



Vocational
education and
training in rural
and remote
Australia



REVIEW OF RESEARCH

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and training in
rural and remote
Australia

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ii

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Contents

| | |
|--|----|
| Executive summary | 1 |
| Introduction | 5 |
| Context | 6 |
| Training outcomes | 15 |
| Access, equity and participation | 21 |
| Curriculum, delivery and assessment | 25 |
| Findings and directions for further research | 31 |
| References | 37 |

Executive summary

NON-METROPOLITAN AUSTRALIA is diverse in terms of population density, educational experiences of the population, occupation and industries for employment. In addition to the issues associated with the vast distances between where some Australians live and large population centres where most educational infrastructure exists, there are other differences between metropolitan and non-metropolitan Australia.

Rural adults are less likely to have completed secondary school, have post-school qualifications, participate in post-school education and training (especially personal enrichment programs), be an employee, be a professional and work in manufacturing, property and business services or finance and insurance. They are more likely to be older, have left school early, be unemployed or out of the labour force, work in small business, be self-employed or an employer, be a labourer or other low-skilled occupation and work in agriculture, forestry and fishing, mining, construction or tourism.

Issues for vocational education and training in rural and remote Australia relate to training outcomes; access, equity and participation; and curriculum, delivery and assessment. Within each of the three categories there are issues for individuals and businesses, locations, and the policies and providers which make up the vocational education and training system.

Seven key issues and associated questions for further research can be distilled from consideration of the existing body of research within the context of non-metropolitan Australia.

1

1. Local involvement in planning

There is a wide diversity of education and training needs outside metropolitan Australia. Regional/local planning is better able to take account of the different demographic patterns in the various regions, and regional/local cultural differences than national or State-based planning. Poor participation in post-compulsory education is often due to poor dissemination of information about programs. Local rural training committees or 'brokers' can facilitate interactions between training providers and rural communities.

2. Thin markets

There is a lack of variety and diversity of training programs offered in smaller centres. Policy initiatives which foster competition at the expense of co-operation, such as user choice, can have negative consequences in small or thin rural markets. A lack of industry diversity in individual locations limits the range of work placements for training, especially vocational education and training in schools. The capacity of the predominant small business sector to host trainees is limited by economic factors and business training infrastructure. The move of businesses and government operations away from small communities reduces workplace training and assessment opportunities.

Small, scattered rural and remote businesses lack bargaining power when procuring training from providers. Small private providers in rural and remote areas can be deterred by the high infrastructure costs imposed by accreditation and competitive tendering.

3. Cost of training and measurement of cost and effectiveness

The cost of delivering and accessing education and training (including assessment) in rural and remote Australia is greater than in metropolitan areas. Vocational education and training funding policy should address issues of access and equity by consideration of both supply and demand side issues.

Higher delivery costs per student/contact hour are not fully recognised in national and State resource allocation models. Resource allocation and performance indicators for vocational education and training do not fully recognise the infrastructure and development cost of flexible delivery.

Teacher/trainer employment terms and conditions do not adequately take into account the tasks required by flexible delivery.

4. Flexible delivery

The growth of information and communications technology and advanced technology (IT and AT) will increase the access to education and training for people in non-metropolitan Australia. IT and AT has its own set of barriers which relate to cost and physical provision of the equipment and infrastructure, training of teachers and students to maximise the benefits of

technology and issues of individual learning styles. There is a paucity of training opportunities in the areas of both communications and advanced technologies for rural people, and a lack of accessible technical support. Not all students adapt well to the independent learning usually required by flexible delivery, including IT and AT. Appropriate and successful training models for rural and remote locations have been developed and need to be heeded.

More co-operation between providers and across sectors is needed to maximise resources for the delivery of programs and the production of high quality materials.

The age structure and unemployment in rural Australia means there will need to be an emphasis on skill upgrading and updating, and re-training for the existing workforce if rural communities are to contribute in a restructured economy in the 21st century. Alternate ways of recognising existing skills and developing new skills must be considered.

5. Limited tradition of formal vocational education and training and limited history of valuing education

With the exception of mining, the industries which dominate non-metropolitan Australia do not have a tradition of formal vocational education and training. However, there is a long tradition of non-formal training through agricultural extension. Learning by doing is valued, but many do not recognise that they have skills acquired through experiential learning. The formal vocational education and training (VET) system needs to value informal learning and it also needs better mechanisms to recognise skills acquired through experiential learning.

A larger proportion of the non-metropolitan population is employed in small business compared to metropolitan Australia. Small business employees are less likely to participate in formal VET. Many businesses and families have no confidence in their ability to be informed and effective as 'consumers' of VET. Many individuals have low self-confidence as learners. This relates to previous negative experiences of schooling and low education levels, although the impact is not uniform across non-metropolitan Australia. Adult and community education providers are important in providing bridging programs in rural communities.

6. Quality and availability of trainers and assessors

Trainers and assessors working in rural and remote locations require a broader range of skills than those in metropolitan areas in order to cope with flexible delivery and a more diverse teaching load. There is a need for professional development, especially as few adult educators in remote locations hold formal qualifications in adult education.

Trainers need to understand clients' existing skills and their needs in order to be credible; metropolitan trainers and providers coming into rural and remote areas often lack this understanding. Insecurity of the training market and difficulties of isolation make acquisition and retention of quality teaching staff difficult in rural areas.

7. Community sustainability, social capital and the value of vocational education and training to communities

Quality private providers who act in partnership with local industries and community are responsive and so generate more effective outcomes in terms of relevant programs. They contribute to community sustainability. It is likely that the lower educational and skill base in rural and remote Australia means the marginal impact of vocational education and training programs is greater than in metropolitan areas.

Introduction

THE SCOPE OF this research review is Australian research articles and reports since 1990. Research relating to Aboriginal and Torres Strait Islanders is the subject of a parallel publication, and is excluded from the scope of this booklet.

There has been relatively little research conducted on vocational education and training outside metropolitan Australia. There is a small body of work which is exclusively related to non-metropolitan Australia, for example studies which consider remote communities and education and training in agriculture. There is another body of work which combines both metropolitan and non-metropolitan data. Very few of these studies report any findings separated on that basis. Studies using data from both sectors tend to report on an Australia-wide or State basis. Much of the rural research which does exist relates to curriculum or delivery. There is a smaller body of work on access and equity, and very little on training outcomes. It is not always clear which issues are specifically related to rural and remote Australia, which impact differently on rural and remote Australia, and which issues require further research to establish whether there is a differential impact.

Context

PEOPLE LIVING AND working in rural Australia contribute much to Australia's national economic well-being. At least two-thirds of our exports are generated outside capital cities (Martin 1996). Some of our major industries including agriculture, mining, forestry and tourism generate all or most of their economic activity outside metropolitan areas. However, perhaps more than in any other time in its history, rural Australia faces a crisis. How does vocational education and training support rural Australia to enable it to contribute to the consolidation and restructuring needed for the Australian economy to move strongly into the 21st century? Rural Australians are less likely to complete secondary school and less likely to have post-school qualifications than their metropolitan counterparts, and are less likely to participate in vocational education and training.

Rural and remote Australia is taken to be all Australia outside metropolitan areas of 100 000 or more people. A diversity of ages, lifestyles, occupations, aspirations, educational experiences, opportunities, industries and communities are represented in rural and remote Australia. While there are many similarities between rural and metropolitan Australia, there are some differences. Major international restructuring has impacted more heavily on the rural sector because primary industries, which are concentrated outside the cities, are directly exposed to world markets (McColl et al. 1997; Crellin 1994). The picture painted by National Board for Employment, Education and Training (NBEET 1991) of adverse differential impacts on rural Australia from national policies which address economic restructuring, and a tendency for governments and the private sector to reduce services in rural areas at times of rural recession continues.

