



Choy, Sarojni C. and Bowman, Kaye and Billett, Stephen and Wignall, Louise and Haukka, Sandra (2008) Effective models of employment-based training. Technical Report, Department of Education, Employment and Workplace Relations, National Centre for Vocational Education Research.

© Copyright 2008 Australian Government

This work has been produced by the National Centre for Vocational Education Research (NCVER) on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education, Employment and Workplace Relations. Apart from any use permitted under the Copyright Act 1968, no part of this publication may be reproduced by any process without written permission. Requests should be made to NCVER. The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER. The author/project team was funded to undertake this research via a grant under the National Vocational Education and Training Research and Evaluation (NVETRE) Program. These grants are awarded to organisations through a competitive process, in which NCVER does not participate. The NVETRE program is coordinated and managed by NCVER on behalf of the Australian Government and state and territory governments with funding provided through the Department of Education, Employment and Workplace Relations. This program is based upon priorities approved by ministers with responsibility for vocational education and training (VET). This research aims to improve policy and practice in the VET sector. For further information about the program go to the NCVER website <<http://www.ncver.edu.au>>.



# Effective models of employment-based training

---

Sarojni Choy

QUEENSLAND UNIVERSITY OF TECHNOLOGY

Kaye Bowman

Stephen Billett

GRIFFITH UNIVERSITY

Louise Wignall

WIGNALL CONSULTING SERVICES

Sandra Hauka

QUEENSLAND UNIVERSITY OF TECHNOLOGY

The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVET

## Publisher's note

Additional information relating to this research is available in *Effective models of employment-based training: Support document*. It can be accessed from NCVER's website

<<http://www.ncver.edu.au/publications/1990.html>>.

To find other material of interest, search VOCED (the UNESCO/NCVER international database <<http://www.voced.edu.au>>) using the following keywords: off the job training, on the job training, work based learning, education work relationship, qualifications

### © Australian Government, 2008

This work has been produced by the National Centre for Vocational Education Research (NCVER) on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education, Employment and Workplace Relations. Apart from any use permitted under the *Copyright Act 1968*, no part of this publication may be reproduced by any process without written permission. Requests should be made to NCVER.

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

The author/project team was funded to undertake this research via a grant under the National Vocational Education and Training Research and Evaluation (NVETRE) Program. These grants are awarded to organisations through a competitive process, in which NCVER does not participate.

The NVETRE program is coordinated and managed by NCVER on behalf of the Australian Government and state and territory governments with funding provided through the Department of Education, Employment and Workplace Relations. This program is based upon priorities approved by ministers with responsibility for vocational education and training (VET). This research aims to improve policy and practice in the VET sector. For further information about the program go to the NCVER website <<http://www.ncver.edu.au>>.

ISBN 978 1 921412 10 3 print edition

ISBN 978 1 921412 11 0 web edition

TD/TNC 92.13

Published by NCVER

ABN 87 007 967 311

Level 11, 33 King William Street, Adelaide SA 5000

PO Box 8288 Station Arcade, Adelaide SA 5000, Australia

ph +61 8 8230 8400 fax +61 8 8212 3436

email [ncver@ncver.edu.au](mailto:ncver@ncver.edu.au)

<<http://www.ncver.edu.au>>

<<http://www.ncver.edu.au/publications/1990.html>>

# About the research

---

Apprenticeships and, more recently, traineeships, are a time-honoured way of training people for certain occupations. What makes them distinctive is the combination of work experience and off-the-job training. The success of this training model—employment-based training—raises the obvious question of whether the model can be adapted to new occupations and higher-level qualifications. Looking at alternative models of employment-based training, particularly for higher-level qualifications, was the focus of this research by a team led by Sarojni Choy from the Queensland University of Technology.

The researchers discovered that the uptake of higher-level vocational education and training (VET) qualifications is constrained by employers' preferences for either university degrees or for demonstrable skills rather than VET credentials. They did, however, conclude in this report, *Effective models of employment-based training*, that enhancements to current models could encourage more effective training for higher-level qualifications.

## Key messages

- ✧ Any new employment-based training arrangements need to take account of the age, literacy and numeracy levels of new entrants, and workplace conditions. For most new entrants, it is important to have a contract of training of sufficient duration to allow them to accumulate and learn from experiences. Fast-tracking can assist more capable learners, as can recognition of prior learning processes.
- ✧ Those seeking higher-level qualifications within employment-based training want greater autonomy to manage their study.
- ✧ The five enhanced models proposed will require a review of the complexities of the regulatory environment and of education and training delivery and employment conditions. In addition, employment-based training models for higher-level VET qualifications need to be able to compete with university qualifications.

The report's recommendations are based on case studies in the manufacturing and child care industries, and their relevance and applicability to other industries are yet to be determined. The authors emphasise that one size does not fit all and that employers must consider different training strategies in order to develop higher-quality skills.

Two other recent National Centre for Vocational Education Research (NCVER) reports of relevance to the issues raised in this research are:

- ✧ *Accelerated apprenticeships: Employer, apprentice and teaching staff perceptions* by Victor Callan (NCVER, Adelaide, 2008)
- ✧ *Higher-level vocational education and training qualifications: Their importance in today's training market* by Sue Foster, Bernadette Delaney, Andrea Bateman and Chloe Dyson (NCVER, Adelaide, 2007).

Tom Karmel  
Managing Director, NCVER



# Contents

---

Tables	6
Executive summary	7
Introduction	10
Scope of the study	11
Employment-based training	13
What constitutes employment-based training?	13
Emerging models of employment-based training	14
Key issues associated with employment-based training	17
Case studies	19
Limitations	19
Case study 1: Process manufacturing	19
Case study 2: Child Care	22
Findings and proposed employment-based training models	26
What we learnt about features for effective employment-based training from the literature	26
What we learnt from the case studies	27
Proposed models of employment-based training	28
Concluding comments	34
References	35
Appendix 1	37
Support document details	42

# Tables

---

1	‘Traditional’ entry-level training model	30
2	‘Accelerated’ entry-level training model	30
3	Internship entry-level preparation model	31
4	Extension model of entry-level preparation	31
5	Extension model of further development	32
6	Alignment between conceptual premises and proposed models	33

# Executive summary

---

Evolving models of employment-based training (EBT) are responding to skill shortages and the need to develop technical skills at a level higher than a certificate III—the benchmark qualification level considered by many as the minimum for ensuring sustainable job outcomes (Stanwick 2004). This research explored a variety of current employment-based training models and proposed five enhancements for higher-level qualifications. These changes concentrate on maintaining a balance of learning experiences between educational institutions and the workplace.

The project was based around case studies in process manufacturing and child care. Thirty-three individuals, representing employers, employees/apprentices, vocational education and training (VET) providers, industry bodies and training package developers were interviewed. The issues and views expressed by those interviewed from both industries were consistent with what was found in the literature review.

Current models of employment-based training can usefully be grouped as:

- ✧ two forms of ‘fast-tracking’ options in a formal apprenticeship model, especially at certificate III level, to address immediate skills shortages. These are accelerated progression models (shorter durations linked to a truly competency-based approach) and intensive up-front training, followed by work-based learning to ensure immediate productivity of the learner in the workplace
- ✧ higher-level VET qualifications gained either through an apprenticeship or by undertaking a vocational course
- ✧ the design of new skill sets/qualifications at various levels of the Australian Qualifications Framework (AQF)
- ✧ alternative provisions for young people.

Although these models continue to make a significant contribution to the skilling of the Australian workforce, their full potential is limited by certain persistent issues. These include inconsistent regulatory arrangements, non-compliance by employers and registered training organisations, poor audit processes, variations in the interpretation and practice of competency-based training, and wages and awards. These various factors mean poor completion rates and losses for individuals, employers, governments and other stakeholders. Recent changes in policy direction are attempting to address some of these issues and simultaneously increase interest and growth in the uptake of employment-based training.

Any new models of employment-based training should address existing problems, as well as take into account the emerging needs of industry for skilled labour. The design of the models must also address an ageing workforce and allow flexible entry points for all age groups. Furthermore, future employment-based training models also need to keep pace with how work is organised in an environment characterised by increased competition, outsourcing, casualisation and an emphasis on specialisation and innovation. What is becoming apparent is the need for a *compendium of models*, rather than a ‘one size fits all’ approach.



Analysis of successful features in past, current and emerging models of employment-based training highlighted a set of fundamentals for effectiveness. They should:

- ✧ be pedagogically sound
- ✧ lead to quality skill formation
- ✧ have positive outcomes for both individuals and the enterprises
- ✧ function effectively
- ✧ be sustained over time.

The strength of employment-based training, in pedagogical terms, lies in the provision of experiential learning in workplaces that complements experiences in educational institutions. The five main elements which make this an effective approach to developing vocational competence are:

- ✧ experiences of the vocational practice
- ✧ the duration of the learning contract
- ✧ expert support
- ✧ link to formal education
- ✧ assessment and certification.

Both the literature review for this project and the data from the case studies informed the development of a set of five enhanced employment-based training models that are classified into two categories: entry-level training; and further or specialised. The five models attempt to provide variations in the provision of entry-level training that take account of the need for an appropriate duration for skill development and the use and integration of experiences provided by both the workplace and the educational component. These issues are highlighted because most recent reforms to the apprenticeship system have concentrated on reducing the duration of the learning contract.

These enhancements acknowledge that different learners, with varying capacities, will need different amounts of time to develop occupational knowledge and diverse pathways through entry-level preparation to meet both their own needs and those of industry.

The five models are:

- ✧ *'Traditional' entry-level training model:* this reflects the current apprenticeship/traineeship model. It features sets of learning experiences in both the workplace and educational settings (that is, registered training organisations) across the duration of the entry-level period of training (that is, between one and four years). An enhancement here is for the greater integration of the learners' experiences in the workplace and educational settings, in which both the workplace and the educational provider will participate, but where the provider might be expected to exercise leadership.
- ✧ *'Accelerated' entry-level training model:* the purpose is to assist selected worker-learners to progress speedily through the process of skill development by their receiving more effective and intense experiences in both the workplace and the educational institution. The leadership for managing the integration of experiences in the workplace and educational setting needs to be shared by trainers and employers and collaboratively regulated.
- ✧ *'Internship entry-level preparation model:* this model provides for a period of employment-related learning beyond the completion of an expedited entry-level training process and would initially lead the worker-learner to be afforded the status of 'intern'. This would provide them with recognition and the interim authority to practise their occupation. After a further stipulated period of employment-related learning experience (for example, one year), both the employer and educational institution will finally assess and recognise the learner as being fully certified for the occupation.

- ✧ *Extension model of entry-level preparation*: this model of entry-level preparation is intended for mature workers (for example, experienced manufacturing or child care workers) or those who are entering the particular occupation after, or on the basis of success in another (for example, child care centre directors). To assist the worker–learners develop their occupational capacities, the employment-based experiences will be augmented by additional educational provision (for example, in the evening, at weekends or by distance). This model requires the learner to be self-directed in their learning.
- ✧ *Extension model for further development*: this model for further development is intended for mature<sup>1</sup> workers (for example, experienced manufacturing or child care workers) or those who have already completed their initial occupational development and have some experience. It is based more strongly on employment-based experiences, supported by educational provision that will mainly occur outside work time, and will not require attendance at the educational institution during the working day. Instead, to assist the worker–learners to develop their occupational capacities, the employment-based experiences will be augmented by an extension kind of further educational provision (for example, in the evening, at weekends, or by distance). The responsibility for securing a rich integration of experiences is shared among the educational provider, workplace and worker. This model also requires learners to be self-directed in their learning.

