

Social area differences in vocational education and training participation

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Program 4:
Understanding vocational education participation and barriers

*A well-skilled future: Tailoring vocational education
and training to the emerging labour market*



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

Publisher's note

Additional information relating to this research is available in *Social area differences in vocational education and training participation: Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1997.html>>.

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About the research



Social area differences in vocational education and training participation by Richard Teese and Anne Walstab

Responsiveness is a familiar refrain in the vocational education and training (VET) sector. Training providers are being called upon to adapt to emerging skills needs and to build greater flexibility into the system. How they do this depends on how they manage their multiple roles and diverse clientele.

In their study, Teese and Walstab examined population differences in that clientele and identified social, economic and cultural barriers some people face in finding employment. Their report and its companion, *Participation in vocational education and training across Australia: A regional analysis*, should help the VET sector to find ways to respond to these obstacles and to motivate individuals to take up training options and, where necessary, to reskill in order to find good jobs.

Key messages

- The roles of VET are population-related. That is, VET providers respond to people's various needs during the different stages of their participation in the workforce.
- The age pattern of participation suggests that the VET sector performs four major roles:
 - a platform-building role for young commencing workers
 - a promotions or skills enrichment role for established workers
 - a re-orientation role for older workers
 - a personal enrichment role for older workers or people not in the workforce.
- These roles are highlighted by the award pattern of participation for different age groups.
 - Basic and skilled VET (certificates I and II, and III respectively) dominate the activity of teenagers and young adults.
 - Skills enrichment, re-orientation and personal development become more prominent for established workers and older people.
- There is a need for greater equity in the system. VET activity rises as socioeconomic status falls. That said, people with lower socioeconomic status are not achieving the higher qualifications which reap the greater rewards from participation in VET.
- These disparities can often be traced back to the type of schooling people received, suggesting that schools have a significant role in shaping aspirations and preparing young people for post-compulsory education and employment.

This report is one of twelve produced by a consortium of the National Institute of Labour Studies, Flinders University, and the Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne, looking into the relationship between the country's future skill needs and the VET system. For a synthesis of the consortium's entire program of work, see *A well-skilled future* by Sue Richardson and Richard Teese.

Tom Karmel
Managing Director, NCVER

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Executive summary

This report has been prepared as part of the consortium research program, *A well-skilled future: Tailoring VET to the emerging labour market*. This research program examines the evolving labour market and changing work organisation and management in the context of the vocational education and training (VET) sector and its role in the development of the appropriate levels, types and quantities of skills required to satisfy the future demands of Australian industry. The research reports have been produced by researchers from the National Institute of Labour Studies, Flinders University, and the Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne. This report and a companion report, *Participation in vocational education and training across Australia: A regional analysis*, identify variations in VET participation.

For Australia to have a highly skilled workforce calls for a responsive national system of vocational education and training. But there is also an implication that there is a readiness amongst Australians to take up opportunities for training and to undertake the work to which training opportunities lead or which are offered through that work.

The participation of Australians in vocational education and training varies a great deal in terms of levels of training, industry fields, and a range of demographic aspects—age, gender, Aboriginality, locality, and socioeconomic status. It is important to examine population differences in VET participation because variations in participation may signal barriers to the capacity of Australians to take up emerging opportunities in the workforce which depend on a training effort.

The barriers may be ones of access. These include remoteness from a provider, shortage of training places, tuition costs, or poor attainment at school. Or they could be barriers of perception in which the need for training is not recognised or not considered relevant to individual aspirations. Barriers may be economic, such as high opportunity costs or low wage dividends to training at certain levels, or they may be cultural and involve preferences or poor information and understanding of training opportunities.

Analysing variations in participation may suggest the existence of barriers, but this analysis does not establish that these do exist and may only provide indications of the nature of any barriers that might exist. Other research strategies are needed to test interpretations of differences in participation levels. These include macro-economic studies to determine the strength of aggregate factors, such as returns on investment in training, case studies of participation in different regional contexts, and qualitative research on economic and cultural factors operating in these contexts.

Contextual studies are valuable because they focus not only on individual factors affecting participation in VET, but on the role of VET in community development, both economic and social. But which contexts should be chosen for this more detailed research?

A first step in this mapping exercise is to apply a social area methodology to data on participation gathered by training authorities and consolidated in AVETMISS. Social area methodology refers to research procedures which use a geographical indicator of socioeconomic status to measure and compare participation in education and training. A social area analysis should be sensitive to the two broad kinds of barriers mentioned above—barriers of access and barriers of perception.

The technical details of the methodology are presented in the support document of this report. However, in brief, our approach has been to apply a social ranking to students in VET, based on

the postcode of their residential address and the Australian Bureau of Statistics Index of Relative Socio Economic Disadvantage, to divide our population into equal-size bands of socioeconomic status, and to compare participation in VET at different award levels and for different age groups and gender across these bands. Some previous work along these lines has been reported in McIntyre (2002), Teese (2001), and Teese et al. (2003).

The data used in this report are for 2001. It is planned to undertake an analysis using more recent data and involving a wider range of information as soon as this is available.

The analysis presented in this report is contained in 18 tables and 45 charts—a third each for Australia as a whole, Queensland, and South Australia. No attempt has been made to provide comment on all these tables and charts. They offer very detailed analyses of various aspects of VET participation, when this is broken out by age, gender, socioeconomic status and Australian Qualifications Framework (AQF) level. The information for Queensland and South Australia is provided simply to illustrate the capacity of the social area methodology to provide analyses at a state level, though the South Australian tables are also useful in the context of the review of the South Australian Certificate of Education.