Importantly, there are large differences within non-metropolitan Australia. There are differences in industry structure, unemployment rates, educational experiences and proximity to vocational education and training infrastructure. National policy impacts differentially within rural Australia as well as between metropolitan and rural Australia. Some regions, such as Tasmania, are experiencing low rates of population growth, while others such as non-

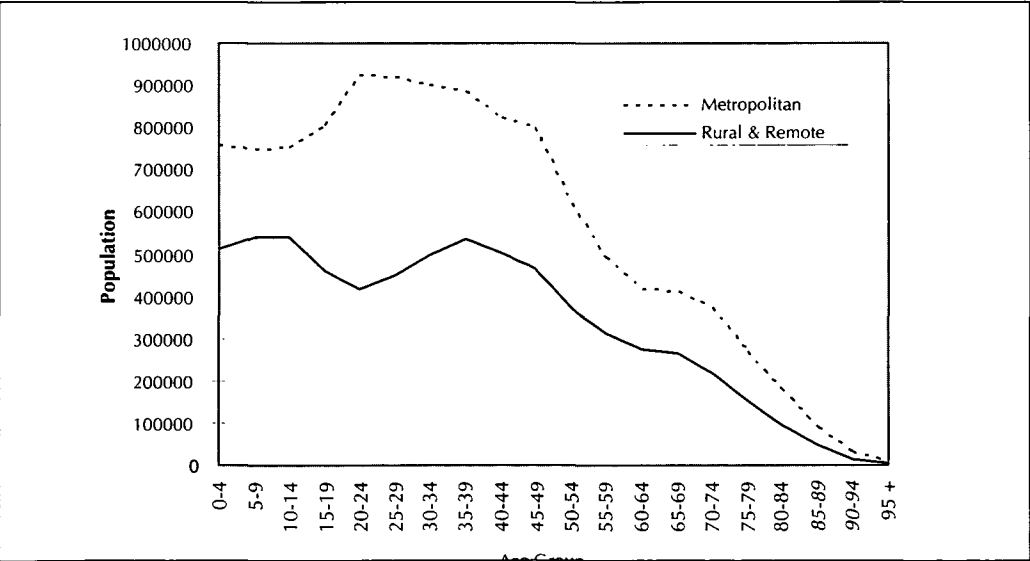
metropolitan south-east Queensland, are growing. Some towns are shrinking, while others are expanding; towns of between 5000 and 20 000 tend to have declining populations (Australian Bureau of Statistics [ABS] 1996 Census, unpublished data).

This publication examines the implications of these differences for vocational education and training policy and practice by considering existing research which is relevant to the points of difference between rural and metropolitan Australia and to variations within rural Australia. It identifies gaps in our knowledge of best practice for vocational education and training for rural Australia and the impact of policy outside metropolitan Australia. Directions for further research are recommended.

Who lives in rural and remote Australia?

Over 37 per cent of the population lives outside metropolitan Australia (ABS 1996 Census, unpublished data). Many young people leave rural and remote areas for education, training and employment. This is reflected in the age distribution of Australia's metropolitan and non-metropolitan areas, which shows a relatively lower number of 15 to 24 year olds in rural and remote Australia and a relatively higher number of that age group in metropolitan Australia. There is a higher proportion of older people in non-metropolitan Australia (see figure 1). These differences in population structure have

Figure 1: Population structure



Source: ABS 1996 Census, unpublished data. Metropolitan centres have populations of 100 000 or more.

implications for the relative requirements for initial vocational education and training. The age structure of the rural population means there will need to be an emphasis on skill upgrading and updating, and re-training for the existing workforce as the economy restructures to meet the challenges of the 21st century.

Educational experience

Rural students are less likely to complete secondary school, and there has been a trend away from school completion for both males and females in the 1990s. Data from the Longitudinal Surveys of Australian Youth show that this is true for both males and females (Lamb 1998, 1997, 1996).

Rural and remote Australians are less likely to have post-school qualifications than those living in metropolitan areas, and less likely to have university-level qualifications (see table 1). Consequently, they are less likely to have previous successful experiences of formal education and training. Literacy performance is strongly linked to educational attainment (ABS 1997a). Females are more likely than males to have completed post-school qualifications in both metropolitan and rural and remote Australia. In contrast to metropolitan Australia, more rural females than males have university and higher-level vocational qualifications. A greater proportion of rural males than metropolitan males have skilled vocational qualifications (defined as typically courses requiring study of two to four years duration with some on-the-job training component).

Table 1: Percentage of population with post-school qualifications

| Post-school qualification | Male Metropolitan | Rural and Remote | Female Metropolitan | Rural and Remote |
|----------------------------------|----------------------|---------------------|------------------------|---------------------|
| Bachelor degree or higher | 7.5% | 3.8% | 6.7% | 4.1% |
| Associate diploma or diploma | 3.3% | 2.5% | 4.2% | 3.9% |
| Skilled vocational qualification | 10.5% | 12.4% | 1.7% | 1.6% |
| Basic vocational qualification | 1.2% | 1.2% | 2.3% | 2.2% |
| Total | 22.6% | 19.9% | 14.8% | 11.9% |

Source: ABS 1996 Census, unpublished data.

Where do they live?

Rural and remote Australians live in communities ranging from isolated stations to regional cities of several tens of thousands. There are 23 major population centres of between 30 000 and 100 000 people, and a further 78 centres with populations between 10 000 and 30 000 (ABS 1996 Census, unpublished data). Of the 37 per cent of Australians who live in non-metropolitan Australia, over one third live in larger centres (10 000 to 100 000), a quarter live in smaller communities (1000 to 10 000) and the remainder are scattered outside these small and large population centres. While there has been a drift to the large metropolitan cities over the last decade, the proportion of the population living outside urban centres has remained constant (ABS, unpublished Census data).

Where do they work?

Rural and remote Australians are more likely to work for themselves, and more likely to employ others. They are less likely to be employees than are metropolitan Australians (see table 2). Employment by industry and occupation data suggest that a smaller proportion of those who are employed in rural Australia are employed full time, since part-time employment is relatively higher in the industries and occupations which comprise most of employment in rural and remote Australia (ABS 1997b). Table 2 shows that unemployment is higher in non-metropolitan areas. The larger proportion not in the labour force points to further 'hidden' unemployment. An implication of higher unemployment rates is that rural students are less likely to find jobs to supplement their income while studying. This is a disincentive for studying outside metropolitan areas.

Table 2: Labour force status

| Post-school qualification | Male Metropolitan | Rural and Remote | Female Metropolitan | Rural and Remote |
|---------------------------|----------------------|---------------------|------------------------|---------------------|
| Employee | 59.4% | 54.0% | 47.0% | 40.6% |
| Employer | 1.6% | 2.6% | 0.7% | 1.5% |
| Own account worker | 4.2% | 7.3% | 2.6% | 5.0% |
| Unemployed | 6.8% | 7.4% | 4.1% | 4.5% |
| Not in the labour force | 28.3% | 29.3% | 46.0% | 49.3% |

Source: ABS 1996 Census, unpublished data.

