toward competency'.

5 Victorian Pilot I in partnership with Australian Industry Group Training Services – Higher/Advanced trade outcomes

5.1 Project overview

This pilot focused on the Australian Industry Group training company identifying suitable apprentices, and host employers, for progression into Certificate IV and Diploma in engineering trades and supporting the apprentices through these qualifications.

The aim of the pilot was to:

- focus on current apprentices and offer them the opportunity to undertake higher level training than their current apprenticeship arrangements provide for;
- test how the group training model is able to respond to and support this approach;
- test the model across a range of enterprises and include at least one national company to test the suitability of the model from a national perspective; and
- utilise already developed higher level qualifications from the Metal and Engineering Training Package.

Because of the range of companies and their locations, a number of different qualifications and RTOs have been used. Qualifications included:

- Certificate IV in Systems Electrician/Instrumentation;
- Certificate IV in Avionics Mechanical;
- Certificate IV in Engineering Mechanical;
- Diploma of Laboratory Technology and
- Advanced Diploma of Electronics/Communication Engineering.

RTOs used:

- RMIT University;
- Swinburne University (TAFE);
- Swan Institute of TAFE WA;
- TAFE NSW Meadowbank;
- TAFE NSW Western Sydney-Mt Druitt and
- Chisholm Institute.

5.2 Apprentice involvement and selection

Fourteen apprentices are involved in this project.

Apprentices were selected in two ways:

1. Existing apprentices who had demonstrated capacity for successfully undertaking higher level training were identified, and their host employers contacted to determine their interest in participating.

2. Other host employers and potential host employers with suitable apprenticeship vacancies were invited to consider raising the level of qualification for the apprenticeship. When this was agreed, suitable apprentices were sought by the group training company during the recruitment process.

Host employers involved:

- Coca Cola;
- BAE Systems;
- Thales;
- CSL Ltd;
- Hunter Douglas; and
- Dexion Australia .

5.3 Feedback from employers and apprentices

The pilot took some time to get started for two main reasons.

Firstly, it was difficult to secure the involvement of host employers. Many industrial awards classify employees according to the level of qualification applied on the job, so an apprentice who completes a higher qualification could well be classified (and hence paid) at a higher level than other tradespeople in the organisation. This can act as a disincentive for an employer to enroll an apprentice at a level higher than Certificate III.

Secondly, there were considerable difficulties experienced in enrolling the apprentices in suitable training. While all of the qualifications were drawn from national training packages, most of them were not typically offered by the RTOs, or were not offered in a way that met the apprentice's and the employer's requirements.

For example, the Certificate IV in Engineering was used to provide a dual trade qualification in the mechanical and electrical trades. This is an initiative that industry has been looking at for some time, and may well prove popular in future, but at the moment TAFE Institutes are not structured in a way to facilitate its delivery. Mechanical and electrical TAFE departments do not work closely together, and issues such as timetabling and mapping across training packages have proved difficult to overcome.

As another example, the Advanced Diploma of Electronics and Communications Engineering is a new qualification that was not offered in Victoria until 2009. RMIT University has devised a training plan that at first uses the old qualification being replaced and then maps across to the new one. This innovative approach has been very welcome, and the RTO has been very responsive, but the time taken to put it into place initially has been considerable.

Both apprentices and employers have been frustrated by the long lead times involved in commencing new training pathways. Because this pilot involved a number of apprentices across many employers, engaged in very different training at different Registered Training Organisations, there is the full range of experiences and the feedback reflects this.

Comments from a cross section of apprentices:
Apprentice A
'The two days off per week takes some getting used to. I get the same number of work projects as other (non-accelerating) apprentices but it takes me more time than the others to do the work. But I'm catching up now.'

'The training is pretty good here. The teachers are good – they're all tradesmen.'

'I'd definitely recommend this (acceleration) to others. What I'm learning I can put into practice everyday and because I'm doing two qualifications I can do a complete job and not have to wait for another tradesman to do their part.'

Apprentice B
'The training is not real flash. Not every electrician is destined to be a good teacher and their training is pretty lacking.'

'We've had one good teacher in two years; that's one out of four. One is so bad we signed a petition not to have to have him in our final year.'