The findings highlight the importance of identifying economic and cultural barriers to participation in order to assist the VET sector to respond effectively to skill shortages and also to ensure equitable access to VET opportunities and good jobs. VET provision occurs in a wide range of different social contexts, and the barriers to higher or more equitable participation are likely to vary in nature and importance. The role of schools in shaping aspirations and in preparing young people has been identified as a key part of the social landscape.

This report is divided into two parts. This section is a discussion of the approach and a summary of a number of key general findings. It discusses the range of roles played by the VET system in Australia and looks at participation at different award levels of VET within this framework. The support document contains all the tables and charts.

Overview

Introduction

The national VET strategy aims to ensure that Australian industry has a *highly skilled workforce to support strong performance in the global economy* (Objective no. 1). To meet this objective requires a responsive VET sector (and responsiveness in schools and higher education as well). But how well the sector responds to emerging skill needs is by no means only a matter of institutional policies and adaptiveness (supply side activity). It is also partly a matter of how VET is perceived and how it is used by the population.

The VET sector plays multiple roles in general, and it plays a different balance of roles for different populations. Both the roles which describe the work of the sector as a whole and the balance of roles played for different populations need to be considered in seeking to make the sector as responsive as possible to national skill needs.

The VET sector is not a clean slate on which emerging skill needs at the national level can be written as a kind of labour market prescription. There are constraints on its responsiveness which relate to the complex roles it has to come to play over time and the factors which influence populations to undertake VET. An important task, then, is to distinguish these roles and to examine the extent to which these different roles are played for different segments of the population.

As an illustration of the importance of this task, we might consider recent public debate about skill shortages. These have frequently been seen to lie in traditional skilled trades areas. While it may be possible to estimate shortages in these areas, it is another question whether the VET sector can supply appropriate training, *given the way the sector is used by different populations*.

Many young people who might fill apprenticeships, for example, are early school leavers who have either no contact with the VET sector at all or who undertake basic courses only. These include pre-apprenticeship courses, but this does not imply that many actually commence apprenticeships from this starting position. Many more begin diploma or certificate IV courses leading to supervisory, technical and other 'middle level' positions, for example, in the finance industry, sales and marketing, information technology or in construction (for example, site management and project management).

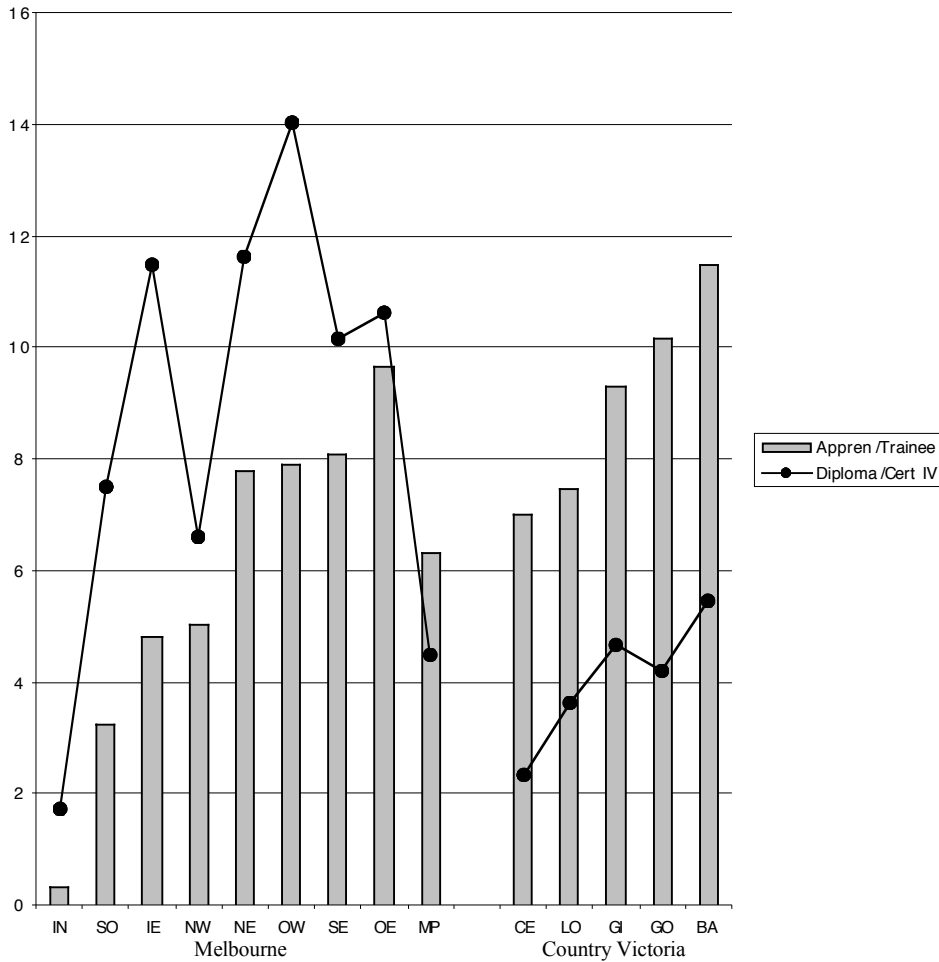
These transition patterns are influenced by how well young people do at school, with the VET sector either compensating for low achievement, supplementing general education with basic vocational training, or building on a successful school experience (value-adding through apprenticeship and other skilled and middle-level programs).

However, the extent to which the VET sector plays these roles, and the balance of the roles that it does play, are influenced by the social context in which providers operate. In some regional communities, for example, comparatively high proportions of school leavers begin apprenticeships and comparatively low proportions undertake middle-level programs, while in other communities, the reverse is true.