People in rural and remote Australia are more likely to be working in agriculture, fishing and forestry; mining; tourism (accommodation, cafes and restaurants); utilities; and construction than metropolitan Australians (see table 3). The range of industry available in individual rural and remote locations is less diverse than that located in individual metropolitan locations.

Data available on small business's share of employment by industry suggests that a larger proportion of the non-metropolitan workforce works in small businesses (Revesz & Lattimore 1997; Ferguson & Simpson 1995). Present statistical collection does not facilitate analysis of small business numbers or employment by location, except at a State level.

Table 3: Working population by industry

| Industry | Metropolitan | Rural and remote |
|--|--------------|------------------|
| A Larger proportion in rural and remote | | |
| Agriculture, forestry and fishing | 0.5% | 11.2% |
| Mining | 0.5% | 2.9% |
| Construction | 6.3% | 7.2% |
| Accommodation, cafes and restaurants | 4.7% | 5.6% |
| B Larger proportion in metropolitan | | |
| Manufacturing | 12.4% | 10.4% |
| Property and business services | 12.0% | 6.7% |
| Wholesale trade | 6.4% | 4.9% |
| Finance and insurance | 4.9% | 2.2% |
| Cultural and recreational services | 2.7% | 1.9% |
| Communication services | 2.2% | 1.4% |
| C Similar proportions | | |
| Health and community services | 10.0% | 9.3% |
| Retail trade | 13.8% | 13.7% |
| Education | 7.2% | 7.3% |
| Government admin and defence | 5.5% | 5.2% |
| Transport and storage | 4.7% | 4.4% |
| Personal and rural services | 4.0% | 3.5% |
| Electricity, gas and water supply | 0.7% | 1.0% |

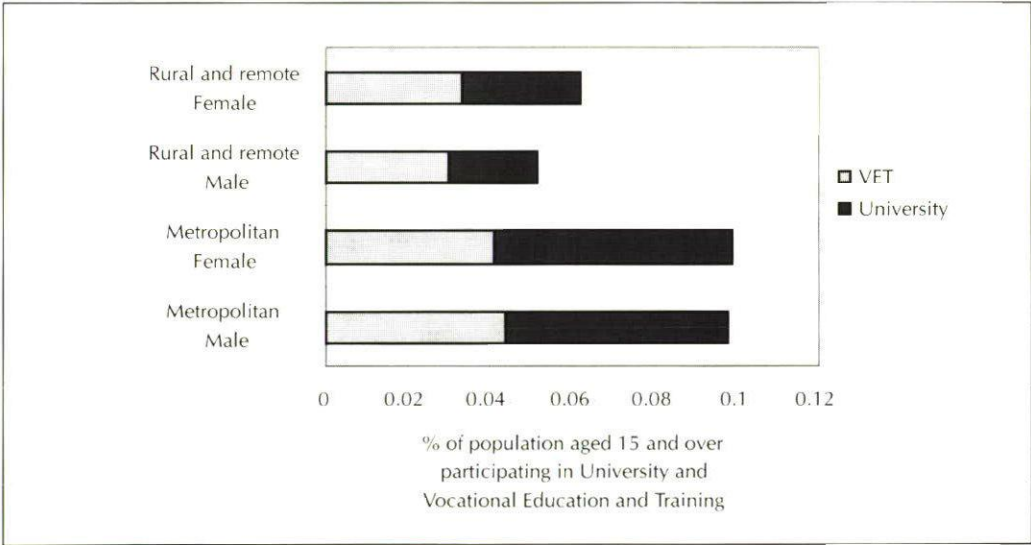
Source: ABS 1996 Census, unpublished data.

Rural and remote Australians are less likely to be professionals and more likely to work as labourers and related workers (ABS 1996 Census, unpublished data).

How many participate in education and training?

Participation in post-school education and training in rural and remote Australia is lower than in metropolitan Australia. Those rural and remote Australians who do study and train are more likely to be in the vocational education and training sector than the university sector (see figure 2). Data on recent vocational education and training graduates whose usual residence is outside capital cities show that graduates with higher-level qualifications (diplomas, associate diplomas and post-trade advanced certificates) are under represented compared with capital cities, comprising 8 per cent of graduates compared to 15 per cent of graduates from capital cities (NCVER 1998).

Figure 2: Percentage aged 15 and over attending post-school educational institutions



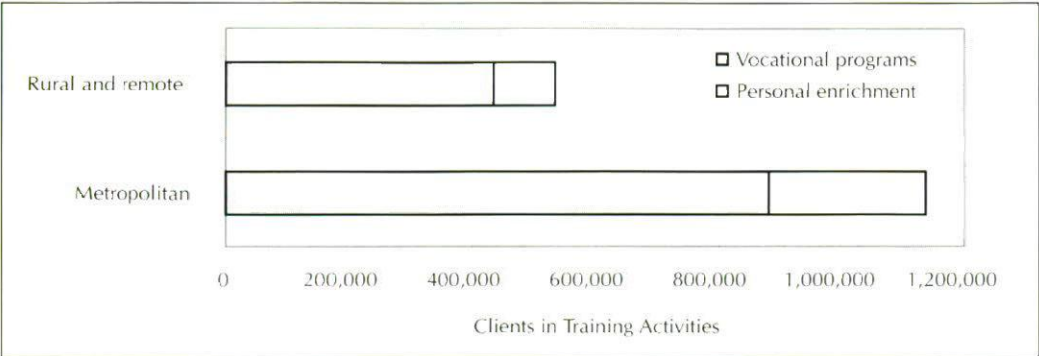
Includes full and part-time study. VET includes technical and further education (TAFE) and private VET providers, but excludes school VET participation.

Source: ABS 1996 Census, unpublished data.

Within non-metropolitan Australia there are regions of very high participation and regions of very low participation (NBEET 1994a). Regions of high participation are around larger centres such as Dubbo, Bathurst and Ballarat which have a long history of provision of post-compulsory education. Rural and

remote Australians who participate in vocational education and training are more likely to participate in vocational programs than in personal enrichment programs, as defined by the Australian Vocational Education and Training Management Information Statistical (AVETMIS) standard (see figure 3).

Figure 3: Numbers of clients in training activities



Source: NCVER 1997.

Note: Variations in participation between the ABS data in figure 2 and figure 3 are due to discrepancies in data collection between the self-administered Census and the State and Territory reporting of student numbers in the AVETMISS collection.

On-the-job training

Rural Australians are more likely to be part-time or casual workers and more likely to work in small businesses. Both these characteristics are associated with a lower time and expenditure on on- and off-the-job training, that is both formal and non-formal training. Training activity over a six-month period in 1993 averaged 4.1 hours per employee for small employers (one to 19 employees) compared to 5.5 for employers of 100 or more (ABS 1994).

Training providers

Government-provided VET education and training was delivered at 1646 locations (including community centres) and by 397 private providers in 1996 (NCVER 1997). Most training in 1996 was provided by TAFE institutions, of which slightly more than half were in non-metropolitan areas. However, many rural Australians do not have ready access to TAFE institutions because of the distance between where they live and work and the location of TAFE institutions (Harrison 1997).

Industry training plans

Industry VET training plans recognise that regional and community involvement in planning must be fostered. However, it is evident from the plans of many industries, especially those with a large metropolitan presence, that this recognition is yet to be translated into action. Plans talk about 'the need to forge links' with regions and communities and development of marketing strategies to raise awareness of VET in regional areas. Most industries with a large presence in non-metropolitan Australia have strategies for flexible delivery to address the training needs of rural and remote workers and enterprises (ANTA 1997b).