The fourth and fifth models are intended for those undertaking further specialist training and are based on assumptions that participants are building upon their existing occupational knowledge; are mature in terms of age, interest and capacity to be self-directed for learning; and will have some capacity to autonomously integrate their learning experiences, both at the workplace and at the educational institution. The case studies revealed that learners at the higher levels wanted such autonomy. This form of practice is dependent, however, on greater recognition of the value of higher-level vocational qualifications as opposed to university degrees.

These five models are considered ‘best fit’ for the process manufacturing and child care industries and have the potential for customisation and implementation in other occupations and industries. They seek to address the overall goal of providing good preparation for worthwhile jobs. The implementation of these versions of employment-based training models may be constrained by regulatory environments; the capacity within the education and training sector to respond to fast-changing industry practices; and workplace/employment relations. These issues play out differently in different working environments. Hence the models need to be tested in the specific enterprise or industry area. It is certain, however, that the nature of the partnership between apprentices/employees, employers, VET providers, government bodies and other supporting agents will underpin the achievement of better outcomes from employment-based training models.

---

<sup>1</sup> For the purposes of this study, mature or maturity is defined as the combination of age and record in conduct of responsibilities and autonomy of action—which typically comes from adulthood or adulthood-like roles.

# Introduction

---

Employment-based models of training, such as apprenticeships and traineeships, have their origins in the Middle Ages, when a master craftsman employed young people as an inexpensive form of labour in exchange for providing formal training in the craft. Over the centuries, the system has worked to provide initial skills for entry into employment, particularly in the trades, and has seen the intervention of government to ensure a system of decent wages and conditions.

The *New South Wales Apprenticeship Acts* of 1894 and 1901 formally introduced apprenticeship legislation into Australia. These acts established a framework of regulation in relation to hours, minimum rates of pay, indenture lengths and breaches of contract that codified apprenticeships. The New South Wales acts established the rules that, with variation, were followed by other states. Various trade committees representing the interests of employers and trade unions also oversaw the regulation of apprenticeships. These committees promoted the concept of ‘off the job’ training and were the drivers for the establishment of a technical education component, the precise nature of which varied from state to state.

In their reviews of the history of employment-based training in Australia, Ray (2001), Robinson (2001), Cully (2006) and Karmel (2006) highlighted the key drivers of change to the traditional system as being the following.

- ✧ Skilled labour needs to be competitive in a global market influenced by technological change and industrial restructuring. This has resulted in diversification of employment-based training so that it includes other occupations and industry areas than the regulated trades.
- ✧ Stepping stones are required through qualifications at levels lower than the traditional certificate III (for apprenticeship) for unemployed and disadvantaged youth, as well as existing workers without qualifications. This resulted in the introduction of traineeships
- ✧ Partly as a consequence of the ageing workforce and increasing global competition, the entire workforce needs to upskill or reskill. In 1992, age restrictions were lifted and employment-based training was extended to existing workers and other newcomers to the system. Traineeships for existing workers included recognition of their skills and upskilling for a qualification within the Australian Qualifications Framework (AQF).
- ✧ The system needs to keep pace with changes in how work is organised through outsourcing, casualisation and with an emphasis on specialisation. Involvement in part-time apprenticeships and traineeships, including for school students, and the administration of employment-based training through group training organisations accommodated some of these changes.
- ✧ There is a need for higher-level VET qualifications, at certificate IV and diploma levels, to meet changing technologies and increase productivity and competitiveness.

Governments, along with employers, unions and other stakeholders have sought changes to the original apprenticeship model of employment-based training to address a range of social, economic and technological issues that have shaped the world of work in Australia. Employment-based training is now available across all occupations and in all industry sectors, and at all vocational education and training (VET) qualification levels. It is available to everyone—all social and age groups, including school students—and offered both as full-time and part-time programs. Overall, there has emerged a complicated relationship between the term ‘apprenticeships and traineeships’, their related AQF levels, durations and end point occupational or employment outcomes (Bowman,

Stanwick & Blythe 2005; Cully 2006; Karmel 2006). (Figure 1 in the support document summarises growth patterns in the number of apprenticeships and trainees from 1970 to 2006 and key changes leading towards the waves of growth.)

In 2006 the Council of Australian Governments (COAG) reached agreement on a package of additional measures to further transform employment-based training and skills recognition in the national VET system (Council of Australian Governments 2006). These measures include the following:

- ✧ encourage accelerated employment-based training, especially in the trade areas due to skills shortages, by shortening the duration of apprenticeships, where competencies are demonstrated
- ✧ support mid-career workers undertaking a traditional trade apprenticeship and people aged over 30 starting an apprenticeship at certificate III or IV level in occupations in high demand through full implementation of recognition of prior learning (RPL), whereby workers' existing skills and knowledge can be assessed quickly and simply, and gap training given using a competency-based training approach
- ✧ provide for intermediate or specialised qualifications in trades as well as full apprenticeships
- ✧ enable more school-based Australian Apprenticeships
- ✧ tackle inconsistencies in licensing (trades) issues to achieve, full mutual recognition of skills across Australia
- ✧ encourage employment-based training leading to higher qualification levels through incentives to meet emerging demands due to expected growth in paraprofessionals
- ✧ support tradespeople to develop small business skills through Business Skills Vouchers and equipment vouchers to encourage individuals to remain engaged in training.

These initiatives point to the need for a *compendium of models* rather than a 'one size fits all' approach. For example, Robinson (2001) and Schofield (2000) found that the models used for younger learners did not suit the older learners. Similarly, models for the purposes of lower VET qualifications appear limited for higher-level qualifications (Curtain 1998; Foster et al. 2007; Stanwick & Saunders 2004). New ways of doing things also need to take into account how turnover, adaptability, returns on investment and technological change could be improved for better employment-based training (Hager 2004a, 2004b; Doornbost, Bolhuis & Simons 2004; Eraut 2004; Pankhurst & Livingstone 2006; Winterton 2004). While these and other research projects have focused on improving the operational aspects of employment-based training, Snell and Hart (2007) conclude that issues associated with improving the *quality of learning experiences* inherent to employment-based training have received little attention.

This project explored how variations to existing employment-based training models could respond to current issues and concerns; these variations could also minimise the limitations of the current models, as well as equip them to withstand issues that may arise in the future. Five 'best fit' models in process manufacturing and child care industries were investigated. The potential for customisation and implementation of these models for other occupations and industries was then considered.

## Scope of the study

The project involved three components:

- ✧ examining and critically analysing existing and emerging employment-based training models
- ✧ appraising emerging models and validating them with key stakeholder representatives and apprentices from selected occupations in two industries (case studies) where demand is high for new employment-based training models

- ✧ assessing the utility of the 'best fit' employment-based training model(s) for the case study occupations and industries and proposing recommendations for other occupations and industries.

Five research questions were explored when determining effective models of employment-based training.

- ✧ In what ways are current features of employment-based training models considered effective or ineffective, and by whom and for what reasons?
- ✧ What are the features of alternative employment-based training models being considered or trialled at present to secure greater effectiveness for learners and employers?
- ✧ Which emerging employment-based training models 'best fit' the needs of selected occupations in two industries and what (if any) modifications are required?
- ✧ What issues need to be addressed to implement the identified 'best fit' employment-based training models in the selected case study occupations and industries?
- ✧ What is the utility of the proposed employment-based training model(s) in the case studies for other occupations/industries?

The focus of the research was on the AQF certificate III level and higher (with an interest in lower-level AQF qualifications or skills sets where relevant). Certificate III is the benchmark qualification for sustainable job outcomes and good wages. A qualification below this level may yield a job outcome, but for most people certificate I and II qualifications are best seen as stepping stones to higher-level AQF qualifications to ensure job security and wage rewards (Stanwick 2004). Other data suggest that, to meet projected high future growth in employment at the paraprofessional level, new employment-based training models are now essential, not only at the certificate III level, but also at the advanced diploma level (Queensland Department of Employment and Training 2005, 2006a, 2006b; Australian Industry Group 2007). While much attention has been paid to employment-based training in the AQF certificate III qualifications, especially in the traditional trades, much less has been said to date about skills above the AQF certificate III level. In a survey of enterprises Curtain (1998) concluded there were no established pathways for middle-level skills acquisition. Foster and her colleagues (2007) further confirmed that VET qualifications at certificate IV, diploma and associate diploma levels still require adjustments to meet the needs of employers and employees.

# Employment-based training

---

## What constitutes employment-based training?

In addition to apprenticeships and traineeships, other VET programs involving employment-based training are offered in Australia. These include: non-regulated training, such as labour market programs involving training and work experience; secondary school 'work experience' placements; and cooperative education and service learning programs for students. There are variations in both regulated and non-regulated training with an employment-based component. For the purpose of this project, employment-based training comprises the following fundamental attributes. It:

- ✧ is employment-based—enacted with the learner (for example, apprentice, trainee or cadet) being an employee of a company and paid a wage
- ✧ includes structured learning on and off the job (in the workplace or in an educational institution)
- ✧ involves a formal contract of training which is a legally binding agreement stipulating responsibilities of an employer, conditions for employment, and the responsibilities of the apprentice
- ✧ involves a training plan, signed by the employer, employee and a registered training organisation
- ✧ is regulated by the state VET authority with whom contracts of (employment-based) training are registered. The contract is underpinned by the national VET recognition framework, which includes training packages to guide the curriculum and assessment of competence.

Essentially, the project focuses on regulated employment-based training founded on a partnership between the employer, employee, and VET institute, with government also playing a role. The relationships between these players are not always well defined (Schofield 2001; Snell & Hart 2007).

The strength of employment-based training, in pedagogical terms, lies in the provision of experiential learning in workplaces and which complements experiences in educational institutions. There are five main elements which make this an effective approach to developing vocational competence:

- ✧ experiences of the vocational practice—learning experiences in the workplace engage the learners, over time, with instances of contemporary and situated practice which constitute the enactment of the occupation they are preparing for
- ✧ duration—long enough to provide a repertoire of activities and experiences, and opportunities to develop, build and refine skills. It is the length and potential diversity of learning experiences that create the understandings which underpin quality
- ✧ expert support—opportunities to engage with experts, who can guide the learner, monitor their progress and provide direct assistance for things they will not learn through discovery alone
- ✧ link to formal education—opportunities to engage with knowledge about the vocation, which may not be easily accessible in the workplace, through participation in formal course components delivered either on the worksite or in an educational institution
- ✧ assessment and certification—which permit the learners to practise their vocation in circumstances other than where it was acquired (see the literature in the support document.)

These features can assist Australian enterprises to develop appropriately and highly skilled workers and can offer those workers personal and occupational benefits from their learning. However, not all employment-based training models in Australia operate on these five principles, some having evolved as a result of short-term responses to economic changes such as skills shortages and youth unemployment. In recent times, these responses have focused on shortening the duration of apprenticeships and traineeships and have not always addressed fundamental issues, as was found in a recent analysis by the Dusseldorp Skills Forum (2007) and the Australian Industry Group (2007), showing that, at least for young people, there are some inherent problems in the employment-based training system that need attention.