To illustrate this, Figure 1 compares the proportions of young people reaching the end of school and entering VET at selected award levels by statistical region of residence (data are from the *On Track* survey in Victoria for the 'class of 2003'). In country Victoria, only small proportions of

school completers begin middle-level training—between 2% and 6%. But in some regions within Melbourne, this reaches to over 10% and in only one or two cases is it below 5%. In the city, middle-level programs generally play a much larger role for school completers than is true in country Victoria, where apprenticeships and traineeships are about twice as important as middle-level programs.

Figure 1 Regional variation in school completer transition to VET at selected award levels, Victoria, 2004



This example shows that social context may make a big difference to the balance of roles played by VET. No doubt there is a range of factors at work here—the availability of apprenticeships, the range of courses on offer by technical and further education (TAFE) institutes and private providers, and the accessibility of campus-based training. But there are other, more complex factors as well. These include perceptions and values about jobs and employment-based training, and income needs. The mix of these factors may vary from context to context. For example, north-west Melbourne and the inner-eastern suburbs have about the same rates of entry to apprenticeship/traineeship, but this is almost certainly due to a different mix of factors. University transition dominates perspectives in the inner-east, where there is also a high rate of transfer to diploma/certificate IV programs. But poverty and low achievement at school are marked features of the north-western suburbs, where transition to university is comparatively low (as is enrolment in Diploma programs).

For Australia to have a highly skilled workforce will require a range of responses to address the barriers to participation which different social contexts present. For example, shortages of registered and enrolled nurses have been identified in every state and territory by the former

Department of Employment and Workplace Relations (DEWR 2004). But to what extent can these shortages be filled by young people from regions where there is low school attainment and strong economic incentives to leave school early or not undertake post-school education or training?

In the trades area, there are national shortages of fitters, machinists, toolmakers, metal fabricators, welders and sheetmetal workers, to name only the engineering trades. But a report from the NSW Industry Forum on skill shortages has highlighted the ‘negative perceptions of the process manufacturing industries as a barrier to recruiting adequately skilled workers’ (Howden 2005, p.10). Many companies, the forum was told, ‘identify that the school system and individual teachers/advisers and many parents push students towards university pathways and away from VET related occupations and industries’ (Howden 2005, p.9). Here the barriers have been identified by manufacturing employers as cultural ones which arise in the school system or are at least reinforced by schools responding to parents.

If the school system has been identified as contributing to skill shortages by focusing aspirations on the professions and management, it has also been criticised for poor standards—‘students do not meet the literacy and numeracy requirements of many of the job roles in process manufacturing, including trades and operator roles’ (Howden 2005, p.10). Comparatively high rates of failure in some social contexts, such as the north-west of Melbourne, the south-west of Sydney, or the northern suburbs of Adelaide, result in a large ‘catch up’ effort falling to the VET sector and a channelling of resources into basic VET programs.

How responsive can the VET sector be in the context of significant economic and cultural barriers, some of which are located in the operation of the school system and the social environment in which schools work? It is this question which needs to be investigated in a range of different regional settings, the identification of which is the purpose of the present study.

The age pattern of participation

While this study is mainly concerned with social and hierarchical (award) differences in VET participation, it is important to look briefly at the national picture of age differences for these provide important clues to the range of roles played by the VET sector in different social contexts.

Nationally, VET participation is highest amongst teenagers and young adults aged 20–24 years. Every third teenager and every fifth young adult are participating in a VET program. Males are marginally more likely than females to be undertaking VET, though the difference is only about four percentage points for either teenagers or young adults (see Table 1 and Figure 1 in the support document). VET participation falls away fairly steeply for adults aged in their mid-twenties and over. However, on average every tenth adult in their mid-twenties, mid-thirties and mid-forties is undertaking VET. Rates are much lower for groups aged in their fifties, sixties and seventies (from 6% declining to 1%).

The age pattern of participation suggests that the VET sector performs four major roles:

- ✧ a *platform-building* role for young commencing workers
- ✧ a *promotions or skills enrichment* role for established workers
- ✧ a *re-orientation* role for older workers
- ✧ a *personal enrichment* role for older workers or people not in the workforce.

This classification leaves to one side the question of the roles which the sector plays for industry and communities.

The roles of VET are *population-related*. That is, they relate to what the sector does for the population at different stages of participation in the workforce. Award levels in VET, on the other hand, may play *multiple roles*. For example, middle-level programs are platform-building for

teenagers, promotional for established workers, re-orienting for individuals returning to the workforce or changing occupations or industries, and developmental or enriching for individuals no longer in the workforce.

In population terms, the VET sector is more focused on the platform-building and promotions roles. Its resources are more concentrated on the mainly young populations who depend on these services. But the re-orientation and enrichment roles are of major importance, allowing older age-groups the flexibility to adapt to changes in labour markets as well as stages in family life-cycles (formation of families, ageing, patterns in household income and consumption etc.).

The award pattern for different age-groups

The variable roles played by VET are brought out clearly by the award pattern of participation for different age-groups. Basic and skilled VET (certificates I/II and III) dominate the activity of teenagers and young adults. These awards are platform-building. Of the 28.6% of all teenage girls who enrol in VET (other than those in school), the great majority—over two-thirds—are in basic or skilled courses (see Table 2 in the Support Document). Nationally over 19% of all teenage girls are undertaking VET at certificates I–III levels.

This heavy concentration of activity in the platform-building cycle of VET continues with young women aged 20–24 years. Only about 46% of this group are found in basic or skilled courses. Although this figure is much lower than for teenage girls (67%), it does mean that nearly one in two young women aged 20–24 who are participating in VET is studying at a basic level. Middle-level training plays a larger relative role for young women aged 20–24 years (27% of all the activity of this group in VET compared to only 14% for teenage girls).