Summary of context of rural and remote Australia

Non-metropolitan Australia is diverse in terms of its population density, the educational experiences of the population, in the occupations and industries it supports. In addition to the issues associated with the vast distances between where some Australians live and large population centres where most educational infrastructure exists, there are other differences between metropolitan and non-metropolitan Australia. Rural people are less likely to have post-school qualifications, participate in post-school education and training (especially personal enrichment programs), be an employee, be a professional and work in manufacturing, property and business services or finance and insurance. They are more likely to be older, have left school early, be unemployed or out of the labour force, work in small business, be self-employed or an employer, be a labourer or work in another low-skilled occupation. They are more likely to work in agriculture, forestry and fishing, mining, construction or tourism. The age structure and unemployment in rural Australia means there will need to be an emphasis on skill upgrading and updating, and re-training for the existing workforce as the economy restructures to meet the challenges of the 21st century.

13

Methodology

The vocational education database (VOCED), Australian Education Index, AUSTROM and OLEARN databases were searched. This was supplemented by recent reports and conference proceedings and contact with researchers and policy-makers with an interest in non-metropolitan VET. The scope of our search was Australian research articles and reports since 1990.

The search of the VOCED database yielded the largest number of relevant research articles and reports. A search for 'research' revealed 1319 entries, of which some were overseas items and some pre-1990. Around half of the remainder appeared to be described as 'first-hand' reports of research projects. We scanned the abstracts of these, and found only a tiny proportion (47) which either explicitly stated they used data from outside metropolitan areas, or may have used non-metropolitan data. These items are listed in the bibliography.

Structure of the publication

The issues relating to vocational education and training in rural and remote Australia are discussed in the following three sections under the headings of: training outcomes; access, equity and participation; and curriculum, delivery and assessment. Within each of these three sections issues relating to individuals and businesses, location, and the system are identified. The system includes the providers and the policy framework. The final section contains a summary of the seven issues identified for VET in non-metropolitan Australia and further research questions related to each issue. The issues are: local involvement in planning; thin training markets; the cost of training and measurement of cost and effectiveness; flexible delivery; a limited tradition of formal vocational education and training and limited history of valuing education; the quality and availability of trainers and assessors; and community sustainability, social capital and the value of vocational education and training to communities.

Training outcomes

THE CONTEXT SECTION noted that a smaller proportion of those outside metropolitan areas complete secondary school and a smaller proportion have post-school qualifications, although more males living in rural and remote regions than metropolitan centres have skilled vocational qualifications. Lower participation rates identified in figure 2 are compounded by lower module and course completion rates (NCVER 1997) and sum to a low level of formal training output in non-metropolitan Australia.

The education and training outcomes and needs of non-metropolitan Australia differ from region to region, and differ from metropolitan Australia. The differences are attributable to the size of population centres, variations in industry structure, with associated variations in the economic impact of changes in markets, and likely differences in job structures (NBEET 1994; Billett et al. 1997; Butler & Lawrence 1996).

Training outcome issues relating to individuals and businesses include lower participation by those with lower educational levels and a preference for informal learning and non-formal education, especially in small business and agriculture. Training outcomes for rural communities are enhanced if there is local involvement in planning. Training outcomes accrue to individuals and communities as well as to industries, which suggests that policy development and implementation should take account of the views of individuals and communities as well as industries. The measures used to assess training outcomes should be more flexible in order to capture the value of training to rural and remote communities, enterprises and individuals.

15

Issues relating to individuals and businesses

Those with lower educational qualifications earn lower incomes (ABS unpublished 1996 Census data), are less job mobile (McDonald et al. 1998) and are less able and willing to make successful changes in their businesses (Kilpatrick 1996). Those with lower levels of education are less likely to undertake further study (Kilpatrick 1996) as they frequently lack confidence in their ability as learners in formal training situations (Butler & Lawrence 1996; Johnstone et al. 1996; Rodwell et al. 1996). Given the uneven spread of

vocational education and training participation that was noted in the Context section (NBEET 1994a), it is important to note that some regions have populations which are not accessing training and are thus disadvantaged. The barriers to participation and ways of overcoming them are discussed in the following section, Access, equity and participation.

There are positive labour force outcomes of formal vocational education and training for those rural Australians who do participate. Volkoff and Golding (1997) studied technical and further education (TAFE) graduates from Australian National Training Authority (ANTA) equity target groups and found that rural Australians are more likely than other equity groups to move into the labour force, and to move from unemployment to a job following a TAFE course. Rural Australians from equity target groups including those from a non-English-speaking background, those with a disability and Aboriginal and Torres Strait Islanders experience poorer outcomes following training (Golding & Volkoff 1998).

The relatively high proportion of males in non-metropolitan regions with skilled vocational qualifications reflects the numbers employed in the mining and construction industries which have a tradition of formal vocational education and training. In contrast, the agriculture, forestry, fishing and tourism industries which employ large numbers in rural Australia (see table 3) do not have a tradition of formal vocational education and training (with the exception of small numbers of farmers who attended agricultural colleges).

However, there is a long tradition of non-formal training in agriculture, where around 80 per cent of farmers participate in field days, workshops and on-going group extension activities. This non-formal training has outcomes of improved business profitability, responsiveness and adaptability (Kilpatrick 1996). Training courses, both formal and non-formal, can establish information and support networks which continue to function long after the course is completed. These networks are particularly important for geographically isolated businesses and individuals (Kilpatrick 1997b; Kilpatrick et al. 1998). The extent and outcomes of non-formal training activities in industries other than agriculture is an area for further research. Research should consider any regional variations in patterns of non-formal training. Application of the extension education model in other industries in rural Australia should be investigated.

Self-employed and small business owner/managers who are relatively more numerous in rural and remote Australia (see table 2) have gained skills through working in and managing their enterprises. Recognition of current competence gained from non-formal and on-the-job learning in industries without a tradition of formal qualifications could increase job mobility and assist in diversification within businesses, for example by assisting farm businesses to diversify into tourism and hospitality. Recognition could improve farmers' ability to earn off-farm income (Synapse Consulting 1997). Despite this, there is little demand for workplace assessment from the existing workforce in rural small businesses (see for example, Moy 1997). Small business in general, and rural small businesses in particular, do not value accredited training (Field 1997; Grannall 1995). Small businesses do not necessarily look to training to satisfy their information and skill development needs. Rural small businesses consider the cost and perceived benefits (outcomes) of education and training compared to other ways of obtaining information and skills, for example from consultants (Kilpatrick 1997a; Catts et al. 1996).

Work in progress on the relationship between training and small business will investigate any differences between metropolitan and non-metropolitan attitudes to accredited training (Kilpatrick in progress). Effective ways of marketing the benefits of vocational education and training and workplace assessment need to be identified.

Issues relating to location

It is likely that the lower educational and skill base in rural and remote Australia means the marginal impact of vocational education and training programs is greater than in metropolitan areas. Metropolitan areas have a greater skills base to draw upon for civic functions such as local government and cultural and community development activities. This may be balanced by the larger proportion of the population not in the labour force, unemployed or working part-time, which implies there is a greater resource of time available for civic functions and community activities. The value of vocational education and training to rural communities is an area for further research.

Small populations and a scarcity and range of formal qualifications in rural communities result in much informal learning taking place as residents manage the civic and social activities of their communities. There is a need to recognise the value of this informal learning which occurs in rural

communities, and a need to recognise informal learning in community contexts as a pathway to formal vocational education and training (Falk 1998a, 1998b; Harrison & Falk 1998; McIntyre & Kimberley 1998).