Revisions that seek to shorten the indenture and make the process less burdensome upon employers will only repeat previous reform efforts. Instead, this process of reform and revision needs to consider how to best sustain the employment-based model of vocational preparation, given the imperatives of skill shortages and the urgency for more (as well as highly) skilled workers. The current imperatives for reforms need to provide a strategic outcome as well as respond to immediate concerns. Otherwise, re-application of past models to address familiar cyclic problems will remain costly and become short-term ‘band aid’ solutions.

## Emerging models of employment-based training

Some features of past employment-based training models can be maintained for effectiveness, but new features with the potential to attend to unresolved and emerging challenges are also needed. We have grouped the emerging models of employment-based training into four categories:

- ✧ ‘fast-tracking’ options
- ✧ higher-level VET qualifications
- ✧ new skill sets/qualifications
- ✧ alternative provisions for young people.

These models are briefly described below. More details are in the literature review in the support document.

### ‘Fast-tracking’ options

Fast-tracking options, used in particular to address immediate skills shortages, take two forms:

- ✧ accelerated progression models (shorter durations linked to a truly competency-based approach)
- ✧ intensive up-front training followed by work-based learning to ensure immediate productivity of the learner in the workplace.

The fast-tracking options focus on efficiencies in delivery strategies to recognise current competencies. These options are not (meant to be) about a reduction of skills and the number or quality of competencies to be demonstrated. In principle, they are a truly competency-based delivery and assessment approach and include the recognition of prior learning. The recognition process follows targeted ‘just in time’ skill development strategies under an employment-based training plan. This option needs stringent monitoring to assure quality.

The intensive up-front model (off-the-job training in a VET institute) combined with industry-specific on-the-job training in a dedicated workplace leads to work readiness for minimally skilled participants entering the workforce. While this model serves for pre-employment training, there is a risk of narrowing skills sets if the on-the-job training is completed in a single workplace, because trainees will learn skills specific to that particular site. Group training companies, together with employers, can facilitate opportunities for rotations between workplaces in order to provide broader experiences.

Options for fast-tracking are still in their infancy. However, some benefits of accelerated progression models for existing workers are already acknowledged. For example, the Western Australian Department of Education and Training (2005) noted the following benefits:

- ✧ a reduction of time away from the workplace for off-the-job training
- ✧ an update of technology skills and knowledge of current staff
- ✧ an increase in the number of tradespersons available at a workplace in a shorter timeframe, which aids business expansion
- ✧ compliance where licensing regulations apply
- ✧ boost in staff morale and confidence where valued existing staff are provided with the opportunity to have their skills recognised and to acquire trade certification (cited in Minerals Council of Australia 2006, p.12).

These benefits are offset by a number of identified concerns by employers and employee representative organisations, who have identified different issues. In the case of accelerated completion, employers point out that they offset the cost of the apprenticeship against a timeframe of completion (planned in terms of 48 months). If apprentices complete their training in a shorter time and progress to higher levels of remuneration more quickly, they may not necessarily deliver in terms of workplace performance. This could jeopardise investment recovery for businesses. In the case of the upfront pre-employment training, employers insist that it should not replace the traditional concept of combining training *and* employment to ensure that apprentices acquire the theoretical knowledge concurrently with the employment-based practical skills. Employers supporting the fast-track model also assume that apprentices will carry out their studies outside working hours (Minerals Council of Australia 2006). They generally fear that they may not get a return on investment through fast-track training if their employees leave the enterprise after completing the training plan.

Employer and union groups are in favour of fast-tracking models, particularly for existing workers with relevant industry and occupational expertise and experience. However, they advise on the need for appropriate occupational quality safeguards to minimise the risk to individual workers and industry reputation. They also flag the need for appropriate remuneration for workers at all levels of training. Employers and unions also draw attention to a need for implementation of fast-tracking models evenly across jurisdictions in order to maintain a minimum level of parity across industries (Minerals Council of Australia 2006).

## Higher-level VET qualifications

The introduction of the national training system and training packages focused on nationally portable entry-level skills through certificates I to III qualifications. Training for qualifications at certificate IV and above were developed later, but remain loosely linked to middle-level jobs (Curtain 1998). There is evidence that middle-level qualifications at the entry point to employment in technical occupations are in open competition with many generalist university qualifications. Similarly, middle-level qualifications for supervisory occupations are often in competition with non-accredited tailored short courses, or specific models from accredited training programs.

Employment-based training qualifications are already available at the diploma and advanced diploma levels, although relatively few people undertake this option. By contrast, numbers in vocational courses based at this level are higher. Stanwick and Saunders (2004) believe that a possible reason for the low numbers in employment-based training provision may be because of a weak correlation between the diploma-level qualifications and employment outcomes for associate professionals. They also recognise the difference in the focus of training at the diploma and advanced diploma levels and suggest a more structured indenture for associate professionals in place of an ad hoc training approach. Stanwick and Saunders note that an indentured approach is more clearly defined and provides better security of employment during the training. Under this



arrangement the load of responsibility for training is shared and the role of the associate professionals in industry is more clearly defined. Moreover, the approach offers learning pathways and training incentives if extended beyond the associate professional level. Following interviews with employers in six industry areas, Stanwick and Saunders (2004, p.7) offer four possible options for employment-based training at the diploma level as follows:

- ✧ a traditional single-stage apprenticeship in which the apprentice is indentured with an employer to undertake training capable of taking the individual from an unqualified status to a fully qualified associate professional. However, estimates of the time required to complete such an apprenticeship vary from three years to seven years (this also tends to vary according to industry and vocational field)
- ✧ a two-stage apprenticeship in which the individual first completes a lower-level pre-apprenticeship to certificate III, followed by a second higher-level apprenticeship which extends to diploma or advanced diploma
- ✧ a two-stage apprenticeship in which the individual first completes a one-year theoretical course as a private student and, upon successful completion of this study, commences an apprenticeship with an employer to undertake the remainder of the training
- ✧ a second version of the preceding two-stage apprenticeship in which the individual is conditionally indentured to an employer during the first year of full-time study towards a diploma and, contingent upon successful completion of this initial study, automatically continues the apprenticeship with the employer to undertake the remainder of the training
- ✧ a fully work-based apprenticeship in which all training is done in the workplace, most of it on the job.

With each of these options, issues of training costs and wage structures warrant further consideration (for details, see Stanwick & Saunders 2004, pp.7–8). To meet the expected growth in paraprofessionals through the Council of Australian Governments reforms and initiatives, there is a need to extend the provision of higher AQF qualifications (above certificate IV) and encourage uptake in a larger number of occupations.

Curtain (1998) suggested three strategies to lift the standing of middle-level workforce skills through higher-level VET qualifications: a proposed VET degree; work placements for all students and work placement assistance after graduation; and short courses leading to relevant qualifications for existing workers. These strategies need to be considered for the models proposed in this report.

## Skills sets

The new 'skill sets' qualifications are those where sub-sets of competencies from a full apprenticeship program are bundled to create a recognised skill set (Schofield & McDonald 2004). Skill sets could be viewed as another approach to fast-tracking (but only at base level) through accelerated employment-based training, especially in the trade areas experiencing skills shortages. However, skill sets apparently are yet to attract the interest of industries other than trades. The Construction Industry Training Board for instance supports this concept at only the certificate II level (one below the Master Trade) and suggests a push for the current Master Trade at certificate III to become a certificate IV.

## Alternative provisions for young people

School-based apprenticeships, which also contribute to senior secondary studies, are under review for further development to allow greater flexibility, with options to take up part-time or full-time training totally on the job; totally off the job; or combined on and off the job, in one workplace or more than one as per the requirements of the training plan. School-based apprenticeships are of limited interest in this study because they are mainly offered at certificate II level and so are important to this research only in so far as they provide a stepping stone to the higher VET qualifications we are focusing on. However, this project recognises the potential of school-based

apprenticeships to improve pathways for high AQF qualifications. Employers interviewed for this study showed a higher preference for the Australian Technical College approach to including certificate III and IV qualifications in their school-based apprenticeships. They were not as keen on other school-based employment-based training because of their part-time nature and lower qualification level. They saw school-based employment-based training at best as a pre-employment training program.

## Key issues associated with employment-based training

Each of the above models has strengths and limitations and needs to be considered in the context of several factors (for example, specific occupation, industry, maturity of the worker–learner) and then customised to serve the purposes and standards for those contexts. When establishing effective models of employment-based training, it is important to note the issues that have been identified with previous and emerging models. The following section summarises these issues.

Future employment-based training models are likely to be shaped by the employer and governmental imperatives associated with recurring cycles of skill shortages or unemployment. Here, it is important to understand that, while there are significant contemporary imperatives seeking to reform employment-based training in particular ways to respond to skill shortages, hastily enacted reforms may be difficult or impossible to overturn swiftly. It is necessary to consider carefully further revisions, in terms of the unintended consequences that might arise, such as those associated with group apprenticeship schemes providing a platform which allows local enterprises to lessen their responsibilities to contribute to skilling and the development of the Australian workforce. The key issues are summarised under four headings: regulatory environment; education and training delivery; and workplace/employment relations.

### The regulatory environment

The Australian Government (through the Department of Education, Employment and Workplace Relations<sup>2</sup>) and eight states and territory training authorities oversee the administration and funding of employment-based training in the VET sector. Legislation and input from industry and educational bodies, registered training organisations (private and public), group training organisations, Australian Apprenticeship Centres, employers and apprentices/trainees contribute to the functioning of a system to develop a skilled workforce for the Australian labour market. States and territories maintain their respective regulatory frameworks, which are multi-layered and result in cases of incompatible licensing arrangements across jurisdictions (Australian Industry Group 2005). Anomalies across jurisdictions question the notion of a nationally consistent training system and interstate recognition of skills—the aim of training packages and Australian Apprenticeships. Insufficient policy and administrative cooperation and variations in registration and audit standards within the recognition framework (Schofield 2000) reflect a weakness in the federal and state governments’ objectives on skilling the Australian workforce. Governance that does not promote collaboration, quality delivery and ethical practices impacts on the efficiencies and effectiveness of employment-based training. Administrative inefficiencies add to costs. Incidences of non-compliance by employers and registered training organisations regarding legal and moral obligations to apprentices and trainees raise concerns. Audit processes that are insufficiently rigorous, inconsistent and loosely linked to industry perspectives have implications for quality (Schofield 2000).

### Education and training delivery

There is an inherent tension between a competency-based training model and a four-year contract, which reflects an indenture. The traditional four-year apprenticeship, which is time-based, as opposed to competency-based, can limit several competent learners in completing their learning

---

<sup>2</sup> This department replaces the Department of Education, Science and Training, which was abolished in December 2007.

contract and joining the workforce as qualified workers. The use of a genuine competency-based training approach for the skilling process is appealing, but it does not have wide support from employers. Many have concerns with competency-based assessment procedures. Training providers also have concerns about on-the-job assessment conducted by employers, particularly in cases where apprentices are deemed competent even though they did not gain skills and experiences in some activities. Not many employers are willing to start paying the full award prior to the end of a four-year contract period with the apprentice (Minerals Council of Australia 2006).

