MONASH UNIVERSITY - ACER

CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING

Regional development, innovation, skill needs and training: A pilot study in the Shire of Gannawarra, Victoria

Chris Selby Smith and Fran Ferrier

WORKING PAPER No. 55
May 2004

This paper was prepared with funding from the Commonwealth Government through the Australian National Training Authority.

MONASH UNIVERSITY - ACER

CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING

The *Monash University-ACER Centre for the Economics of Education and Training (CEET)* is a joint venture of Monash University's Faculties of Education and Business & Economics and the Australian Council for Educational Research (ACER).

Directors

Gerald Burke (Professorial Fellow, Faculty of Education, Monash University, Executive Director); Phillip McKenzie (ACER—on leave—John Ainley ACER Deputy Director); and Chris Selby Smith (Professor, Department of Management, Faculty of Business & Economics, Monash University).

Associates

Peter Noonan (Consultant), Julian Teicher, (Head Department of Management Monash University, Leo Maglen (Professorial Fellow, University of Melbourne, International consultant)

Research Staff

Damon Anderson, Richard Cooney, Fran Ferrier, Michael Long, Chandra Shah and
Paul White.

Funding

CEET receives its main funding from ANTA as a Key VET Research Centre and undertakes consultancies for a range of other authorities.

Focus of Work

CEET's research focuses on the contribution of education and training to economic and social development. CEET's recent work includes:

- the costs of vocational programs in schools, in TAFE and in industry
- models for assessing demand for training
- labour turnover and the effect on jobs for entrants to the labour market
- the impact of globalisation on the occupational structure
- evaluation of 'user choice' for apprenticeship training
- analysis of the efficiency and equity in the training market
- policies to improve the transition of youth from education to work
- the impact of VET research on policy and practice
- equity and VET
- models for analysing student flows in higher education and in vocational education, and
- returns to investment in enterprise training.

Executive Summary

This project, conducted by CEET during 2003, set out to investigate the relationship between innovation and the provision of appropriate education and training in regional Australia. The four main questions identified for research were:

1. How closely does the supply of education and training match the skill requirements of enterprises?
2. Is there a mismatch between the education and training that is provided, and what is needed - or does one develop as enterprises innovate?
3. What is the magnitude of the problem? Are difficulties experienced by only a handful of enterprises, perhaps operating at the leading-edge of their industries, or are they more general?
4. What kind of a response is required, if any?

Initially, the project was designed as a pilot study with two main purposes:

- To test whether and how the issues could be investigated, with the aim of using the findings as a basis for larger and more comprehensive studies in the future.
- To collect and analyse information about innovation and the provision of relevant education and training in some specific regions that would advance understanding of the major concerns and issues, both within the particular area and more generally in regional Australia.

The Gannawarra Shire of northern Victoria was chosen for this pilot study because contacts made in the Shire indicated considerable support for investigating the issues and offered opportunities for access to local government, enterprises and training providers. Preliminary discussions and examination of published material also indicated substantial innovation in the region.

The project comprised:

- A search for sources of information about the Gannawarra region including geography, population, industries and employment.
- Analysis of this material to gain an understanding of the major characteristics of the region.
- Consultations with relevant people and organisations within and outside the region.
- A survey of individuals and enterprises on the Gannawarra Business Register.

In addition, opportunities for presenting the preliminary and final survey results within the Shire to local enterprises and training providers enabled the findings to be discussed and contributed to ongoing refinement of the conclusions.

Gannawarra

Gannawarra is facing some difficult challenges. It has a declining population that has a high proportion of older people and that is ageing. Its labour force has fewer qualifications than is average for Victoria. It suffers difficult environmental conditions of periodic drought and the effects of long-term rises in the level of salinity. Many of its enterprises are small owner-operated businesses with limited resources. Many young people, particularly young women, leave the region following compulsory education – to pursue studies or employment elsewhere. Employment opportunities are limited, with many enterprises employing a small number of full-time permanent staff and supplementing them with part-time and casual labour as needed. The

region's major industry, agriculture, faces strong competition in export and domestic markets. Several of its industries also tend to be co-dependent. For instance, the fortunes of the local retail industry, a major employer, are linked with those of agriculture. When farm incomes fall so do those of local retail businesses. Similarly the manufacturing industry, another major employer, concentrates on agriculture-related products (eg. food processing, stock feed, farm machinery) and thus is also dependent on continued economic success in agriculture.

There are some signs that the region has a capacity to meet these challenges. The resilience of local enterprises is demonstrated by the fact that many of them have been in existence for many years. Skill levels in the community are rising, particularly the number of people holding advanced diploma, diploma or certificate qualifications. Despite difficult economic circumstances following prolonged drought, local enterprises continue to employ apprentices and trainees, though in reduced numbers, and about three-quarters of the enterprises responding to the CEET survey indicated that they are in a period of growth or consolidation. Firms in growth or consolidation outnumber those in decline in all industries except dairy farming, where the numbers are the same. There are no businesses less than five years old in decline and conversely there are some very 'old' enterprises in growth.

Innovation

A large proportion of enterprises are engaged in innovative activities, and importantly, firms stating that they are in a period of growth or consolidation are over-represented among innovators. Innovation is very much part of the agenda within the community to assist in meeting the challenges faced by the region and is supported by the local government's Business Development Unit.

Innovation is being driven by local factors and by forces that also affect other regions of Australia. Increased competition (84% of survey respondents indicated that competition in the market is medium or strong in intensity) and changing consumer preferences are both important drivers of innovation. For instance, agriculture in the region is innovating to increase efficiency, meet new consumer preferences for products (eg. organic produce) and product quality (eg. 'clean' pork). The need to use water for irrigation more efficiently is another driving force. The availability of water from the local rivers has enabled the development and success of many agricultural ventures in the region, such as dairy farming and grain production. However, the environmental damage that this has contributed to, including salinisation and the effects of depleted river flows, have now been recognised and the region is under pressure to use irrigated water more efficiently, effectively and frugally. Rising levels of salinity are forcing local enterprises to confront traditional practices and find new ways of doing things – or move to different products, or forms of business.

Gannawarra's warm and dry climate, together with the region's many lakes and rivers, provides the basis for ongoing development of a thriving tourism industry, but also is enabling promotion of the region as the 'new Mediterranean'. The production of grapes and olives, with related value-adding activities, and other fruits suitable to the climate, are being promoted by the Shire in conjunction with the neighbouring municipalities of Greater Bendigo and Loddon. This initiative, which has received state government funding support, recognises that some changes in skill requirements will occur and thus incorporates planning to deliver appropriate training in the region (www.newmediterranean.com.au).

Education and training

Enterprise skill needs are changing. It is not clear that this reflects innovation, but a connection appears very likely. For instance, the provision of training to meet skill needs is an important

component of the initiative to develop 'the new Mediterranean' in Gannawarra and neighbouring regions.

