

Young people and work: Is VET the answer?

Summary report on the first National Issues Forum

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UTS RESEARCH CENTRE FOR VOCATIONAL EDUCATION AND TRAINING

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OVERVIEW

The Research Centre for Vocational Education and Training at the University of Technology, Sydney held its first National Issues Forum in December 1997. This paper draws on and highlights the implications of the keynote papers and ensuing discussion at the Forum. A major theme of the Forum was the extent to which vocational education and training helps young people¹ to make a successful move from compulsory schooling to the world of work. A second theme was how lessons from overseas efforts to reconstruct vocational education can be applied to Australia.

This overview paper discusses evidence that shows that the school-to-work transition is a problem for an increasing number of young people and why this is the case. The paper then outlines the range of responses by government in Australia to help young people. Among these is greatly increased public funding for VET. However, evidence is presented to show that the vocational education and training providers have failed to attract an increasing proportion of young people as shown by the decline in young peoples' participation in the VET sector. The only area where young people's participation in VET has increased, from a zero base, has been in the secondary school system.

The reasons for the decline in participation by young people in vocational education and training are discussed. Particular attention is given to the labour market outcomes for young people who have undertaken vocational education and training. Recent (1998) survey results are presented on employment and earnings' outcomes achieved by young people who use a VET course to prepare them for employment.

What capacity do the providers of VET have to respond to how work will be organised in the future? The paper suggests that VET's traditional strengths – its institutional base and vocational focus – may also be its greatest weaknesses in the future. The orientation of Australia's VET sector to young people has been strongly influenced, in its policy and practice, by the apprenticeship system and the well-defined occupational structures of the industrial award system. Evidence is presented in the paper that countries with similar training arrangements are making major changes to how their structured education school-to-work pathways work.

The paper concludes with an exploration of the types of changes that VET in Australia needs to make. The short answer to the question posed in the title of this paper is that VET in its traditional form has not been an answer for many young people in helping them in their transition from compulsory schooling to work. As vocational knowledge is increasingly

constructed in the workplace, the challenge to institution-based vocational education and training providers is to work out ways to incorporate workplace learning into their programs. The research presented and the discussion that followed at the 1997 National Issues Forum supports a strong case for the need for vocational education and training providers to undertake a continuous reassessment of how well they are currently meeting the needs of potential students.

INTRODUCTION

Research and public policy too frequently live in separate worlds. Research, at its best, uses an analytical framework that often challenges conventional wisdom. Public policy, on the other hand, is strongly pragmatic. Its focus is on what can work in the here and now. Few opportunities exist to bring these two perspectives together. This appears to be the situation in relation to the role of vocational education and training in assisting young people to move into full-time work

The National Issues Forum was the first in an ongoing series sponsored by the Research Centre for Vocational Education and Training at the University of Technology, Sydney. The purpose of the Forum was to bring together researchers and policy makers in two ways: the first to provide a vehicle for presenting recent research on key policy issues; and the second to give the two communities of practice the opportunity to discuss and debate the issues collectively.

The National Issues Forum was held in Sydney on December 1-2, 1997. and brought together 80 invited senior researchers, policy makers and program managers from across Australia. Three keynote papers given by leading international and national researchers, and responses to those papers by eminent Australian policy makers and researchers formed one key axis of the Forum. The papers showed how international comparisons, and data on what happens to students over time provide rich insights into the operation of training systems in Australia. The second key axis was a set of three discussion groups organised around key issues emanating from each paper.

The purpose of this paper is to highlight key issues raised at the Forum. The paper does this without attempting directly to summarise the keynote papers. However, the paper draws on the responses to the keynote papers, and the lively and vigorous debates that occurred in the Forum's discussion groups. For those interested, the three keynote papers are available separately from the Research Centre for Vocational Education and Training at the University of Technology, Sydney.

Professor David Stern of the National Center for Vocational Education Research, University of California, Berkeley presented a paper on **Developing employability in a learning economy**. Responses to it were provided by Ms Ann Morrow, former Chair of the Commonwealth Schools Council, and Ms Jozefa Sobski, Director of the South West Sydney Institute of TAFE. The questions that shaped the discussion groups following the paper were:

- How effective a mix of vocational, personal, social and career development is offered to young people by the VET courses that they undertake? Do some areas of VET offer more

effective mixes than others? How do school VET programs compare to those offered within the broader vocational education and training sector in this regard?

- How well do VET courses meet the needs of a learning economy?
- How effectively is work-based learning used within VET? How could its use be improved?

Professor Peter Dwyer of the Youth Research Centre at the University of Melbourne presented the second keynote paper **Rethinking transitions: Options and outcomes of the post-1970 generation**. His paper was responded to by Ms Cassandra Parkinson, Chief Executive of Culture, Research, Education and Training Enterprise Australia (CREATE Australia) and Mr Barry Golding of the Bendigo Regional Institute of TAFE and the Centre for the Study of Higher Education at the University of Melbourne. The discussion groups that responded to Professor Dwyer's paper considered the following questions:

- How can post-school qualifications be constructed more flexibly to reflect the experiences and choices of young people? Are traditional VET qualifications sufficient?
- What implications does the reality of fragmented and interrupted transitions have for the career advice that is given to young people?
- Do the income support and educational funding mechanisms for young people in transition to adulthood take sufficient account of their life patterns? Do notions such as entitlements and learning accounts have any value?

Mr Jeff Malley of the Australian Council for Educational Research presented the third keynote paper entitled **Youth, VET and work: Through a partial looking glass**. Responses were provided by Mr Geof Hawke, Senior Research Fellow at the Research Centre for Vocational Education and Training at the University of Technology, Sydney and Dr Richard Curtain, Principal of Curtain Consulting. The discussion groups that followed considered the following issues:

- Why has so little attention been paid to young peoples' outcomes from undertaking VET, in contrast to the heavy policy emphasis in recent years upon their participation?
- If you were a careers adviser, would you advise a 15 year old to plan a career based upon undertaking a VET course?
- Do the returns to young people who undertake VET courses justify the level of public investment in vocational education and training?

CONTEXT OF THE FORUM

Young people and work: Changing prospects over the last three decades

Until the mid 1970s the link between education and the labour market was scarcely an issue for Australian policy makers. Most students obtained jobs soon after leaving school.

Employers rarely required them either to possess formal post-school qualifications or to combine their earning with learning. Being an early school leaver was not a problem but the norm at a time when Year 12 retention rates were around 30 per cent. The first oil shock of the mid 1970s, and the associated rise in overall unemployment levels, for the first time since the Second World War, focused policy makers' attention upon the relationship between education and the youth labour market.

The recessions of the early 1980s and the early 1990s each saw another round of attention from the policy makers. In over twenty years, the issue of youth unemployment has never disappeared from the agenda of the public, the media, politicians, policy makers and policy analysts. Only the scale of the attention has varied, and usually with the scale of the problem. The scale of the problem has itself been a matter of dispute. Nevertheless, however the problem is expressed, the public consensus is that too many of Australia's youth who want work cannot obtain it.