The platform-building role diminishes in relative importance with age, while other roles become more prominent—promotions and skills enrichment, re-orientation, and personal development. This is reflected in the changing weight of award courses. Thus Figures 2 (women) and 3 (men) in the support document—reproduced below—show that the award bands representing basic and skilled courses contract as age advances. One possible implication of this is that older individuals face greater barriers to skilled training than young men or women. Manufacturing employers argue that the ‘current focus of the training system on time-based completion of whole qualifications imposes a training regimen which is often a disincentive to both employers and learners’ (Howden 2005, p.9). There are also insufficient funding incentives to employ and assess mature-age workers, including for certificate II traineeships (Howden 2005, p.10).

Social patterns

The roles provided by the VET sector vary not only by age, but also by the socioeconomic status of the population. One way of testing this is to compare participation rates at different award levels for different SES fractions or bands of the population. Why is it important to examine social variations in participation at different award levels (and for different age-groups)? Part of the answer to this question lies in attempting to widen the social pool from which skill shortages are filled. A widening of the pool implies identifying and tackling economic and cultural barriers (as well as possible institutional barriers, such as program emphasis and selection practices). Social analysis is the first step in doing this. But part of the answer lies in the need for greater equity in the way VET currently works. For example, the rewards of VET are greater at the top end of the AQF scale than at the bottom, but social access to the top end varies widely.

Figure 2 Percentage participation in VET, Australia, women by age groups and main qualification

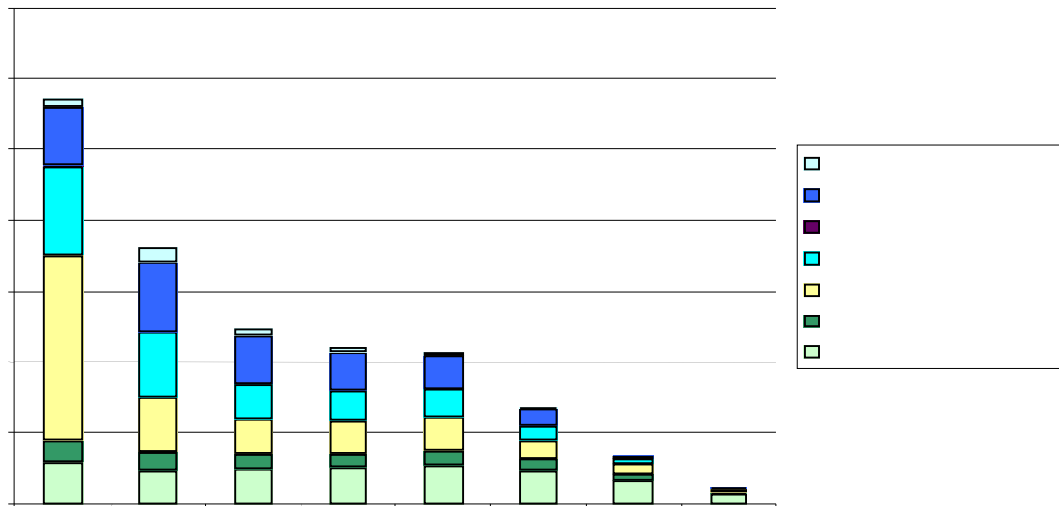
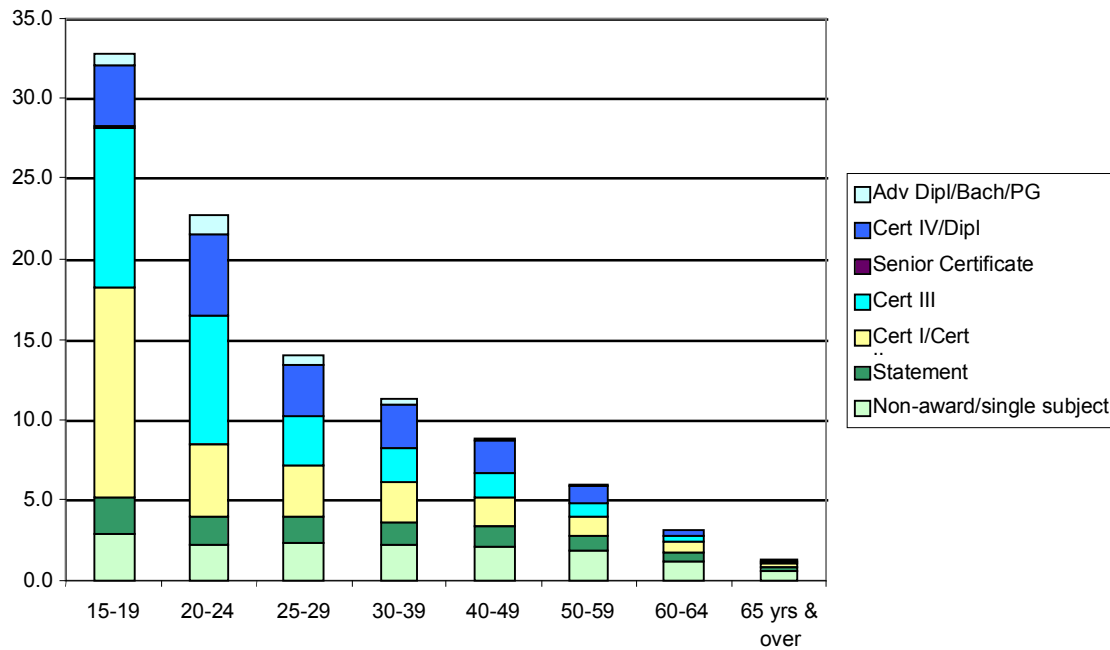


Figure 3 Percentage participation in VET, Australia, men by age groups and main qualification



In general, the platform-building role played by the VET sector *increases as the scale of SES is descended*. For example, at the highest SES level, only 7 in 100 teenage girls are enrolled in certificate I or II courses (excluding those in school). This rises sharply to 17 in 100 for teenage girls in the next-to-lowest band of SES (see Figure 4 from the support document, reproduced below).