Most enterprises have required 'more training' in recent years and many have required 'different training'. In both cases, these are particularly firms in growth or consolidation. Most of these enterprises have also required training for skills in new technologies. This is particularly noticeable among the firms in growth. Unfortunately, many firms are unhappy with the response to their changing needs and, alarmingly, enterprises in growth, as well as many in a period of consolidation, are over-represented among them. Dissatisfaction is particularly high among firms needing training for skills in new technologies (and especially among the firms in growth). The proportion of enterprises that are dissatisfied with the response to their need for 'different training' is also higher than the proportion dissatisfied with the response to their need for 'more training'.

Examples of 'good responses' cited by enterprises are of four main kinds:

- Flexibility, adaptability and willingness to negotiate to meet the needs of the business.
- High quality of the program.
- Value for money (but not necessarily low cost).
- References to individual providers (eg. Bendigo Regional Institute of TAFE, Gannawarra Shire).

Examples of 'poor responses' are almost the opposite of these, including: inability to access appropriate training within the region; failure to negotiate; specific needs of the business were not met; low quality programs; and poor follow-up.

Key messages

Considerable innovation is occurring in the industries and enterprises of Gannawarra. This is contributing to changes in the types of training being sought. Dissatisfaction with the response to their changing needs among enterprises indicates that there is considerable room to improve the response to the changing education and training needs of local enterprises. In particular, education and training providers might give greater consideration to updating their provision as enterprise needs change, as well as engaging more closely with enterprises to negotiate ways of meeting their particular needs.

There is clearly a balance of formal and informal provision of education and training in Gannawarra. This is important and desirable, but to what extent is it optimal and are there ways in which the relationships (and thus the overall provision of education and training, and the benefits obtained from it) could be improved? For example, where enterprises provide informal, in-house training and are supportive of it, could the specialist knowledge of education providers assist in improving delivery? Conversely, are there ways in which the specialised and contemporary knowledge of professional or industry associations, or of equipment manufacturers and suppliers, could be more effectively used by formal education and training institutions to enhance their programs? Many enterprises attach importance to generic skills and competencies - perhaps this is another potential area for greater collaboration between enterprises, specialist education and training providers, and the wider community.

The establishment of Local Learning and Employment Networks (LLENs) by the Victorian Government has been successful in strengthening relationships between educational providers, communities and industry in Gannawarra. Though the LLENs are still in their infancy, they are already playing a significant role in ensuring attention to learning, skills and training needs. They

are contributing to the establishment of cooperative approaches at the local level. This suggests that, if adapted to suit local conditions, similar networks might also be successful in other parts of Australia in improving planning for, and provision of, education and training in Australia to meet local needs. They could assist communities to address the sorts of challenges that are illustrated in Gannawarra.

The Project

Background

As part of a number of projects conducted over recent years, and in a variety of other forums, CEET has engaged in discussions with a range of enterprises in both metropolitan and regional Australia about their skill needs and education and training preferences. Among other things, these discussions have suggested that, while all enterprises from time to time experience difficulties in accessing the particular education and training they need to meet their skill requirements, those in regional areas sometimes face greater challenges, particularly if they are located at some distance from metropolitan centres.

These difficulties can occur at any time, but there is a suggestion that they may be especially strong when the enterprise is engaged in innovation - for instance, when it is introducing new systems or methods of production or operation; shifting from low-technology to high-technology solutions; or developing new forms of business.

Based on the concerns raised in these discussions this project set out to investigate the relationship between innovation and the provision of appropriate education and training in regional Australia. The four main questions identified for research were:

- How closely does the supply of education and training match the skill requirements of enterprises?
- Is there a mismatch between the education and training that is provided, and what is needed - or does one develop as enterprises innovate?
- What is the magnitude of the problem? Are difficulties experienced by only a handful of enterprises, perhaps operating at the leading-edge of their industries, or are they more general?
- What kind of a response is required, if any?

Conduct of the project

Initially, the project was designed as a pilot study with two main purposes.

First, it would test whether and how the issues could be investigated, with the aim of using the findings as a basis for larger and more comprehensive studies in the future. For instance, the study would identify relevant and accessible data sources. It would recommend a methodology for providing optimal results. It would identify any further research questions that ought to be addressed.

Secondly, it would collect and analyse information about innovation and the provision of relevant education and training in some specific regions that would advance understanding of the major concerns and issues, both within the particular area and more generally in regional Australia.

The Gannawarra Shire, in northern Victoria, presented itself as an ideal subject for the pilot study. Contacts made with relevant people in the Shire indicated considerable support for investigating the issues that had been identified. These contacts also offered opportunities for access to local government, enterprises and training providers in the Shire. Just as importantly, Gannawarra also appeared to 'fit the bill' in terms of innovation. Preliminary discussions and examination of published material indicated that innovation was occurring within existing industries and also that some new industries were being developed in the region.

Following initial discussions with local representatives it was decided that the project would comprise four main activities:

- A search for sources of information about the Gannawarra region including geography, population, industries and employment.
- Analysis of this material to gain an understanding of the major characteristics of the region.
- Consultations with relevant people and organisations within and outside the region.
- A survey of individuals and enterprises on the Gannawarra Business Register.

In addition, opportunities developed for presentation of the preliminary and final survey results within the Shire to local enterprises and training providers. This enabled the findings to be discussed; and they contributed to ongoing refinement of the conclusions.

Data search and analysis

The primary aim of these two activities was to identify sources of data on the Gannawarra region (including population, industries and employment) and to analyse this data to gain an understanding of the major characteristics of the region that might shape innovation, education and training needs, and provision. The project identified four major sources of data which were useful in investigating its major concerns:

- *The Australian Bureau of Statistics*: the ABS publishes selected Census data for regional areas on its website. The data for Gannawarra included considerable information about the local population, labour force, occupations, qualifications, employment and industry. It also included some data from the previous Censuses of 1996 and 1991, enabling some changes over time to be identified.
- *Local governments:* on their websites and in some published material local governments provide useful detailed information about: the major and minor towns of the region, their population and major industries; the geographical characteristics of the region; local schools and public training providers; major industries and their share of employment; and sponsored initiatives.
- *State government*: various departments publish material useful for different aspects of the study, including the Victorian Department of Primary Industries and there is a joint departmental 'atlas' of Victoria
- *Local Learning and Employment Networks:* these networks, established by the Victorian Department of Education and Training, publish material on local industry, employment and participation in education and training. Data is drawn largely from ABS sources.

Three other sources of information were used. First, industry bodies were useful for information about innovation and other changes in particular industries. Secondly, there were transcripts of radio and TV programs about relevant issues. Thirdly, information was obtained from research centres and individual researchers, including about the types of innovation being undertaken.

Consultations

Consultations were held at a number of stages during the project. Initially, discussions were held with the Business Register Project, the Shire of Gannawarra and the Victorian Department of Innovation, Industry and Regional Development. These discussions led to the development of the business survey.

Consultations were held following initial analysis of the survey responses. These consultations included discussions with a number of enterprises that had completed the questionnaire and with

enterprises, education and training providers and those concerned with the economic development of the region. They sought responses to the issues being identified by the researchers.

Presentation of the survey results within the Shire to local enterprises and education and training providers incorporated discussions that cast further light on the findings and led to ongoing refinement of the conclusions. A number of these helpful suggestions for modifications and elaborations have been incorporated into the report.

