

outcomes
factors pertaining
quality apprenticeships
shorter duration
traineeships quality
outcomes factors
quality pertaining
apprenticeships
traineeships

Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships

Kaye Bowman

John Stanwick

Ann Blythe

Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships

*Kaye Bowman
John Stanwick
Ann Blythe*

National Centre for Vocational Education Research

Publisher's note

This report constitutes the main outcome of the first phase of a national project funded by ANTA to explore what are the key factors in achieving quality outcomes for people in shorter duration apprenticeships and traineeships.

Additional information relating to this research is available in *Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships—Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au>>.

© Australian National Training Authority, 2005

This work has been produced by the National Centre for Vocational Education Research (NCVER) with the assistance of funding provided by the Australian National Training Authority (ANTA). It is published by NCVER under licence from ANTA. Apart from any use permitted under the *Copyright Act 1968*, no part of this publication may be reproduced by any process without the written permission of NCVER. Requests should be made in writing 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 ANTA and NCVER.

ISBN 1 920896 53 8 print edition

1 920896 54 6 web edition

TD/TNC 81.15

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

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

Contents

Tables and figures	4
Key messages	5
Executive summary	6
Introduction	9
Objective	9
Literature evaluation framework	9
Summary of definitions	10
Background	10
The apprenticeship and traineeship system today	10
Training factors	13
Distribution of New Apprenticeships	14
Quality of outcomes achieved	16
Qualifications gained	16
Employment and related outcomes	18
Satisfaction as an outcome	19
Summary	20
Factors affecting quality of outcomes	21
Factors relating to actions of stakeholders	21
Characteristics of apprentices/trainees	25
Contextual factors	26
Summary	26
Implications	27
Implications for government	27
Implications for industry	27
What do we still need to know?	28
Comparative international studies	29
References	30

Tables and figures

Tables

1	Apprentices and trainees in training as at 31 December 2003 by expected duration and qualification level (%)	14
2	Apprentices and trainees in training as at 31 December 2003 by ASCO and by expected duration (%)	14
3	Apprentices and trainees in training as at 31 December 2003 by ANTA industry area and by expected duration (%)	15
4	Estimated rates of completion for apprenticeships and traineeships by occupation and duration (1998)	17
5	Estimated rates of completion for apprenticeships and traineeships by industry and duration (1998)	18
6	Satisfaction levels (%) agreeing with statement 'Overall, I was satisfied with the quality of the course'	20

Figures

1	Conceptual Framework: The Apprenticeship and Traineeship Business System	12
2	How the factors in the conceptual framework interact	13

Key messages

- ✧ For the purpose of this study, quality outcomes refer to the employment and related benefits achieved from completing the apprenticeship or traineeship related qualification and the level of client satisfaction with the program. Shorter duration apprenticeships or traineeships are defined as those of expected duration two years or less.
- ✧ The evidence indicates that the rate of training completion, and hence qualifications attained, is the key issue related to quality outcomes for shorter duration apprenticeships and traineeships. Those who do complete shorter duration apprenticeships and traineeships achieve relatively good employment-related outcomes and express high levels of satisfaction with the program.
- ✧ Based on 1995 to 2000 data the study found that, on average, only one in two apprentices and trainees in shorter duration programs complete their training compared to three in four in longer duration ones. However, there is much variability by industry and occupation in training completion rates of shorter duration apprenticeships and traineeships. Risk areas where shorter duration contracts have very low training completion rates relative to longer term ones, include all trades and related occupations and the personal and other services industry area.
- ✧ Of the various factors that can affect the quality of outcomes of apprenticeships and traineeships, it is the actions of New Apprenticeships Centres, registered training organisations and employers that appear to have had the biggest impact and appear to be associated mainly with shorter duration apprenticeships and traineeships, based on 35 research studies undertaken between 1990 and 2003. Issues arising from the actions of New Apprenticeships Centres, registered training organisations, and employers that require attention, include the level of awareness by all parties of their roles and responsibilities, the level of employer support and commitment, the level of skills of the trainers, and the amount of training provided.
- ✧ A key suggestion is that a proper and thorough induction process be developed, and perhaps the mandatory development of a training plan, to ensure roles and responsibilities and necessary training commitments are understood by all players. Further research is also needed to separate the factors of 'duration' from 'Australian Qualifications Framework (AQF) level' in respect of training completion rates, and to gauge the effect of existing workers on training completion rates.
- ✧ The quality of outcomes of shorter duration apprenticeships and traineeships is an important issue for the training sector because they are a significant and growing subset of all apprenticeships and traineeships that in turn are a growing cohort of all students in vocational education and training. It is expected that shorter duration apprenticeships and traineeships will dominate longer duration ones in the near future.

Executive summary

This study examines relevant literature in order to identify key factors influencing the quality of outcomes from shorter duration apprenticeships and traineeships. National data on apprenticeships and traineeships were also analysed. A support document contains the reviews of the 35 research studies included (appendix 1) and the complete data analysis (appendix 2). This document can be obtained from the National Centre for Vocational Education Research (NCVER) website at <<http://www.ncver.edu.au>>.

Quality outcomes in vocational education and training (VET), and for this study, refer to qualifications and competencies attained, and the better employment and related outcomes achieved as a result of training participation. Employer and apprentice/trainee satisfaction is also considered a key indicator of quality.

The major finding is that non-completion of training adversely affects the quality of outcomes for shorter duration apprenticeships and traineeships. Those who do complete their qualification achieve relatively good employment and related outcomes. They are highly satisfied with the quality of their course (83%), and they are as satisfied as longer duration apprentice/trainees and all other graduates.

Apprenticeships and traineeships of two years or less in duration have consistently lower training completion rates, and so qualifications achieved, in comparison to those of longer duration. Data analysis for this project indicates that those in shorter duration contracts had average training completion rates of about 50% for the period 1995–2000, compared to about 75% for longer duration contracts.

The research studies indicate that there is great variability in training completion rates of shorter duration apprenticeships by occupation and industry, but none of the studies clarified this completely. Data analysis for this project confirms and clarifies this variability (as at 2002–03).

Below the 50% average training completion rates were found for all shorter duration apprenticeships and traineeships in trades and related workers occupations (except for mining) with an average of 23%. All other occupation groups have training completion rates of between 50% and 55% for shorter duration apprenticeships and traineeships, and significantly higher than these training completion rates for longer duration contracts. The exception is the elementary and intermediate clerical sales and service workers occupation where training completion rates for longer duration contracts are only marginally above those for shorter duration contracts. The other exception, in a positive sense, is managers and administrators who have high training completion rates for both shorter and longer duration contracts.

By industry sector, we also find that shorter duration apprenticeships and traineeships have consistently and significantly lower training completion rates than longer term contracts and that personal and other services industries stand out together with the trades industries as having very poor training completion rates.

Factors affecting quality of outcomes

Four factors were identified that could have an impact on the quality of outcomes achieved from apprenticeships and traineeships. The four factors are: characteristics of apprentices and trainees, actions of stakeholders, training issues and contextual factors. The various stakeholders in the system are the apprentices/trainees, employers, registered training organisations, and New Apprenticeships Centres.

According to the evidence available, in the 35 research reports developed between 1990 and 2003, the actions of stakeholders in the system is the factor that has had the most influence in relation to shorter duration programs.

Actions of stakeholders

The review of research revealed four major factors relating to the actions of stakeholders in the apprenticeship and traineeship system that affect the quality of outcomes from shorter duration contracts. The four factors are:

- ✧ Lack of *awareness of roles and responsibilities* between the various stakeholders in the system was the most commonly recurring theme. Employers and apprentices/trainees in some cases lacked information on what the apprenticeship/traineeship would involve. This included employment as well as training arrangements. Non-completion was found to be more often associated with dissatisfaction with the working relationship than the training component among trainees (who are generally in shorter duration programs).
- ✧ Level of *employer support and commitment* to the apprenticeship/traineeship was another strong theme. This concern extended to a lack of a learning culture and time for employers to undertake the training. Additionally, the level of networking among students, and time to do the learning for the apprenticeship and traineeship while working, were raised as areas of concern across studies. Employers had concerns regarding allocating time for the apprenticeship/traineeship and administrative burdens.
- ✧ *Training* issues of various kinds was another key theme. For some apprentices and trainees, training was inadequate or lacked structure. In addition, some studies found that there was a lack of training plans. Furthermore, some of the studies found that there was inadequate use of recognition of prior learning. This may be related to some apprentices and trainees saying that they did not learn anything. In addition, lack of availability of assessment when apprentices/trainees are ready to be assessed was raised as another area of frustration in some instances.
- ✧ Level of *skills of teachers and workplace trainers* was another key factor recorded. Issues were raised in terms of teachers being up to date with what is happening in the workplace, as well as the level of skills of workplace trainers.