Similarly, participation in skilled (certificate III) courses rises from 3.6% of teenage girls from the highest tenth band of SES to 21.7% in the third lowest band.

Note from Figure 4 that the trend for both certificate I/II and certificate III participation turns down at the lowest or the next-to-lowest tenths of SES rather than continuing to rise. This suggests that teenage girls from the poorest backgrounds have a weaker relationship to the VET sector and

utilise its opportunities less frequently than socioeconomic status would predict, and consequently that there may be additional, gender-specific factors coming into play at the lowest levels of socioeconomic status.

Amongst teenage males, participation in basic VET rises from 7.2% in the highest SES band to 16.8% and 16.2% in the third and second lowest bands respectively (see Figure 5, reproduced below).

The social trend for skilled VET is humped, with the peak in participation in the middle SES range and tapering off, especially at the high end, but also—though less sharply—at the lower end of the SES scale (Figure 5).

The tendency for lower SES groups to use VET's platform-building role more heavily than do higher SES groups is also evident amongst young adults aged 20–24 years. Participation in both basic and skilled VET courses (certificates I–III) increases as SES falls (see Figure 6, reproduced below, which reports the pattern for women).

The same is true of men aged 20–24 years. Participation in both basic and skilled VET increases as SES falls (Figure 7).

The social pattern in middle-level training is more difficult to read. Amongst both teenage boys and teenage girls, there is a very weak social trend favouring higher SES individuals (weakening at the top points). The same trend is also found amongst young adults, but again is very limited—strongest amongst the 20 to 24-year-old males (Figure 7).

Why should there be such a weak social trend in participation in middle-level courses? Let us look, firstly, at young people of relatively low SES. These individuals have less access to middle-level courses. This is because their rates of early leaving are higher. To the extent that early leavers do participate in VET, this is at the lower levels of the AQF. Additionally, young people of lower SES who do complete school frequently do not apply for entry to tertiary education—including TAFE/VET middle-level courses—especially in country districts. These two tendencies depress lower SES participation in technician-level training in Australia.

At the other end of the social spectrum, more young people complete school and more who do so go on to university. Their use of middle-level VET is limited, though still important. This is especially true of *low achievers within high SES bands*. For example, only about 4 in 100 high achievers in the highest SES band in Victoria enrol in a middle-level course compared to nearly 1 in 3 of the lowest achievers from this same social background (unpublished *On Track* data).

Arguably the higher retention rates of upper SES groups and their tendency to use middle-level programs as a second-choice option for low achievers raises somewhat their overall level of participation at this AQF level by comparison with the participation of low SES groups. But the gap is very small. In short, at both ends of the social spectrum, there is a demand for this level of platform-building activity, and the demand is only marginally greater (if at all) amongst the higher SES groups.

Figure 4 Percentage participation in VET, women, 15–19 years, Australia, by SES deciles

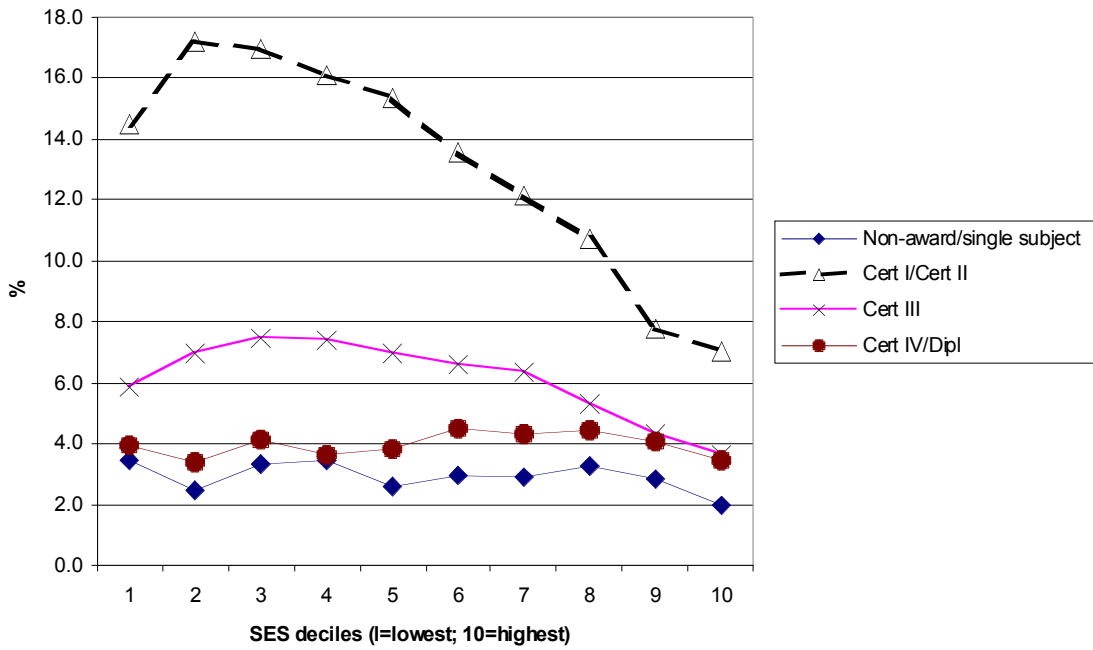


Figure 5 Percentage participation in VET, men, 15–19 years, Australia, by SES deciles