Rural and remote communities value the local presence of TAFE campuses as a type of 'social capital' which contributes to the sustainability of the community in the form of population and infrastructure. Quality private providers who have established relations with the community are also viewed positively. It is not so much who the provider is as the quality of provision, and the partnership between them and the community, and the flexibility and responsiveness that are important (Smith & Herbert 1997; Butler & Lawrence 1996). Long-term strategic relationships between education and training providers, industries and communities contribute to community sustainability and enhanced training outcomes for individual locales (Billett et al. 1997; Falk 1997a, 1997b, 1997c; Harrison & Falk 1998; Ainley & Fleming 1996; Golding 1996).

Issues relating to the system

Vocational education and training policy must take into account the diversity of regional needs, due largely to demographic and industry structures (Billett et al. 1997). The changing industry structure of regions also has implications for vocational education and training provision. Regions which have relied on industries which have been affected by economic restructuring, for example through changes in global markets or reductions in tariff protection, need people with skills to fit new industries, such as knowledge and technology-based industries or niche food production industries. The closure of major employers in small locales leaves behind a population which requires training for new jobs that may be located elsewhere. There is a trend toward closure of branches and changes to services delivery in areas such as banking and health services in rural and remote Australia (Harrison 1997). People with skills that were used in the old service delivery structures, for example bank tellers and hospital orderlies, are less likely to find jobs that use existing skills than would be the case in metropolitan Australia. New service delivery (by bank agencies and community health centres, for example) will require different skills that may not be readily available in small communities.

The needs of remote locations are very different from those of larger rural centres (NBEET 1994a). Remote locations have small numbers of actual and potential students and a very limited range of vocational opportunities.

The measures used to assess performance should be more flexible and appropriate, not 'one size fits all'. Some of the performance measures could be negotiated with individual providers and so relate to goals over which the providers have some control (Billett et al. 1997).

There is little research on the impacts of vocational education and training policy and performance measures on a regional, as distinct from State or Territory, basis (Billett et al. 1997). Most of the measures of outcomes of vocational education and training target immediate training and employment outcomes (see for example, ANTA 1997a and Werner 1998).

The national training framework and industry training plans are drawn up in consultation with industry and allied funding flows to accepted industries. Vocational activities which occur in rural communities and which do not fall within accepted definitions of industries are not funded by national and State vocational education and training systems (Falk 1998a, 1998b; Harrison & Falk 1998). The development of knowledge and skills in community activities such as running community groups, lobbying and managing community projects and the majority of what used to be called 'cottage industries' seem to fall into this category. The recent trend towards working from home (telecommuting), and the increase in numbers of micro and home businesses places even greater emphasis away from the traditional institution-based and workplace provision of vocational education and training. In addition, there is both formal and informal vocational learning which occurs in community settings related to women's work, such as stall-holding and volunteer work, all of which builds vocations yet is not explicitly recognised as such. Policy does not take adequate account of the multiple skills required by those who hold several seasonal or part-time jobs.

Whilst almost all industry training plans acknowledge the need for regional consultation, most have not yet implemented a strategy for such consultations (ANTA 1997b). Golding and Volkoff (1997) have found that a substantial proportion of TAFE students are motivated to study by potential outcomes not related to their current employment. This suggests that policy development and implementation should take account of the views of individuals and communities as well as industries. Regional consultations should include these groups. An evaluation of the effectiveness of the regional consultation strategies outlined in the national industry training plans would provide useful information on best practice for the incorporation of regional issues into the training system.

Frequent changes to the vocational education and training system are difficult to keep up with and apply, especially for the rural sector which does not have a culture of formal education and training (Reynolds 1997).

Providers must have an understanding of context, and a realistic expectation of outcomes for clients in remote communities, for example, in terms of employment (Rodwell et al. 1996).

Access, equity and participation

THIS SECTION CONSIDERS some of the factors that may contribute to differences in participation rates observed in figure 2. There are issues related to previous educational experience; travel cost and distance; availability of staff to replace workers who are upgrading skills; availability of work placements; access to information and communications technology; the relevance of training for rural client groups; and marketing of vocational education and training.

Issues relating to individuals and businesses

Low self-confidence as a learner, related to previous negative experiences of schooling and low education levels, is prevalent in rural Australia and is a barrier to accessing education and training, particularly for older people already in the labour force (Kilpatrick 1997a; Butler & Lawrence 1996; Grannall 1995; Johnstone et al. 1996; Rodwell et al. 1996). As young rural Australians are less likely to complete secondary school (Lamb 1998), low levels of educational attainment will continue to be a barrier to participation. Economic hardship is a barrier to school completion (Country Education Project 1993).

The limited and uneven tradition of formal vocational education and training in rural Australia, and in small business, discussed in the section on training outcomes above, is a further access barrier for many (Falk 1998a, 1998b; Butler & Lawrence 1996; McNamara & Valadian 1994). Small and medium businesses in regional areas have a diversity of approaches to planning and managing training. Some rely on head offices in metropolitan areas to manage training. As few have specialist training managers or people with expertise in planning and managing training and links to training providers, the quality of training decisions tends to be lower than in large business in metropolitan areas (Noble 1994).

Adult and community education and providers such as SkillShare are important in providing bridging programs for entry into vocational education and training in rural communities. These providers operate out of local communities and are in touch with community needs (Butler & Lawrence 1996; Kaye Schofield & Associates 1996; McIntyre et al. 1995).

Women, those from a non-English-speaking background, those with a disability and Aboriginal and Torres Strait Islanders face additional barriers in accessing training due to distances from specialised training providers and non-viable class sizes for targeted courses (Golding & Volkoff 1998; Knight 1996; Mageean 1990).

Issues relating to location

The most visible access and equity issue for rural and remote Australia is the travel required to access training delivery sites. Over 70 per cent of recent vocational education and training graduates who usually reside outside capital cities relocated to study because there was no local TAFE or their local TAFE did not offer the course they wanted to take (NCVER 1998). The cost of travel and the opportunity cost of the time spent travelling are barriers to participation (Kilpatrick 1997a; Butler & Lawrence 1996). However, people will travel if the training is perceived to be of sufficient benefit (Kilpatrick 1997a). Community attitudes to, and knowledge of, post-school options are a barrier to participation for young people (Country Education Project 1993).

There is less childcare available in rural and remote locations than in metropolitan areas and available care is not always flexible, for example when travelling long distances to education programs (Knight 1996; McGowan 1994). The provision of childcare facilitates access to training (Kilpatrick 1997a).

There is a paucity of replacement workers to allow the release of the existing workforce for training. Small business managers have difficulty in finding suitable replacement staff whilst they participate in off-the-job training (Butler & Lawrence 1996; Rodwell et al. 1996; NBEET 1994a). Flexibility and negotiation in scheduling training can reduce the impact of staff absences for training (Kilpatrick 1997a; Butler & Lawrence 1996; Grannall 1995).

The range of work placements for initial vocational education and training, including VET in schools, limits individuals' choice of career path, especially in smaller population centres (Butler & Lawrence 1996). Effective work placements beyond students' home locations can improve retention for rural students (Country Education Project 1993). The capacity of the predominant small business sector to host trainees is limited by economic factors and business training infrastructure (Watkins 1996). Many young people and their parents welcome the opportunity for school leavers to move to larger centres for study and work because it opens doors to new opportunities and broadens

vision (Choate et al. 1992). However, there are financial and emotional costs of moving away for education and training leading to uncertain future employment (Butler & Lawrence 1996).