Other factors

- ✧ *Characteristics of apprentices/trainees*. Both the research reviewed and the data analyses undertaken found that certain characteristics are associated with shorter duration apprentices and trainees who do not complete or achieve poorer employment outcomes, although these were common to all students in VET with lower outcomes. These characteristics were lower levels of previous education, unemployment prior to the apprenticeship/traineeship, and Indigenous status. Age was the one distinguishing characteristic. It was found that training completion rates increase by age at commencement for all shorter duration apprenticeships and traineeships, while they decrease by age for longer duration apprenticeships and traineeships. Being an existing worker might be another factor. However, further work is required to clarify their effect on training completion rates.
- ✧ *Training issues*. The level of integration of training was found to affect the quality of outcomes. Integrating both on- and off-the-job learning modes generally resulted in fulfilment of learning and assessment expectations, while the fully on-the-job mode raised concerns about the quality of the training, and training outcomes, particularly the breadth of skills gained, and employer

commitment. There is no information available on differences (if any) between shorter versus longer duration 'fully on-the-job' traineeships/apprenticeships.

- ✧ *Contextual factors.* The structure of the labour market, legislation and regulation and government policy, and government financial incentive schemes, for example. Contextual factors were not found to be primary factors in the research evaluated.

Implications

These findings suggest more effort must be put into improving training completion rates of apprenticeships and traineeships of shorter duration, and particularly those at Australian Qualification Framework (AQF) levels I and II, in order to improve the overall quality of outcomes from these programs.

Firstly, there needs to be a proper and thorough induction process to ensure the roles and responsibilities of the apprentice/trainee, employer, registered training organisations and New Apprenticeships Centres are understood by all players, especially the apprentice and trainee. Perhaps the mandatory development of a training plan at the induction phase would clarify what the apprentice/trainee can expect from the apprenticeship/traineeship. It would also help clarify whether the apprentice or trainee should receive recognition of prior learning or be required to undertake a full training program, and when the registered training organisation is needed.

Secondly, developing a learning culture in enterprises and industries is important, especially in those without a tradition of apprenticeships/traineeships. This also has implications for the skill development of workplace trainers in terms of training and assessment practices.

Thirdly, increased use of group training organisations would enable apprentices/trainees to gain a greater breadth of skills, particularly for the mostly on-the-job mode of delivery and would ease the administrative burdens placed on employers. However, to be noted is that group training organisations reflect the overall trends when it comes to shorter duration apprenticeships and traineeships. They too have achieved significantly lower training completion rates in these contracts compared to their traditional longer term contracts.

The findings also suggest the need for further work to fully separate the duration and the AQF level factors in respect of training completion rates, as well as to gauge the effect of existing workers on training completion rates. Further work also needs to be done on the extent to which key factors found to affect quality of shorter duration apprenticeships and traineeships also affect longer duration ones.

Introduction

Objective

The objective of this project was to examine existing literature and national data to identify key factors in achieving quality outcomes for shorter duration apprenticeships and traineeships (that is, of expected length two years or less if undertaken on a full-time basis). A literature search resulted in 124 papers being found. Full texts were obtained for 35 studies after consideration of the abstracts and more refined key wording. All 35 studies were included in the review (see appendix 1 in the support document, available at <<http://www.ncver.edu.au>>). The literature reviewed is based on research findings for the period 1995–2003. The new training contract arrangements that began in 2004 fall outside the scope of this review.

A comprehensive analysis of national apprentices and trainees data was undertaken (see appendix 2 in the support document available at <<http://www.ncver.edu.au>> and the data presented in this report are focused on validating or filling gaps in the findings of the research studies reviewed. Trends of general characteristics of apprentices and trainees, current numbers of new commencements, and totals in training and their employment outcomes were considered, as were the levels of satisfaction of apprentices and trainees.

For the purposes of this study, outcomes refers to both achieving competencies and qualifications within apprenticeships or traineeships, and achieving better employment-related outcomes as a result of that participation. Satisfaction of apprentices and trainees and employers was also explored as a quality indicator.

Literature evaluation framework

The 35 research studies included in the review were assessed in terms of the quality of the methodology and analysis as well as the nature of the findings. These studies were split into studies of national dimensions, state/territory dimensions and other specific purpose studies, such as a particular industry sector or local geographic area.

There were 14 studies of national significance, eight of which could be considered high quality (see appendix 1). Only one was considered poor quality. They range in the time they were undertaken from pre-New Apprenticeships (generally mid-1990s) to post-New Apprenticeships (and up to 2002).

There were 13 state/territory level studies and our specific purpose studies (see appendix 1). The state/territory studies also range in time from pre-New Apprenticeship (mid- to late-1990s) to about 2001. Only four of the state/territory studies could be considered high quality, while three of the four specific purpose studies could be considered high quality. Despite this, there are some common themes running across these studies. Most weight was given to factors identified in the quality national studies reviewed. The state/territory and specific purpose studies were used to confirm the factors identified in the quality national studies.

Four international studies on Modern Apprenticeships in the United Kingdom were also evaluated for the purposes of comparison, three of which were assessed as high quality.

Summary of definitions

Quality outcomes

For the purposes of this project, outcomes refers to both achieving competencies and qualifications within the apprenticeship or traineeship, and achieving better employment-related outcomes as a result of that participation. Satisfaction of apprentices and trainees and employers was also explored as a quality indicator.

Shorter duration apprenticeships and traineeships

Shorter duration apprenticeships and traineeships are defined for this project as those of expected duration of two years.

Training completion rates

Training completion rates refer, for apprentices and trainees who commenced their training between 1995 and 2000, to the percentage that successfully completed their training. However, training completion rates for apprentices and trainees in longer duration contracts could not be derived for those commencing after 1998 as a number of those contracts have not yet been completed.

Fully on-the-job training

Fully on-the job training refers to a mode of training whereby the majority of the training is undertaken as a part of normal work experience. However, it is rare for it to be 100% work-based. That is, some theoretical training usually takes place.

Background

Most people know about apprenticeships and traineeships. Apprenticeships (generally of 34 years duration) have been around for hundreds of years and traineeships, while in comparison a new phenomenon, follow the apprenticeship model. However, over the years, and particularly over the last decade or so, arrangements for employing or becoming an apprentice or trainee have changed dramatically.

As little as 15 years ago, an employer could simply walk into any newsagency, purchase a blank 'indenture' form, fill in their business name, the apprentice's name, the name of the trade in which the young person would be apprenticed and the length of time the apprenticeship would take to complete. The employer and apprentice then signed the indenture and sent it in to the relevant government department, which would then register the indenture once the employer's ability to train had been confirmed. The process varied across the states and territories.

Over the past decade, employment-based training arrangements have changed significantly. Traineeships were introduced in 1985 (generally of shorter duration) to complement apprenticeships, and with the aim to introduce employment-based training in non-trade occupations. Since then, the system has progressively evolved, including the creation of New Apprenticeships Centres where employers and trainees and apprentices now go to sign up.

The apprenticeship and traineeship system today

New Apprenticeships were introduced in Australia in 1998 with the aim of providing a more flexible system of work-based training leading to nationally recognised skills and qualifications and improved work opportunities and performance. Much of Australia's previous separate apprenticeship and traineeship systems are still apparent in New Apprenticeships. However, a closer look reveals several important changes.

As Schofield (2000a) observed, what has remained the same is that employers and apprentices/trainees still enter into training contracts that are registered by government. There is still regulation by government, although recently the Australian Quality Training Framework has replaced the Australian Recognition Framework. Though similar in substance, the new framework has some added features such as more clearly specifying the requirements of registered training organisations, improving auditing arrangements, and introducing standards for state/territory registering bodies in addition to standards for registered training organisations. Other similarities include that protection from exploitation of employees remains important, and that there are still a variety of government financial incentives available to employers, although there have been some changes to this scheme.

What has changed is that the advent of New Apprenticeships has also seen the creation of New Apprenticeships Centres. These were created to provide apprenticeship and traineeship services in an integrated and streamlined fashion. The employer and apprentice/trainee are serviced through the one centre for the life of the contract. Funding for these centres is based on numbers of apprentices and trainees serviced.