Despite the policy intentions of the National Training Framework, research has shown that training, assessment, trade sign-off and licence testing are fragmented activities, with jurisdictional variations still disallowing portability within a supposedly national training system using the training packages (Australian Industry Group 2005). Some regions experience the absence of timely training in the preferred locations, mismatch or irrelevant content, lack of qualified trainers, and use of out-of-date training equipment.

There are issues with high rates of non-completion of apprenticeships and traineeships through employment-based training. About a third of the apprentices leave in the first six months (Australian Industry Group 2005). Employers and the general industry believe that young people are not attracted to apprenticeships because of their duration and the perception of lower status, and being non-university based. Recent research (Snell & Hart 2007) shows that a number of quality issues such as use of apprentices and trainees as cheap labour, fully on-the-job training, narrowing of skills, lack of proper training and poor regulation of quality standards have implications for the quality of skilling through employment-based training. A lack of clarity in the roles and responsibilities of the various partners in employment-based training is a major predicament that permeates most of the issues related to developing a highly skills workforce for Australian industries.

## Workplace/employment relations

Economic pressures on employers, particularly of small businesses, can limit their capacity to act as a 'master' passing on skills. There appears to be greater emphasis on treating the apprentices as a 'labourer' and not a learner, even when the state and federal governments provide teachers and incentives (Schofield 2000). Employers are looking for more time for on-the-job training, thereby marginalising the off-the-job component of training. Research by Stanwick and Saunders (2004) showed that there were pressures on employees who are paid a training wage to do the off-the-job component of the apprenticeship in their own time (typically 1000 hours with 7000 hours on the job), through increased use of pre-apprenticeships, night classes and flexible delivery options (Stanwick & Saunders 2004).

Wages and award rates for apprentices remain an issue for most industries. While market conditions dictate the rate of pay, the determination of pay above the award rate is influenced by an individual's age, education level, ability and experience, and quality of work (Australian Chamber of Commerce and Industry 2005). Employer incentives above an award rate, to a market rate of pay, encourage more skilled workers to gravitate to workplaces that can afford to pay at the high end of the competitive rates (Australian Chamber of Commerce and Industry 2005). This movement of workers highlights 'leakages' and skills wastage for employers, as skilled workers whose skills are portable across industry areas transfer into new occupations where work arrangements are more attractive in terms of wages and life style. This results in wastage of skills which may be in demand, but not utilised by able workers through personal choice.

Although decisions about approval and implementation of training packages are made at the state/territory level, not all have an enabling legislation or the ability to ensure award provisions for training wages. Usually state/territory authorities will not approve pathways for apprenticeships and traineeships in the absence of workplace relations arrangements, the responsibility for which lies with the industry parties. This often becomes an issue for employers developing contracts for registration.

# Case studies

---

This project focused on two industry areas as case examples for exploring effective employment-based training models. In choosing the industries and occupations, consideration was given to those which:

- ✧ showed activities in alternative employment-based training models
- ✧ were keen on employment-based training models at all VET qualification levels, and higher levels in particular
- ✧ have future employment growth and good job prospects.

Following consultations with stakeholders in industry and the VET sector, occupations in the process manufacturing industry and child care occupations in the community services and health industry were selected for this study. They both represented quite different industry types. Data were collected through face-to-face and telephone interviews and via emails from 17 participants representing the process manufacturing industry and with 16 from the child care industry.

## Limitations

The researchers relied on the accessibility and availability of the sample during the period of data collection (April–May 2006). Although the sample size is small and may not be representative of the stakeholders, the issues and views expressed by those interviewed are consistent with what was found in the literature review.

A summary of the two case studies is presented here. More details can be found in the support document.

## Case study 1: Process manufacturing

According to a survey by the Australian Bureau of Statistics (ABS 1998), in the 1994–97 period, the processing industries were seen to be among the most technologically innovative. Technology and work changes have continued and affected the entire Australian and international workforce. There has been a shift towards more skilled (but not necessarily more highly qualified) workers at all levels of the manufacturing workforce. The manufacturing case study focused on three main skills streams—operator level training; trades training and maintenance work; and technicians and new processes and products development stream (see support documents for detail).

Statistical data on changes to the whole of the manufacturing industry workforce profile over a ten-year period (1994–2004) show a decrease in the proportion of operator-level workers, from 39% to 33.5% of the total, no change in the proportion of tradesmen (25.5%), and an increase in the combined proportion of associate professionals, managers and professionals, from 20% to 27%. Overall, it appears that the workforce pyramid structure has now changed to a convex structure in

the manufacturing sector. The move to LEAN<sup>3</sup> manufacturing could be seen as the next phase in the shift towards all workers becoming more highly skilled workers—more involved in ‘thinking’, ‘problem solving’ and ‘innovation’ across the board (rather than more highly qualified or credentialed). Often this requires short, just-in-time training solutions geared around a particular business issue rather than the completion of a full qualification.

The new Training Package in Competitive Manufacturing Practice has qualifications ranging from certificate II to the advanced diploma. It is perceived as meeting the needs of many occupational areas within the manufacturing industry due to its flexibility and ability to be customised to meet the business needs of enterprises. Another recent development is the Technology Cadetship, developed specifically for new entrants to the manufacturing industry by the Australian Industry Group to provide a greater range of pathways to technician occupations, including manufacturing operations, laboratory operations, technical officers and computer-assisted drafting. These cadetships are currently being implemented at AQF certificate III and IV levels, but are to be expanded in the future to diploma and advanced diploma levels, with the potential for articulation to degree-level programs. Overall, there is a strong need and desire for faster, smarter and higher trades outcomes in manufacturing, as reflected in several recent reports by the Australian Industry Group.

In our study, we found that the bulk of government-funded training occurs at the operator level and there was an established acceptance of a traineeship model for existing workers in certificates I, II and III in either the Plastics or Process Manufacturing Training Package.

## Emerging new employment-based training models

The Australian manufacturing industry is pursuing an articulated employment-based training model from certificate III qualifications upwards for trades level to technician or paraprofessional level occupations using its new training packages and custom-built training options. From a technical skills perspective fast-tracking of certificate level skills training is considered more feasible for existing workers, but not for young people in apprenticeships, possibly for maturity reasons.

New certificate IV level qualifications are being introduced as an entrée into trades and other occupations with a strong technical focus. Our research suggests that, as individuals go higher up the qualifications framework, the harder it is for them to demonstrate prior competence, given the more theoretical nature of diploma and advanced diploma level programs. At these higher levels, employees want less employer control and so seek the most suitable training arrangement to gain skills and experiences broader than those offered and required by their employers. Because of this they choose to learn outside a formal employment-based training arrangement in order to gain more choice over the content of their learning. Some participants had managed, however, to negotiate with their employer to fund their course, thus linking it to their conditions of employment. One worker commented, ‘Your plant can only give you so much. You need to learn off others, and learn in groups, and learn how things are done in other industries.’

## Skill sets

The new skills sets appear to be the alternatives to diplomas and advanced diplomas (especially for existing workers with trade qualifications). Specialised skill sets, some of which are not easily characterised in the qualification framework, are a growing currency in manufacturing training. Employers/registered training organisations start with the job description and work back to the training packages, mixing and matching from different packages and AQF levels (for example, some from diploma level, some from certificate IV level etc.). Graduate vocational certificates and

---

<sup>3</sup> LEAN manufacturing is an operational strategy oriented towards achieving the shortest possible cycle time by eliminating waste. It is derived from the Toyota Production System and its key thrust is to increase the value-added work by eliminating waste and reducing incidental work. The technique often decreases the time between a customer order and shipment, and it is designed to radically improve profitability, customer satisfaction, throughput time, and employee morale, <<http://rockfordconsulting.com/lean.htm>>, viewed 19 June 2007.

diplomas are also being introduced for existing workers with trade skills. However, when recruiting technicians, it remains the case that employers often judge VET and work-based trained individuals as less desirable than university graduates.

## Issues

On examination of a number of AQF qualifications within the manufacturing industry there are issues of lack of parity in relation to the 'time served' in training, the complexity of content and the eventual job role and wages. Certificate III, production-based certificates and trade-related certificates are an example. The production-based certificate results in an operative position and the other a full trade qualification. These two qualifications have no parity in relation to how workers are perceived in the workplace or how well they are paid.

A small company employer commented on the current low unemployment rate and explained that the larger employers who can afford to pay more than the award rates attract the 'top quality' apprentices. For small-to-medium businesses this creates less than a level playing field, and in some eyes is a mockery of wages linked to awards.

## Existing workers

There were mixed views from an employer's perspective about the ability and efficacy of training existing workers. One employer expressed frustration with employees who 'do not want to stand out from the crowd', take on additional study and move from blue- to white-collar work. In another instance, however, there was employer reluctance to accept that an existing worker could move up into a technical role via a VET pathway, despite signs that the employee was interested in doing so. Clearly, workplace culture that delineates fields of skills unnecessarily needs to transform if effective models of employment-based training are to be introduced in this industry.

## Delivery

With regard to education and training, the case study highlights five key delivery issues. First, across all qualification levels there is a need for effective combinations of theory and applied practices. This is best facilitated by regular visits to the registered training organisation and the workplace to bridge experiences gained from these two sites. Second, enrolments for training at above certificate III level are generally small. This incurs high costs for registered training organisations and an unattractive delivery option using government funding. Third, industry demands highly credible 'cutting edge' trainers and assessors from registered training organisations. If government-funded training cannot provide this level of quality, then employers will bypass the accredited system and purchase private solutions. Fourth, industry perceives that technical and further education (TAFE) institutes are generally not 'up to speed' on the way things are done in industry. This highlights the importance of training personnel to maintain currency of industry knowledge. Finally, models of training most valued by enterprises are those that break down silos in company structure and thinking, and pose challenges in a real-time business environment.

## 'Best fit' models

Overall, this research validates two of the four models proposed by Stanwick and Saunders (2004) for contractual employment-based training options at the diploma and higher levels. The first is a traditional single-stage apprenticeship in which the apprentice is indentured with an employer to undertake training. Such training should be capable of taking the individual from scratch to a fully qualified associate professional. However, estimates of the time required to complete such an apprenticeship vary from three years to seven years. The second is a two-stage apprenticeship in which the individual first completes a lower-level apprenticeship to certificate III, followed by a second higher-level apprenticeship, which extends to a diploma or advanced diploma.

Clearly, with a variety of employment-based training options now available in process manufacturing, the 'one size fits all' approach is a thing of the past.

## Case study 2: Child Care

The child care sector in Australia is regulated by state legislation which sets the qualification requirements of practitioners. The Australian Government influences services through the child care benefit allocations linked to the tax system. The Australian Government is currently looking into establishing standards to foster self-regulation in all jurisdictions (details at <[http://www.facs.gov.au/internet/facsinternet.nsf/childcare/national\\_standards\\_childcare.htm](http://www.facs.gov.au/internet/facsinternet.nsf/childcare/national_standards_childcare.htm)>).

The sector is made up of long day care centres<sup>4</sup>, kindergartens, family day care schemes, occasional care, school age care, and in-home care. While technology and work changes have directly affected many industries, this has not been the case with child care. The 'hands on' nature of the work remains unchanged. The demands of children, especially those with complex needs and from migrant and refugee backgrounds, have required higher levels of skills and professional support in centres and services. With an increasing number of parents in employment, there is demand for longer hours of operations. The expansion of the child care sector is expected to continue. Data from the Australian Bureau of Statistics (ABS 2001) show that growth in the number of businesses and organisations providing children's services is outstripping growth in employment levels.