Survey

As part of the Victorian Government's *Living Regions Living Suburbs* program the Shire of Gannawarra has developed a Business Register Project. Initial business forums were held in the Shire and indicated a strong desire by local businesses to become more involved in a range of activities to foster economic development.

After discussions with the Business Register Project, the Shire of Gannawarra and the Victorian Department of Innovation, Industry and Regional Development, CEET developed a questionnaire that was distributed through the Gannawarra Shire to the approximately 700 individuals and organisations on the Business Register. (A copy of the questionnaire is at Attachment 1.)

The questionnaire:

- sought information about the individual enterprises, including their size, location, years in operation and industry. It asked them whether they were a public sector, a private sector or a religious/voluntary/charitable organisation. It asked about aspects of the business environment in which the enterprise was operating and whether it operated in local, state, national or export markets. It also asked whether the enterprise was engaged in innovation or organisational change.
- asked about the skill needs of the enterprise. What were the occupations of employees and had employment risen or fallen in these occupations over recent years? What were the post-school qualifications of employees and had there been any recent changes in the qualification mix? What types of skills and attributes did the enterprise consider to be important? Did the enterprises employ any apprentices, trainees or school students?
- asked several questions about training. What kinds of training did the enterprise support? To what extent was it dependent on the established education and training system for standard occupational skills training? Had the enterprise required more or different training in recent years? Had it needed training for skills in new technologies? The questionnaire asked where training takes place, both within the enterprise and also away from the enterprise; and whether there were particular fields of study in which the enterprise undertook considerable internal training.
- asked enterprises to comment on the responsiveness of local education and training providers to their needs, and in particular to their requirements for more or different training or training for skills in new technologies. Respondents were also asked to give examples of some responses by education and training providers that had been particularly good, and others that had been particularly poor.

Introducing Gannawarra

The Northern Region of Victoria extends along the plains of the Murray, Loddon and Campaspe rivers. The climate is dry and warm with an average maximum temperature of 22 degrees centigrade and annual rainfall of 325-425mm. The availability of irrigated water from the region's rivers has enabled agriculture and horticulture to flourish. However, the environmental price of

irrigation is high and dry-land salinity is now a significant problem in some areas. The region has a diverse industry base. Traditional agricultural and manufacturing industries include dairying, poultry, wool, mining, viticulture, food processing, steel fabrication, rubber manufacturing and engineering. Mineral sands mining has recently commenced and grape and olive production (with related value-adding activities) are being boosted by Gannawarra in conjunction with the neighbouring municipalities of Greater Bendigo, and Loddon (www.doi.vic.gov.au).

Gannawarra is a local government Shire with offices in the towns of Cohuna and Kerang on the Murray Valley Highway, which follows the path of the Murray River between Echuca and Swan Hill. Gannawarra's communities include Koondrook, Lalbert, Murrabit and Quambatook. Cohuna is a commercial centre with a manufacturing industry that has a leading role in the production of advanced irrigation components. The dairying industry dominates the surrounding plains of the Murray River. Local protein casein manufacturing produced food for the Apollo space missions. Kerang, the largest town in Gannawarra with a population of about 4000, is located on the Loddon River between Swan Hill and Echuca, at the junction of the Loddon and Murray Valley Highways. Within the town retail trade and manufacturing industries (including the production of furniture and food) provide local employment and economic wealth. Agriculture is the main industry in the surrounding area. With a low annual rainfall of approx 350 mm, the district is supported by extensive irrigation. As well as dairying and cattle, agricultural industries include hay and grain, horticulture, viticulture and stonefruit. Koondrook, on the Murray River near Barham (NSW) is an Australian centre for the redgum industry. River Redgum (eucalyptus camaldulensis) occurs in most riverine areas throughout mainland Australia, but there are extensive forests covering approximately 187,000 hectares along the Murray River and its tributaries. Production and harvesting of redgum supports a local furniture manufacturing industry. Fifty kilometres west of Kerang, Lalbert is a major grain-receiving centre for the Mallee, where wheat, barley, oats, canola and legumes are cultivated. The town supplies grain feed to the dairy industry and quality grain for the milling industry and export markets. Murrabit is a small country town on the Murray River with agricultural industries which include dairying, citrus, rice, beef, lambs and olives (www.gannawarra.vic.gov.au).

Population

The 2001 Australian Census provides some basic information about the people of Gannawarra. The results reported here are taken from a snapshot of the Gannawarra 'statistical local area' published by the Australian Bureau of Statistics (www.abs.gov.au). The snapshot also usefully compares some of the 2001 results with those from the Censuses conducted in 1996 and 1991. This allows a glimpse of some changes which have occurred over the past decade.

Table 1 below indicates that on Census night in 2001, the total population of Gannawarra was 11,394, of whom just over half (50.2%) were females. The vast majority of the population (90.3%) were Australian-born and very few (1.1%) indicated that they were of Indigenous origin. A high proportion of the population (17.8%) were aged 65 years and over.

Table 1: Selected Characteristics of the Gannawarra Shire Population in 2001

	Male	*Female*	*Total*
Total persons[a]	5674	5720	11394
Aged 15 years and over[a]	4403	4496	8899 (78.1%)
Aged 65 years and over[a]	902	1131	2033
Total Indigenous Persons	55	72	127
Born in Australia	5117	5152	10269
Born overseas[b]	243	266	509
Indigenous Persons aged 18 years and over	34	35	69

Notes: (a) These categories include overseas visitors.
(b) Includes birthplaces 'inadequately described', 'at sea', and 'not elsewhere classified'.

Comparing the 2001 Census data with data from the 1996 and 1991 Censuses indicates that:

- *The population of Gannawarra is decreasing*. There has been a decline of 4.4% in the total population since 1996 and of 8.6% since 1991.
- *The population is ageing*. In 2001 the median age was 40 years, compared with 37 years in 1996 and 34 years in 1991.
- *The Indigenous population has grown.* In 1991, 91 people identified themselves as Indigenous, compared with 127 in 2001, but there has been a very slight decline since 1996, when there were 132 Indigenous people.

Table 2 below indicates changes in the population between 1991 and 2001 by gender. It clearly shows the decline in the population, but also indicates that this decline has been more marked among men than women.

Table 2: Population of Gannawarra by Gender

	2001	*1996*	*% Change 1996 - 2001*	*1991*	*% Change 1991 - 2001*
Male	5674	6037	-6.0%	6269	-9.5%
Female	5720	5885	-2.8%	6191	-7.6%
Total	**11394**	**11922**	**-4.4%**	**12460**	**-8.6%**

Table 3 below indicates selected age-groups in the population, by gender. More than two-thirds of all people in the Shire are aged 25 and over and about 60 per cent are of working age (15-64 years). Young people aged 15-24 years comprise only a small group (10.6%). This is consistent with many people of this age moving out of the region to pursue education or work. In this group males outnumber females. The difference is consistent with more young women than young men leaving the region for opportunities elsewhere. In the older age group, where there were 1131 females but only 902 males aged 65 years and over in 2001, the difference reflects gender differences in death rates.