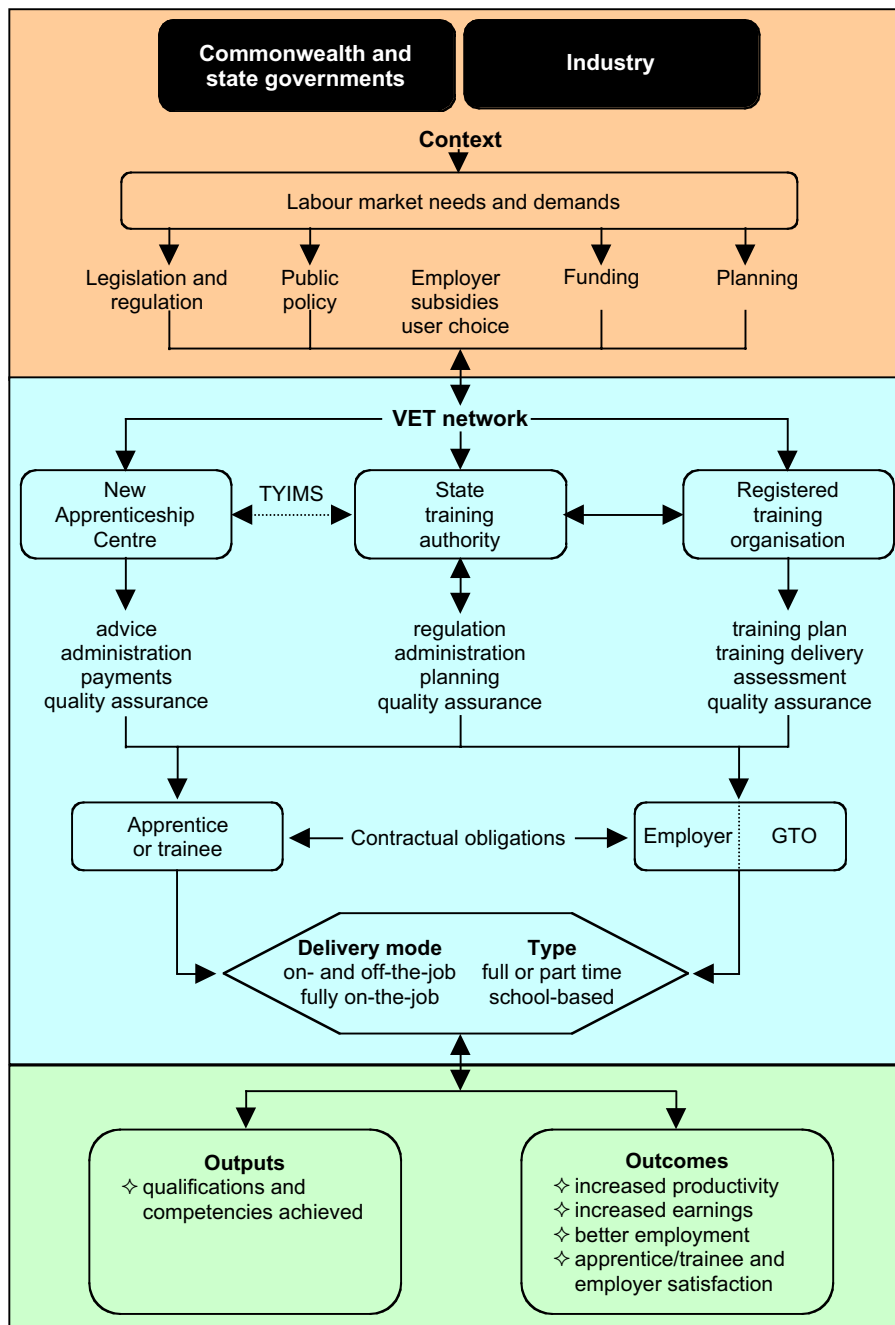
What has also changed is that the concept of 'user-choice' has been introduced. The user-choice policy has meant that employers have choice of training provider for the off-the-job component of the apprenticeship or traineeship. Employers can also negotiate content, method of delivery, and sequencing of training. Technical and further education (TAFE) institutes no longer have the monopoly as a training provider, and there are now many private training providers in the system competing for training funds.

Figure 1 overleaf shows the various components of today's apprenticeships and traineeships as a business system. This was used as a framework to guide this project. The various components and the relationships between the components influence the system's outcomes.

Component factors impinging on the auditing of outcomes of apprenticeships and traineeships include:

- ✧ contextual factors
- ✧ actions of stakeholders in the business network
- ✧ training and training contract factors
- ✧ apprentice/trainee factors.

Figure 1: Conceptual framework: The apprenticeship and traineeship business system



Note: GTO = group training organisation; TYIMS = Training and Youth Internet Management System

Contextual factors

The key government policy initiatives that have contributed to the development of the New Apprenticeship system include the introduction of competency-based training, training packages and ‘user choice’ arrangements. Competency-based training and training packages incorporate apprenticeships and traineeships into the Australian Qualifications Framework. User choice arrangements enable employers and their apprentices or trainees to choose which registered training organisation will provide them with structured training services and to negotiate key aspects of the training. Additionally, a range of financial incentives has been made available to employers to encourage them to take on apprentices and trainees.

Actions of stakeholders

New Apprenticeships Centres, state and territory training authorities and registered training organisations now work together to monitor quality and ensure trainees and apprentices receive the right training both at their place of work and through their training provider.

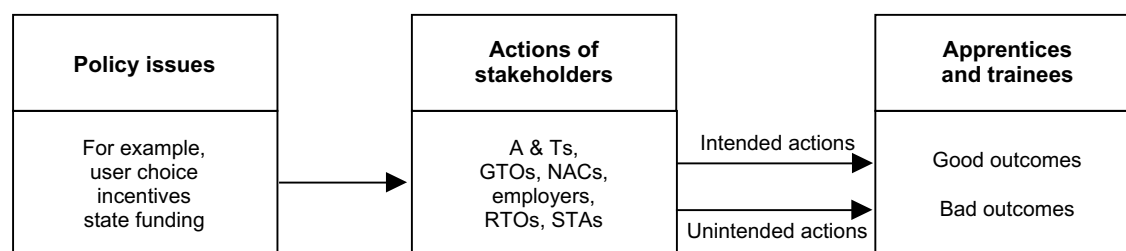
The New Apprenticeships Centres provide a variety of services to employers and apprentices and trainees. These include providing information, advice and assistance regarding recruitment, training, financial assistance and documentation. In addition, they provide support services during the training period, and administer the financial incentives scheme, including the entry of apprentice and trainee training contract commencement information on the Commonwealth's national information management system, Training and Youth Internet Management System (TYIMS).

State and territory training authorities remain the regulatory authorities responsible for the ongoing administration of training contracts. Though varying across states and territories, their role includes giving employers approval to train, confirming training contract details entered by New Apprenticeships Centres through the training and Youth Internet Management System, completing any variations to the information on the contract, providing a mediation and conflict resolution service for employers and apprentices, and issuing the Certificate of Competency for successful completions of traineeships and apprenticeships.

Registered training organisations, including TAFE institutes and private providers, are registered by the training authority to deliver apprenticeship and traineeship training and assessment. A training plan, completed between the registered training organisation, employer and apprentice, outlines details of the training to be undertaken and sets out how the registered training organisation will ensure the apprentice/trainee will receive quality training.

Figure 2 shows in a simple way how contextual factors, through the actions of stakeholders, can affect the outcomes (although there may be issues to do with the policy itself). The model implies that actions of stakeholders are an intervening variable between policy and outcomes.

Figure 2: How the factors in the conceptual framework interact



Note: A & Ts = apprentices and trainees; GTOs = group training organisations; NACs = New Apprenticeship Centres; RTOs = registered training organisations; STAs = state training authorities

Training factors

The training itself may take place in a variety of different ways, including both on the job and off the job (the 'traditional' method), or 'fully on the job', either on a part- or full-time basis, and may also form part of the Senior Secondary Certificate (school based). Once the training mode of delivery has been decided, the apprentice or trainee and the employer complete and sign the apprenticeship/traineeship training contract, binding themselves to certain contractual obligations. Group training organisations are significant players in the New Apprenticeships system, employing apprentices and trainees who are then placed with a variety of host employers to facilitate a wider training experience.

The apprenticeship/traineeship training contract covers detailed demographic information on the apprentice or trainee and workplace details of the employer as required by the state training authority and the Commonwealth to determine eligibility for government incentives or subsidised training and other allowances, as well as a requirement to complete additional employment and training arrangement details in the form of a training plan.

Apprentices/trainees and employer factors

At the heart of the system are the apprentice or trainee and the employer. The apprentice or trainee enters into the apprenticeship/traineeship training contract with the employer to undertake training relevant to the workplace. Characteristics of the employer and apprentice/trainee can also affect the quality of outcome such as their previous levels of training.

Distribution of New Apprenticeships

Access to apprenticeships and traineeships has widened across industries and occupations as the roll out of training packages has occurred. New Apprenticeships have become a mass system. Indeed, the numbers of apprentices and trainees in training have more than doubled in the period between 1996 (163 300 apprentices and trainees) to 2003 (406 850), and they represented almost one in four of all students in vocational education and training (VET) in 2002.

Today, apprenticeships and traineeships are available across all VET qualification levels (see table 1), all occupations (table 2) and in all industry sectors (table 3). Shorter duration apprenticeships and traineeships make up 43% of all apprenticeships and traineeships in training and dominate commencements (60%). They are also spread across all qualification levels, occupations and industry sectors, making the differentiation of shorter from longer duration apprenticeships and traineeships perhaps the biggest challenge this study presented.