The child care sector in Queensland is licensed by the state government through the *Child Care Act 2002* and the *Child Care Regulation 2003*. This legislation requires child care services to meet minimum quality standards concerning, for example, the ratio of adults to children, their activities and experiences, the physical environment, health hygiene and safety. Under legislation, all existing workers are required to be enrolled to gain a qualification at certificate III, diploma or advanced diploma levels. The *Child Care Regulation 2003* includes the prescribed qualifications requirements for workers in centre-based care, school-aged care, and coordinators in family day care. The legislation does allow employers 'to engage workers without the necessary qualification if the engaged person has the required qualification of the level below', as long as they start 'a relevant course for the position they are engaged in, within six months and complete the course within the prescribed finishing period' (Queensland Community Services and Health Industry Training Council 2005, p.10). As such, 'enrolled' is often interpreted as 'qualified'. At the time of writing this report, the Department of Communities was conducting a review of qualification provisions in the legislation. The qualifications in the Community Services Training Package (CSTP)<sup>5</sup> that meet the legislative requirements include:

- ✧ CHC30402 Certificate III in Children's Services
- ✧ CHC40402 Certificate IV in Out of School Hours Care
- ✧ CHC50202 Diploma of Out of School Hours Care
- ✧ CHC50302 Diploma of Children's Services
- ✧ CHC60202 Advanced Diploma of Children's Services.

After completing a qualification, child care workers can gain a position as a team leader, group leader, program leader, assistant, or special needs inclusion worker. Workers who are enrolled in an advanced diploma can also work in the position of service manager or director. The required training to conform to the legislation currently recognises an enrolment as 'qualified'. For example, an apprenticeship at the diploma level can be completed in six years on a part-time basis. However, workers can remain enrolled in courses for years while operating as an assistant and above. The

---

<sup>4</sup> A long day care centre is a type of formal care that is centre-based and is available to children between birth and school age for the full day or part day. Centres are usually open for most of the year (ABS 2006, p.61).

<sup>5</sup> The National Training Quality Council endorsed the Community Services Training Package on 23 December 2002.

recent offer of apprenticeships in the Diploma of Children's Services is expected to boost the higher-level skills and qualifications of child care workers.

In determining features for a 'best fit' employment-based training model, the interviewees highlighted a range of issues with the training of child care workers. These issues provide a context for the best fit models of employment-based training they suggested. These are explained below.

## Delivery

In Queensland child care workers gain their qualifications through vocational courses, mainly at their own expense. To satisfy regulatory requirements, they are required to be *enrolled*. There is little incentive in terms of the pay rates; hence, completion could take a very long time. Centre directors, with qualifications to supervise other staff enrolled in a course, have little time for close supervision because the legislation demands constant attention to the activities in the centre.

## Recruitment and retention

Employers advised against school leavers entering the child care sector and proceeding as fast as possible through the qualifications structure. This is because, in the child care sector, experience in a number of settings is highly recommended and sought by employers. Some employers have compared the alignment of awards and qualifications in child care with workers in other industries and found lower wages and conditions in this industry.

As an apprentice a Group Leader in child care would equate to tradesman on the Metal Industry Award – there is no comparison with the wage rate. The apprentice rate for each level is a percentage of the trade's rate ...

(Employer, large statewide registered training organisation)

## Higher-level skills

Unlike the trade industries where apprentices are engaged for a certificate III qualification, in the child care industry the same qualification is offered as a traineeship, and an apprenticeship is available above this level. Because of disparities between the licensing and training regulations, child care apprenticeships are often difficult and costly to manage. For example, the regulation around the number of staff required on the floor at any given time places constraints on quality time for supervision or for completing learning activities during operating hours. Furthermore, because completion of apprenticeships does not equate to higher pay awards, there is no incentive for learners to complete their studies early. One issue with workers at the director level enrolled at the diploma level is that they do not have other staff to supervise them. This contravenes the conditions of training for an apprenticeship. However, because the regulation accepts 'enrolled' as 'qualified', they are able to remain in employment.

## Quality of graduates

There were concerns about the current training arrangements for apprentices in the child care sector.

The flexible delivery and competency-based training has been of great detriment to our profession ... Competency-based training provides no indication to the service or the students what a person's skills need to be to work with children ... The product of this system is crap quite frankly.

(Employer, owner operator, private)

By obtaining registration as a training organisation some employers were able to offer apprenticeships to their existing staff and provide training they consider is of high quality.

Two apprentices found the variety of delivery and flexibility worked well for them.

I was lucky as I can work on the modules at home and on the web. Cert III was all online.

You have to take the initiative. The quality was good.(Certificate III apprentice, over 45 years)



Yes it was better than Cert III which I did on my own online from TAFE. The modules I am doing with the apprenticeship are behavioural challenges and inclusion – as we have 3 autistic children in the room and this is really relevant to my activities day to day.

(Apprentice, over 45 years)

Apprentices in full-time employment receive varying periods of study time, with some expected to complete the formal learning tasks in their own time. While this type of arrangement worked for apprentices who are more self-directed and motivated, other apprentices preferred time during working hours to complete learning tasks.

Some employers questioned the relevance of the material in the workbooks provided to apprentices and noted limited integration of theory into practice. There was also criticism that the workbooks contained alien language, especially for people from non-English speaking background, which challenged learners and mentors on some sites. Lack of support with literacy problems also impacted on the training. As essays are often used as a form of assessment in the workbooks, they were seen to be a major barrier to the progress of the learner. Another concern raised was that some visiting assessors held assessment qualifications but had no relevant industry experience, particularly in remote locations where there is reliance on third party reports provided by the workplace supervisors who were often not paid to do this. According to the directors and human resource managers of the various child care centres, the training process is too paper-driven, with documentation overtaking learning to care and provide activities for children.

To allow experienced, unqualified workers to meet the qualification requirements for group leader and director positions, it was suggested that sets of skills could be grouped for recognition. However, there was a strong view about the importance of having a full qualification.

There should be advocacy that no matter how the model is set – we would never be advocating a lessening of the qualifications – so you could not work with a recognised skill set – it must be a qualification. (Employer, large statewide registered training organisation)

Some employers expressed reservations about a recognition process and some were sceptical of the whole idea of competency where learners have to demonstrate competency in a single instance to a single assessor (often with no or little industry background) and deemed competent. They were doubtful about an entire complex system of different agencies involved in signing up, then providing the training, the workplace assessment, either directly or through a third party (often unpaid), and the issuing of qualifications. According to them, there could be possible misunderstandings and role confusion in the market place. Some employers observed that ‘there is a lot of scratching each other’s back in arrangements around employment-based training in VET’.

### Features of a ‘best fit’ employment-based training model for child care

The data for this case study in the child care industry show support for a fully work-based apprenticeship (Stanwick & Saunders’ 2004 [fifth model]) as a best fit model for qualifications above the certificate III level. This model also meets the regulatory requirements of the child care industry in Queensland. The sample has suggested several requirements to this ‘best fit’ model to achieve successful training outcomes. These features are common to other models and include integration of theory with on-the-job activities, where apprentices can work with qualified staff and at the same time learn from them. Learning resources that are more practical and less academic in nature are preferred. Their learning needs to be supported by providing apprentices with the required study time in the workplace (and without a drop in wages), while at the same time maintaining the required staffing level on the floor. Child care apprentices want workplace assessors to have the necessary knowledge of the industry. The model could benefit from fast-tracking and improved recognition processes to reduce the duration of an apprenticeship.

To increase enrolments the sample suggests raising the awareness of the profile of the child care profession. A review of the current model for School-based Traineeships in Child Care may increase the number of ‘suitable’ people entering and remaining in the industry. Strategies to

support graduates with high-level courses with no experience in the industry need to be supported to enable them to gain confidence and competency rapidly. Child care workers also need a career path where qualified staff are remunerated accordingly, where apprentices have a clear pathway through the AQF, and where roles/responsibilities of qualified staff are clearly defined. Many apprentices in the sample suggested that employers should at least partially cover training costs for a 'best fit' of employment-based training model.

The 'best fit' model suggested by our research is plagued by a range of issues raised by the sample. For example, low wages in the Children's Services Award and the conflict between strict government regulations in relation to staffing ratios (by qualification) and the compulsory study time during working hours as set out in the qualification requirements are issues that need to be resolved. The tensions here rest in a lack of agreement between the regulations set by the two government departments, the Department of Communities and the Department of Education, Training and the Arts.

# Findings and proposed employment-based training models

---

## What we learnt about features for effective employment-based training from the literature

Our review of the evolution of employment-based training models in Australia, the key drivers for change, core features of current models and related issues led us to collate a set of features for effective employment-based training. It is concluded that for employment-based training models to be effective they must have five main dimensions. They must:

- ✧ be pedagogically sound
- ✧ operationally effective
- ✧ provide quality skills
- ✧ have utility and be sustainable
- ✧ address requirements for quality outcomes (as suggested by Bowman, Stanwick & Blyth 2005). (More details are provided in the discussion section of this report).

### Pedagogically sound

An effective employment-based training model which is also pedagogically sound has three main features. First, vocational experiences should comprise an integrated on- and off-the-job training and employment arrangement involving a range of stakeholders. Learners should be allowed graduated access to vocational experiences to gain competency. This requires the provision of structured learning experiences and opportunities. Learning needs to be based on competencies in training packages. Second, the vocational experiences should be long enough to provide a repertoire of experiences to ensure learning that covers the scope of the vocational activities to be practised. Learners should be assessed when ready—a truly competency-based approach. Learning should be assessed and certified in ways which permit the learners to practise their vocation in circumstances other than where it was acquired. Third, expert support needs to be made available to provide opportunities for learners to engage with experts who possess the knowledge to be learnt, who can guide the learner, monitor their progress and provide direct assistance. Experts also need support and time allocation.

### Operationally effective

Two main functional features make employment-based training models effective. The first relates to clearly stated roles, responsibilities and costs for learner, employer, government and other stakeholders (often stated in the training contract). Agreements around these will enable learners to participate in learning while earning and allow employers to be competitive. The VET providers will also be able to maintain the arrangements flexibly, as supported and regulated by government. The second functional feature relates to access to user choice<sup>6</sup> arrangements.

---

<sup>6</sup> User choice means that employers have a choice in selecting a registered training organisation (public or private) for the off-the-job component of the employment-based training. They can also negotiate the content, method of delivery and sequencing of training.

## Provide high-quality skills for employment

Higher-level VET qualifications (for example, above certificate IV level and at paraprofessional level) and employment-based training options that are open to diverse learners, including all age groups, add to the quality of skills available to employers. Employment-based training options facilitate upskilling or reskilling of mid-career workers and also support older workers.

## Have utility and be sustainable

Two key features reflect the utility and sustainable nature of effective employment-based training models. Firstly, such models should meet skilled labour requirements. That is, meet skills shortages, allow apprenticeship diversification from mainly regulated trades to other industry areas, and be available for upskilling or reskilling of the whole workforce. Secondly, they should accommodate changes in how work is organised through outsourcing, casualisation and specialisation. Such models should offer long-term solutions, withstand future skilling needs, and add to national skills development.