Closure of branches of businesses and government facilities such as hospitals and local government amalgamations all reduce workplace training and assessment opportunities. Further research is required on the impact of closures on training opportunities in rural communities and on the effect of workplace-based apprenticeships in schools on the transition from school to work for rural children.

Issues relating to the system

A large number of studies have found that programs which are perceived to be relevant to the needs of people in a rural community will attract a higher participation rate (for example, Kilpatrick 1997a; Butler & Lawrence 1996; Rodwell et al. 1996; Grannall 1995). Relevant programs acknowledge local issues and the culture and skills of potential participants. Community and local employer participation in formulation of vocational education and training policy and programs allows local needs and demographic characteristics to be taken into account. For example, literacy and numeracy training needs of a community or strategies to improve the employability and self-esteem for women can be incorporated into programs (Butler & Lawrence 1996; Davis in ANTA 1997c; Kaye Schofield & Associates 1996; Knight 1996; Grannall 1995). Rural employers need more effective consultation with training providers to ensure that vocational education and training is relevant to local needs (Market Equity 1997). A 'visible' local contact point is desirable; local training brokers may assist employers, individuals and communities to access appropriate vocational education and training (Kilpatrick 1997a).

Equitable access to vocational education and training involves appropriate information and marketing of programs. Poor participation is often due to poor dissemination of information about programs to employers, potential students, and parents (Butler & Lawrence 1996; Knight 1996; Choate et al. 1992). Marketing through local community groups and associations is effective (Kilpatrick 1997a). Students consult multiple information sources before joining programs, for example past participants, the media or the course provider (Kilpatrick 1997a). A knowledge of local information networks and sources is a prerequisite for effective marketing of training. Providers based in distant locations do not always have sufficient knowledge of local information sources.

The growth of information and communications technology, such as interactive satellite technology and the world wide web, will increase the access of education and training for people in non-metropolitan Australia, and remote Australia in particular (Synapse Consulting 1997; Da Rin & Groves 1996). Information technology and advanced technology (IT and AT) per se does not overcome all access barriers. IT and AT has its own set of barriers which relate to cost and physical provision of the equipment and infrastructure, training of teachers and students to maximise the benefits of technology and issues of individual learning styles (Kilpatrick 1997a; Butler & Lawrence 1996; NFDT 1996). For example, a study of women working in remote locations by Grace et al. (1996) found there is a paucity of training opportunities on the use of IT and AT; the telecommunications infrastructure is inadequate for professional development/continuing education for professional workers; and the cost of telecommunications inhibits use.

Cross-sectoral co-ordination between TAFE, private providers, schools, higher education and industry will improve access and participation in VET for non-metropolitan people by sharing costs and increasing the range of infrastructure and human resources available to each sector in rural and remote locations, permitting a wider range of programs to be provided in rural and remote locations. Successful examples of cross-sectoral sharing of facilities and expertise point to the need for flexibility in designing and managing cross-sectoral initiatives (Kilpatrick 1997a; McIntyre et al. 1995).

Curriculum, delivery and assessment

THE LARGEST BODY of research relating to non-metropolitan Australia is research on curriculum delivery and assessment. The issues covered in this section include: providing programs which are tailored to the needs of rural and remote clients and the related issue of methods of training brokerage between local communities and enterprises and training providers; the needs of people for training beyond areas represented by local employment; the need for flexible yet effective alternatives for delivering vocational education and training to small, scattered client groups; staff development, support and retention in remote areas; and appropriate performance measures for vocational education and training in rural and remote Australia.

Issues relating to individuals and businesses

Training should be relevant to clients; both personal development as well as employment-related content is important (Banberry 1997; Dunn & Lamont 1997; Rodwell et al. 1996). Rural and remote Australians who participate in vocational education and training are more likely to participate in vocational programs than in personal enrichment programs, as defined by the National Centre for Vocational Education Research (NCVER) (see figure 3). Further research is needed to determine whether this difference is because of differential availability of personal enrichment programs, or for other reasons such as definitional variation in the data collected.

Providers need to negotiate the content, format and timing of training with each of their client groups (Falk & Kilpatrick 1997; Kilpatrick 1997a; Butler & Lawrence 1996; Knight 1996; Rodwell et al. 1996; Grannall 1995). Providers must take into account that effective training for rural small business and the self-employed is contextualised, and that they are operating in a segmented market (Kilpatrick 1997a; NBEET 1991). Some rural Australians perceive that non-metropolitan training providers offer a lower quality training product because they perceive that the quality of teacher/trainer preparation is lower,

especially in small TAFE institutes and the alternative delivery mechanisms used in rural areas are inferior to the mainstream mechanisms used in larger metropolitan centres (NBEET 1991).

Several studies have identified a need for management and information technology training in non-metropolitan Australia. Needs are across a broad spectrum, from initial familiarisation with new technology and the internet to support for specialised applications of information technology in workplaces. Specifically, research has identified additional needs for training in these areas for rural women (Synapse Consulting 1997; Butler & Lawrence 1996; Knight 1996; South Australian Women's Advisory Council 1996; NBEET 1994a). However, a large number of studies are restricted to women's needs and there is no reason to suggest that provision of training in information technology for rural men is adequate.

High unemployment and limited job opportunities in rural areas mean that more pathways into training and employment are required. Individuals, especially young people, may require training in areas not represented by local employment, but nevertheless of national significance, as discussed in the access and equity section. The age structure and unemployment in rural Australia, as identified in figure 1 and table 2, means there will need to be an emphasis on skill upgrading and updating, and re-training for the existing workforce if rural communities are to contribute in a restructured economy in the 21st century. Further research is needed into alternate ways of recognising existing skills and developing new skills.

Issues relating to location

26

People and businesses with little experience of education and training lack confidence as consumers of education and training (Selby Smith 1996a). The lack of a tradition of education and training in many rural industries and non-metropolitan communities means that many rural and remote individuals, enterprises and their communities lack experience and lack confidence as consumers of education and training. Small, scattered rural and remote businesses lack bargaining power for procuring training from providers. They lack understanding of issues of quality when selecting providers and training methods, and do not always understand the system (Rural Industry VET Plan, ANTA 1997b). Support for employers and participants at all stages of the training process from the decision to procure a program through to the final

assessment of participants, is essential for success in remote communities (Rodwell et al. 1996). Mentoring can be used to provide support for employers, and trainees who are isolated from others in similar situations (Conibear 1995).

Local rural training committees or brokers could facilitate interactions between training providers and rural communities and ease the transition to new policies such as training markets and user choice (Billett et al. 1997; Kilpatrick 1997a; Grannall 1995). They could also provide a support role in remote communities. Local brokers are aware of individuals who need training in areas not represented by local employment opportunities, but in demand at the national level, and will be able to locate suitable providers. This is a question of meeting global needs locally, and of recognising that there will be migration out of some communities as the economic structure of locales, regions and the national economy changes. Group training companies have the potential to expand their role in rural communities beyond the facilitation of apprenticeship training and could fill the role of local training broker (Selby Smith et al. 1996a). Regional development organisations or boards may also be able to act as training brokers. Research is needed to identify good practice and effective models for local training brokers.