Table 1: Apprentices and trainees in training as at 31 December 2003 by expected duration and qualification level (%)

	Certificate I	Certificate II	Certificate III	Certificate IV	Diploma	Advanced diploma	Total
Up to 1 year	92.8	35.9	5.3	4.0	5.4	0.0	10.0
Over 1 and up to 2 years	5.3	28.4	31.6	54.6	13.7	0.0	33.0
Over 2 and up to 3 years	1.9	29.3	23.9	28.6	17.2	16.7	25.1
Over 3 and up to 4 years	0.0	5.6	37.1	11.0	38.1	70.2	30.0
Over 4 years	0.0	0.7	2.0	1.8	25.6	13.1	1.9
Training duration	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	260.0	62 680.0	307 570.0	35 080.0	1 180.0	80.0	406 850.0

Source: NCVET National Apprentice and Trainee Collection, December 2003

Today shorter duration apprenticeships and traineeships include almost all of the small number (260) of certificate I apprenticeships and traineeships, about two-thirds of certificate IIs and about 37% of certificate III and over half of certificate IV level apprenticeships and traineeships. They dominate in all occupational groups under the Australian Standard Classification of Occupations (ASCO) except for the trades and related workers group where they represent only 7%. They are available across all industry areas and dominate longer duration contracts in the four Australian National Training Authority (ANTA) industry areas of arts entertainment sport and recreation (63% compared with 37%), transport and storage (79% compared with 21%), business and clerical (81% compared with 19%), and computing (81% compared with 19%). They account for about

50% in relation to all other services industries. Only in trade related industries, where longer duration apprenticeships have been the norm, are shorter duration apprenticeships and traineeships a relatively small proportion (10% or less).

Another important change is that New Apprenticeships now cater for existing workers in addition to labour market entrants, and can be undertaken part-time as well as full-time. There may, however, be some part-time apprenticeships and traineeships which are actually shorter duration programs that could have been classified as longer duration programs. This is because the calculation of training duration is based on the anticipated completion date of the contract. It is also important to note that New Apprenticeships can now be undertaken mostly on the job, and none are limited to off-the-job classroom training.

Table 2: Apprentices and trainees in training as at 31 December 2003 by ASCO and by expected duration (%)

Occupation	2 years and under	Over 2 years	Total
1 Managers and administrators	83.2	16.8	100.0
2 Professionals	53.9	46.1	100.0
3 Associate professionals	75.9	24.1	100.0
4 Tradespersons and related workers	7.1	92.9	100.0
5 Advanced clerical and service workers	63.4	36.6	100.0
6 Intermediate clerical, sales and service workers	56.5	43.5	100.0
7 Intermediate production and transport workers	70.0	30.0	100.0
8 Elementary clerical, sales and service workers	60.6	39.4	100.0
9 Labourers and related workers	51.4	48.6	100.0
Total	43.0	57.0	100.0

Note: ASCO = Australian Standard Classification of Occupations.

Source: NCVER National Apprentice and Trainee collection, December 2003

Table 3: Apprentices and trainees in training as at 31 December 2003 by ANTA industry area and by expected duration (%)

Industry area	2 years and under	Over 2 years	Total
1 Arts, entertainment, sport and recreation	63.3	36.7	100.0
2 Automotive	9.8	90.2	100.0
3 Building and construction	5.0	95.0	100.0
4 Community services, health and education	50.8	49.2	100.0
5 Finance, banking and insurance	59.0	41.0	100.0
6 Food processing	44.7	55.3	100.0
7 TCF and furnishings	26.5	73.5	100.0
8 Communications	10.5	89.5	100.0
9 Engineering and mining	11.1	88.9	100.0
10 Primary industry	51.8	48.2	100.0
11 Process manufacturing	45.2	54.8	100.0
12 Sales and personal services	48.2	51.8	100.0
13 Tourism and hospitality	30.3	69.7	100.0
14 Transport and storage	78.8	21.2	100.0
15 Utilities	5.5	94.5	100.0
16 Business and clerical	80.9	19.1	100.0
17 Computing	81.2	18.8	100.0
18 Science, technical and training	43.5	56.5	100.0
Total	43.0	57.0	100.0

Note: TCF = Textiles, clothing and footwear.

Source: NCVER National Apprentice and Trainee Collection, December 2003

Quality of outcomes achieved

Quality of outcomes in vocational education and training, and for the purposes of this study, include competencies and qualifications gained within the apprenticeship or traineeship, and achieving better employment-related outcomes as a result of that participation. Satisfaction level of employers and apprentices and trainees is also a key quality indicator. In presenting the findings, we refer firstly to what the research studies, identified as quality national studies, say. Secondly, we refer to the state/territory and specific purpose studies reviewed, and then to the NCVER data analysis.

Qualifications gained

National studies

The national studies use apprenticeships as a proxy for longer duration apprenticeships and traineeships, and traineeships as a proxy for shorter duration apprenticeships and traineeships.

The finding seen consistently over time is that apprentices have higher training completion rates than trainees. For example:

- ✧ Grey et al. (1999) indicated that trainees had high non-completion rates (of about 40%) for data pertaining to 1995–97.
- ✧ A study by Ray et al. (2000) examining attrition over the period 1994–95 to 1995–96 for apprenticeships (this would be mainly in the traditional trades), estimated that attrition was of the order of 22–30% overall and found that most attrition occurs early in the apprenticeship.
- ✧ Cully and Curtain (2001) looking at non-completers for 1999 found that trainees were more likely not to complete than apprentices.
- ✧ Similarly, Bender (2003), examining completion rate data over the period 1995–2000 found that contracts with a duration of one to three years, certificate III contracts, and those in the trades were more likely to complete.
- ✧ NCVER (2001), in relation to group training organisations, found that they mainly deal with traditional trade apprentices, and for the period 1995–2000, training completions for group training organisations' apprentices/trainees grew at a higher rate than for apprentices/trainees overall, and that attrition was similar to apprentices and trainees overall.

State/territory and specific purpose studies

State/territory studies confirm the contention that traineeships have lower training completion rates than apprenticeships. These low training completion rates were mentioned in studies by Smith (2000), Schofield (1999, 1999a) and Toner et al. (2001).

Several studies also alluded to variability in training completion rates by traineeship type but did not completely clarify this issue.

In terms of traineeship type, Callan (2000), for example, found that trainees in sales, food, and timber production were less likely to complete, while Afrassa (2001) found that trainees not in professional employment or in agriculture or mining employment were less likely to complete. In Schofield's (1999) Tasmania study, trainees in small business, food preparation and service, and

retail operations were less likely to complete. The finding for small business is consistent with that of the Grey et al. (1999) study. The finding that trainees in food had lower training completion rates needs to be considered in the light of findings of Lamb et al. (1998), Ray et al. (2000) and Callan (2000), that apprentices in food had low training completion rates.

NCVER data analysis

The data analysis on training completion rates undertaken by NCVER as part of this project confirm that training completion rates for apprenticeships and traineeships of less than two years duration are lower (less than 50%) for the period 1995–1998 than those for durations of greater than two years (generally about 75% or more). The low training completion rate of less than 50% for shorter duration contracts has continued for 1999 and 2000.

The data analysis also confirms variability in training completion rates of shorter duration apprenticeships and traineeships by industry and occupation, as clarified in tables 4 and 5.

Overall, NCVER data analysis indicates that shorter duration apprenticeships and traineeships in the industry areas of construction, accommodation cafes and restaurants, and personal and other services have the lowest training completion rates. By occupation, all shorter duration trades apprenticeships and traineeships have the lowest training completion rates. This is also true for group training apprentices and trainees.

Group training completion rates for apprenticeships and traineeships of under two years duration are on a par with the rate for the contracts under two years overall, whereas group training completion rates for the over-two-years-duration contracts are higher than for all those over two years.

Non-completers of shorter duration apprenticeships and traineeships were mostly employed in the private sector (over 80%), in intermediate sales and service worker occupations (40%), property and business services (20%), and retail (a further 20%).

Expired contracts by industry and occupation were also investigated. These are contracts past their expected training completion date but for which no final status is known. The majority of shorter duration apprenticeships and traineeships with expired contracts were intermediate clerical and service workers (38%) and intermediate production and transport workers (an additional 22%) in 2003.

Table 4: Estimated rates of completion for apprenticeships and traineeships by occupation and duration (1998)

Occupation	Contracts 2 years and under (%) [*]	Contracts over 2 years (%) [*]
Managers and administrators	63	86
Professionals	54	79
Associate professionals	53	82
Tradespersons and related workers	23	75
Advanced clerical and service workers	50	n/a
Intermediate clerical, sales and service workers	54	62
Intermediate production and transport workers	53	69
Elementary clerical, sales and service workers	55	57
Labourers and related workers	48	67

Note: ^{*} rounded to nearest %.

Source: Apprentice and Trainee Contract of Training Data Collection

Table 5: Estimated rates of completion for apprenticeships and traineeships by industry and duration (1998)

Industry Area	Contracts 2 years and under (%)*	Contracts over 2 years (%)*
Agriculture, forestry and fishing	53	76
Mining	72	92
Manufacturing	50	79
Electricity, gas and water supply	50	79
Construction	28	74
Wholesale trade	49	78
Retail trade	47	74
Accommodation, cafes and restaurants	30	57
Transport and storage	54	77
Communication services	57	58
Finance and insurance	56	66
Property and business services	48	76
Government, administration and defence	63	81
Education	56	79
Health and community services	63	72
Cultural and recreational services	52	74
Personal and other services	36	73
Unknown	37	69

Note: * rounded to nearest %.