## Requirements for quality outcomes

Research by Bowman, Stanwick and Blyth (2005) identifies three main features of employment-based training models that lead to quality outcomes. These are: high level of employer support and commitment to the apprenticeship/traineeship; compliant with legislative and regulatory requirements for the occupation; and minimum administrative burden on employer. All three of these features focus on operational matters, some of which are also covered under other dimensions discussed above. Bowman, Stanwick and Blyth (2005) advocate a good working relationship between apprentice/trainee and employer. High-quality outcomes are achieved when the workplace supports the development and maintenance of a positive learning culture, and where experts in the workplace are given time to conduct the training. Adequate structure in the training at work also provides good employment outcomes. Legislative and regulatory requirements for the occupation include a well thought-out training plan; application of recognition of prior learning; provision for assessment when apprentices/trainees are ready for assessment; and teachers and workplace trainers with appropriate levels of skills and expertise, who are also aware of contemporary workplace changes. Models that engage a group training company minimise administrative burdens on employers.

## What we learnt from the case studies

Concern was expressed in both manufacturing and child care about improving the number of available and appropriately skilled workers expeditiously and also developing and credentialing a higher level of skills. Yet, the history and character of the skill development provision for the two industry sectors raises distinct challenges. For manufacturing, it is about utilising and extending more effectively existing employment-based training provisions, including engaging more effectively with off-the-job provisions. For child care, it is about establishing effective employment-based training models across the workforce, from child care assistants to centre directors. In many ways the concerns of this sector relate to securing the kinds of arrangements long enjoyed by the manufacturing sector, including the acceptance by employers of their role in supporting and sustaining the development of viable entry-level systems of vocational education for all levels of workers; this provision has not previously existed.

So, across both industries, there is evidence of the need to retain and sustain many of the features of the existing model of employment-based training. In particular, for the development of occupational knowledge that leads to sustainable job outcomes and good wages, there is a need for support for both on- and off-the-job learning. A period of preparation that allows for younger workers in particular to mature, both personally and professionally, is also required. Consequently,

initiatives to accelerate skill development in high-achieving apprentices need to include the range and duration of experiences provided through more measured forms of initial skill development.

Provisions for further developing the capacities of experienced workers currently performing work tasks need to include support from both within and outside the workplace. In advancing models of employment-based training, there is a distinction between those for initial preparation for the occupation (that is, entry-level) and those for further or more specialised forms of development—beyond initial occupational skill development. The proposed model(s) for each of these purposes are presented separately.

### Employment-based training models—entry level

In considering models of employment-based training and how these might be organised, it seems that many of the features of existing models need to be retained and improved for those entering a particular occupation. The duration of preparation needs to be long enough to secure the knowledge and skills required for that occupation through processes which support and promote the learning in both the workplace and through educational provisions. The balance and degree of support from the workplace and educational provision may well differ, but seem essential as features of all entry-level training models. Given that these models of training also often serve regulatory ends (that is, certification to practise an occupation), their features need to be sustained and extended into areas such as the preparation of child care workers and child care centre directors, who to date have not enjoyed these provisions. Consequently, there is a need to propose models that go beyond the initial preparation of occupational skills for those just leaving school and/or who have lower levels of educational achievement.

In advancing models of entry-level preparation, it also needs to be acknowledged that models of employment-based training need to serve learners for a range of AQF levels. This extends from the certificate III level, through to the advanced diplomas held by child care centre directors, for instance. However, it needs to be acknowledged that entry-level training models need to account for the maturity, educational background and occupational imperatives of participants in these programs.

### Employment-based training models—further or specialised level

Beyond entry-level preparation, new models are also required for further occupational development for specialisation, advancement or maintaining currency. Given that the development here is most likely to be post-initial preparation and intended for learners who have maturity and personal interests to pursue, the tight relationship between the educational provision and the specific requirements of the workplace can be uncoupled. Consistent with this, a more industry and personally focused provision of off-the job educational provision can be exercised, while at the same time workplace-based learning activities can focus on the particular enterprise requirements.

Our research shows that worker–learners now gauge employment-based training from a much broader perspective (personal, employment and lifelong learning outcomes) than do employers who concentrate largely on economic benefits. Worker–learners want greater control over the proportion of off- and on-the-job training. They also want greater control of employment-based training because indentured contracts generally restrict application and learning to enterprise-specific tasks only, thereby limiting their application in other workplaces. The transition between qualification levels is blurring, because individuals and employers are often more interested in different outcomes and expediciencies through employment-based training.

## Proposed models of employment-based training

Ordering employment-based training models into those associated with either entry-level training or further or specialised training entails recognition of two distinct educational purposes and the need for particular kinds of experiences and support to achieve those purposes. This seems more

efficacious than applying other frames, for example, AQF levels which are inconsistent and have levels that apply to both entry and further development. So, for instance, you find individuals who are engaged in certificate I, II, III as well as diplomas and advanced diplomas participating in forms of entry-level preparation.

These two categories of educational provision are therefore used to delineate the models advanced here. However, in developing these models we have to consider the fundamentals of effective approaches to employment-based training foreshadowed earlier. That is, they must be pedagogically sound, provide quality skill formation, be inclusive of quality outcomes for individuals and enterprises, operate effectively and be sustained.

## Entry-level training

Typically, entry-level training provides experiences both in an educational context and in workplace settings to the level of certificate III. The principle of balanced participation in both kinds of experience is supported in both case studies. Indeed, the child care case study is looking to improve this very kind of provision. However, from both case studies there was little enthusiasm for having a ‘front end’ provision of an extensive block of time in an educational institution followed by continuous on-the-job experiences. There is also a commonly identified requirement to maximise the potential of this approach by integrating the two sets of experiences to effectively secure outcomes for both the student and workplace. Similarly, the duration of the preparatory period is seen to need to be commensurate with the complexity of the knowledge to be learnt. Both industry sectors, however, are demanding higher levels of capacities (that is, skills, responsibilities, accountabilities) through the entry-level training provision. The challenge for entry-level models of employment-based training is to provide a balance of on- and off-the-job components, to ensure the effectiveness of those components, and to provide a series of learning experiences of sufficient duration to secure these outcomes. Considerations of the viability of options and alternatives also extend to meeting the needs of both the learners and their enterprises.

We propose five different models of employment-based training models that commonly focus on initial preparation for the occupation, yet seek to account for distinct purposes and imperatives that have been identified in our research. These result from the findings arising from both the review of the literature and the case studies.

### *‘Traditional’ entry-level training model*

This reflects the current apprenticeship/traineeship model. It features sets of learning experiences in both the workplace and the educational setting (that is, registered training organisation) for the duration of the entry-level period of training (that is, between one and four years). It is anticipated that learner-workers will attend and engage in experiences in educational settings as part of their work. The balance of experiences in this model will always be more on the workplace (for example, 80% workplace, 20% education institution), and this degree of emphasis will increase across the duration of the program. An enhancement here is for greater integration of the learners’ experiences in the workplace and educational settings, in which both the workplace and the educational provider will participate. The educational provider might be expected to exercise leadership in bridging what is learnt in the two settings, and advising about appropriate workplace pedagogies to facilitate learning.

This model is familiar to VET and industry. Theoretically, this model has the potential to sustain much of the trade skill preparation for manufacturing and is needed in the child care sector, particularly for the skill and career development of lower-level child care workers. However, the implementation of this model needs to address poor completion rates. Universal limiting factors such as inconsistent regulatory arrangements, non-compliance by employers and registered training organisations, poor audit processes, variations in the interpretation and practice of competency-based training, wages and awards also need to be resolved to make this a more effective model.

**Table 1** 'Traditional' entry-level training model

Elements	Model-specific requirements
Specific purpose of model	Providing entry-level preparation through a combination of experiences in workplace and educational settings, progressive assessment and certification, particularly for school leavers and those with lower levels of educational achievement
Duration	Consistent with current arrangements (e.g. three to four years for trade certificate, shorter period of time for 'traineeship level [cert. II])
Levels of certification	Certificates, II, III, IV
Specific requirements of model	An effective integration of experiences and support in both educational and workplace settings

### *'Accelerated' entry-level training model*

This model constitutes an expedited version of the 'traditional model'. The purpose is to assist selected learner-workers to progress speedily through the process of skill development through more effective and intense experiences in both workplace and educational institution. The accelerated apprentice will attend and engage in experiences in the educational setting as part of their work; however, this may be in a more condensed or distributed form. There will need to be responsibility exercised by both the workplace and the educational provider to carefully manage the expedited skill development processes to assist meeting student and workplace requirements. The leadership for managing the effective integration of experiences in the workplace and educational setting needs to be shared and collaboratively regulated. Partnership arrangements between educational institutions and the workplace can improve the bridging of knowledge and skills gained at the two sites. This model is one which might be used to provide the kinds of expedited initial skill development currently being requested by the manufacturing sector. Issues such as the practice of competency-based training and assessment, wages and awards will have implications for the implementation of this model.

**Table 2** 'Accelerated' entry-level training model

Elements	Model-specific requirements
Specific purpose of model	Providing an accelerated approach to initial skill development to shorten the existing duration of apprenticeship training, particularly for younger entrants with high levels of educational achievement and capacities to become highly skilled more quickly than their peers
Duration	Premised on the progress of individuals, their successful assessment and the minimum duration of experiences required for securing occupational competence
Levels of certification	Likely, certificate III and IV
Specific requirements of model	There is a specific requirement for the participants to be carefully selected on the basis of predicted performance; the experiences in both the workplace and educational settings need to be carefully organised and maximised, and a process of monitoring learners' progress would be required

### *Internship entry-level preparation model*

The internship model would provide participants with recognition and the interim authority to practise their occupation. After a further and stipulated period of employment-related learning experiences (for example, one year), both the employer and educational institution would finally assess and recognise the learner as being fully certified for the occupation. This model offers an alternative to the wholly expedited model being requested by the manufacturing sector. It addresses concerns within that sector about the need for an appropriately long period of initial preparation to develop the capacity required for trade-level work.

Although such a model has potential for meeting the needs of the manufacturing and similar industries, particularly with more established employers, details of its operation may vary from site to site. More research is required to explore its implementation with small workplaces and those in regional and remote areas. The implications for awards, and assessment and certification also need to be addressed.

**Table 3 Internship entry-level preparation model**

Elements	Model-specific requirements
Specific purpose of model	Providing a specific period of consolidated work experience, beyond an accelerated form of initial preparation. Having completed an accelerated program, the learner is given probationary status and can work full-time, with a further period of work experience being required prior to securing occupational certification
Duration	Typically, a year beyond that required for an accelerated apprenticeship
Levels of certification	Likely, certificates III and IV
Specific requirements of model	There is a specific requirement for the participants to be carefully selected on the basis of predicted performance; the experiences in both the workplace and educational settings need to be carefully organised and maximised, and a process of monitoring learners' progress would be required. This would be followed by a managed and supported provision of probationary work within the workplace

### *Extension model of entry-level preparation*

This model of entry-level preparation is intended for mature workers (for example, experienced manufacturing or child care workers) or those who are entering the particular occupation after or on the basis of success in another (for example, child care centre directors).