Youth unemployment is one symptom of the deep structural changes that have occurred in the youth labour market in the last thirty years. Another is the decline in the availability of full-time employment for youth. The decline in full-time jobs has varied from the steady to the precipitous and has coincided with a substantial expansion in the number of full-time jobs held by adults. In the mid 1960s, some six in ten (60 per cent) 15-19 year olds held a full-time job. Currently it is around one in six (16.5 per cent), with the decline being particularly sharp in the early 1990s.

The reduced availability of full-time jobs for teenagers has been caused by a number of factors. Among the reasons are: the effects of economic recession; the introduction of new technologies; new working patterns and arrangements; a reduced capacity and commitment to training in its longer forms such as apprenticeships; competition from new and more experienced labour market entrants; a rising demand for new labour market entrants to have formal qualifications; and changing skill demands. In concert, these developments have penalised new job seekers who lack skills, qualifications and experience.

Another important change in the youth labour market has been the growth of part-time employment. This is perhaps paradoxical in light of the growing demand for skills and qualifications that has been a key reason for young people losing out in the competition for full-time work. These jobs are generally casual, temporary and seasonal, brief in hours, poorly paid, requiring few qualifications and providing little formal training. Part-time jobs now account for nearly two-thirds (66%), of all jobs held by 15-19 year olds.

Nearly all part-time teenage jobs during the 1970s and 1980s were held by full-time school or tertiary students. During the 1990s there has been a sharp growth in the number of non-students whose formal labour market status is conferred through a marginal part-time job. Currently around one in five (20%), part-time jobs held by teenagers are held by non-students working only a few hours a week for low wages. These jobs rarely require them to undertake education or training.

It is apparent that the state of the youth labour market problem is only partially and incompletely described by official figures on youth unemployment. A more comprehensive approach needs to look not simply at unemployment, but at the wider group of those who are

on the margins both of full-time work and of full-time study. This group includes the unemployed, and also those non-students who are in part-time employment and the inactive who have dropped out of all forms of education and job search. A recent estimate shows that for every 15-19 year old who is formally unemployed, there is another who is not in either full-time education or full-time work. In May 1999, 15 per cent of the age group were neither in full-time work nor in full-time education. This proportion of young people “at risk” remained significant during the 1990s.⁴ Research shows that a substantial minority of young people - close to one in ten - persist in such marginal activities for up to three years after leaving school⁵. “Milling and churning”, to borrow a phrase from the US literature, is becoming increasingly common for many young people in their lives after school.

Implications for public policy

Two of the keynote papers presented at the National Issues Forum reflect the types of issues that confront policy makers because of the complex changes taking place in the youth labour market in Australia and in many other OECD countries. Stern, on the one hand, looked at ways of shaping learning, both within formal education and outside of it, to allow young people to compete more effectively in an economy and a labour market in which knowledge and skill are paramount. Dwyer, on the other, looked at the increasingly fragmented ways in which young people construct their trajectories through education and through a labour market in which temporary and insecure work is becoming more common.

The microprocessor revolution continues to accelerate economic and social change. Computers and telecommunications make information and capital more mobile than before. Enterprises and individuals can thrive only if they can embrace continual change. This, in brief, is the “learning economy”. Preparing young people for work and life in this age of rapid change requires a different kind of education than in the past, when initial schooling could provide a person with a larger proportion of what a person would need to know for a lifetime.⁶

Much of the academic research and popular literature has assumed that there is a natural process of development for young people leading from full-time schooling and then on into full-time work as the prelude to the achievement of the responsible status of adulthood, citizenship and the parenting of the next generation...What [the experience of young people] suggests is that the policy preoccupation with career-paths based on a definition of labour market participation as a consequence of participation in various post-compulsory education pathways has masked or underestimated a significant overlap between study, work and other life-commitments that for many of the post-1970 generation is in the forefront of their experience.⁷

DECLINE IN YOUTH PARTICIPATION IN VET

Australian policy makers have responded to the changing, and generally deteriorating, labour market faced by young people in a variety of ways since the mid 1970s. These responses include:

- a range of labour market programs directed at the unemployed such as wage subsidies, job search training, and short training courses in the community sector or in vocational education and training;
- changes to unemployment benefit requirements that have been designed to make unemployment a less attractive option than other activities;
- attempts to reduce the supply of youth labour entering the labour market through increasing participation levels in schools, higher education and vocational education and training; and
- an increased emphasis upon programs not specifically directed at unemployed youth but The designed to raise the overall level of skill and of qualification among youth: apprenticeships, traineeships, and school-industry programs are examples.

Vocational education and training is a common theme in many of these principal policy directions. All governments, particularly those in office since the early 1980s, whether State or Commonwealth, Labor or Coalition, have been committed to increasing the participation rate of young people in VET, particularly through TAFE, its main publicly funded arm. This has applied especially to increased participation in apprenticeships and traineeships, in which paid employment is combined with off-the-job education and training. More recently, Commonwealth governments from both sides of the House have been energetic in supporting vocational education programs offered in partnership between schools and enterprises.

Yet this intensive policy effort, and the substantial funds, particularly Commonwealth funds, that have flowed to increase the proportion of young people in VET does not appear to have achieved a great deal for Australia's youth. During the 1980s, coinciding with the development of a strong public policy focus upon young people and vocational education and training, vocational education and training participation by teenagers actually fell.

Between 1983 and 1990 school participation by 15-19 year olds rose by 24 per cent and higher education participation by 58 per cent. Yet, participation by 15-19 year olds in vocational education and training rate fell by six per cent. This fall in participation was accompanied by a sharp change in young people's attitude towards vocational education and training. Opinion polling commissioned by the Commonwealth Government showed that their falling interest in vocational education and training coincided with a growing interest in higher education.

The 1990s have seen only a minor reversal of these trends.

An overview by Ball and Robinson of young people aged 15 to 19 years and vocational education and training during the 1990s¹¹ points out the following:

The overall rate of participation in vocational education and training by young people remained static during the first half of the 1990s at around 20 per cent of the 15-19 year old age group.

Static youth participation has coincided with rising participation by adults, as a result of which young people's share of vocational education and training enrollments fell from

30 per cent to 20 per cent between 1990 and 1996 (Malley's paper to the Forum confirms this trend). Apprenticeship commencements by 15-19 year olds fell by 21,600 or 44 per cent between 1989-90 and 1996.

In the same period, traineeship commencements by 15-19 year olds grew by 6,000. However largely as a result of initiatives taken in 1992 in allowing adults to access traineeships, and in 1994 through the creation of the National Training Wage, by 1996 some 55 per cent of all those commencing traineeships were adults.

Commencing enrolments by 15-19 year olds as a proportion of all TAFE, enrolments rose from 72 per cent to 80 per cent between 1990 and 1996. This points to a rise in enrollments lasting one year or less and a declining role for TAFE in providing young people with extended and broad-based preparation for working life.

The only area of the vocational education and training system where significant growth in participation by young people is apparent during the 1990s is a school-industry program. Here the participation rate has risen from a base of zero at the beginning of the decade to 12 per cent of all Year 11 and 12 students in 1996. However, it is important to note that much of this participation is in short programs and in programs offering limited workplace contact. As Malley noted in his paper to the Forum, much of this growth has been stimulated by the creation, in the 1994 Working Nation White Paper on employment, of the Australian Student Traineeship Foundation, an initiative continued by the Coalition government that was elected in 1996¹⁴.

Why the decline in participation of young people in VET?