Source: Apprentice and Trainee Contract of Training Data Collection

Employment and related outcomes

The studies reviewed did not concentrate on employment outcomes. Only two of the national studies have related training completion rates to employment outcomes, although both of these studies predate New Apprenticeships. Grey et al. (1999), in their study on traineeship non-completions (that is, shorter duration contracts), found that non-completers have poorer short-term employment outcomes. In contrast to this, Cully et al. (2000) in a study of completed traineeships found that trainees who completed have good employment outcomes—83% were employed one year after completing the traineeship, with only 7% unemployed.

NCVER data analysis

NCVER analysis of the 2003 student outcomes survey shows that those who complete lower AQF level (that is, shorter duration) apprenticeships and traineeships have good employment-related outcomes, albeit not as good as higher AQF level (that is, longer duration) apprenticeships and traineeship graduates who have the best outcomes of all VET students. Eighty per cent of apprentices/trainees at certificate I/II level (generally of shorter duration) are employed after training completion compared to 89% for all apprentices/trainees.

Moreover, 30% of certificate I/II apprentice/trainee completers received an increase in earnings compared to 45% for all apprentice/trainee graduates and 12% for certificate I/II non-apprentice/trainee completers. On the other hand, 26% of certificate I and II apprentice/trainee completers indicated that they did not gain any benefits from their course compared to 17% for all apprentices and trainees.

Interestingly, good employment outcomes were also achieved by a minority of certificate I and II apprentices and trainees who withdrew before completing their qualification. However, the profile of employment related outcomes is no different to those achieved by non-completers of other training courses at AQF I and II level.

Satisfaction as an outcome

Another outcome measure as defined in this study is the level of satisfaction with the apprenticeship/traineeship by the main players in the system.

National studies

The findings from the national studies indicate that apprentices/trainees, employers and registered training organisations were generally satisfied with apprenticeships and traineeships.

The (pre-New Apprenticeships) study by Cully et al. (2000) on completed traineeships (that is, shorter duration contracts) found that completed trainees viewed the system very positively, with 91% of trainees somewhat agreeing or strongly agreeing that the traineeship had been valuable. This can be contrasted with a study conducted by Cully and Curtain (2001) that examined reasons for non-completion (of New Apprenticeships). This study found that trainees (that is, shorter duration contracts) were less happy than apprentices (that is, longer duration contracts) with training issues. In other words, trainees were more likely to say that they were:

- ✧ obliged to undertake the training (54% of existing employee trainees as compared to 17% existing employee apprentices, and 18% new employee trainees as compared to 2% new employee apprentices)
- ✧ less well informed about what the training would entail (61% of apprentices thought information provided on what New Apprenticeships would entail was good or very good, versus 46% of trainees)
- ✧ less likely to have participated in structured training (58% of trainees as opposed to 66% of apprentices).

Employers viewed the training more positively than did apprentices/trainees with 82% saying they provided training plans, 94% saying they had discussions about work training, 96% about work progress, 84% providing off-the-job training and 97% providing structured training.

Other general studies on New Apprenticeships also found general satisfaction with aspects of the system. For example, group training organisations were viewed positively by main players in the system (ANTA 2001), school-based New Apprenticeships were viewed as a positive experience by participants (Smith & Wilson 2002), and apprentices/trainees and registered training organisations were satisfied overall with mostly on-the-job apprenticeships and traineeships (Wood 2004). Another study by Strickland (2001) found that apprentices and trainees generally had their expectations fulfilled. However, it must be noted that these studies were generally not rated as high on quality as the studies by Cully et al. (2000) and Cully and Curtain (2001). Nevertheless, they demonstrate a common thread of general satisfaction with various aspects of the apprenticeship/traineeship system.

State/territory and specific purpose studies

The state level and specific purpose studies support the national study findings that apprentices/trainees, employers and registered training organisations overall were satisfied with the system. Studies on fully on-the-job traineeships suggest that trainees, employers and registered training organisations were generally satisfied with this mode of delivery, although perhaps not as much as other apprenticeships and traineeships. To clarify, Misko (1999) found that less than 60% of small business fully on-the-job trainees in South Australia enjoyed their traineeship, while Toner et al. (2001) found that when dissatisfaction was expressed, the system was viewed as being concentrated in fully on-the-job trainees. In addition, Callan (2001) found that apprentice/trainee completers were more satisfied than non-completers with the quality of on-the-job training.

NCVER data analysis

From the National Student Outcomes Survey we find that there is no difference in the satisfaction levels of apprentices and trainees who graduated from certificate I or II level courses and those who graduated from certificate III or IV level courses. Similarly, there was little difference in the satisfaction levels of graduates of apprentices and trainees in certificate I or II level courses and other graduates from certificate level I or II courses.

However, table 6 shows that there is a difference in the levels of satisfaction of apprentices and trainees in certificate I and II level courses who did not complete the full course compared to other students in certificate I and II, and also other students in higher level qualifications who completed modules only of the course. For module-only completers, only 61% of apprentices and trainees at certificate I and II levels were satisfied compared to 70% or more for the other three groups abovementioned (see table 6).

Table 6: Satisfaction levels (%) agreeing with statement 'Overall, I was satisfied with the quality of the course'

Student type	Certificate I & II	Certificate III & IV
Completers apprentices/trainees	83	82
Completers non-apprentices/trainees	85	82
Module-only completers apprentices/trainees	61	74
Module-only completers non-apprentices/trainees	71	70

Source: NCVER 2003 Student Outcomes Survey

Summary

The major finding in relation to quality of outcomes of shorter duration apprenticeships and traineeships is that only one in two complete their program and so attain a qualification. This is much worse than for longer duration apprenticeships and traineeships where three in four complete.

The research studies indicate that there is great variability in training completion rates of shorter duration apprenticeships by occupation and industry, but none of the studies clarified this completely. Data analysis for this project confirms and clarifies this variability (as at 2002–03).

The variability is stark in relation to all trades-related apprentices and trainees. Only one in five complete shorter duration contracts compared to three in four who complete longer term contracts in this occupation and related industries. It is also quite stark in relation to Personal and Other Services industries where one in three on average complete shorter duration contracts compared to three in four in longer duration contracts.

Those who do complete apprenticeships and traineeships at certificate I and II levels achieve good employment and related outcomes, albeit not as good as those in longer duration training contracts who record the best outcomes, but better than those undertaking other training programs (not attached to an apprenticeship/traineeship) at certificate I and II levels. Those who complete have high course satisfaction levels that are no different from those who graduated from certificate IIIs or IVs.

In contrast, apprentices and trainees in AQF levels I and II who do not complete are noticeably less satisfied than other apprentices and trainees who complete modules only, and also other students (not attached to an apprenticeship/traineeship program) who do not complete AQF levels I and II.

Certificates I and II have been used here as a proxy measure for shorter duration apprenticeships and traineeships because information on duration of the training is not provided in the Student Outcomes Survey. There is a need for further work, therefore, to disentangle fully the relationship between AQF level and duration and its impact on training completion rates.

Factors affecting quality of outcomes

Factors identified that can impinge on the quality of outcomes from apprenticeships and traineeships include:

- ✧ stakeholder actions
- ✧ characteristics of the apprentice or trainee
- ✧ training mode factors (see figure 1)
- ✧ contextual factors.

Factors relating to actions of stakeholders

The following factors were ascertained from the research studies. No other data is available. In general the research uses traineeships at AQF levels I and II as the proxy measure for shorter duration contracts and apprenticeships at AQF levels III and IV as the proxy measure for longer duration contracts.

Awareness of roles and responsibilities

One of the main issues raised in the research reviewed deals with the level of communication between players in the system (apprentice/trainee, registered training organisation, employer, New Apprenticeships Centres), and awareness of roles and responsibilities by the various parties.

National studies

Cully et al. (2000) found that for some trainees (that is, shorter duration contracts) there was a gap between expectations and what the traineeship delivered. This was due in part to a lack of information on what the traineeship involved, both in regards to the actual training and the work conditions (about 38% of trainees reported this). Cully and Curtain (2001) also found in regard to the New Apprenticeships system that trainees were less informed than apprentices regarding what the traineeship would involve.

These concerns were mirrored in New Apprenticeships generally and across stakeholders of the system. The ANTA (2001) consultation on group training organisations found that about a third of apprentices and trainees consulted did not understand how a group training employer varies from other employers. In addition, Market Solutions (2003), in a study of satisfaction with New Apprenticeships Centres, found that ongoing communication and follow-up with all relevant parties, particularly the employer, was an area of concern.

In relation to workplace only apprenticeships and traineeships, Strickland (2001) found that in some cases there was a gap in expectations between what apprentices/trainees expected and what was received. The study by Wood (2004) found that a key driver of satisfaction for apprentices/trainees was a clear understanding of the apprenticeship/traineeship. Although these studies are not of the same quality as some other studies, they do support the general findings regarding communication and awareness.