Table 3: Gannawarra, Selected Age Groups by Gender

	0-14 years	*15-24 years*	*25-44 years*	*45-64 years*	*65 years and over*	*Total*
Male	1269	663	1351	1482	901	5666
Female	1223	546	1374	1439	1130	5712
Total	2492	1209	2725	2921	2031	11378
Percent	**21.9%**	**10.6%**	**23.9%**	**25.7%**	**17.9%**	**100%**

Table 4 below indicates the marital status of the population in 1991 and 2001. In 2001 a smaller proportion of people were married than in 1991, but larger proportions were separated/divorced or widowed. The proportion that had never married did not change from 1991 to 2001. The increase in the number and proportion of people who were widowed clearly shows the effects of an ageing population, while substantial differences in the numbers of widowed men and women highlight differences in death rates.

An interesting result is the substantial difference in both 1991 and 2001 between the numbers of males and females who had never been married. In 1991 there were 443 more 'never married' males than females and in 2001 there were 385 more. One possible contributing factor is the difference in the number of young women and young men in the region. As noted above, more young women aged 15-24 than young men appear to be leaving to pursue opportunities elsewhere.

Table 4: Marital Status, Gannawarra Population, 1991 and 2001

Status	*Males*		*Females*		*Total*	
	1991	2001	1991	2001	1991	2001
Married	2992	2654	3008	2660	6000 (63.7%)	5314 (59.9%)
Separated/divorced	234	341	242	325	476 (5%)	666 (7.5%)
Widowed	130	152	578	643	708 (7.5%)	795 (9.0%)
Never married	1340	1244	897	859	2237 (23.7%)	2103 (23.7%)

In 2001, the number of people in Gannawarra living in couples with children, or in couples without children, were almost identical. Among all families there were 1401 couples with children (44.3%) and 1403 couples without children (44.4%). One parent families comprised about 10 per cent of all families. About 1200 people (10.9% of the population) lived alone. The high proportion of families without children reflects the ageing population, but could also be related to a low birthrate.

Labour Force Status

Table 5 indicates the labour force status of the population in the week prior to Census night 2001. Of the total population of 11,394 less than half (43.9%) were in the workforce, but of these, the vast majority (95.7%) were employed in either full or part-time work. Unemployment was higher for women (5.2%) than men (3.7%). Males comprised over half the labour force (57.1%) and females less than half (42.9%).

Table 5: Labour Force Status by Gender, Gannawarra 2001

Status	*Males*	*Females*	*Total*
Employed full time	2269	1010	3279
Employed part-time	481	1022	1503
Unemployed	105	111	216
Total in labour force	**2855**	**2143**	**4998**

Comparing the data with that for the 1996 and 1991 Censuses indicates that:

- *Unemployment has declined substantially.* In 1991 the proportion of the labour force identified as unemployed was 9%, compared with 4.3% in 2001.
- T*he number of males in the labour force has also declined.* In 1991, there were 3078 males, compared with 2855 in 2001. The number has also declined since 1996, when there were 2972 males.
- *The number of females in the labour force declined from 1991 to 1996, but has since recovered.* In 1991 there were 2147 females in the labour force and this number declined to 2034 in 1996. Between 1996 and 2001 growth in the number of females brought the total figure back to close to the 1991 level.

Declines in the number of people in the labour force are consistent with growth in the number of retirements in an ageing population, but they may also indicate that some people have chosen to opt out of work and are no longer looking for employment. Similarly, lower levels of unemployment may indicate increased work opportunities or that some unemployed workers have chosen to leave the labour force.

Table 6 provides information about the occupation of people in the labour force in 2001. It excludes workers who did not indicate their occupation. Occupations can be used as a proxy for skills and thus increases in some occupational categories may identify increased demand for some types of skill.

Looking firstly at all workers, by far the largest group in 2001 was found in the occupational category *Managers and Administrators*. As these occupations require some substantial skills, this might be indicative of a high skills base, ie. a large number of people in the region with high levels of education and skill. Conversely though, it might merely indicate a substantial need for skills. The large number of workers in this category is consistent with many people operating their own businesses. The remaining workers were fairly evenly spread across other occupations, with the largest proportion in the low-skills group *Labourers and related workers* (15.3%) and the smallest in the intermediate skills group *Associate Professionals* (10%).

Comparing males and females highlights some distinct gender differences. A very large proportion of males (43.6%) were found in only one occupational category, *Managers and administrators*. There were also smaller but still large groups of males in the occupations *Tradespersons and related workers* (19.5%) and *Labourers and related workers* (16.3%). Together, these three categories accounted for almost 80 per cent of all male workers. Males also vastly outnumbered females in the occupational category *Tradespersons and related work* (458 males compared with 62 females).

The largest group of females was also in the occupational group *Managers and Administrators,* but the proportion was much smaller (28.1% of females compared with 43.6% of males). Only a slightly smaller proportion of females were in the occupational group *Intermediate Clerical, Sales and Service*

workers (24.8%) and females vastly outnumbered males in this occupational group (409 females compared with only 93 males).

Table 6: Occupation by Gender, Gannawarra, 2001

Occupation	*Males*	*% males*	*Females*	*% females*	*All*	*% all*
Managers and administrators	1023	43.6	463	28.1	1486	37.2
Professionals	183	7.8	291	17.7	474	11.9
Associate professionals	207	8.8	193	11.7	400	10.0
Tradespersons and related workers	458	19.5	62	3.8	520	13.0
Intermediate clerical, sales and service workers	93	4.0	409	24.8	502	12.6
Labourers and related workers	384	16.3	228	13.9	612	15.3
Total	**2348**	**100**	**1646**	**100**	**3994**	**100**

Comparing results with those for 1991 and 1996 indicates that:

- There has been very little change in the number and proportion of workers employed in the high skill occupational groups *Managers and administrators* and *Professionals.*
- The number of workers employed in the intermediate skill occupations *Associate professionals* grew from 280 to 400 between 1991 and 2001, but declined between 1996 and 2001 from 448 to 400.
- Substantial growth occurred in the intermediate skills category, represented by the *Intermediate clerical, sales and service workers* occupation. In 1991 346 people worked in this occupational category, compared with 447 in 1996 and 502 in 2001.
- The number of workers employed in the intermediate skills occupations represented by the category *Tradespersons and related workers* declined from 597 workers in 1991 to 520 workers in 2001.
- Following a decline from 1991 to 1996, there was growth in the low-skill occupational category *Labourers and related workers* between 1996 and 2001. However, there were still fewer workers in this category in 2001 than there were in 1991. In 1991 555 workers were employed in these occupations, compared with 518 in 1996 and 612 in 2001.

Industry

The Gannawarra Shire has a mix of traditional and new industries. Employment is growing in some industries, particularly manufacturing and property and business services, but is declining in others.

Data published on the Shire's website (www.gannawarra.vic.gov.au) indicates that agriculture is the major source of employment, followed by the retail and manufacturing industries: agriculture (30%); retail (16%); manufacturing (16%); community services (10%). Within agriculture, the main activities contributing to overall production are milk (46%), cereals and coarse grains (23%), red meat (12%); and pigs (10%). Legumes, sheep and lambs, and vegetables and grapes are other agricultural activities in Gannawarra Shire.