Declining or static participation in TAFE, the largest element of the public vocational education and training system, reflects a range of factors. Among these are the changing patterns of demand for skill and changing youth attitudes.¹⁵ However, there are also structural reasons within the TAFE system itself, as a senior TAFE official participating in the Forum pointed out. TAFE courses in many cases are open to all comers and competitive entry favours those with prior employment. This means that young people without relevant employment or experience are often disadvantaged compared to adults in their attempts to enter TAFE. Courses that are linked to the possession of employment and training contracts can help to avoid this problem if young people have an advantage in gaining these contracts. But where these contracts are declining in number, as in apprenticeships, or where young people under the age of 20 no longer have a regulated advantage in competing for them, as in traineeships, young peoples' chances of entering TAFE will fall.

The messages about what happens to those young people who do enter TAFE, once they get in, are confused and contradictory. On the one hand, research conducted during the early 1990s suggests that younger people perform somewhat more poorly than do older students in the same courses¹⁶. This suggests that those same factors that disadvantage young people when they are competing for a place in TAFE - lack of relevant work experience and lack of a job that is related to the course that they are doing - also appear to work against them once they have gained entry to a course. Ball and Robinson, using aggregate national module load completion rates, rather than data that is matched within comparable courses, suggest that course success is somewhat but not markedly lower for younger than for older TAFE

students.

On the other hand, Dwyer in his paper to the Forum, draws on a longitudinal survey of 1717 school leavers to show that those young people who enrol in TAFE find it a highly satisfying experience. This is in contrast to the more negative attitudes towards TAFE revealed in other opinion polls and suggested by comparative enrolment trends between TAFE and higher education. Of those in his sample who had enrolled only in a VET course: 80 per cent said that TAFE should be more highly regarded; 86 per cent said that TAFE is worth recommending to others; 75 per cent said that TAFE is generally well organised; and 81 per cent said that TAFE is generally well taught.

It seemed particularly significant to us that in our VET research study there was a dramatic turnaround in students' attitudes once they had moved beyond their school settings. Clearly in their final school years one of the major barriers to participation in vocational education and training was the prejudicial disregard of VET at the school level...Direct experience of VET produces an entirely different opinion. In fact the VET pathway not only emerges as one held in high regard but also one that for many participants, including those who had done both university and VET studies, was even assessed as 'the better option'.¹⁷

TAFE AND EMPLOYMENT OUTCOMES

Malley's paper to the Forum, on the other hand, suggests the need for great caution in suggesting that this enthusiastic reaction to the quality of the TAFE experience by young people is automatically translatable into solid labour market returns. He reports detailed findings of the 1995 ABS Survey of Graduate outcomes, Technical and Further Education. However, he points out that the sample excludes all those who failed to complete their courses, as well as all those who enrolled in courses lasting less than 200 hours. The lack of good course completion measures in TAFE makes the former group difficult to estimate. However, experience of the system suggests that it is likely to be high rather than low, particularly among young people and among those young people not in trade courses.

The data on TAFE graduate labour market outcomes for 1995, 1997 and 1998 show that over seventy per cent (73, 71 and 73 per cent respectively) are in employment five months after graduation with slightly higher employment rates for 15 to 19 and 20 to 24 year old graduates.¹⁸ However, there is a marked difference between the outcomes of trade (and post-trade) courses and other courses. Using more up-to-date figures than those used by Malley, 93 per cent of persons graduating from a trade course in 1997 were in employment in May 1998, with 84 per cent of all trade course graduates in full-time work. On the other hand, only 56 per cent of Certificate II graduates in 1997 were employed in May 1998 with only 30 per cent of Certificate II graduates in full-time work.¹⁹

The gender divide is most evident in the differences in employment outcomes. The most recent data, fully consistent with the earlier data used by Malley, show that 79 per cent of 1997 male graduates were employed while only 68 per cent of female graduates were in work in May 1998. This gender divide is even more marked for the differences between 1997 male and female graduates' full-time employment outcomes (64 per cent and 35 per cent

respectively in May 1998).

However, the employment outcomes of many TAFE graduates, and in particular of graduates from trade courses, may not be directly attributable to their TAFE courses. Many enrol in a TAFE course as a supplement to existing employment, rather than in order to gain employment. Some 40 per cent of employed TAFE graduates in 1997 had the same employer in May 1998 as before and during their course.²⁰ A more accurate picture of employment outcomes of TAFE graduates can be gained from looking at those graduates who were unemployed or employed part-time before commencing their course. These data for 1997 graduates show that of those unemployed before their course, only 46 per cent were in employment after graduation in May 1998 (with nearly three fifths of those in full-time work). Of those not-in-the labour force before their course, only 42 per cent were in employment six months after graduation (with just under half in part-time work).

For those in part-time work before their course, as high as 85 per cent were employed in May 1998 (but just over half remained in part-time work). The group most likely to show a strong employment outcome after graduation were those in full-time work before their course. The data show that of the 1997 graduates in full-time work before their course, as high as 91 per cent were in work after graduation, with most (86 per cent) in full-time work.

Another view of the employment outcomes is presented in Table 1 below. These data show that the proportion of 1997 TAFE graduates in full-time employment has increased from 38 per cent before their course to 48 per cent after their course. The proportion of graduates in part-time employment has decreased but remains high at 19 per cent. The proportion unemployed has fallen marginally from 16.8 per cent to 14 per cent while the proportion not-in-the labour force before their course has fallen from 18 per cent to 13 per cent.

Clearly, these results show that in terms of employment outcomes, only a small proportion of TAFE graduates (10 per cent) are likely to benefit in terms of attaining full-time work as a result of doing their TAFE course. On the other hand, the data also show the importance of combining a TAFE course with employment, preferably where the course of study is integrated with or is at least relevant to work.

Table 1: TAFE graduates' labour market status before and after course, Australia, 1998 (per cent)

Labour market status	Before starting course	After graduation
Full-time employment	37.8	47.9
Part-time employment	26.2	19.4
Unemployed	16.8	14.0
Not in the labour force	18.1	13.0
Total (including not stated)	100.0	100.0

Source: NCVET *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 at a Glance*. Supplement to the Australian Training Review, Adelaide, January-March 1999, Vol. 29, p. 3.

Perceived relevance of TAFE course

The relatively weak link between course of study and positive labour market outcomes is confirmed by the perceptions of TAFE graduates themselves. Of the 1997 TAFE graduates who gave as their main reason for doing the course “to get a job or own a business”, only 49 per cent said that the course helped them to achieve their aim.²¹ Employed graduates were also asked about the relevance of their TAFE course to their current job. As many as 83 to 91 per cent of professionals, associate professionals, managers/administrators and tradespersons rated their course as relevant. However, young people aged 15 to 19 years, part-time workers, women and NESB were the most likely to say that their course was of little or no relevance.²² Only 54 per cent of graduates rated their qualification as good to excellent in terms of its standing in the eyes of employers. Some 39 per cent rated their qualification as average and 7 per cent rated it as poor in the eyes of employers.²³

These results strongly suggest that the stand-alone effect of a TAFE course on labour market outcomes may be substantially less than the aggregate data indicate. Even where prior full-time employment is not a prerequisite to undertake a course, a positive labour market outcome appears to depend mostly on the student’s prior employment status. In other words, unless you have prior experience in work, graduating from a TAFE course is only likely to help a small proportion of job seekers find full-time employment.