Policy initiatives which foster competition at the expense of co-operation, such as user choice, may have negative consequences in small or thin rural markets. Further research is needed to investigate the ways in which co-operation and competition work in small communities (Anderson 1998; Noble et al. 1998). There are few employers large enough in non-metropolitan Australia to have the necessary infrastructure to deliver a balance of enterprise-specific and general competencies. The administrative requirements of accreditation are a further barrier to small and medium business participation in training delivery. Therefore most employers need to draw upon external providers for all their VET needs (Watkins 1996), and there is reduced tailoring of courses for particular businesses compared to large metropolitan employers (Butler & Lawrence 1996).

Class sizes are smaller in smaller population centres. This means higher costs per student/contact hour, as is demonstrated by the high cost of VET per hour in Tasmania and the Northern Territory where all centres are relatively small (Watkins 1996). Classes may not be large enough to fund, especially for elective modules (Butler & Lawrence 1996; Knight 1996). The withdrawal of a

large employer from a TAFE training program can reduce class sizes below minimum funding criteria (Ferrier 1997; Selby Smith et al. 1996a). The relative contributions of mobility of skilled labour and local training in filling skilled jobs in non-metropolitan Australia has not been researched.

Small private providers in rural and remote areas can be deterred by the high infrastructure costs imposed by accreditation and competitive tendering (Kell et al. 1995). When combined with pressure on public providers, this may result in a decline in the number of visible local training providers. A possible outcome from this is that people in small rural centres may not have a point of contact with the training system.

Courses need to provide for a wider range of skills within them so as to cater for the multi-skilled requirements of many rural and remote individuals, jobs, businesses and communities (Butler & Lawrence 1996). Research is needed to ascertain whether national industry standards cater for the broad range of skills required for rural jobs.

It is difficult to attract and retain high quality teachers, trainers, facilitators and assessors in many rural and remote locations. Problems faced by trainers in remote locations include isolation, professional loneliness, poor resources and facilities. A peer support system among remote area educators may improve quality and retention of staff (NSDC 1996).

Issues relating to the system

The extent and nature of the demand for education and training in non-metropolitan areas (both articulated and latent) has not been adequately identified (KPMG 1996; Schofield 1996): rather, needs have been assumed on the basis of metropolitan provision (Falk 1998b). Regional identification of needs and planning are necessary because of different demographic patterns and cultural differences (Billett et al. 1997; NBEET 1994a).

Training providers from distant locations do not always understand local culture and needs (Rodwell et al. 1996), including the diversity of local needs. Trainers and facilitators from distant locations lack credibility if they fail to appreciate the existing skills, knowledge and values which participants bring to education and training programs (Falk et al. 1997). Removal of training providers to distant centres results in distancing the provider from the community in regard to decision-making and consultation (Butler & Lawrence 1996). Small rural adult community education centres have been successful in identifying specific needs for education and training and meeting those needs

either themselves or through links with other providers (McIntyre et al. 1995). Tendering arrangements concentrate on short-term plans and may not adequately provide for continuity and the long-term training needs of a community (Butler & Lawrence 1996).

Local training brokers could assist communities and training providers to overcome barriers imposed by culture and local knowledge. They would be in a position to provide for the long-term education and training needs of the community.

Flexible delivery of training suits many clients in rural and remote Australia, including small business managers (for example, Southwell 1995). Programs should include flexible entry and exit points, which are related to a preference for short, manageable courses (Kilpatrick 1997a; Grannall 1995). However, not all students adapt well to the independent learning usually required by flexible delivery. Pre-course counselling is essential for students to continue in programs (Ingle 1997). Student support in TAFE systems is not designed for rural flexible delivery students (Ingle 1997; Butler & Lawrence 1996).

High quality learning materials are not always available, including those with appropriate literacy and numeracy levels. This has a greater impact on rural Australia if flexible delivery is to replace traditional delivery methods in rural and remote areas. It is expensive to provide for the range of materials required to cater for variations and individual needs. More co-operation between providers is needed to maximise resources for production of high quality materials. Providers should co-operate across sectors in use of facilities and expertise to reduce costs. Examples of co-operation show that flexibility in planning and managing cross-sectoral initiatives is necessary for success (Kilpatrick 1997a; NFDT 1996).

The growth of information and communications technology and advanced technology (IT and AT) will increase the access of education and training for people in non-metropolitan Australia. Outcomes from participation in training using IT and AT can be enhanced by taking note of existing research.

Appropriate and successful training models for rural and remote locations have been developed and need to be heeded. Learning is enhanced by participant interaction, some face-to-face components, the use of itinerant teachers or mobile facilities and mentoring for remote students (Bamberry et al. 1997; Falk & Kilpatrick 1997; Rodwell et al. 1996; Knight 1996; Butler & Lawrence 1996; Grannall 1995). Interactive television by satellite is successful as a training medium for rural and isolated people. It increases interaction and

discussion amongst the participants following the programs. Bulletin boards and electronic mail have the potential to facilitate interaction between students and students and teachers (McLoughlin 1995).

Insecurity of the training market makes acquisition and retention of quality of teaching staff difficult in rural areas (Butler & Lawrence 1996). Teacher/trainer employment terms and conditions do not adequately take into account the tasks required by flexible delivery, for example teaching loads are often based on contact hours, and do not take into account the time spent on preparing materials, telephone contact with remote students and administration of multi-site delivery (Ingle 1997).

Those working in rural and remote locations require a broader range of skills than in metropolitan areas to cope with flexible delivery, and a more diverse teaching load. Loads are diverse because there are limited numbers of classes in particular subject areas, and composite classes of students studying for different awards are common. There is a need for professional development for rural and remote teachers and trainers, including the skills needed for flexible delivery. Few adult educators in remote locations hold formal qualifications in adult education (NSDC 1997; Ingle 1997; NFDT 1996; Shaw 1995).

There is a need for more trained assessors in rural areas, and the cost of assessment in remote locations is increased because of the time and costs of travel by assessors (Moy 1997; Butler & Lawrence 1996). Assessment materials, like education and training materials, need to be culturally appropriate for particular contexts and locations, and need to take into account issues such as for literacy and numeracy (Moy 1997).

Existing measures of the cost and effectiveness of vocational education and training are not all appropriate for rural contexts (Grannall 1995); for example they do not account for slower completion times of rural flexible delivery students (Ingle 1997). Resource allocation and performance indicators for VET do not fully recognise the infrastructure and development cost of flexible delivery (Kilpatrick 1997a; NFDT 1996). Funding policy should address access and equity because of the greater cost of delivering education and training in rural Australia (Kilpatrick 1997a; Butler & Lawrence 1996).

Findings and directions for further research

THE REPORT *TOWARDS a national education strategy for rural Australians* (NBEET 1991) identified issues for vocational education and training in rural areas. Many of the same issues are still current seven years later. Participation rates are still uneven, but generally lower than in metropolitan areas. Appropriate consultation in planning and costs of accessing education and training are issues still to be addressed.

The issues for VET in non-metropolitan Australia can be summarised under seven headings: local involvement in planning, thin markets, cost of training and measurement of cost and effectiveness, flexible delivery, a limited tradition of VET and history of valuing education, quality and availability of trainers and assessors, and community sustainability, social capital and the value of VET to communities.

Issue 1: Local involvement in planning

There is a wide diversity of education and training needs outside metropolitan Australia. Regional/local planning is better able to take account of the different demographic patterns in the various regions, and regional/local cultural differences than national or State-based planning. Regional and local involvement is required at all levels from policy development to individual program development. National industry standards should be evaluated to ascertain whether they cater for the broad range of skills required for rural jobs.