Dairying is the major agricultural activity in the Shire, representing a little less than half of the Shire's agricultural production. According to the local government, dairying flourishes with the

region's low rainfall and its Mediterranean climate, while farmers benefit from quality irrigation water, abundant feeds and industry expertise. Consequently, Gannawarra produces about 350 million litres of milk each year, and this figure is rising by seven per cent per annum. Innovations that have been assisting the industry include the introduction of rotary dairies, improved herds and pastures, and skilled operators.

Production of pork is growing. The local government indicates that pig farming has played an important part in the agricultural development of the region. Its growth is due to the abundance of feed grains (from local growers), reliable water supplies and farmers who are capable of taking advantage of market opportunities. The industry is a significant employer and creates employment in the wheat and grain farms of the Mallee region, and in feed milling and pellet manufacturing. The region produces about thirty per cent of Victoria's pork and supplies about eight per cent of the total Australian market. The industry is innovating, especially in response to global market opportunities and to consumer preferences. In particular, efforts are being made to improve product quality and production efficiency. The global market potential is thought to be substantial. Research cited by the Australian Pig Science Association (Cranwell, 2002) suggests that the Australian pig industry derives a competitive advantage because of its freedom from many of the major viral diseases from which pigs suffer elsewhere.

The region also hosts a longstanding citrus industry that dates back to the planting of 2,000 citrus trees in 1911. Oranges and grapefruits are grown, both for juicing at factories within the region and for fresh fruit markets in Australia and overseas. Shire data indicate that packing and juice works employ 28 people and that more than 400,000 cartons of fruit are handled by the packing shed each year. The juice works processes 8-10,000 tonnes of fruit per year, much of which is taken to Melbourne by refrigerated tanker on the afternoon of each processing day. (The local produce is identified by the 'Daily Juice' brand in the shops.) Approximately 75% of produce leaving the packing and juice works is for the Melbourne domestic market. The remaining 25% is exported, including to New Zealand, the United States of America, South East Asia, Thailand and Taiwan.

Manufacturing

Much of the manufacturing industry in the Shire is related to agriculture. For instance, the production of grain pellets for animal feed is an important activity, as is the manufacture of agricultural equipment. Food processing is also significant. Furniture manufacturing is based on the extensive local natural redgum resources. Harvesting of river redgums began in the mid-nineteenth century and grew with the building of the railways, an increase in demand, and the establishment of many sawmills along the Murray. Koondrook is now the redgum manufacturing centre of the region. Redgum sawmills in the region supply timber to the local furniture industry and to commercial building and trade centres across Australia.

Tourism

The region's natural resources of lakes, rivers and a dry warm climate have been the basis for developing a thriving tourism industry. The Shire's website notes that:

> 'Cohuna caters for fishing, camping, bushwalking and conservationists. The Gunbower forest provides a fantastic natural bush setting for thousands of campers annually. Water skiing is also popular on the Gunbower Creek with a highlight being the Victorian Barefoot Waterski Championships' (www.gannawarra.vic.gov.au).

In addition, the Shire promotes tourism in connection with Kerang's lakes and swamps, which boast a population of over 250,000 ibis. The ibis rookeries are known locally as the 'eighth wonder

of the world'. More than 350 bird species have been identified, including many rare international wading birds. A 'hide' has been erected for viewing by the public. The ibis is recognised in the Gannawarra Shire Council logo.

The snapshot of Census results for the Gannawarra Statistical Local Area, published on the Australian Bureau of Statistics website (www.abs.gov.au), compares data on employment by industry for 2001 with that from the two previous Censuses. While noting that changes in industry classifications after 1991 make comparisons difficult the data also indicate that there has been:

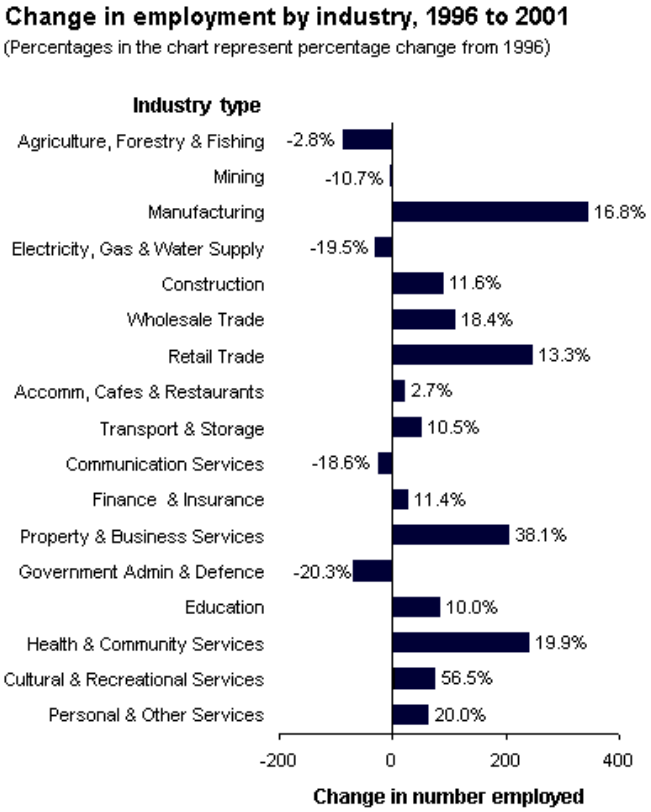
- *Growth in Manufacturing industry*: The number and proportion of people employed in the manufacturing industry has increased. In 2001, 477 (9.6%) people were employed, compared with 447 (8.9%) in 1996 and 396 (7.6%) in 1991.
- *Employment growth in the Construction industry:* In 2001 there were 258 (5.2%) people employed compared with 222 (4.4%) in 1996 and 216 (4.1%) in 1991.
- *Employment growth in Health and Community Services*. There were 393 (7.9%) people employed in 2001, compared with 347 (6.9%) in 1996 and 327 (6.3%) in 1991.
- *Slight employment growth in Retail Trade*. There were 682 (13.7%) people employed in 2001, compared with 665 (13.3%) in 1996 and 629 (12.0%) in 1991.
- *A decline in employment in Education since 1991*, although employment in this industry has remained fairly steady since 1996. In 2001 there were 275 (5.5%) people employed, compared with 272 (5.4%) in 1996 and 315 (6.0%) in the 1991.
- *A decline in employment in Property and Business Services since 1996,* although employment in this industry is still higher than it was in 1991. In 2001, 198 (4.0%) people were employed, compared with 220 (4.4%) in 1996 and 119 (2.3%) in 1991.

Figure 1 below shows changes in employment by industry between 1996 and 2001 for the Campaspe Cohuna region. This includes large sections of Gannawarra Shire, but also includes several towns outside the Shire's boundaries (Echuca, Kyabram and Rochester). The data is published on the website of the Victorian Local Learning and Employment Network (www.llen.vic.gov.au) for this region and is based on data derived from the ABS Censuses for 1996 and 2001. Employment appears to have declined in percentage terms most strongly in three areas: Government administration and defence; Communication services; and Electricity, gas and water supply. These declines reflect re-structuring in these industries, privatisation and government decisions to reduce the size of the public sector. Employment has also declined in the mining industry. Gold is the main commodity that is mined in the area and the decline in employment reflects changes in price, methods of production and reserves.