TAFE and earnings

To improve one’s chance of finding suitable work is not the only reason for undertaking a TAFE course. Only a third of 1994 TAFE graduates gave getting a job or starting a business as the reason for doing a course. Nearly a quarter (24 per cent) wanted a better job or a different career. This suggests that income change may be a better measure of the economic benefit derived from a TAFE qualification.

Research findings about the incomes of those with different types of educational qualifications suggests the need for caution about the impact of TAFE graduation upon earnings. The 1998 TAFE Graduate Destination Survey noted that 29 per cent of employed 1997 TAFE graduates received an increase in earnings; 20 per cent received a promotion or increase in status at work; and 28 per cent had changed job or obtained employment.²⁴ However these point-in-time results need to be complemented by data taken over a longer time frame.

Analysis by Professor Ann Harding shows that income levels related to educational qualifications reveal that those with bachelor or higher degrees and those with diplomas experienced substantial income increases from the early to mid 1990s (\$447 to \$481 pw); and (\$399 to \$423 pw, respectively). The income of those without post-secondary qualifications remained steady (\$330 to \$335 pw) but those with skilled vocational qualifications experienced a substantial fall (\$493 to \$456 pw). Data analysed by Marks and Fleming of ACER for three cohorts born in 1961, 1965 and 1970 show that between the ages of 18 to 22 years the returns to apprenticeship training are substantial. However, by the age of 28 to 33

years, an apprenticeship had no significant impact on earnings. Their conclusion is that diplomas and certificates gained at TAFE were found to have a much weaker impact on earnings than possession of other qualifications.²⁵

It is not possible to be definitive about the labour market and earnings outcomes of VET courses at this highly generalised level. As Jeff Malley notes in the conclusion to his paper, there are few comprehensive and connected studies on youth, VET and the labour market. We know little about the connection between VET and job pathways or between different VET courses and earnings. The need for information about graduate outcomes is important at the system level but also at the training provider level. There appear to be significant differences between providers and types of courses in terms of the labour market outcomes achieved. He asks, for example, why there are high unemployment rates for first-time entrants doing courses in arts, social science, and science and business studies.

IS VET THE ANSWER?

These labour market outcomes suggest that for many TAFE graduates VET may not be the answer. The evidence on labour market outcomes strongly suggests that there is considerable scope to improve the capacity of VET as delivered through TAFE to help young people make a successful transition from compulsory schooling to full-time work.

Where VET remains tied to the production of standardised skills in rigidly defined occupations in declining industries, its ability to respond flexibly to the needs of the emerging new occupations in new sectors of the economy appears to be limited. Vocational education and training (VET) as a government funded technical training system historically was closely tied to the apprenticeship system.²⁶ Trade training was the primary focus of much of technical education until the 1980s.²⁷

The legacy of the past

Peter Dwyer, in a more recent analysis of the policy implications of the research findings reported at the Forum has noted the damaging effect of past arrangements on the options for young people in vocational education and training today:

Current training arrangements still appear to be largely shaped by the 'norms' of the industrial era, premised on a linear transition 'from study to work', the identification of narrow 'job-specific skills', and (outside the apprenticeship system) an assumption that study and work are sequential rather than complementary elements of the training agenda. However, for the participants, and in response to new labour market conditions, the relationship between these elements has changed. The interface between study and work is now accepted by them as a 'fact of life', and integral to their preparation for the 'workforce of the future'.²⁸

The close links between trade training and the apprenticeship system produced what has been termed a *tightly connected* training system. Occupational boundaries were prescribed in industrial awards.²⁹ Training content for the off-the-job training was closely overseen by tripartite industry training advisory bodies. The legacy of this tightly connected system in

Australia is still evident in the continuing emphasis on the importance of industry and occupational competency standards still in many cases linked to industrial awards.

Another legacy of traditional apprenticeship system is the separation between academic and vocational training. Apprenticeship training is commonly seen by teachers and students as not requiring a high level academic foundation. This is reflected in the high proportion of apprentices who are early school leavers.³⁰ This traditional separation of the academic from vocational training is also reflected in the fact that only 53 per cent of 1998 TAFE graduates had completed Year 12 or equivalent.³¹

In other respects, Australia has moved away from a tightly connected system for managing entry level employment and training. This is particularly the case in the new occupations and industries. The traditional apprenticeship system has remained tied to the occupations where it was first established often before the turn of the century. New training arrangements have been formalised through traineeships but this mode of entry level training operates in a far less formal way than the apprenticeship system.

The new realities

Employers in new occupations are often unwilling to offer formalised apprenticeship-type contracts of training for a variety of reasons. In most cases, it is up to individuals to construct their own pathways, combining learning with work experience that may or may not be relevant. The diversity of pathways is the opposite of the lockstep progression that the apprenticeship system is built on and many industrial awards have sought to follow. Young people now prefer to keep their options open by acquiring an educational foundation that is broad based. Craft skills linked to rigidly defined occupations are often seen by employers and school leavers as too restrictive a basis for their foundation learning for the workplace.

Dwyer shows from his rich data set how young people are responding over time: 60 per cent of those surveyed are not following the conventional pathways of further education or full-time work. For example they are interrupting or discontinuing studies, are happy with irregular work, or are downgrading the importance of qualifications. This diversity of pathways is related to the fact the career expectations of many of those surveyed had not been fulfilled. Only 34 per cent of respondents described their jobs as being in their preferred career area.

Dwyer emphasises how young people increasingly have to negotiate their own pathways from school to work. This is in line with a range of other changes facing young people and older adults in what has been called “The Risk Society”:

The proportion of the biography which is open and must be constructed personally is increasing... Decisions on education, profession, job, place of residence, spouse, number of children and so forth, with all the secondary decisions implied, no longer can be, they must be made. Even where the word ‘decisions’ is too grandiose, because neither consciousness nor alternatives are present, the individual will have to ‘pay for’ the consequences of decisions not taken.³²

TAFE's capacity to respond

The capacity of TAFE to respond to the new, flexible world of shifting occupational boundaries appears to be highly variable. One aspect of their course that 1997 TAFE graduates were least satisfied with was the availability of information about careers and jobs. Only just over a third - 36 per cent – of graduates rated this aspect as good or excellent. Other areas of dissatisfaction were related to information received when choosing courses, subjects or modules. This aspect of TAFE's performance was also seen as less than good by half (50 per cent) of the graduates. The balance between instruction and practice was seen as unsatisfactory by 46 per cent of TAFE graduates. Similarly, only 42 per cent rated their course as average or poor in reflecting industry practice.³³

The following section outlines in more detail the new forms of work that are now emerging. The requirement for new flexibilities has different implications for each of the two broad types of education-to-work systems that operate in OECD countries. The ambiguity of Australian training arrangements is discussed and future directions proposed. The final section of the paper goes into more detail about specific suggestions for new directions for the vocational education and training system.

NATURE OF THE CHANGES TO WORK

Stern highlighted in his paper the ways in which changes in how work is organised are having a dramatic effect on vocational education in industrialised countries. The new knowledge-intensive economy poses challenges for systems that were previously seen as highly successful. As Stern notes, employment is becoming increasingly fluid with occupational boundaries changing or dissolving. Organisations are seeking to both promote learning and at the same time reduce the cost of training through “on-line learning”.