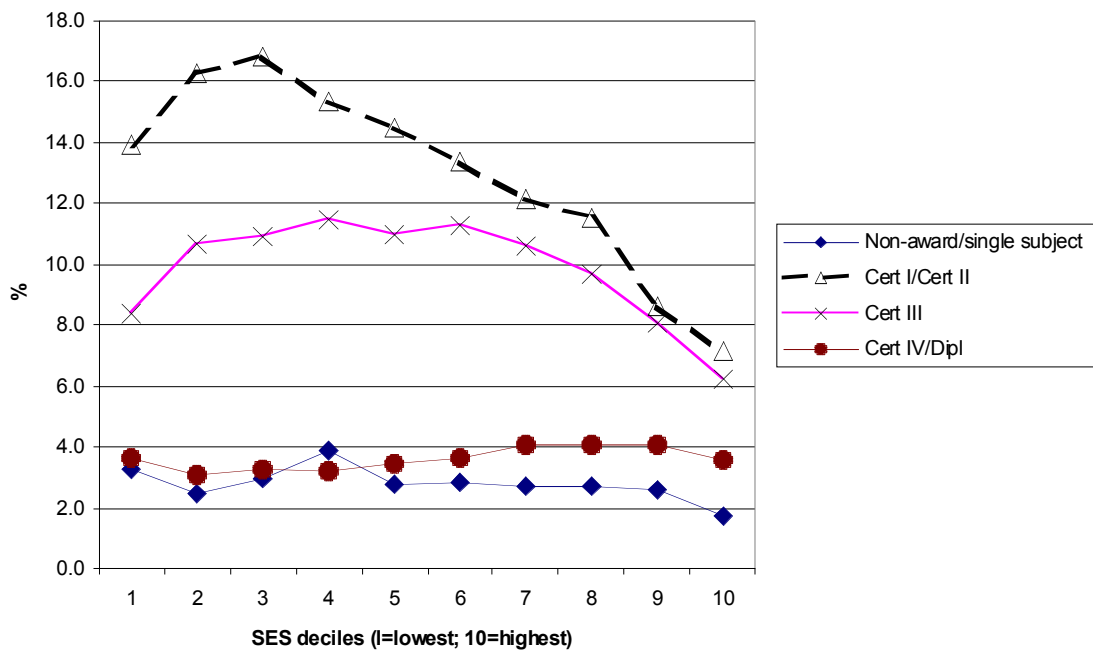


Figure 6 Percentage participation in VET, women, 20–24 years, Australia, by SES deciles

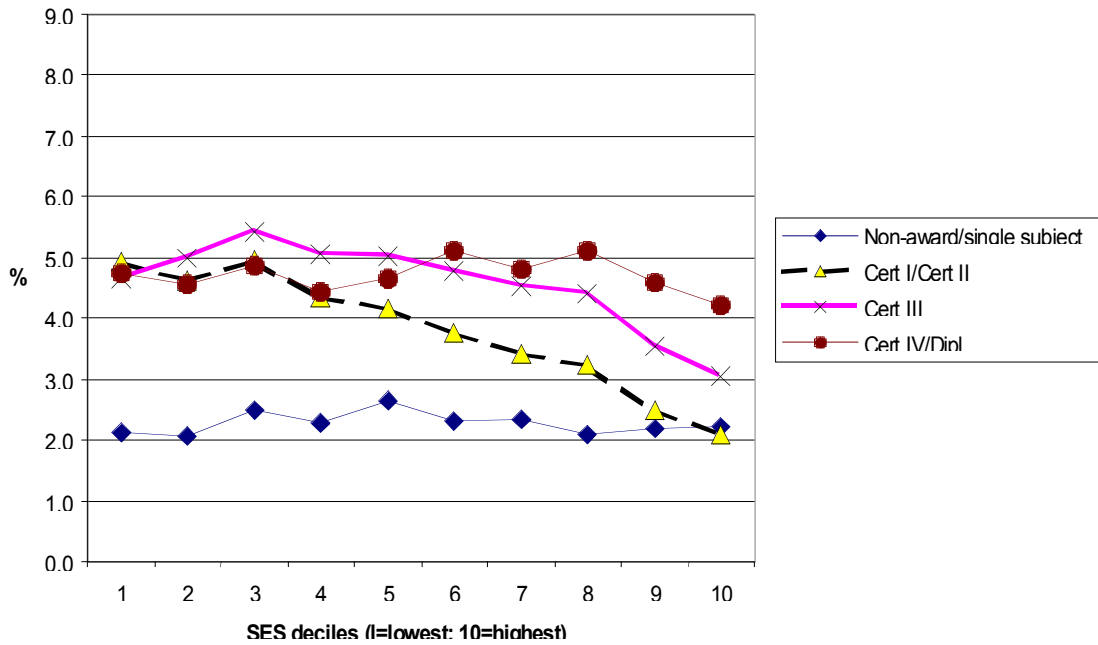
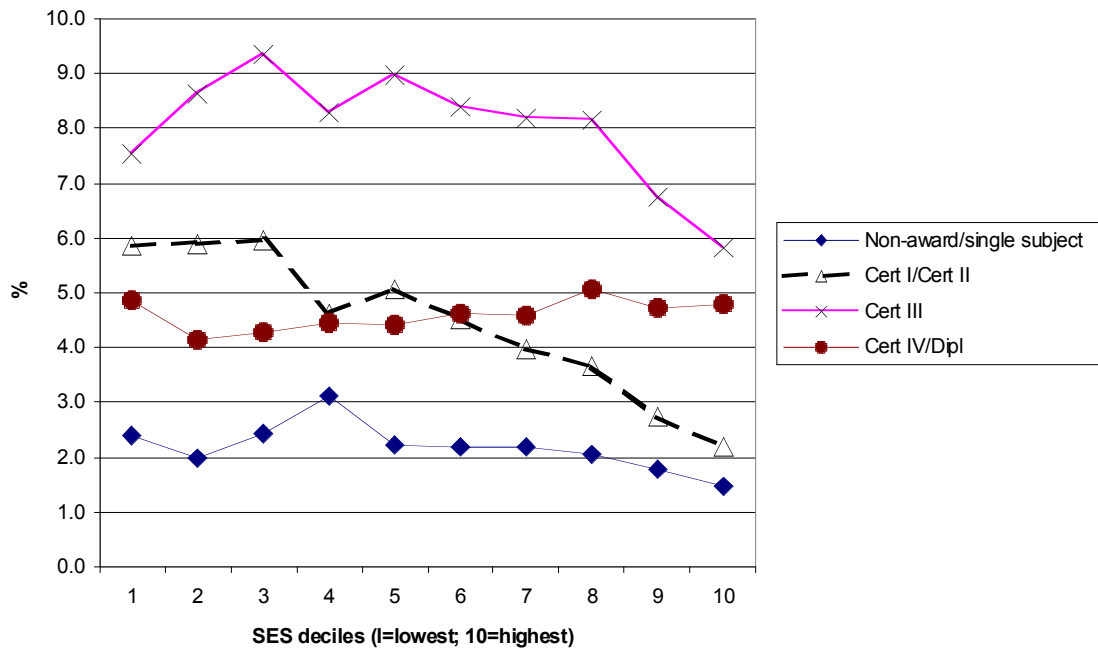