The number of people employed in agriculture appears to have decreased by over 100 – a higher decrease than for any other industry. However, this represents only a small decline in employment in this industry in percentage terms. The decline reflects difficulties being experienced due to severe drought conditions over recent years and might be considered to be small, given the circumstances.

Figure 1 shows also that the number of people employed in manufacturing has grown strongly. However, in percentage terms, employment growth has been strongest in cultural and recreational services (56.5%), perhaps reflecting an increased effort in tourism, property and business services (38%) and health and community services (20%), influenced by the ageing of the local population.

Figure 1: Campaspe Cohuna Changes in Employment, 1996-2001



Innovation

Innovation is part of the community's agenda to meet the challenges it perceives itself as facing. Many different factors are shaping the innovation effort in Gannawarra Shire. In particular, four factors are emphasised. First, there is a need to ensure the economic wealth and social well-being of the community, especially in difficult periods, as when drought affects agricultural production and its effects flow on to other industries. Secondly, there is recognition of rising levels of salinity, which have forced local enterprises to reconsider traditional practices and look for new ways of doing things – or move to different products, different types of business or go elsewhere. Thirdly, the region is under pressure to use irrigated water more efficiently, effectively and frugally. The availability of river water has enabled the development and success of many agricultural ventures, such as dairy farming and grain production. However, the environmental damage that this has contributed to, including salinisation and the effects of depleted river flows, have now been recognised. Fourthly, Gannawarra Shire and its businesses are acutely aware of increased competition in global and domestic markets.

The Gannawarra Shire provides business development support to local enterprises and industry through its Economic Development Unit (EDU). Much of this work relates directly to agriculture, as the dominant industry in the Shire, and in particular to the ability to utilise irrigation systems in better ways. But the EDU also:

> *… look(s) at each area of the Shire and determine(s) the economic strengths of the individual areas and attempt(s) to encourage and promote further growth. For example Quambatook and Lalbert are recognised as the key grain production hubs within Gannawarra so we aim to encourage grain related industries to develop. Cohuna and Leitchville are prolific dairy centres and we are aiming to further develop the milk processing capabilities and create further opportunities for our dairy farmers. Other focus areas include large-scale horticultural*

developments aimed at providing significant employment options and utilising local water rights, and further developing our strong intensive livestock industries.

Some specific examples of the many innovative activities being undertaken in the region include: the New Mediterranean initiative; organic farming and the use of technology; and the harvesting of salt.

The New Mediterranean initiative

Gannawarra's warm and dry climate is enabling development of the region as the 'new Mediterranean'. The production of grapes and olives with value-adding and other fruits suitable to this climate are being promoted by the Shire in conjunction with the neighbouring municipalities of Greater Bendigo and Loddon.

There are a number of non traditional agricultural ventures currently being explored and established in the region, including olives, tomatoes, winegrapes, nectarines, apples and walnuts. Irrigation is available through an extensive water channel system provided through Goulburn Murray Water, which services the region.

Incentives are also being given to potential farmers via Loddon Murray 2000 which targets investments that lead to increased productivity, efficient use of water and opportunities for value adding (www.loc-gov-focus.aus.net/2002/november/medvic.htm).

This initiative, which has received state government funding support, recognises that some changes in skill requirements will occur and thus incorporates planning to deliver appropriate training in the region.

The New Mediterranean region has the potential for a multi-million dollar diversification program into new, high yield, labour intensive produce and related activities.
To meet the demands of these new activities and the need for development and implementation of safety, quality and environmental management systems, specific training needs to achieve world best practice status must be introduced.

…The Loddon Murray 2000 plus Special Training Needs Identification Survey report has identified training needs and delivery preferences of the existing operators. These preferences, combined with traditional training requirements will be integrated into the competency training programs that will be available throughout The New Mediterranean region.

By recognising the stated needs of farmers for training to be provided by industry qualified and experienced trainers, The New Mediterranean approach to training encourages the farmer to participate in research and development of the training and then retain 'ownership' through their local industry group.

Training will be delivered on-the-job at a time to suit the farmer's needs where and when required. Training is conducted to meet the preferred learning environment, format and training outcomes of the business. Delivery options include online, on-the-job or in a dedicated training environment; or a mix-and-match of all delivery media.

*… (Local) Councils will also work with training organisations to develop packages for potential employees to ensure the investor has skilled staff to work within all areas of his business from production through to marketing. (*www.newmediterranean.com.au*).*

Organic farming and the use of technology

Synergy Farms is just one example of a new agribusiness being showcased in north central Victoria. …Husband and wife team, Brian Smith and Sue Bennett of Synergy Farms, are being hailed as leaders contributing to the changing face of agriculture within the region but are quick to brush the label aside. "We are early adaptors, not innovators," Brian corrects firmly.

… their 200 hectare property at Yarrawalla near Pyramid Hill is a prime example of their willingness to embrace new ideas and technology. Surrounded by traditional grazing and cropping land, their organic apple orchard has raised more than a few eyebrows since its establishment in 1997.

"I guess that most people regard us as being a bit different," Brian admits. Despite being a fifth generation farmer, he is not bound by tradition and indeed his father and grandfather also made significant changes when required.

Like most farmers, Brian is sensitive to the environment and the harsh effects of long-term cultivation on our fragile soils. "We knew we had to change. It's better to use permanent culture than have to put in crops every year. The orchard has allowed us to do that."

It was a less than positive start when the orchard was hit severely with black spot despite the use of conventional chemical sprays. "We sold many of the apples for juice at far less than it cost to pick them. It was then that we decided to go organic. We had nothing to lose," Brian explained. The irony was that the black spot responded better to the alternative sprays allowed in organic farming and they sold their produce last year for almost four times the price. To top it off there was no shortage of interested buyers. "It makes you feel so much better when you have a product everyone wants," Brian says with visible relief.

Committed to maximising diversity within their farming system, Brian and Sue are also trialling irrigated olives and timber production alongside their more traditional wool and grain pursuits. A future goal is to produce organic crops under irrigation. Another of their properties at Pyramid Hill is currently being used to trial the production of rice for Goulburn Murray Water Board.

"It's all trial and error," admits Brian who is keen for more research and development to take place.

Technology also plays a major role in their daily activities. Both Sue and Brian frequently use the Internet for weather forecasts, research and the conduct of their business.

From: www.newmediterranean.com.au/news&events/ne06.html

The harvesting of salt

Despite being branded Victoria's 'salt capital', Kerang has not surrendered to the salinity problem Three Kerang-based enterprises are developing operations that actually restore agricultural land and water systems. The people of the Kerang and Gannawarra Shires are making salt a resource, not a curse.

Local farmers are joining Allan Coad, the designer of the Kerang Cohuna Reclamation Project, to make the removal of excess groundwater and the harvesting of epsomite profitable.

Epsomite is a high value added product with a significant market in Australia and overseas.

The project will also restore the land by pumping underground water into 100 hectares of evaporation ponds, lowering the high water table that brings salt to the surface.

Farmer Ken Pay said the problem has always been working out a way to dispose of salt-laden groundwater.