'Some of the texts are ancient. They're updating them now.'

'The facilities here aren't any better than elsewhere.'

Apprentice C and D
Off-the-job training is undertaken at the workplace.

'The work is interesting and the training could be improved if we had a trainer with technical skills.'

'I'd rather go out to a campus than do the training at work. I'd appreciate the opportunity to work with others and find out about other career opportunities in this field.'

Comments from a cross section of host employers:

'This qualification is new to this business unit. We're interested because we've had skills shortages in this area over the last 3-4 years and this (fast tracked, higher level qualification) is a way of addressing this.'

'We're building a pipeline to overcome the natural exodus of skills we see (to mining).'

'We want to get all of our people to this (higher trade) level and we'll encourage them to continue on with their studies.'
'Decisions on training are made at head office in Sydney – we don't have any say on this.' (Two employers in this pilot made this observation.) 'It's hard to get anything off the ground at a local level.'

'Theoretically the dual trade should be a huge bonus to us, especially over the weekend where we have coverage with only small numbers of staff and there is only limited support.'

Some of the companies involved do not have the breadth of work needed by apprentices undertaking dual trade qualifications and they have organised opportunities with their contractors for these apprentices. But more than one said it's a battle to get the range of experiences. Even though the companies were supportive they found it was difficult to work around having an apprentice off site for two days per week and that it required more planning than they'd anticipated.

Employers find it hard to provide adequate supervision to apprentices and to give them the time they need to develop new skills and this is exacerbated when an apprentice is doing a dual trade/accelerated training.

Employers with apprentices doing a dual trade were clear that this was a model which they supported with many saying that there has been a breaking down of barriers between traditional trades and the training system needs to keep pace with these industry changes.

5.4 Project outcomes

Active promotion and facilitation of higher level qualifications in apprenticeships is required: The preparedness of employers to use higher level qualifications cannot be assumed. Many employers in traditional industries are familiar with Certificate III apprenticeships and without being given good reasons would not consider any other options. Those that do need expert assistance to help them through both the recruitment and the enrolment processes.

During the decision making phase, employers need to be informed that higher level qualifications than Certificate III for apprentices are available and may be suitable for their workplace, but they may result in higher wages both during and after the apprenticeship. On the other hand, higher level qualifications will be attractive to some potential apprentices, and may be a selling point for a career with that employer.

Group training representatives were required to engage extensively with host employers, apprentices and RTOs to promote, explain and facilitate the acceleration and delivery of higher level qualifications.

Acceleration is demanding and requires high levels of ability: During the recruitment phase, employers need to understand that apprentices who enroll in higher level qualifications will be undertaking more challenging training than standard Certificate III apprentices and thus will need to have the capacity to achieve at a higher level. Employers may need to consider raising their minimum education levels.

Employers need assistance to navigate their way through acceleration options: During the enrolment phase, employers need considerable assistance to identify the relevant qualification and find a suitable RTO. There are over 1,400 qualifications available nationally, and no employer is likely to do the research necessary to find the most suitable option. Many of these qualifications are not offered by local RTOs because they have no demand, but an experienced intermediary who has a good

understanding of the capacity of relevant RTOs may be able to broker a solution for employers.

Apprentices were consistent in their support of the acceleration options: Across the project the apprentices spoke highly of the opportunity to accelerate their training. For some the benefit was in gaining a broader range of skills, which they expected would result in improved career prospects. For others, the chance to gain a higher level qualification more quickly was the motivation.

The quality of training is patchy: While some of the apprentices and employers were satisfied with the quality of the training, many were not. Those who were critical were highly critical, indicating that there exist substantial quality issues which must be urgently addressed. It is important to stress that these issues are not just a function of the accelerated nature of the qualifications or the newness of the qualifications – this was a factor in some instances – but some of the sharpest criticism was reserved for longstanding training pathways.

6 Victorian Pilot II: Air conditioning and Mechanical Contractors Association Apprentice Trade Plus programs project

6.1 Project overview

This pilot examined the important role industry associations play in the provision of training; considered the relationship between accredited and non-accredited training and between industry training providers and Registered Training Organisations; extended the skills apprentices gain during their apprenticeship by adding both technical and soft skills; and tested the model across a wide range of enterprises.