This model requires and expects that the learner is well placed to be self-directed in their learning. The responsibility for securing a rich integration of experiences is shared among the educational provider, employer and worker, in terms of how the learning is organised and recognised while in the workplace. This model addresses the kinds of needs for initial skill development for those entering an occupation with a level of maturity in skill and capacity, and who need to find other ways of balancing work and learning, other than through block or day-based engagement in educational provisions. For instance, child care centre directors are seen as having their needs met by this model of entry-level preparation.

**Table 4 Extension model of entry-level preparation**

Elements	Model-specific requirements
Specific purpose of model	This model is intended for mature workers and the kinds of work where frequent day release or block release is not possible or desirable. Here, full-time employment is likely to be supported by weekend, evening or flexible provisions of learning experiences and support through educational institutions and courses
Duration	Premised on the progress of individuals, their successful assessment and the minimum duration of experiences required for securing occupational competence. Here, the learner is most likely to determine the pace of completion
Levels of certification	Level III and IV certificates, and diplomas and advanced diplomas
Specific requirements of model	The worker-learners must have maturity, a level of educational achievement and be located in employment that will permit a conscious focus on blending work activities, over a period of time, and supported by an educational provision which is provided outside work time

These models attempt to provide variations of the provision of entry-level training that rely on appropriate duration for skill development, the use and integration of experiences afforded by both the workplace and the educational provision, while acknowledging that, for different learners with different capacities, there need to be different kinds of pathways through entry-level preparation. In addition, they offer alternative approaches to managing the length of the time required for the formation of occupational knowledge. They also seek to uphold the requirements of pedagogical soundness, quality skill formation and in ways that can be effectively enacted and sustained, for both the interests of the learners and their workplaces.

### Further or specialised training

The key arguments for advancing models of further specialised employment-based training are: that the participants are most likely to be building upon their existing occupational knowledge; are mature in terms of age, interest and ability to be self-directed in the off-the-job learning; and will have some



capacity to autonomously integrate their learning from both workplace and educational experiences. It is assumed that the skill sets likely to be the focus of this development are such that the issues of duration arising for initial preparation are not as pertinent here. In addition, current arrangements are most likely to be supporting individuals to secure higher vocational education and training qualifications (that is, certificate IV level and above). These tend to be less constrained by training packages. Indeed, given some of the specialist kinds of learning, certain educational provisions may well be offered by specialist and vendor training organisations, rather than VET providers. There is also a stronger imperative here for the learners to exercise interest, discretion and agency in the conduct of their courses, thereby opening up the possibility for engaging in the components of preparation that are offered by the educational provider. This small autonomous form of practice, a move away from being wholly centred on enterprise need, also serves a more individual goal—that of elevating the standing of higher vocational education and training qualifications.

### *Extension model for further development*

This model of further development is intended for mature workers (for example, experienced manufacturing or child care workers) or those who have already completed their initial occupational development and have some experience. It is similar to the *extension model of entry-level preparation*—described above. This model addresses further skill development for an occupation where a level of maturity of skill and capacity already exists. It suits individuals who need to find ways of balancing work and learning, other than through regular college attendance during the day. This model can meet the kinds of needs articulated by the Advanced Diploma in Engineering worker–learners identified in the manufacturing case study.

**Table 5 Extension model of further development**

<b>Elements</b>	<b>Model-specific requirements</b>
Specific purpose of model	This model seeks to provide further and/or specific skill preparation beyond initial occupational preparation. It seeks to provide a model of employment-based training which enjoys both separation from the immediate needs of the workplace, with relevance to that workplace and meeting the longer-term needs and aspirations of the learners
Duration	Likely to be determined by the duration of coursework provisions
Levels of certification	Certificate IV, diploma and advanced diploma
Specific requirements of model	That the worker learners are able to engage in a program of study which meets their personal and professional needs yet is aligned also to the interests and activities of the current employment. It is likely that the learner–workers will be sufficiently mature and possess a level of educational achievement that will permit them to study in a relatively independent way

### Alignment with conceptual premises

These proposed models of employment-based training seek to address the overall goal of providing good preparation for worthwhile jobs and in doing so, address the kinds of characteristics required of effective employment-based training models. That is, these models are held to:

- ✧ be pedagogically sound
- ✧ lead to quality skill formation
- ✧ have positive outcomes for both individuals and the organisations
- ✧ function well
- ✧ be effectively enacted and sustained over time.

The alignment between these characteristics and the proposed models is briefly mapped in table 7.

**Table 6 Alignment between conceptual premises and proposed models**

<b>Characteristic</b>	<b>1 'Traditional' entry-level training model</b>	<b>2 'Accelerated' entry-level training model</b>	<b>3 Internship entry-level preparation model</b>	<b>4 Extension model of entry-level preparation</b>	<b>5 Extension model for further development</b>
Pedagogically sound	Sequenced integration of experiences in work and educational settings	Sequenced integration of experiences in work and educational settings, but carefully calibrated to assist effective skill development in shorter time span	Sequenced integration of experiences in work and educational settings, in both earlier accelerated program and through opportunities to hone and extend skills in internees' final year	Provision of experiences in work and educational settings. Learners play a key role in the direction and integration of experiences, particularly those in the educational setting	Provision of experiences in work and educational settings. Learners play a key role in the direction and integration of experiences, particularly those in the educational setting
Quality skill formation	Skill formation over time and through support in both workplace and educational settings	Skill formation over time and through support in both workplace and educational settings, and careful management of experiences and monitoring of accelerated learning	Skill formation over time and through support in both workplace and educational settings, and careful management of experiences and monitoring of accelerated learning, and internship year	Skill formation over time and through support in both workplace and educational setting	Specialising by means of further skill formation over time and with support in both workplace and educational setting
Quality outcomes for individuals and enterprises	Development of industry and enterprise-level skills that provide learner with employability and industry adaptable outcomes	Development of industry and enterprise-level skills that provide learner with employability and industry adaptable outcomes	Development of industry and enterprise-level skills that provide learner with employability and industry adaptable outcomes	Development of industry and enterprise-level skills that provide learner with employability and industry adaptable outcomes	Development of industry and enterprise-level skills that provide learner with employability and industry adaptable outcomes, with a particular emphasis on personal and professional development
Function effectively	Traditional model well accepted in many industries	A model that some enterprises have requested to be introduced	A model requiring the commitment of enterprises to secure outcomes, and to support the level of competence they are requesting	Traditional model well accepted in many industries and relies on the maturity of the learners	Traditional model well accepted in many industries
Effectively enacted and sustained	Demonstrated capacity for it to be enacted and sustained	A model requiring the commitment of enterprises to secure outcomes, and to support the level of competence they are requesting	A model requiring the commitment of enterprises to secure outcomes, and to support the level of competence they are requesting	Demonstrated capacity for it to be enacted and sustained	Traditional model well accepted in many industries

A further step in assessing the strength of these models against the five conceptual premises would entail a similar mapping exercise against the features and subsequent elements listed in the section ‘Effective features of employment-based training’ in the support document.

## Concluding comments

The proposed models focus largely on arrangements to achieve a balance between learning in educational institutions and that taking place in the workplace. These five models are considered ‘best fit’ for the process manufacturing and child care industries and have potential for customisation and implementation in other occupations and industries. The adoption and adaptation of these models will need to look into the issues that limit their effectiveness, such as regulatory environments; education and training delivery; and workplace/employment relations. These issues play out differently by industry/occupational and enterprise area. The nature of the partnership between apprentices/employees, employers, VET providers, government bodies and other supporting agents will also underpin the achievement of better outcomes from employment-based training models. The tested models would expand the compendium of models much needed for more effective employment-based training.

It is also necessary to consider carefully the unintended consequences that might arise; hastily enacted reforms may be difficult or impossible to overturn quickly to minimise risks and losses. However, the selected employment-based training model should not limit the level of challenge in the training activities and create a sense of ‘dumbing down’. This would not only lead to discontent in apprentices and trainees and to non-completion, but also compromise the quality of employment-based training and subsequent skills of the workforce.

# References

---

- ABS (Australian Bureau of Statistics) 1998, *Innovation in manufacturing 1996–97*, cat.no.8116.0, ABS, Canberra.
- 2001, *Community services*, cat.no.8696.0, AGPS, Canberra.
- Australian Chamber of Commerce and Industry 2005, *Paying apprentices – the market responds, review*, no.120, ACCI, Sydney, p.5.
- Australian Industry Group 2005, *A new approach to New Apprenticeships*, AiG, Sydney, viewed 26 March 2008, <[http://www.acci.asn.au/text\\_files/issues\\_papers/Employ\\_Educ/Jan%2005%20-%20New%20Approach%20to%20New%20Apprenticeships.pdf](http://www.acci.asn.au/text_files/issues_papers/Employ_Educ/Jan%2005%20-%20New%20Approach%20to%20New%20Apprenticeships.pdf)>.
- 2007, *It's crunch time: Raising youth engagement and attainment*, viewed 16 August 2007, <<http://www.dsf.org.au>>.
- Bowman, K, Stanwick, J & Blythe, A 2005, *Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships*, NCVER, viewed 26 March 2008, <<http://www.ncver.edu.au/research/proj/nr4050.pdf>>
- Council of Australian Governments 'Communiqué', 11 February 2006, viewed 26 March 2008, <[http://www.dpc.vic.gov.au/CA256D800027B102/Lookup/COAGCommunique2006/\\$file/COMMUNIQUE2006.pdf](http://www.dpc.vic.gov.au/CA256D800027B102/Lookup/COAGCommunique2006/$file/COMMUNIQUE2006.pdf)>.
- Cully, M 2006, *Kirby comes of age: The birth, difficult adolescence and future prospects of traineeships*, NCVER, Adelaide.
- Cully, M & Curtain, R 2001, *Reasons for New Apprentices' non-completions*, NCVER, Adelaide.
- Curtain, R 1998, *Future directions in middle level VET*, Curtain Consulting in association with the Centre for Employment, Education and Training, Monash University, viewed 26 March 2008, <[http://www.curtain-consulting.net.au/download\\_controlled/Skill%20formation/Middle%20skills%20report%20RCurtain1998.pdf](http://www.curtain-consulting.net.au/download_controlled/Skill%20formation/Middle%20skills%20report%20RCurtain1998.pdf)>.
- Doornbost, AJ, Bolhuis, S & Simons, PRJ 2004, 'Modeling work-related learning on the basis of intentionality and developmental relatedness: A non-educational perspective', *Human Resource Development Review*, vol.3, no.3, pp.250–74.
- Dusseldorp Skills Forum, 2007, *How young people are faring: At a glance*, viewed 16 August 2007, <<http://www.dsf.org.au>>.
- Eraut, M 2004, 'Informal learning in the workplace', *Studies in Continuing Education*, vol.26, no.2, pp.247–73.
- Foster, S, Delaney, B, Bateman, A & Dyson, C 2007, *Higher-level vocational education and training: Their importance in today's training market*, NCVER, Adelaide.
- Hager, P 2004a, 'Conceptions of learning and understanding learning at work', *Studies in Continuing Education*, vol.26, no.1, pp.4–17.
- 2004b, 'Lifelong learning in the workplace? Challenges and issues', *Journal of Workplace Learning*, vol.16, nos1–2, pp.22–32.
- Karmel, T 2006, *Older workers in apprenticeships and traineeships*, NCVER, Adelaide.
- Minerals Council of Australia 2006, *Addressing barriers to employment and training of traditional trade apprentices in the Australian mining industry*, Mineral Council Australia, Sydney.
- Pankhurst, KV & Livingstone, DW 2006, 'The labour process: Individual learning, work and productivity', *Studies in Continuing Education*, vol.28, no.1, pp.1–16.
- PhillipsKPA 2006, *Group Training Australia and the Dusseldorp Skills Forum: Report of the Traineeship Roundtable*, PhillipsKPA, Melbourne.
- Queensland Community Services and Health Industry Training Council 2005, *Child Care Skills Formation Strategy: Initial discussion paper*, QCS&HITC, Brisbane.
- Queensland Department of Employment and Training 2005, *Queensland's proposed responses to the challenges of skills for jobs and growth: Matching the supply of skills to rapidly changing demands*, DET, Brisbane.
- 2006a, *Queensland training and employment priorities, 2005–2006*, DET, Brisbane.
- 2006b, *The smart investment: Queensland training and employment priorities, 2005–2006*, DET, Brisbane.
- Ray, J 2001, *Apprenticeships in Australia: An historical snapshot*, NCVER, Adelaide.
- Robinson, C 2001, *Australian apprenticeships: Facts, fiction and future*, NCVER, Adelaide.
- Schofield, K 2000, *Report of the independent review of the quality of training in Victoria's apprenticeship and traineeship system*, Department of Education, Employment and Training, Melbourne, viewed 26 March 2008, <<http://www.otte.vic.gov.au/dpappschreview.asp>>.