'We could do the first stage of this project and pump it out from underground, but disposal of the water is a no-no,' he said.

'We had to find some way of processing it and taking it out of the system and this project would be an ideal way of dealing with it.'

Pyramid Salt and Geoprocessors are also in the business of turning salt into cents.

Pyramid Salt has managed to drop the water table by a massive six metres and have also grown successful vegetable crops on formerly ruined land, all thanks to groundwater pumping and evaporation.

It uses the salt for stock feed, medical and chemical uses, and sells salt into Sydney's gourmet food market.

Pyramid Salt's John Ross said the company's ambition was to clean up the Murray Basin and bring industry and prosperity to country Australia.

Extract from the ABC Site for the Landline show: www.abc.net.au/landline/stories/s152892.htm

Education, training and skills in Gannawarra

Provision of education and training

The Shire of Gannawarra website lists four primary schools (Kerang Central Primary School, Kerang Christian Community School, Kerang South Primary School, and St. Joseph's Primary School), two secondary schools (Cohuna Secondary College and Kerang Technical High School), a TAFE institute at Kerang and an adult education provider (the Kerang Learning Centre) in the region (www.gannawarra.vic.gov.au). Education and training are also provided within the region by some private training organizations and group training companies.

In addition, education and training opportunities are also available for the community from educational organizations located primarily outside the region eg. Bendigo Regional Institute of TAFE. There is no university campus in Gannawarra and the nearest universities are at Bendigo and Ballarat, major centres to the south.

Post-school Qualifications

The ABS statistical snapshot includes some information about post-school qualifications among the population. These qualifications give some indication of the level of intermediate and advanced

skills in the community. Additional information about education and training in Gannawarra is included in the following section of this report.

Skill levels, as indicated by educational qualifications in the community, are low, but increasing. Between 1991 and 2001, the number of people holding a bachelors degree increased from 282 (3.0% of the population) to 435 (4.9%). The number of people with an advanced diploma, diploma or certificate also grew, but more slowly, from 1537 (16.3%) in 1991 to 1662 (18.7%) in 2001. More women than men held a bachelor's degree in both 1991 (164 compared with 118) and 2001 (289 compared with 146). Conversely, more men than women held an advanced diploma, diploma or certificate in 1991 (1000 compared with 537) and 2001 (1125 compared with 537). Few people in the community hold a postgraduate degree, graduate diploma or graduate certificate, although the numbers grew a little between 1991 and 2001. In 2001 103 people (1.2% of the population) held this type of qualification, compared with 83 people (0.9%) in 1991. Females with these qualifications continue to outnumber males (66 compared to 37 in 2001). Although the number of people without a qualification was large in 2001 (6686 people, 75.2% of the population), it has declined since 1991, when it was 79.8% (7521 people) and 1996 (78%, or 7136 people). The number of females with qualifications exceeded the number of males in both 1991 (3551 males and 3970 females) and 2001 (3089 males and 3597 females).

Local Learning and Employment Networks (LLENs), an initiative of the Victorian government Department of Education and Training (DET), collect and publish information about the provision of education and training, and participation in education and training, in Victoria by region (www.llen.vic.gov.au). The Gannawarra local government area does not have its own LLEN, but sections of the Shire are included within the two LLENs for: Swan Hill/Gannawarra/Buloke (*Murray Mallee LLEN)* and Campaspe/Gannawarra: (*Campaspe Cohuna LLEN).* The Campaspe Cohuna LLEN includes the area around Cohuna, while Murray Mallee LLEN region includes the Kerang district.

Data published by the LLENs for these two regions support ABS data indicating that lower proportions of the populations have a qualification than is the case for Victoria as a whole. In the Murray Mallee LLEN area, 37.1% of residents aged 15 and over have some type of qualification, compared with 46.3% in Victoria as a whole. Similarly in the Campaspe Cohuna LLEN area 38.0% of residents aged 15 and over have some type of qualification, compared with 46.3% in Victoria. In both regions, the most common qualification is a Certificate. In Campaspe Cohuna this qualification is held by 16.3 per cent of people aged 15 and over. In Murray Mallee 15 per cent of the population have achieved this credential.

Participation in education and training

LLENs data indicate that in the Campaspe Cohuna region 4,476 residents were enrolled in at least one TAFE/ACE/VET/private provider course in 2001. The largest group was in the field Community Services and Health (about 1900 students), followed by General Manufacturing (about 1700 students), Business Services, and Primary and Forestry. 791 people were engaged in a traineeship or apprenticeship in 2001. Of these, about a third (34 per cent) were undertaking an apprenticeship and the majority a traineeship. Only 41 of 269 apprentices were women.

Figure 2 below indicates the age of the apprentices and the industries in which they were working. In 2001, the largest groups were in the Automotive and Building and Construction fields, followed by Engineering and Electro-Technology. There were only a handful of apprentices in Primary Industries. Apprentices were mainly in two age groups, 15-19 years and 20-24 years, but there were some interesting industry differences. In Tourism and Hospitality there were large numbers of

apprentices aged 20-24 years, but many fewer in other age groups. In Building and Construction there are only slightly more apprentices aged 15-19 years than 20-24 years but there were also more apprentices aged 25-44 or 45 and over than in any other field.

Figure 3 shows trainees by industry and age group in Campaspe Cohuna. In contrast to apprentices, there are large numbers of trainees in the fields of Food and Primary Industries. Overall though, the largest numbers are in the Wholesale, Retail and Personal Services fields. Trainees appear to be older than apprentices, with many more in the 25-44 and 45 and over age groups.

Figure 2: Apprentices in Campaspe Cohuna, 2001

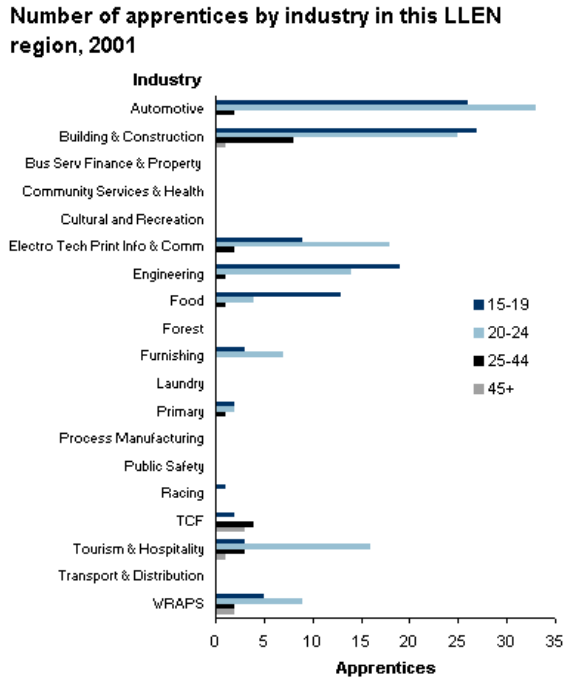
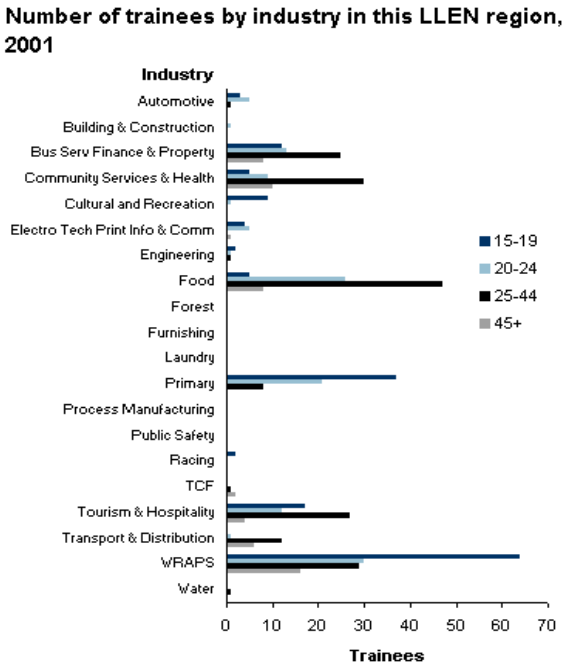