In many ways, the new knowledge economy is built on a shift in organisations away from top-down hierarchical structures to flatter structures such as networks and autonomous teams. Top down hierarchies are particularly suited to producing or providing standardised goods and services. Knowledge production requires looser forms of organisation that give greater recognition to personal autonomy and self-direction of the mind³⁴. Knowledge is best acquired through the active involvement of the learner and not through passive rote memorisation. Within enterprises, there is a strong emphasis on independence and teamwork, away from working conditions based on independence and autonomy³⁵. Cross-functional communication and co-ordination is increasingly seen as a crucial requirement of people working in ever more specialised work teams³⁶.

Central command structures give way to semi-autonomous teams horizontally coordinating according to centrally given rules. Work organized according to the externally determined "one best way" is replaced by participative experimentation leading to continuous improvement. Within the firm, the transfer of localized tacit knowledge takes place mainly through horizontal apprentice-like relations, not vertical training from managers to workers³⁸.

The answer to the question of whether VET is the answer for helping young people move into the world of work depends on how well VET is able to respond to the new work environment outlined above. What implications does this new working environment have for the VET system? Before tackling this question, however, it is important to note two broad types of education to work arrangements and where Australia fits in terms of its arrangements.

Impact of new work realities on education to work systems

Two types of education to work arrangements in OECD countries have been identified: *tightly connected or loosely coupled*.³⁹ David Stern in his paper to the National Issues Forum noted how training systems based on the former are experiencing difficulties due to their inflexibility compared to the latter in meeting the training needs of the new types of work and working arrangements.

In countries such as Germany, Austria, Switzerland and Denmark, with a tight connection between the education system and the labour market, there is extensive involvement by employers and trade unions in setting competency standards and providing training places for young people. Government plays a key role in regulating the operation of education and training systems and the labour market. In such countries the education and training system is generally segmented into vocational and general education, pathways and the vocational pathways are closely tied to preparation for particular occupations.⁴⁰ Labour markets in these countries are generally organised around occupations that can only be entered by those holding the relevant occupational-specific qualification.

On the other hand, in countries such as the USA, UK, Canada and New Zealand with more loosely coupled links between education and work, employers and trade unions play much less of a role in the education and training system. Labour markets in such countries tend to be organised around broad employability attributes rather than specific occupational qualifications. The labour markets are relatively open and flexible, and subject to comparatively little government regulation. In loosely coupled systems tends Secondary education to have a strong emphasis on general education oriented to university study, modularisation of curriculum provision and courses, and *individually constructed* pathways connecting education and work.

A major strength of tightly connected systems is that they provide secure routes to work for youth, and their record in achieving smooth transitions is impressive. However, a limitation of tightly connected systems can be their inflexibility. According to McKenzie:

The often rigid separation of general and vocational pathways is seen as a factor explaining why the proportion of young people enrolling in vocational programs in German-speaking countries has been falling for the last 10 years or more. Only limited bridges have been established between vocational training and higher education, and such systems are increasingly viewed as unable to satisfy young people's desire for more extended qualifications. Indeed, the highest growth in upper secondary education in Austria is in programs that qualify young people both for entry to employment and to

higher education – even though such programs commonly take up to a year longer than programs designed to enter either higher education or employment direct from school⁴¹.

This rigidity was noted in a comparison of German and US school-to-work transition patterns. Buechtemann, Schupp and Soloff note that major drawback of the German system:

...its strong channeling of youngsters into different career tracks that ...largely preclude cross-track upward mobility into higher skill and wage strata ... is increasingly at odds with the changing aspirations of upcoming generations of youth within a more open and fluid societal environment.⁴²

David Stern in his paper notes the changes that vocational education is going through to respond better to the demands of the new knowledge intensive economy.

Reforms include strengthening the academic content of vocational preparation...In Germany, where many apprentices have traditionally received a high level of theoretical instruction as part of their training, there have been efforts in recent years to bolster academic content even more. Countries are making it easier for vocational students to pursue further studies at the university level, as in Germany where 30 per cent of university students in 1994 had completed apprenticeships in the dual system. These changes are intended to attract larger numbers of intellectually talented students into vocational programs to give them sufficient theoretical grounding to deal with changing technology, and to prepare them for continual problem solving.⁴³

In contrast, loosely coupled systems provide much weaker support to young people in the transition to work. However they can provide many more opportunities for re-entry into the education and training system at later stages in life. The tightly connected systems are oriented more towards the young, and place more emphasis on providing vocational skills before entering full-time employment. This means that tightly connected systems are at a disadvantage when economic and social circumstances change rapidly, and adults need to adapt and adjust.⁴⁴

NEW DIRECTIONS FOR VET

The research results presented and the group discussions held at the National Issues Forum about the role of VET in helping young people into employment suggest that two forms of flexibility are needed. One can be called content/context flexibility and the other temporal flexibility. Content/context flexibility refers to the four types of reform vocational education is undergoing in industrialised countries noted by David Stern in his paper. These are: integration of academic and vocational studies, use of competency standards including generic work skills, opportunities for work-based learning and shared responsibility between employers and educationalists.

Dwyer also proposed a similar set of changes in Australia. These are the need for TAFE to recognise and provide credits for simultaneous work experience within course arrangements;

and for TAFE institutes to establish closer links between students' part-time local employers. Also needed, according to Dwyer, is for TAFE to give clearer recognition, within competency guidelines, to transferable 'employment skills' as an important complement to more narrowly defined 'job skills',⁴⁵.

Need to integrate academic and vocational streams

Stern, in his paper, showed how the divide between academic and vocational education is being broken down to permit those who may have pursued one or the other streams to cross over and qualify in the other stream. This can be done at the margin by relaxing the rules to make it easier to take courses in the other stream. A more definitive approach is to allow students to qualify for university by taking vocational courses that are regarded by the education authorities as equivalent to academic courses. As Stern points out, France, Britain, Japan, the Netherlands and Denmark have followed the latter approach. However, he notes that no country has yet implemented one integrated set of credentials for both vocational and academic studies at the secondary school level.

Ann Morrow, in her response to David Stern's paper, pointed out that an integrated general and vocational education curriculum was recommended to Australian governments by the Commonwealth Schools Council in 1994. This involved linking senior secondary schooling outcomes more closely to the Australian Qualifications Framework. Ann Morrow also suggested that an integrated academic and vocational curriculum would also need to be supported by single national accreditation board. However, Ann Morrow stressed that a change of this nature would need to be underpinned by Australian research to show teachers how and to what extent participation in vocational education and workplace learning improved students' academic performance.

Need to include generic work competencies and theory

Another important element of content flexibility, again based on Stern's reading of the lessons from recent developments on OECD countries, is the use of explicit competency standards that integrate occupational and education objectives. This means ensuring that competency standards for VET courses are not narrowly based on occupational requirements alone. They also need to reflect a broader set of generic work skills or key competencies together with an underpinning of theoretical knowledge. The former are the soft skills needed to operate in the modern workplace by being able to apply occupational or technical skills in different contexts. The inclusion of theory is important to make it easier to solve problems in a variety of settings. It is also the basis for further learning both in classroom settings and in the workplace.