- 2001, 'Quality in context: Reflections on factors impacting on the quality of apprenticeship and traineeship training', in N Smart (ed.) *Australian apprenticeships: Research readings*, NCVER, Adelaide, pp.239–60.
- Schofield, K & McDonald, R 2004, *Moving on: Report of the High Level Review of Training Packages*, Australian National Training Authority, Brisbane.
- Snell, D & Hart, A 2007, 'Vocational training in Australia: Is there a link between attrition and quality?', *Education + Training*, vol.49, no.6.
- Stanwick, J 2004, *Outcomes from higher-level vocational education and training qualifications*, NCVER, Adelaide.
- Stanwick, J & Saunders, J 2004, *New Apprenticeship pathways: An option by associate professionals?*, NCVER, Adelaide.
- Western Australia Department of Education and Training 2005, *Investing in Western Australia's future, Fast Track Apprenticeship Program*, WADOT, Perth.
- Winterton, J 2004, 'A conceptual model of labour turnover and retention', *Human Resource Development International*, vol.7, no.3, pp.371–90.

# Appendix 1

---

## Interview questions for employers in the manufacturing industry

### A Context

Improving workforce skills can take the form of informal skill development like how to use a piece of equipment right through to a training program that results in a qualification. We are interested in the latter in this research.

- 1 Have workforce skills been an issue for the company?
- 2 Have past efforts to raise workforce skills (through training and other measures) actually led to improvements in your company's performance?
- 3 What are the skill levels requirements in your workplace (from entry to specialist worker)? Is the training system currently catering for what you need?

### B Experience to date with employment-based training

Employment-based training (EBT) can broadly be described by the terms apprenticeships, traineeships and cadetships.

- 4 What experiences have you had with EBT?
- 5 Did this EBT meet your expectations?
- 6 Has the EBT been more effective at some levels than others? (Was it perhaps more effective for entry-level training than for more advanced levels requiring customisation and/or specialisation?)

### C What doesn't work?

- 7 What features of employment-based training are an issue and why?

(By features we mean the time taken to complete the training, the style and quality of the VET delivery, the regulation issues relating to apprenticeships, traineeships and cadetships and the associated work arrangements and/or pay conditions.)

### D What works?

- 8 Has your current competency been sufficiently taken into account?
- 9 What are the features of an EBT training program that you consider might work for you to improve effectiveness?

(For example, is current competency sufficiently taken into account? would more upfront in the classroom tuition before employment/ongoing training help? Is there room for new qualifications based on skills sets to be developed? Will you use the recent government incentives for higher skill level EBTs? What about school-based EBT's?)

10 If you thought about a ‘best possible world’ scenario of EBT you would use, both now and into the future, what would it look like?

(For example are there different types of EBT needed for young entry level workers compared to older existing workers “upskilling or new-skilling” and/or at the different qualification levels for example at higher technical levels (Diploma levels compared to the certificate levels).)

## E Summation questions

11 What issues would need to be addressed in your industry to achieve your ‘best-fit’ EBT model?

12 Are there other occupations/industries where your best-fit model may also be applicable?

## Interview questions for apprentices in the manufacturing industry

### A Context

Please choose a category and age range? <25, 25-35, 35-45, >45

- ✧ Entry level worker from school
- ✧ Entry level worker from other employment
- ✧ Existing worker.

1 How important to you is getting training while working as opposed to training separately from employment?

### B Experience to date with EBT

Employment-based training (EBT) can broadly be described by the terms apprenticeships, traineeships and cadetships.

- 2 Are you in a contract of training (EBT) arrangement now? What qualification will it result in?
- 3 If no? Would you like to be? What stops you from so being?
- 4 Are you interested in pursuing higher-level qualifications within your field?
- 5 If yes, why do you consider this important? If not, why not?

### C What doesn’t work?

6 What are some of the features of EBT that you consider need changing in order to make them a better option for workers?

[For example is the length of the training an issue? Are there TAFE or private training college delivery issues? Are there regulation issues? Or work pay arrangements and/or conditions?]

### D What works?

7 In the case of the EBT you have participated in - what is/was good about these arrangements and why?

### E Some alternative EBT models under consideration that we would like your opinions on

- 8 Has your current competency been sufficiently taken into account?
- 9 Would more upfront ‘in the classroom’ tuition before employment/ongoing training be good?

- 10 Will you or your employer use the recent government incentives for higher skill level EBTs?
- 11 (For those in <25 category) What about school based EBT's? Special Trades schools etc?
- 12 Do you see room for new qualifications based on skills sets to be developed?

## F Summation question

- 13 What would be your “ideal” EBT arrangement and would it differ depending on the level of qualification you were undertaking?

## Interview questions for employers in the child care sector

- 1 I would like to hear what you think about apprenticeships in children’s services. Tell us about training in your industry.
  - ✧ Have workforce skills been an issue for the service?
  - ✧ What are the skill levels requirements in your workplace?
  - ✧ Is the training system currently catering for what you need?
  - ✧ Have past efforts to raise workforce skills (through training and other measures) actually led to improvements in your service’s performance?
- 2 Tell us about your experiences with employment-based training - apprenticeships, traineeships, cadetships.
  - ✧ What experiences have you had with EBT?
  - ✧ Did this EBT meet your expectations?
  - ✧ Has the EBT been more effective at some levels than others?  
For example compare entry level to more advanced skills
- 3 Tell us about time taken, style of training, quality of training, regulation, work arrangements - pay & conditions.
  - ✧ What features of employment-based training are an issue and why?
- 4 Tell us about what could work.
  - ✧ How could the CHC50302 Diploma of Children’s Services be improved as an EBT?
  - ✧ Ideas such as:
    - ◆ Recognition processes at start up?
    - ◆ Do we need a new qualification as skill sets only?
    - ◆ More up front class-based tuition?
  - ✧ Will you use the recent incentives announced by the government for higher skill level apprenticeships? Explain your response.
  - ✧ What do you think about school-based traineeships in child care?
  - ✧ Ideally, now and in the future, what would the best EBT model you could use in your service - what would it look like?
  - ✧ Ideas such as:
    - ◆ EBT for young entry level workers compared to older existing workers
    - ◆ “upskilling or new-skilling” - different qualification levels for example at higher technical levels (Diploma levels compared to the certificate levels)



- 5 Tell us about what could work for the child care sector and in other sectors and industries.
  - ✧ What issues would need to be addressed in your sector to achieve a “best fit” EBT model?
  - ✧ Are there other occupations & industries where this “best fit” model may also be used?
- 6 Have your final say.
  - ✧ Is there anything you want to add?

## Interview questions for apprentices in the child care industry

What is your age range (years): <25, 25-35, 35-45, >45

- 1 How would you describe your employment in the child care industry?
  - ✧ Entry level worker from school
  - ✧ Entry level worker from other employment
  - ✧ Existing worker
- 2 How important to you is getting training while *working* as opposed to training *separately* from employment?
 

Tell us about your experience while training.

  - ✧ What experiences have you had with your apprenticeship?
  - ✧ Did this apprenticeship meet your expectations?
  - ✧ What has been good about your apprenticeship?
  - ✧ And what has been “not so good”?
  - ✧ What could be done to make it better?
- 3 Tell us about time taken, style of training, quality of training, regulation issues, work arrangements - pay & conditions.
 

Looking at the list -

  - ✧ What part of the apprenticeship was a problem?
  - ✧ Why was that a problem?
- 4 Tell us about what could work.
  - ✧ How could the CHC50302 Diploma of Children’s Services be improved for apprenticeship?
  - ✧ Ideas such as:
    - ◆ Recognition processes at start up?
    - ◆ Do we need a new qualification as skill sets only?
    - ◆ More up front class-based tuition?
    - ◆ What is your view about school based EBTs?
  - ✧ Ideally, now and in the future, what would the best apprenticeship model for you - what would it look like?
- 5 Tell us about what could work in other sectors and industries.
  - ✧ What would the best kind of apprenticeship in children’s services look like?
  - ✧ Are there other occupations & industries where this “best fit” model may also be used?
- 6 Have your final say. Is there anything you want to add?

# Acknowledgements

The project team extends appreciation and gratitude to the many people who participated in this project:

- ✧ All employers, employees, Training Package developers, providers and representative of the Manufacturing State Industry Training Board, who participated in the case study.
- ✧ Members of the Australian Industry Group (AIG) who provided advice and assisted in identifying potential interviewees.
- ✧ Members of the Manufacturing & Engineering Skills Advisory Board of Victoria (MESAB) who provided advice and assisted in identifying potential interviewees.
- ✧ All children's services workers, employers and apprentices/employees who participated in supply of data for this project.
- ✧ Staff at the Queensland Health and Community Services Workforce Council, Brisbane for assistance and advice.
- ✧ Members of the Children's Services Sub Committee, Department of Human Services, Queensland, for advice.
- ✧ Staff of Early Years Services Branch, Department of Human Services, Queensland for advice.
- ✧ Staff of Service and Workforce Planning Branch, Department of Human Services, Queensland for advice.
- ✧ Mr Richard Mathews, Chair, National Children's Services Information Management Group, Australian Bureau of Statistics, Ms Tina Martin and Mr Greg Dowling from the Children's Services Workforce Project for advice on data.
- ✧ Staff from the Department of Education, Training and The Arts (DETA), for advice.
- ✧ Members of the AVETRA – Apprenticeship Interest Group who commented on the draft EBT models.
- ✧ Members of the researchers' networks who provided comments on the draft EBT models.

# Support document details

---

Additional information relating to this research is available in *Effective models for employment-based training—Support document*. It can be accessed from NCVET's website <<http://www.ncver.edu.au/publications/1990.html>> and contains:

- ✧ Literature review
- ✧ What constitutes employment-based training
- ✧ Evolution of EBT models in Australia and key drivers of change
- ✧ Key issues associated with EBT
- ✧ Summary of literature
- ✧ Effective features of EBT
- ✧ Case studies