State/territory and specific purpose studies

The issues raised by state/territory and specific purpose studies confirm the major factors raised in the national studies. Firstly, level of communication and awareness of roles and responsibilities was mentioned in several studies across time, ranging from Roy Morgan Research (1998) to Toner et al. (2001). Some of these studies also referred specifically to traineeships, in particular Misko (1999) and Patterson and Markotic (1999) which were specifically on fully on-the-job traineeships, and Schofield's (1999a, 1999b) reviews of Queensland's and Tasmania's traineeship system.

Lack of awareness of the system by employers was mentioned in several state-based studies and one local study. For example, Roy Morgan Research (1998) found that there was limited awareness by employers about user-choice in Victoria, while Toner et al. (2001) found in New South Wales that employers had a general lack of knowledge about the apprenticeship/traineeship system. Level of information provided and lack of awareness of roles and responsibilities by trainees/apprentices and registered training organisations was also cited as an area of concern in some of the studies.

Employer support and commitment

A second area of concern coming out of the research has to do with issues surrounding employer support and commitment to the apprenticeship/traineeship.

National studies

Grey et al. (1999) found in relation to shorter duration traineeship non-completion in small business and hospitality, that poor workplace relations and low pay was a main reason for not completing the traineeship, with 32% of those leaving voluntarily citing these factors as very important reasons for leaving. Cully et al. (2000) found terms and conditions of employment to be an area where problems were reported with traineeships (about 38% of completing trainees reported this). Other studies on New Apprenticeships tend to support these findings. For example, Cully and Curtain (2001) found that many apprentice and trainee non-completers were dissatisfied with aspects of the working relationship, with 58% of trainees leaving for job-related reasons as compared to 48% of apprentices. In another study, Harris et al. (2000) found that a supportive workplace and workplace culture was a factor that contributed to the retention of apprentices/trainees.

In relation to fully on-the-job apprenticeships and traineeships, Strickland (2001) found that learning cultures were important in providing a quality learning experience. Furthermore, Wood (2004) cited as one of the concerns raised by registered training organisations in regard to fully on-the-job apprenticeships and traineeships as being lack of employer commitment. Additionally, apprentices/trainees saw the efforts of employers during training activity as being a key driver of satisfaction with the apprenticeship/traineeship. Furthermore, group training organisations saw pastoral care as critical to group training and as being linked to quality outcomes (ANTA 2001). However, these studies were not specifically on trainees (shorter duration). In addition, they were not rated as high in quality as the studies by Grey et al. (1999), Cully et al. (2000) and Cully and Curtain (2001).

State/territory and specific purpose studies

Issues of employer support and commitment were strongly emphasised by state and local studies. Misko (1999) and Patterson and Markotic (1999) both mentioned lack of employer support as an area of concern by fully on-the-job trainees in Western Australia and South Australia (that is, in shorter duration contracts). In addition, the Western Australian Department of Training (1998) found that employers of apprentices were more motivated and committed than employers of trainees. However, concerns with employer support were raised more generally across the apprenticeship and traineeship system in, for example, Schofield's (2000b) review of Victoria's apprenticeship and traineeship system and Callan's (2001) study on apprenticeship and traineeship completions in Queensland.

Training issues, including the training itself and training plan

Some of the issues raised in the research related to the delivery of training—for example, the adequacy of the training, the level of structure of the training, support from registered training organisations and availability of assessment, and integration of training and work, particularly in the fully on-the-job mode.

National studies

The strongest research findings regarding training delivery related to the adequacy and structure of training. Grey et al. (1999) found that one of the three most important reasons for trainees (shorter duration) not completing was inadequate training (31% of non-completers who left voluntarily left because of inadequate training). Similarly, Cully and Curtain (2001) found that non-completing trainees (shorter duration) were less likely to have participated in structured training than non-completing apprentices. However, both apprentices and trainees in this study cited lack of training as a reason for not completing, while some said they received no training, a lack of structured training, or were not learning anything. Cully and Curtain also found that while 60% of trainees had a training plan, 62% reported an absence of discussion to monitor progress. This compares to 39% of apprentices who said they had a training plan with 59% of apprentices reporting an absence of discussion to monitor progress. In addition, Cully et al (2000) found that 3% of trainees (shorter duration) claimed to have received no training and that 56% of trainee completers were unaware recognition of prior learning could be applied. Harris (2001) also found structured training to be a factor in the retention of apprentices/trainees.

Other issues regarding training delivery were raised in the national studies, although the quality of some of the research studies is not as strong, and they do not pertain specifically to traineeships. These issues were all raised by post-New Apprenticeships studies. The availability of assessment when apprentices and trainees are ready to be assessed was raised as an area of concern in the study by Strickland et al. (2001). This is supported by Wood (2004) where lack of support from registered training organisations was mentioned as an area of concern.

Another issue that emerged from the studies of national significance referred to the level of integration of training. For example, Strickland et al. (2001) found that apprentices and trainees had learning and assessment expectations fulfilled particularly where there was a combination of on- and off-the-job learning. Apprentices and trainees were found to value the off-site learning environment in complementing the work environment. In relation to group training, both host employers and apprentices/trainees thought that integration of on- and off-the-job learning assisted in achieving quality training outcomes (ANTA 2001).

This leads on to particular concerns with fully on-the-job training. Strickland et al. (2001) found that apprentices valued a combination of on- and off-the-job training. Concerns were raised by apprentices and trainees with the fully on-the-job mode as regards issues such as opportunities to share ideas, the use of training plans and the employer finding the time to talk about the work. The study by Wood (2004) also raised similar concerns (by registered training organisations) such as lack of opportunities to network, employer commitment, trainees' competing work and study loads and insufficient theoretical content (off-the-job training). In addition, concern was raised about the breadth of skills obtained from the fully on-the-job mode, as this type of training is specific to one workplace only. However, it should be noted that fully on-the job training is a slight misnomer—fully on-the job trainees receive some off-the-job instruction, even if on the worksite.

State/territory and specific purpose studies

Lack of a training plan was cited as a concern in several studies. For example, Callan (2000, 2001) found in Queensland that over a quarter of apprentice/trainee non-completers did not have a training plan, and also that 15% of completers did not have one. Schofield (2000b) found that 40% of trainees and apprentices who responded to a survey in Victoria did not have a training plan.

Patterson and Markotic (1999) also found that lack of development of training plans was an area of concern in relation to fully on-the-job traineeships in South Australia.

Some studies indicated that training was merely reinforcing existing skills and that, consequently, there was inadequate use of recognition of prior learning, a point also raised by Cully et al. (2000) in their national study. For example, Schofield (1999b) found that in Queensland about 20% of trainees reported that the traineeship merely reinforced existing skills. Additionally, Patterson and Markotic (1999) found inadequate use of recognition of prior learning as an area of concern for fully on-the-job traineeships in South Australia. Similarly, Schofield (2000b) in Victoria found insufficient use of recognition of prior learning to be a weakness in the apprenticeship and traineeship system. In a study on training in New South Wales abattoirs (New South Wales Department of Education and Training 2003) found that most existing worker trainees (mainly in shorter duration contracts) felt they knew most of what was being taught. The development and use of training plans and appropriate use of recognition of prior learning are important aspects in providing adequate and structured training with new skills being learnt.

Regarding the level of integration of on- and off-the-job training, this was seen by some of the state/territory-based studies as an important issue in providing quality training. In particular, off-the-job training was thought to be important in complementing on-the-job training. This issue was raised in studies by Roy Morgan Research (1998), Western Australian Department of Training (1998), and Toner et al. (2001). This has implications for apprenticeships/traineeships done fully on the job. For example, Toner et al. (2001) found that dissatisfaction by trainees with the fully on-the-job mode was a result of the balance of training being too much on the job. Two studies on fully on-the-job training by Misko (1999) and Patterson and Markotic (1999) found that the breadth of skills obtained by fully on-the-job training was of concern.

Another area of concern raised in state/territory studies, mainly in relation to the fully on-the-job mode, was the time available to trainees and employers for doing the training. In the Misko (1999) study, both trainees and employers raised concern about finding time to undertake the traineeship. Schofield (1999a) found, in relation to fully on-the-job traineeships in Tasmania, concern over trainees finding time to complete self-paced learning packages.

Skills of trainers/assessors

Another issue arising from the research related to the level of skills of trainers and assessors.

National studies

Level of teachers'/trainers' skill levels was mentioned by Kilpatrick et al. (2001) in terms of problems with professional development and difficulties in getting skilled trainers in rural Australia. Strickland et al. (2001) mentioned teachers/trainers not being up to date with what is happening in the workplace as an area of concern raised by apprentices, while Wood (2004) raised registered training organisations' concern with employer training skills.