Figure 7 Percentage participation in VET, men, 20–24 years, Australia, by SES deciles



Young adults in their mid-twenties also exhibit a social pattern of participation. Levels of participation in basic and skilled VET rise as SES falls (see Figures 8 and 9 below), while participation in middle-level VET is mixed.

Figure 8 Percentage participation in VET, women, 25–29 years, Australia, by SES deciles

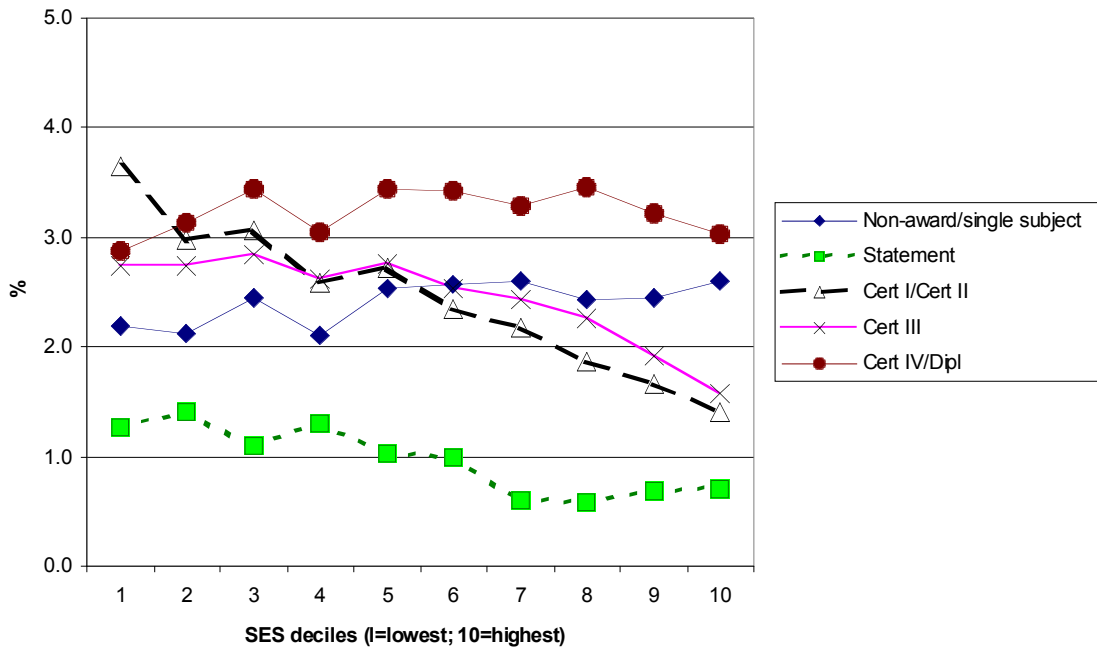
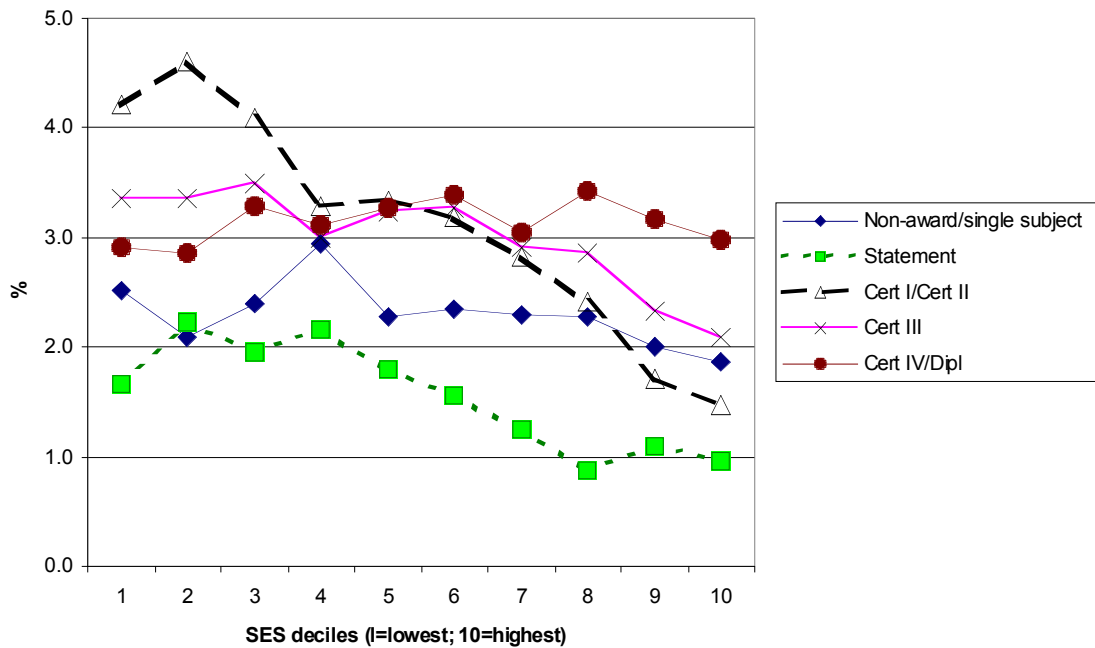