Need for learning in context

Context flexibility refers to David Stern's third and fourth types of reforms to VET in overseas systems implies that learning is best acquired when it is "situated" or carried in context. For vocational education and training providers, this requires delivering training that has been shaped by the workplaces for which their students are destined.

A particular strength of the apprenticeship system has been its potential for linking on and off-the-job training. However, in the apprenticeship system as it has operated in Australia, the links between the formal classroom instruction and on-the-job learning were often tenuous at best and non-existent at worst. It is only with the recent formal specification of competencies for on-the-job skill acquisition that learning in context for many TAFE courses is now possible. Efforts by individual course providers are still needed to ensure that this potential to integrate off and on-the-job training is achieved.

As one discussion group noted:

Enterprise specific training does have positive outcomes for students. Vocational education and training cannot provide all the skills for life. Lifelong learning occurs through mixed mode patterns.

The work-based learning placement model offers a range of benefits to educationalists and enterprises. Three sets of benefits of close teacher-employer links can be identified. First, employers can demonstrate to students what skills are needed in the workplace and hence reinforce in students the value of a good education. Second, students are likely to exert more effort once they return to the classroom because they have a better appreciation of how their classroom performance is relevant to their future careers. And third, teaching staff accrue additional authority based on their close association with employers. However, realisation of these benefits will depend on employers playing an active role. This role needs to include specification of relevant competencies to be acquired through the work placement and demonstrated in their subsequent assessment.

The group discussions confirmed this positive assessment of the potential value of closer ties to students, schools and employers.

It is exceptionally valuable to make the link between training, school and work...it cements and enhances the learning experience. A work placement makes students work ready... it increases their exposure to employment opportunities [and] makes them more competitive.

Where there is no formal link between the classroom and the workplace it will be important, at least for those who are school leavers, to have the opportunity for an extended work placement during their VET course. This applies not only at the senior secondary school level but also in TAFE.

However, in responding to David Stern's paper, Jozefa Sobski, noted that workplaces may not be good places to learn. This sentiment was echoed in some of the group discussions. It was also noted by one discussion group that enterprises are largely informal learning sites but educationalists tend to judge the learning experience against their institutional criteria. This suggests that, for example, formal assessment in the workplace may not always be required or necessary. Self-assessment may be a useful outcome in many instances.

Another discussant noted that workplaces might understand learning in a different way to educationalists, and that these differences are illustrated by experience with the TRAC model. The differences in understanding may revolve around structure, framework and the focus on problem solving. There may be a reluctance by small business staff in particular to leave the determination of appropriate outcomes to teachers. Similarly, what students learn at work may be different from what employers and schools expect them to learn. There is an issue for educationalists as to far they should go in engaging workplace expectations.

Unsatisfactory learning conditions in the workplace may be due to an absence of appropriately trained mentors. It may also be due to bad work practices, such as scapegoating or victimising of apprentices. David Stern, in his presentation, noted that for a work placement to be a beneficial experience for the student, it needs to be carefully planned and monitored by people who understand both the work setting and what is to be learned there. Work placement coordinators may need a close rapport with employers to encourage employers to devote the resources needed to mentor students in the workplace. Coordinators, therefore, may need to be sourced directly from industry and be located in bodies with high credibility with employers such as an employer association.

Another discussion group noted that employer expectations regarding the student's level of competence change according to the length of the placement. A work placement over a longer time period is more likely to increase the chances of learning and the value of the skills acquired to both the employer and the student.

Employers and the difficulty of finding work placements

There is now a range of options for employers to provide secondary and post secondary students access to the workplace. These vary from short-term work experience (which is simply job shadowing) to structured work placements of varying length. More recently, part-time New Apprenticeships are also available for students still at school.

The integration of off and on-the-job skills acquisition in the apprenticeship/traineeship system and the widespread use of work placements for full-time VET students require a close working relationship between educationalists and employers. A strong feature of the German apprenticeship system is the involvement of employers alongside government and the unions. However, this employer involvement is not limited to national or state peak industry bodies. It involves a social partnership at the regional and local levels where employers play a proactive role.

In contrast, in Australia employers are often involved in VET courses through work placements in a passive way. An Australia-wide study of the benefits of secondary school students in workplaces shows that, apart from prescribing some selection criteria, employers play a minimal role in organising the placements. The initiative is taken by teachers or vocational placement coordinators.⁴⁶ There is no reason to believe that the situation is likely to be different in other parts of the VET sector.

The group discussions highlighted the difficulties of getting employers to offer work placements. Two major problems were noted: the volume of the work placements and the distribution of placements. There is an increasing demand from secondary schools and TAFE for suitable placements but there are major difficulties in finding employers who can offer placements. It is noted that larger firms are more likely to participate and are regarded as easier to work with. Where small employers are willing to become involved, they often do not have a training infrastructure. However, small employers are more likely to employ students on a continuing basis.

The discussions also noted that many employers are disappointed by the quality of students. Specific attention may need to be directed at students who are likely to meet work requirements. One reason for the success of the retail industry traineeship in NSW is the trainee selection process. Employers noted that this saved them significant time and hence provided them with a financial saving. Trainees themselves were satisfied with the selection process.⁴⁷

A more structured rather than an ad hoc approach to the provision of access to the workplace for students by employers is likely to produce a better response. This structured approach should start with a set of national guidelines to spell out the likely costs and benefits employers can expect from different types of education industry linkages. The guidelines should also specify what conditions are needed to maximise the benefits of any one option. The development of the guidelines should be the primary responsibility of national peak employer bodies. TAFE through ANTA may need to work with national employer bodies to develop the guidelines for managing structured work placements in particular.

One discussion group noted that education providers “need to work with the limitation of workplaces and persist with personalised contact”. because the link person between the education provider and the workplace was seen as crucial. The rule of thumb identified by the group to judge the resources required for the co-ordinator was roughly half a day per placement with time for follow-up additional.

The group discussions emphasised the need to find ways to help students to learn in context when work placements are not available. In-house arrangements have been developed in schools and TAFE to give students the experience of a simulated work environment. Examples are the practice firm concept that operates in mainly TAFE Institutes⁴⁸. A practice firm is a simulated business that is set up and run by students with support from an educator (trainer/facilitator) and a real business. Practice firms conduct business with other practice firms in a simulated market economy on a local, national or international basis. The products and services traded reflect those marketed by their real business partners.

Flexibility in delivery

The second major form of flexibility that will be important to VET in the future is temporal. This refers to flexibility in times, venue and format that will be required to meet the needs of an increasingly diverse array of peoples’ needs. Many young people, as Dwyer’s research suggests, are now likely to construct their own pathway by negotiating a series of steps that includes work and further education. These choices Dwyer makes clear are not likely to be in

a linear sequence. Modes and times of delivery need to accommodate a clientele that will increasingly want to exercise their full range of options, particularly in relation to different combinations of work and study.

The group discussions highlighted the need for TAFE to move from a course-based model with set hours of training delivery to one that was more firmly focused on the needs of the individual. The issue was how best to match individual choices to education structures to make a greater range of career choices and aspirations possible.