State/territory and specific purpose studies

Some studies cited concern with issues surrounding teachers'/trainers' level of skills. In particular, some concern was raised about the level of expertise of the workplace supervisor by Patterson and Markotic (1999), Callan (2000) and Smith (1999). In Callan's study, only 40% of apprentice/trainee non-completers thought the workplace supervisor was a good trainer, with trainees being less satisfied with the quality of trainers than apprentices. Some concern was also raised about the ability of teachers and trainers to adequately conduct assessment. For example, Smith (1999) found in an evaluation of user choice in Queensland poor assessment practices for traineeships done fully on-the-job. Another evaluation on training in New South Wales abattoirs (New South Wales Department of Education and Training 2003) found in a compliance audit that 43% of registered training organisations had trainers not qualified to train or assess the qualification (in meat processing).

Characteristics of apprentices/trainees

Characteristics of shorter duration apprentices/trainees related to probability of non-completion or poorer employment outcomes suggested in the review of the research were:

- ✧ lower levels of previous educational attainment—especially those who have not previously completed Year 12
- ✧ being unemployed prior to the apprenticeship/traineeship
- ✧ Indigenous status.

However, these characteristics are common to all students in VET with lower training completion rates and employment outcomes. Age was the one characteristic that the studies did not clarify, and so was focused on in the data analysis task.

National studies

Six of the national studies have examined characteristics of apprentices and trainees with lower training completion rates and, in one case, poorer employment outcomes.

Two of the studies examined characteristics of trainees prior to 1998 (the New Apprenticeships scheme), albeit from different perspectives. In both these studies, trainees with lower levels of educational attainment and prior unemployment had poorer outcomes.

Grey et al. (1999) found in relation to traineeship non-completion, that trainees with lower levels of educational attainment and prior unemployment were more likely not to complete. In addition, trainees in small business or hospitality/tourism traineeships were less likely to complete.

Alternatively, Cully et al. (2000) found, in relation to completed traineeships, that those with poorer employment outcomes had not completed Year 10, were over 25 years of age, were unemployed prior to the traineeship, were of Indigenous status, and had poor numeracy skills. In both these studies, trainees with lower levels of educational attainment and prior unemployment had poorer outcomes.

Two other studies examined training completion rates after 1998. A study by Bender (2003) found that people with part-time contracts, certificate II contracts, non-government, non-trades, or with disability or Indigenous status were less likely to complete. In addition, a study by Cully and Curtain (2001) on apprentice and trainee non-completions (two-thirds of which were trainees) found that non-completers were more likely to be young and work for organisations less than 100 people. The finding that young people were less likely to complete contrasts with findings from other studies.

Indeed, the results for the characteristics of age across all these studies were equivocal and, so, focused in the data analysis.

State/territory and specific purpose studies

Studies by Afrassa (2001) and Callan (2000) confirmed that characteristics such as previous educational attainment and Indigenous status were related to probability of training completion. Afrassa found that older trainees, those that had not completed high school, and Indigenous trainees were less likely to complete. In addition, Callan (2000) found younger trainees and Indigenous trainees were less likely to complete. He also found that apprentices that had Indigenous status, had not completed Year 12, had a literacy/numeracy need or a disability, were less likely to complete. Once again, the findings for the age characteristic were equivocal.

NCVER data analysis

NCVER's own data analysis has found that training completion rates increase by age at commencement for all apprenticeships and traineeships of less than two years, while they decrease by age for apprenticeships and traineeships of greater than two years. In particular:

- ✧ training completion rates in 2000 for apprentices and trainees of shorter duration commencing at ages 15–24 was 43%, at ages 25–44, 51% and at ages 45–65, 58%
- ✧ training completion rates in 1998 for apprentices and trainees of longer duration commencing at age 15–24 was 74%, for ages 25–44, 71%, and for ages 45–65, 67%.

An analysis has also been undertaken by NCVER on the distribution of existing workers apprentices and trainees by industry and occupation level and duration. What we have learnt is that existing workers make up about 30% of all apprentices and trainees in-training at December 2003, and 44% of all shorter duration apprenticeships and traineeships.

Within the shorter duration apprenticeships and traineeships, existing workers are concentrated in the occupational areas of intermediate clerical, sales and service workers (29%) and intermediate production and transport workers (an additional 30%).

Further analysis is required to clarify whether the presence of existing workers may be related to training completion rates.

Contextual factors

Contextual factors were not found to be primary factors affecting quality of outcomes in the research evaluated. However, increased compliance requirements in relation to the Australian Quality Training Framework were mentioned in state located and specific purpose studies as impacting on the time employers and registered training organisations have for training. Smith (1999) found that there were increasing administrative burdens on employers, while Favero (2003) found in a Victorian TAFE institute that teachers' ability to provide quality training was affected by increasing demands for compliance. A small number of state studies also raised the issue of the appropriate use of financial incentives available to employers.

Summary

The key differentiating factor between shorter and longer duration apprenticeships and traineeships is the number who actually completes their apprenticeship/traineeship training Contract. On average one in two, compared to three in four complete, with the differences being even starker within some industry/occupation areas. Those who do complete have good quality employment related outcomes and satisfaction levels with their training. This study has identified that non-completion of shorter duration apprenticeship and traineeship contracts is due mainly to the actions of stakeholders, and in particular to an apparent lack of communication and awareness of roles and responsibilities between the employer, apprentice or trainee, and registered training organisations and New Apprenticeships Centres. This lack of awareness and communication is often in relation to the employment conditions as well as the training arrangements.

Non-completers of shorter duration contracts are dissatisfied with the employment relationship (their terms and conditions under an apprenticeship or traineeship) as often as they are with the commitment and support they receive in relation to the training itself (Cully & Curtain 2001). The training itself in some instances has been negligible, or else did not teach the apprentice or trainee anything new, suggesting that, in a minority of cases, factors other than skills development might have been influencing training decisions.

Implications

There are several implications both for government and industry arising from this study.

Implications for government

Some studies indicated a lack of awareness as to what is involved in the apprenticeship and traineeship by parties involved, pointing to a need for proper induction processes. The research found that some apprentices/trainees and employers did not realise fully what was involved. A need for clearer information up front by way of a proper induction process would greatly assist relevant parties in understanding their roles and responsibilities in apprenticeships/traineeships. This may have implications for New Apprenticeships Centres in terms of them facilitating this induction and providing relevant information.

There is an implication from the research that a better use of training plans might be a solution. Development and use of training plans would ensure the training is relevant and structured. Some of the national studies indicated that some trainees were receiving inadequate or unstructured training. These studies also imply that the adequacy and structure of training is linked to the completion of training.

Some studies found that trainees were not learning new skills, or that the training was merely reinforcing existing skills. Where this is the case, more appropriate use of recognition of prior learning should be made. The evaluation of the research also indicates that consideration needs to be given to the skill development of teachers and trainers both in terms of training and in assessment practices. The expertise of workplace supervisors was highlighted as an issue to address. This was particularly so for studies on traineeships.

Implications for industry

For industry, there is an implication from the research that a learning culture needs to be developed in areas that do not have a tradition of apprenticeships and traineeships. Some of the research indicates that in some instances there is concern with the level of commitment and support provided by employers. This concern extends to mostly on-the-job traineeships. In addition, one study suggested that employers of apprentices were more committed than employers of trainees. This may be because employers of apprentices have a stronger tradition of apprenticeship training, and hence a stronger culture of learning. However, employers in the traditional trade areas have not achieved good training completion rates either among shorter duration contracts.

This includes group training organisations. Their record of achievement in relation to shorter duration apprenticeships and traineeships is poor relative to their record with longer duration traditional trades contracts. On the other hand, group training organisations are one useful way for apprentices and trainees to gain a greater exposure to a range of skills and so overcome the concern raised in the research, particularly for the mostly on-the-job mode of training. Also, they might be a mechanism for reducing administrative burdens for employers.

What do we still need to know?

The analysis contained in this report provides pointers to what still needs to be known. This can be described in terms of the framework shown in figure 1.

Outputs/outcomes

There is room for further work to fully disentangle the relationship between AQF level and the duration factor, in respect of training completion rates. AQF level I and II traineeships sometimes had to be used as a proxy measure for all shorter duration apprenticeships and traineeships because information on duration of contract has only started to be collected recently. Hence, we do not fully understand whether shorter duration apprenticeships or traineeships, or lower AQF level apprenticeships should be the focus of policy attention.

Further analysis is also required to clarify whether the presence of existing workers may be related to training completion rates. No national studies have been done specifically on shorter duration existing worker apprenticeships and traineeships and part-time apprenticeships and traineeships.

Actions of stakeholders in the system

More research is also required to see whether the key factors that were found to have an impact on the quality of shorter duration contracts also affect longer term ones.

Training mode

More needs to be known about shorter duration mainly ‘on-the-job mode’ apprenticeships and traineeships. Little national level work has been done in this area. A national report on fully ‘on-the-job’ apprenticeships and traineeships, evaluated as part of this work, does not distinguish between longer and shorter duration. It is also not known what percentage of this mode of delivery is shorter duration. There are also gaps in what is known about variations by other modes of delivery for shorter duration contracts. In addition, there was only one small-scale study found on school-based New Apprenticeships.