Figure 9 Percentage participation in VET, men, 25–29 years, Australia, by SES deciles



School attainment

The social pattern in which basic and skilled VET activity rises as SES falls can be regarded as a response to differential schooling. VET's platform-building role becomes increasingly important, the weaker the use of school as judged by (a) retention rates, (b) relative achievement.

Young people who drop out of school either for academic or economic motives lose the platform of a completed senior certificate. Generally speaking, across Australia, they will have no credential

at all, except in New South Wales. They frequently gravitate to the VET sector to build an alternative platform. This includes both employment-based VET (apprenticeships, traineeships) and campus-based VET. In the great majority of cases, they will only be able to access basic or skilled programs.

However, it is not only low SES users who turn to VET. As observed above, young people from high SES backgrounds—including those who complete school—enrol in a range of programs from basic to middle-level. They, too, are building a platform of skills and competencies, and this platform will differ according to whether they complete school and how successful they have been at school.

The most successful students at school may initially bypass the VET sector altogether *in its platform-building role*. They complete school and usually go to university. But they may subsequently turn to VET either to promote their workforce options or enrich their skills once they are working, or to supplement the university platform where this lacks specific strengths.

The VET participation of higher SES groups reflects both of these approaches—the *promotions and skills-enrichment* role and the *initial platform-building* role. In some cases, the individual will complete an award, in others, only one or two modules.

Schooling level affects the other roles of VET as well. Older adults with incomplete schooling or poor literacy and numeracy skills may turn to VET to re-orient themselves in the workforce or to gain more flexibility should this be needed. They also use VET for personal enrichment, independently of work commitments.

Finally, the role of personal enrichment is played out for well-schooled (including university-trained) individuals, again independently of work status.

Conclusion

This brief overview of findings from the social area analysis of VET participation has highlighted the importance of identifying economic and cultural barriers to participation in order to assist the VET sector to respond effectively to skill shortages and also to ensure equitable access to VET opportunities and good jobs. VET provision occurs in a wide range of different social contexts, and the barriers to higher or more equitable participation are likely to vary in nature and importance. The role of schools in shaping aspirations and in preparing young people has been identified as a key part of the social landscape. Only more detailed work can identify how context acts on provision and either promotes or constrains responsiveness. Further analysis of regional variations, using a fuller range of data, will prepare the ground for this work.

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Appendix 1:

Skills consortium publications

The following is the complete list of titles produced by the National Institute of Labour Studies, Flinders University and the Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne, through the research project, A well-skilled future: Tailoring VET to the emerging labour market.

Forecasting future demands: What we can and cannot know

Sue Richardson and Yan Tan

Future skill needs: Projections and employers' views

Diannah Lowry, Simon Molloy and Samuel McGlennon

Demographic impacts on the future supply of vocational skills

Yan Tan and Sue Richardson

Skill acquisition and use across the life course: Current trends, future prospects

Bill Martin

What is a skill shortage?

Sue Richardson

Changing forms of employment and their implications for the development of skills

Sue Richardson and Peng Liu

Changing work organisation and skill requirements

Bill Martin and Josh Healy

Social area differences in vocational education and training participation

Richard Teese and Anne Walstab

Participation in vocational education and training across Australia: A regional analysis

Anne Walstab and Stephen Lamb

Current vocational education and training strategies and responsiveness to emerging skill shortages and surpluses

Jack Keating

Matching supply and demand: International perspectives

Jack Keating

Impact of TAFE inclusiveness strategies

Veronica Volkoff, Kira Clarke and Anne Walstab

A well-skilled future

Sue Richardson and Richard Teese

Support document details

Additional information relating to this research is available in *Social area differences in vocational education and training participation: Support document*. It can be accessed from NCVER's website <<http://ncver.edu.au/publications/1997.html>>. It contains the charts and tables from the analysis.



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The consortium, *A well-skilled future: Tailoring vocational education and training to the emerging labour market*, comprises researchers from the National Institute of Labour Studies in South Australia and the Centre for Post-compulsory Education and Lifelong Learning in Victoria. Its program of research aims to investigate future work skill needs and work organisation arrangements, and their implications for vocational education and training.

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