Poor participation in post-compulsory education is often due to poor dissemination of information about programs. A 'visible' local contact point is desirable. Local rural training committees or 'brokers' can facilitate interactions between training providers and rural communities.

Questions for further research

What are good practice models for the provision of local training broker services?

Do national industry standards cater for the broad range of skills required for rural jobs? What is the effectiveness of the regional consultation strategies outlined in the various national industry training plans in addressing local needs?

What is the extent and nature of the demand for education and training on a region-by-region basis?

Issue 2: Thin markets

Policy initiatives which foster competition at the expense of co-operation, such as user choice, may have negative consequences in small or thin rural markets. Small population centres often lead to classes not running because they are not large enough to fund. This reduces the choice available to non-metropolitan students.

The lack of diversity of industry in individual locations limits the range of work placements for training, especially vocational education and training in schools. The capacity of the predominant small business sector to host trainees is limited by economic factors and business training infrastructure, and further reduces work placements. The move of businesses and government operations away from small communities reduces workplace training and assessment opportunities.

Small, scattered rural and remote businesses lack bargaining power when procuring training from providers. They lack understanding of issues of quality and do not always understand the system. There is reduced tailoring of courses for particular businesses compared to large metropolitan employers.

There are few employers large enough in non-metropolitan Australia to have the necessary infrastructure to deliver a balance of enterprise-specific and general competencies. Therefore most employers need to draw upon external providers for all their vocational education and training needs. Small private providers in rural and remote areas can be deterred by the high infrastructure costs imposed by accreditation and competitive tendering.

Women, those from a non-English-speaking background, those with a disability and Aboriginal and Torres Strait Islanders face additional barriers in accessing training due to 'thin markets' for specialised programs in small population centres.

Questions for further research

How does co-operation and competition for the provision of training operate in small communities? What is the impact of training market reform policies on rural and remote communities? What are the possibilities for cross-sectoral collaboration?

What is the impact of branch and government service closures on training opportunities in rural communities?

Issue 3: Cost of training and measurement of cost and effectiveness

The cost of delivering and accessing education and training in rural Australia is greater than in metropolitan areas. Vocational education and training funding policy should address issues of access and equity by consideration of both supply and demand side issues.

Class sizes are smaller in smaller population centres. This means higher costs per student/contact hour, which are not fully recognised in national and State resource allocation models. Resource allocation and performance indicators for vocational education and training do not fully recognise the infrastructure and development cost of flexible delivery. Teacher/trainer employment terms and conditions do not adequately take into account the tasks required by flexible delivery. Costs of assessment are higher, especially in remote locations.

Students who travel to distant centres for education and training face greater transport and accommodation costs, and spend more time on travel. This reduces the incentive to participate, especially for the existing rural workforce.

Questions for further research

What are the impacts of national vocational education and training policy and performance measures on a regional, as distinct from State or Territory, basis?

What are alternative models of costing and funding vocational education and training (both demand and supply sides)? What impact would the alternatives have on provision and participation in rural and remote regions?

Issue 4: Flexible delivery

The growth of information and communications technology and advanced technology (IT and AT) will increase the access to education and training for people in non-metropolitan Australia. IT and AT per se does not overcome all access barriers. IT and AT has its own set of barriers which relate to cost and physical provision of the equipment and infrastructure, training of teachers and students to maximise the benefits of technology and issues of individual learning styles. There is a paucity of training opportunities on use of IT and AT for rural people, and lack of accessible technical support. Not all students adapt well to the independent learning usually required by flexible delivery, including IT and AT.

Learning is enhanced by participant interaction, there is a need to consider the incorporation of some face-to-face component, or mentoring into flexibly delivered programs, whether they be print or technology based. Appropriate and successful training models for rural and remote locations have been developed and need to be heeded, for example itinerant teachers, mobile facilities.

More co-operation between providers and across sectors is needed to maximise resources for the delivery of programs and the production of high quality materials.

The age structure and unemployment in rural Australia means there will need to be an emphasis on skill upgrading and updating, and re-training for the existing workforce if rural communities are to contribute in a restructured economy in the 21st century. Alternate ways of recognising existing skills and developing new skills must be considered.

Questions for further research

What are the barriers to use of proven models of good practice in the delivery of vocational education and training in rural and remote Australia, and what strategies could be used to overcome them?

How can the skills of the relatively older workforce in rural Australia be upgraded and new skills be developed so rural communities can contribute in a restructured economy in the 21st century?

Issue 5: Limited tradition of formal vocational education and training and limited history of valuing education

With the exception of mining, the industries which dominate non-metropolitan Australia do not have a tradition of formal vocational education and training. However, there is a long tradition of non-formal training through agricultural extension. Learning by doing is valued, but many do not recognise that they have skills acquired through experiential learning. The formal vocational education and training system needs better to recognise skills acquired through experiential learning. There is a need to recognise the value of the informal learning which occurs in rural communities, and recognise it as a pathway to VET.

A larger proportion of the non-metropolitan population is employed in small business compared to metropolitan Australia. Small business employees are less likely to participate in formal VET. Many businesses and families have no confidence in their ability to be informed and effective as ‘consumers’ of VET.

Low self-confidence as a learner is widespread, and is related to previous negative experiences of schooling and low education levels, although the impact is not uniform across non-metropolitan Australia. Adult and community education and providers are important in providing bridging programs in rural communities.

Frequent changes to the national VET system are difficult to keep up with and apply in businesses and communities which do not have a culture of education and training.

Questions for further research

Can the agriculture extension education model be applied in other industries in rural Australia?

What are the effective ways of marketing the benefits of training and workplace assessment which leads to formal qualifications?

Issue 6: Quality and availability of trainers and assessors

Trainers and assessors working in rural and remote locations require a broader range of skills than those in metropolitan areas in order to cope with flexible delivery and a more diverse teaching load. There is a need for professional development, especially as few adult educators in remote locations hold formal qualifications in adult education.

Trainers need to understand clients' existing skills and their needs in order to be credible; metropolitan trainers and providers coming into rural and remote areas often lack this understanding.

Insecurity of the training market makes acquisition and retention of quality of teaching staff difficult in rural areas. Difficulties faced by trainers in remote locations are: isolation, professional loneliness, poor resources and facilities.

Questions for further research

What are the barriers to providing effective and cost-efficient training for rural and remote adult educators and trainers? What are effective support mechanisms for isolated educators and trainers?

Issue 7: Community sustainability, social capital and the value of vocational education and training to communities

Quality private providers who act in partnership with local industries and community are responsive and so generate more effective outcomes in terms of relevant programs. They contribute to community sustainability. Rural and remote communities value the local presence of TAFE campuses as a type of social capital which contributes to the sustainability of the community in the form of population and infrastructure.

It is likely that the lower educational and skill base in rural and remote Australia means the marginal impact of vocational education and training programs is greater than in metropolitan areas.

Questions for further research

Does the lower educational and skill base in rural and remote Australia mean the marginal impact of vocational education and training programs is greater than in metropolitan areas? Metropolitan locations have a wider skills base to draw upon for civic functions such as local government and cultural and community development activities.

What are the social and economic benefits of vocational education and training to rural communities? Does participation in vocational education and training lead to greater community involvement and, if so, is there a subsequent 'economic' outcome?

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This review of research on vocational education and training is one of a series of reports commissioned to guide the development of future national research and evaluation priorities.

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