Policy and contextual issues

There are gaps in what is known about how contextual issues such as user choice policy and employer incentives and recognition of prior learning funding policies influence the actions of stakeholders, and whether the influences are different for shorter duration versus longer duration apprentices and trainees. National studies to date on those contextual issues have not included duration or contract as a key variable for consideration.

Comparative international studies

Four studies were evaluated on Britain's Modern Apprenticeship system. Three of these studies were considered to be of high quality. These studies serve as an interesting comparison to the Australian studies even though there are some differences between the systems. For example, Modern Apprenticeships are targeted at 16 to 24-year-olds. However, there are also some similarities to Australia's system. Modern Apprenticeships were introduced in 1995 (compared to New Apprenticeships in 1998), so they are both relatively new systems. Both are industry driven, and both have strived to extend apprenticeships and traineeships beyond the traditional trades.

Evaluations of the Modern Apprenticeship system raised some similar issues to those found in the Australian studies. For example, lack of information and awareness of what is involved in a Modern Apprenticeship was found to be an area of concern. Winterbotham et al. (2000) found that half of the young people who started a Modern Apprenticeship had little idea of what would be involved. Furthermore, the survey found that employers were not well placed to provide that information.

Lack of employer commitment was also cited as an area of concern in these evaluations. Winterbotham et al. (2000) found that employers were relatively uncommitted to Modern Apprenticeships. An earlier 1998 evaluation by Economic Research Services (2000) found that some employers were reluctant to commit to a Modern Apprenticeship because of insecurity of funding. Furthermore, there was some suggestion by Fuller and Unwin (2003) that employers did not feel ownership of the Advanced Modern Apprenticeship. This lack of commitment may in turn be related to a lack of demand for the Advanced Modern Apprenticeship in non-traditional areas.

Two of the studies also discussed relevance of the training, specifically in terms of integration of key (generic) skills in the training. Economic Research Services (2000) found that where key skills had not been integrated in the training or work, employers thought apprentices were irritated by having to perform irrelevant tasks. Supporting this, Kodz et al. (2000) found that development of key skills works best where they are integrated with tasks relevant to the work.

In summary, research on Britain's Modern Apprenticeship system has uncovered similar issues to this study, including that:

- ✧ good information on the apprenticeship/traineeship for those involved is needed
- ✧ employer support and commitment is a key issue
- ✧ breadth of skills obtained and the integration of key (generic) skills into the training is an outstanding issue.

References

- Afrassa, T 2001, 'Factors influencing the completion of South Australian traineeships: A two-level HLM analysis', *Australian Journal of Adult Learning*, vol.41, no.2, pp.208–23.
- ANTA 2001, *National review of group training: Report on state and territory consultations*, Australian National Training Authority, Brisbane.
- Bender, A 2003, 'Factors influencing completions in Australia's apprenticeship system', *The sixth Australian VET Research Association conference: The changing face of VET*, Australian Vocational Education and Training Research Association, Nowra, NSW.
- Callan, V 2000, *Report on apprenticeship and traineeship non-completions*, Department of Employment, Training and Industrial Relations, Queensland.
- 2001, *Apprenticeship and traineeship completions*, Department of Employment, Training and Industrial Relations, Queensland.
- 2002, *Review of the printing and graphic arts industry and training provisions*, Callan Consulting Group, Brisbane.
- Cully, M & Curtain, R 2001, *Reasons for New Apprentices' non-completions*, NCVER, Adelaide.
- Cully, M, VandenHeuvel, A & Goodes, R 2000, *Completed traineeships: A longitudinal survey of outcomes*, viewed 13 April 2005, <www.dest.gov.au/directory/publications/completedtraineeships.htm>.
- Economic Research Services 2000, *Evaluation of Modern Apprenticeships: 1998 survey of employers*, DfEE, Great Britain.
- Favero, J 2003, "'Quality" training: Challenges for teachers of workplace training for trainees and apprentices' in *The sixth Australian VET Research Association Conference: The changing face of VET*, Australian Vocational Education and Training Research Association, Nowra, NSW.
- Fuller, A & Unwin, L 2003, 'Creating a Modern Apprenticeship: A critique of the UK's multi-sector, social inclusion approach', *Journal of Education and Work*, vol.16, no.1, pp.5–25.
- Grey, K, Beswick, W, O'Brien, C, & Ray, D 1999, *Traineeship non-completion*, REB report 1/1999, Commonwealth of Australia.
- Harris, R, Simons, M, Bridge, K, Bone, J, Symons, H, Clayton, B, Pope, B, Cummins, G & Blom, K 2001, *Factors that contribute to retention and completion for apprenticeships and traineeships*, NCVER, Adelaide.
- Kilpatrick, S, Hamilton, V & Falk, I 2001, 'Issues of quality learning: Apprenticeships and traineeships in rural and remote Australia', *Australian and New Zealand Journal of Vocational Education Research*, vol.10, pp.1–26.
- Kodz, J, Tackey, N, Pollard, E, Dench, S, Tyers, C, & Dewson, S 2000, *Modern Apprenticeships and national traineeships: Skills utilisation and progression*, research report 204, DfEE, Great Britain.
- Lamb, S, Long, M & Malley, J 1998, *Access and equity in vocational education and training*, Research monograph no. 55, Melbourne, ACER Press.
- Market Solutions 2003, *2002 surveys of New Apprentice and employer satisfaction with New Apprenticeship Centres*, Department of Education, Science and Training, Canberra.
- Misko, J 1999, *On-the-job traineeships in Western Australia*, NCVER, Adelaide.
- NCVER 2001, *Group training apprenticeships and traineeships in Australia*, NCVER, Adelaide.
- New South Wales Department of Education and Training 2003, *Strategic evaluation of traineeship training in NSW abattoirs*, NSW DET, Sydney.
- Patterson, J & Markotic, R 1999, *Review of arrangements for on job traineeships in South Australia*, Department of Education, Training and Employment, Adelaide.
- Ray, D, Beswick, W, Lawson, C, O'Brien, C & Madigan, S 2000, *Attrition in apprenticeships: An analysis of apprentices commencing between July 1994 and June 1996*, REB report 1/00, Commonwealth of Australia.
- Roy Morgan Research 1998, *Benchmarking employer satisfaction with training for apprentices and trainees*, Office of Training and Tertiary Education, Melbourne.
- Schofield, K 1999a, *A risky business: Review of the quality of Tasmania's traineeship system*, viewed 13 April 2005, <www.ovet.tas.gov.au/pub_res/oldtemplate/review/report/execsum.htm>.
- 1999b, *Report of the independent investigation into the quality of training in Queensland's traineeship system*, viewed 13 April 2005, <www.training.qld.gov.au/reports/schofield.htm>.
- 2000a, 'Inside the shell: Australia's apprenticeship and traineeship system', *The Australian TAFE Teacher*, Winter 2000, pp.16–19.

- Schofield, K 2000b, *Report of the independent review of the quality of training in Victoria's apprenticeship and traineeship system*, Volume 1, Department of Education, Science and Training, Canberra.
- Smith, E & Wilson, L 2002 *Learning and training in school-based new apprenticeships*, NCVER, Adelaide.
- Smith, L 1999, *The impact of user choice on the Queensland training market: a progress evaluation*, Department of Education, Training and Industrial Relations, Queensland.
- 2000, *Apprenticeships and traineeships: Queensland trends: 1998–99 update*, Department of Employment, Training and Industrial Relations, Brisbane.
- Strickland, A, Simons, M, Harris, R, Robertson, I, Harford, M & Edwards, A 2001, *Evaluating on- and off-the-job approaches to learning and assessment in apprenticeships and traineeships*, NCVER, Adelaide.
- Toner, P, Croce, N, Pickersgill, R & Van Barnevald, K 2001, *Trends in apprenticeship and traineeship training in New South Wales*, NSW Board of Vocational Education and Training, Sydney.
- Western Australia Department of Training 1998, *New Apprenticeships: Making it work*, Western Australia Department of Training, East Perth.
- Winterbotham, M, Adams, L & Lorentzen-White, D 2000, *Modern Apprenticeships: Exploring the reasons for non-completion in five sectors*, DfEE, Great Britain.
- Wood, S 2004, *Fully on-the-job training: Experiences and steps ahead*, NCVER, Adelaide.

The objective of this project was to examine existing literature and national data to identify key factors in achieving quality outcomes from shorter duration apprenticeships and traineeships. It was found that apprentices and trainees undertaking programs of two years or less have a higher rate of non-completion than those doing longer training and this non-completion is the key issue related to the quality of outcomes. The study identifies four key factors affecting completion rates. Of these the actions of stakeholders have greatest impact. Awareness of roles and responsibilities emerges as an issue for attention.

NCVER is an independent body responsible for collecting, managing, analysing, evaluating and communicating research and statistics about vocational education and training.

ISBN | 920896 53 8 print edition

ISBN | 920896 54 6 web edition