The entry level training system in the retail industry in NSW requires extensive training on-the-job. However, it was noted that TAFE has had problems coping with the mixed locations and mixed routes to the end result. One major problem is that resources are still allocated on the basis of the traditional measures such as annual hours curriculum. This means that any change to greater flexibility will need to be based on new criteria for allocating funding.

The NSW Retail Industry's traineeship program appeals to both employers and trainees because of its flexibility. Employers liked the customisation of the curriculum, and scheduling of the timetable. Trainees saw their training as valuable because of the high regard in which it was held by employers⁴⁹. Other evidence was cited in one discussion group of the flexibility in course design at Illawarra TAFE which was well received by students and employers. The course structure was based on clear but not rigid outcomes. Also at Salisbury High School in South Australia, there a range of provision structures available permeated by a "whole of school" care group structure based on a time allocation of over three hours a week.

Another discussion group noted the limitations of the concept of partnership. It was believed that school or TAFE partnerships with local employers often worked to the advantage of the more powerful party at the expense of the weaker party. The result was little or no pressure on TAFE to provide a greater range of flexible options. A more appropriate approach, according to a comment made in one group discussion, was that "VET courses needed to be owned by all the community and not just a partnership".

Other responses to the need for more individualised approaches to learning involve greater use of RPL to give credit for informal learning. The Victoria University of Technology has developed the use of individual learning plans to encourage people to undertake tertiary study. The target group were those people who otherwise may not have gained entry to a tertiary institution based on their previous level of education attainment.

CONCLUSION

Can VET help young people to make a successful transition to work? The answer is certainly not VET as we have known it. The challenges for VET are those identified by the Finn and Carmichael reports on how best to prepare young people for worthwhile and satisfying employment. These are: the need to embed vocational education more solidly into senior secondary school curriculum, adopt more flexible forms of curriculum among all VET providers, establish closer and more comprehensive links to workplaces and develop qualifications with wide acceptance in the marketplace.

TAFE has suffered from the legacy of servicing a tightly connected system that has historically shaped structured entry-level training arrangements in Australia. This tightly connected system revolved around clearly defined occupations operating within the legal framework of industrial awards. Future jobs, however, will not be as clearly defined. A major criticism of tightly connected school-to-work arrangements, such as the apprenticeship system in Australia in the past, is the narrowness and specificity of the training and the lack of an alternative option for the young people who receive their training through such systems.

An important feature of the changed conditions emerging in the knowledge economy is the move away from centralised bureaucratic controls. The move to more complex knowledge-based work requires the delegation of authority to act to the lowest levels in an organisation. Central command structures give way to decentralised workplaces operating as semi-autonomous teams horizontally coordinating according to centrally given rules. “Work organised according to the externally determined ‘one best way’ is replaced by participative experimentation leading to continuous improvement.”⁵⁰

Just as work, in many cases, is moving away from being packaged in narrow jobs with little responsibility, so will the content, context and mode of delivery of training need to change. The centralised structures used by government-funded education and training providers in the past will need to more closely reflect how knowledge-based services are delivered in the leading sectors of the economy. The challenge for publicly funded education and training providers is that they need to swing a great increase in their local level responsiveness while still adhering to broader public objectives.

On balance, TAFE, as the main provider of VET to young people, has not had a strong record in being able to sell itself to young people. There has been no growth of any note in TAFE participation by young people in the 1990s, despite a high public profile and large injections of Commonwealth funding. However, when VET has been associated with secondary schools, growth in student participation in VET has been marked⁵¹.

The picture of minimal growth in young people’s participation in TAFE during the 1990s, following a period of decline during the 1980s, is in part due to the decline in apprenticeships, and in part to a growth in traineeships that has been concentrated among those over the age of 20 and which at times has occurred within non- TAFE training providers. However neither of these factors accounts to any real extent for the marked decline in youth participation in TAFE and VET more generally that occurred during the 1980s, a period in which apprenticeship numbers were continuing to rise. A key factor in explaining the lack of attractiveness of TAFE to young people, highlighted by Malley, may well be the poor employment and earnings outcomes for many TAFE courses compared to other tertiary education options. Young people, if they have a choice, are choosing to go into higher education because the prospects for employment and career earnings appear to be much better.

The uncertainty of vocational education and training providers in how to respond to the new employment market is reflected in dissatisfaction among recent TAFE graduates with TAFE as an information broker in terms of job and career prospects. TAFE graduates also expressed dissatisfaction about the information they received when choosing their courses, subjects or

modules. National survey results also show that many TAFE graduates are not convinced about the value of their qualification in the eyes of employers.

What sort of VET might be the answer? If VET (and TAFE's role within it) is to be part of the answer, the changes to enterprises and work produced by the knowledge economy will demand much greater flexibility in what is defined as training and how it is delivered. The standardised formats of the past need to change to meet the learning needs of participants in the new economy. This flexibility will need to extend to training in order to encompass cross-industry mixes of skills and knowledge. This will require operating with more flexible rules to allow individuals to build up the component elements for a qualification at a designated skill or knowledge level. Generic work skills for different types of jobs will need to receive a major emphasis in new approaches to training. Integrated academic and vocational studies, wider opportunities for work-based learning, and greater shared responsibility with employers will also be required. In many cases, the starting place for the new approach to training has to be the workplace.

NOTES

¹ In general the term “young people” is used in this paper to refer to those aged 15-19.

² Respectively, the Chief Executive of Create Australia and Staff member of the Bendigo Regional Institute of TAFE.

⁴ Curtain, R, 1999, "Young Peoples' Transition from Education to Work: Key Performance Indicators", available at www.dsf.org.au

⁵ McClelland, A., McDonald, F., and MacDonald, H. Young people and labour market disadvantage: The situation of young people not in education and not in full-time work. *In Australia's Youth: Reality and Risk*. Sydney: Dusseldorp Skills Forum, 1998.

⁶ David Stern *Developing Employability in a Learning Economy* Keynote paper presented to the National Issues Forum, Research Centre for Vocational Education and Training, University of Technology, Sydney.

⁷ Peter Dwyer *Rethinking Transitions: Options And Outcomes Of The Post-1970 Generation*. Keynote paper presented to the National Issues Forum, Research Centre for Vocational Education and Training, University of Technology, Sydney

⁸ NCVER, 1999, *Australian Vocational Education and Training Statistics 1998 At a Glance*. NCVER, Adelaide.

⁹ ABS *Transition from Education to Work Australia* May 1997 and 1998, Cat 6227.0, Table 3.

¹⁰ ABS *Transition from Education to Work Australia* May 1999, Cat 6227.0, Table 3. However, it should be noted that there may be some confusion as to what TAFE means. ABS, for the purpose of this survey, define TAFE as a Technical and Further Education Institution but note that in Victoria, it may also be interpreted as Training and Further Education (ie including both public and private training providers).

¹¹ Ball, K. and Robinson, C. Young peoples' participation in and outcomes from vocational education and training. *In Australia's Youth: Reality and Risk*. Sydney: Dusseldorp Skills Forum, 1998.

¹² NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 at a Glance*. Supplement to the Australian Training Review, Adelaide, Jan-March 1999, Vol 29, p9.

¹³ NCVER *Australian And Trainee Statistics 1998* Vol 4, N5 July-Sept, Figure 3.

¹⁴ The most recent Apprentice and Trainee Statistics do not distinguish between apprentices and trainees.