The pilot targeted apprentices undertaking air conditioning apprenticeships, either in the Metal and Engineering or the Electrotechnology Training Packages. Through this model apprentices were not offered higher qualifications, but rather additional training programs relevant to their trade and industry.

6.2 Apprentice involvement and selection

Fifty-two apprentices were involved in this pilot, drawn from across the membership of the Air Conditioning and Mechanical Contractors Association (AMCA). The following companies were involved:

- AllStaff Air Conditioning;
- Aulair Pty Ltd;
- AE Smith Service Pty Ltd ;
- P Industries;
- Ellis Air Conditioning P/L ;
- Estair;
- A.G. Coombs Servicing Pty Ltd;
- Parmac Air Conditioning and Mechanical Services ;
- A C Hall Air Conditioning; and
- Airepair Air Conditioning Services.

6.3 Feedback from employers and apprentices

The feedback from the apprentices, gathered through formal feedback sheets completed at the conclusion of the training sessions, was very positive. A typical summary evaluation is included in the appendix. At the end of each session the apprentices were asked a series of questions including 'Has the training influenced the job behaviour?' and 'Has the organisation benefited from the training?' Consistently positive responses to these questions were recorded.

6.4 Project outcomes

Apprentices supported the model, successfully taking up the additional training offered through their industry association. All apprentices were undertaking the Certificate III – Engineering – Mechanical Trade and concurrently completed the additional training.

RTOs were able to be sufficiently flexible to meet this industry's needs. The RTOs involved were Box Hill TAFE and Holmesglen TAFE. The RTOs were able to work to the timetable below:

Additional Skill Training - 1st Half 2008
Manual Handling – 1st April 2008 & 1st May 2008 – *Trained 12*
Height / Harness – 29th April 2008 & 29th May 2008 – *Trained 14*

Additional Skill Training – 2nd Half 2008
Confined Space 2nd Oct 2008 & 16th Oct 2008 – *Trained 11*
Safe Driving (Driving with a Load) 5th Sept 2008 & 6th Oct 2008 – *Trained 15*

The training delivered was mapped to the following national competencies:

Manual Handling – TDTD197B
TDT02: Transport and Distribution Training Package

Height / Harness – MNMG237A
MNM05 – Metalliferous Mining Training Package

Confined Space – PMAPER205B
MNM05 -Metalliferous Mining Training Package

Safe Driving (Driving with a Load) - TDTC197B
TDT02: Transport and Distribution Training Package

Apprentice Trade Plus Confined Space Awareness Safety Feedback Summary – 2 Oct & 16 Oct 2008

Evaluation of the training session – based on points scoring (5 points = highest score to 1 point = lowest)
Participants = 11

THE COURSE		
Highest possible score (11 x 5 points)		Actual Score
Value for Money	55	**55**
Objectives were achieved	55	**54**
Content was relevant to the job	55	**55**
Subject matter was organised & understandable	55	**55**
Materials were suitable (handouts, audio visuals etc)	55	**55**
Accommodated those with special needs	55	**55**
THE INSTRUCTOR		
Highest possible score (11 x 5 points)		Actual Score
Effectively related subject matter to work situations	55	**53**
Effectively kept discussion focused on relevant topics	55	**55**
Created a positive environment	55	**55**
Was prepared & organised	55	**55**
Overall was effective	55	**55**
THE VENUE		
Highest possible score (11 x 5 points)		Actual Score
The venue was accessible	55	**55**
The meeting room was suitable	55	**55**

GENERAL COMMENTS SUMMARISED

New skills, knowledge & attributes learned:

1. Confined Space Qualification
2. Gas & Toxin Awareness
3. Understanding of legal requirements
4. Role of the standby person
5. Danger awareness

Has the training influenced the job behaviour?

11/11 answered 'Yes'

Most participants have a better understanding of safety issues & dangers related to confined space

Has the organisation benefited from the training?

Most participants answered 'yes' – employees were more aware of dangers in the workplace

Please explain any changes you would recommend to improve the training?

No recommendations were made

Additional Comments

1. Good Course

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