However in terms of occupations, strong increases in intermediate clerical, sales and service worker occupations have been recorded but growth in numbers of apprentices and trainees in the traditional apprentice occupations was static from July 1997 to September 1998 NCVER *Australian And Trainee Statistics 1998* Vol 4, N5 July-Sept, Figure 3

¹⁵ A relative decline in the demand for trade skills and a decline in the ratio of apprentices to tradespersons have interacted to influence apprenticeship commencement trends, See Sweet, R. How well do our entry level training models fit the labour market of the 1990s? Tasmanian Education Consortium Conference on Rethinking Work, Re-Inventing Education, Hobart, October 1996.

¹⁶ Clayton, B., Goleby, A. and McMicken, J. *Predictors of Success in TAFE Courses*. Adelaide: TAFE National Centre for Research and Development, 1992.

¹⁷ Peter Dwyer *Rethinking Transitions: Options And Outcomes Of The Post-1970 Generation*. Keynote paper presented to the National Issues Forum, Research Centre for Vocational Education and Training, University of Technology, Sydney, p31.

¹⁸ Jeff Malley NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 at a Glance*. Supplement to the Australian Training Review, Adelaide, Jan-March 1999, Vol 29, p9.

¹⁹ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 National Report*. Adelaide, 1998 Table 3, p10.

²⁰ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 at a Glance*. Supplement to the Australian Training Review, Adelaide, Jan-March 1999, Vol 29, p4.

²¹ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 National Report*. Adelaide, Table 3, p29.

²² NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 National Report*. Adelaide, Table 3, p33

²³ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 National Report*. Adelaide, Table 3, p35

²⁴ “Satisfaction outcomes”, TAFE Graduate Destination Survey NCVER website <http://www.ncver.edu.au>

²⁵ Marks, G and Fleming, N *Youth Earnings In Australia 1980-1994: A Comparison Of Three Youth Cohorts*. Australian Council for Education Research.

²⁶ Stephen Murray Smith in "Technical Education in Australia: An Historical Sketch", in E L Wheelwright (ed) *Higher Education in Australia* noted that technical education as an institutionalised, state run training system was "largely a compromise between those seeking full freedom of employment policy and those trade union forces who sought compulsory apprenticeship, the appointment of a supervisory body and the stringent regulation of apprenticeship training".

²⁷ The 1998 TAFE Graduate Destination Survey shows that 23 per cent of TAFE graduates are trades or related workers. The largest occupational grouping is intermediate clerical, sales and service workers at 24 per cent of TAFE graduates.

²⁸ Dwyer, Peter, "Combined Study and Work Pathways in Vocational Education and Training: Policy Implications and Analysis" Manuscript, University of Melbourne, Youth Research Centre, University of Melbourne, Parkville,

²⁹ See Curtain, R *Has the Apprenticeship System a Future: the impact of labour market reform on structured entry level training*. Report commissioned by the Department of Employment, Education and Training, October 1993, p9.

³⁰ ABS data for May 1998 show that 57 per cent of apprentices not attending school full-time had left school at 15 or 16 years of age. Leaving school at age 16 or less, it is most likely that these school leavers have not completed Year 12. This is an increase on the 1995 figure which reported that 41 per cent of apprentices not attending school full-time had left school at 15 or 16 years of age. (Transition from Education to Work Australia, May 1998, ABS Catalogue No 6227.0 7.0).

³¹ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 at a Glance* . Supplement to the Australian Training Review, Adelaide, Jan-March 1999, Vol 29, and p10.

³² Beck, U. *Risk Society: Towards a New Modernity* London, Sage 1992 cited by Peter Dwyer in "Combined Study and Work Pathways in Vocational Education and Training: Policy Implications and Analysis" Manuscript, University of Melbourne, Youth Research Centre, University of Melbourne, Parkville

³³ NCVER *Australian Vocational Education & Training: TAFE Graduate Destination Survey 1998 National Report*. Adelaide, Table 3, p35.

³⁴ Stiglitz, J *Public Policy For A Knowledge Economy*. UK Department of Trade and Industry, London, January 27, 1999.

³⁵ Adler, P. "Work Organisation: from Taylorism to Teamwork", *Perspectives on Work*, Industrial Relations Research Association, Madison, Wisconsin, 1997

³⁶ Adler, P p62-63

³⁷ Adler, P p62-63

³⁸ Stiglitz, J p19.

³⁹ Hannan, D., Raffé, D. & Smyth, E. (1996), *Cross-National Research on School to Work Transitions: An Analytical Framework*, Background paper prepared for the Thematic Review of the Transition from Initial Education to Working Life. Paris: OECD.

⁴⁰ McKenzie, P (1998) *The Transition from Education to Work in Australia Compared to Selected OECD Countries*. Paper presented to the Sixth International Conference on Post-compulsory Education and Training organised by the Centre for Learning and Work Research, Griffith University, Gold Coast, Queensland, 2 December 1998

⁴¹ McKenzie, p 11

⁴² Buechtemann, C; Schupp, J and Soloff, D "Roads to Work: school-to-work transition patterns in Germany and the United States", *Industrial Relations Journal* 24:2, 1993 pp97-111.

⁴³ Stern, D ,p 4

⁴⁴ McKenzie, p 11

⁴⁵ Dwyer, "Combined Study and Work Pathways in Vocational Education and Training: Policy Implications and Analysis" Manuscript, University of Melbourne, Youth Research Centre, University of Melbourne, Parkville

⁴⁶ Misko, J. *School students in workplaces: what are the benefits?* NCVER, Adelaide, 1998.

⁴⁷ Johnston, Robyn "A Partnership Orientation: a case study documenting leading edge practices in entry-level training of Retail Group Training & Employment Ltd", *Research Centre for Vocational Education & Training*, University of Technology, Sydney

⁴⁸ The Australian Network of Practice Firms consists of practice firms, with representatives from every State and Territory. The majority of these practice firms are established in the TAFE sector, however, according to the Network's web page, "there has been an upsurge of interest from schools with the introduction of vocational education and training into their programs. One private provider is a member of the Network and a number of universities are currently exploring the options provided by this innovative training scheme. Over 50 practice firms expect to be operating at the beginning of 1999". The Australian Network of Practice Firms is based on a

successful European scheme and was initiated in the TAFE sector in 1995. The headquarters of the Network - located in the Canberra Institute of Technology - co-ordinates training and support for the establishment and operation of practice firms in all States and Territories. <http://www.anpf.cit.act.edu.au/anpf.htm>

⁴⁹ Johnston, Robyn "A Partnership Orientation: a case study documenting leading edge practices in entry-level training of Retail Group Training & Employment Ltd", *Research Centre for Vocational Education & Training*, University of Technology, Sydney.

⁵⁰ Stiglitz, J Public Policy For A Knowledge Economy. UK Department of Trade and Industry, London, January 27, 1999, p19.

⁵¹ Between 1994 and 1996, 62 per cent of Australian schools were implementing school-industry programs with 44 per cent of the remainder indicating an intention to do so. By August 1997, there was an estimated 20,000 employers involved in ASTF supported programs; covering over 38,000 students (up from 16,000 at the end of the preceding year) *ASTF 1994-1997: Three Years On*. Sydney 1997.