Figure 3: Trainees in Campaspe Cohuna, 2001



Note: In these figures WRAPS refers to wholesale, retail and personal services.

Figures 4 and 5 show the equivalent figures for apprentices and trainees respectively in Murray Mallee for 2001. In the Murray Mallee region slightly fewer (4,030) residents were enrolled in TAFE/ACE/VET/private provider courses in 2001. Whereas the largest fields in the Campaspe Cohuna region were Community services and Health and General Manufacturing, the largest fields in the Murray Mallee region were 'No industry' (general VET) with over 1800 students, followed by Primary and Forestry, with just under 800 students, and Business services, with just over 600 students. Some of the differences are likely to reflect provision, student choice and employment opportunities. There were 808 people engaged in a traineeship or apprenticeship in the Murray Mallee region in 2001. Thirty-five per cent of these people were undertaking an apprenticeship and the remainder a traineeship. Of the 281 apprentices, only 28 were women.

Figure 4: Apprentices in Murray Mallee, 2001

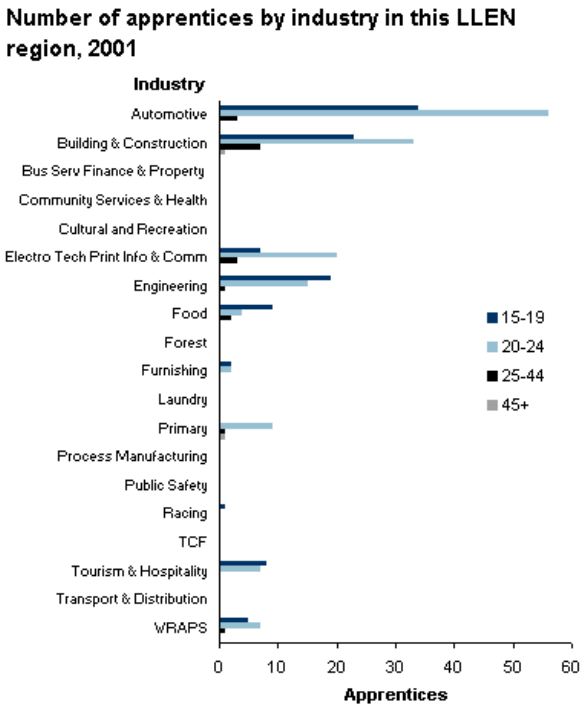
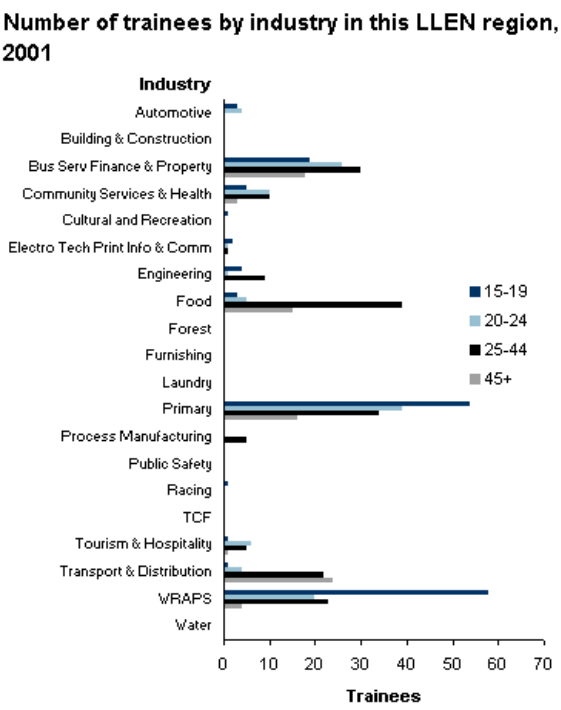


Figure 5: Trainees in Murray Mallee, 2001



University participation

Many fewer people in these two LLENs regions are engaged in university education than in VET courses. Figure 6 below indicates enrolment in Victorian universities by people whose home address is in the Campaspe Cohuna region. It shows that about 800 people were enrolled in 2002. The majority are female and the largest group is the 19-24 year age group. Participation in the Murray Mallee, shown in Figure 7, shows similar patterns. However, the gap between female and male participation is larger in the youngest age group.

Comparing patterns of participation in university and VET courses it is clear that more young women than men pursue a university education, and more young men than women undertake apprenticeships. This is reflected in gender differences in the proportion of the population holding post-school qualifications. As noted earlier, Census data for 2001 indicate that more women than men held a bachelor's degree in 2001 (289 compared with 146) and more men than women held an advanced diploma, diploma or certificate (1125 compared with 537). There has been no increase in the number of women holding an advanced diploma, diploma or certificate since 1991.

As there is no university located in the region the pursuit of higher education appears to explain, at least in part, why men outnumber women among young people aged 15-24 years in the Gannawarra region.

Figure 6: Campaspe Cohuna; University participation in 2002

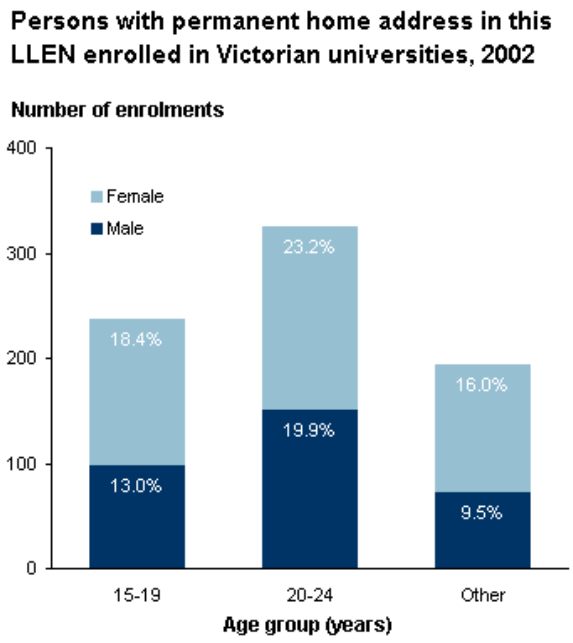
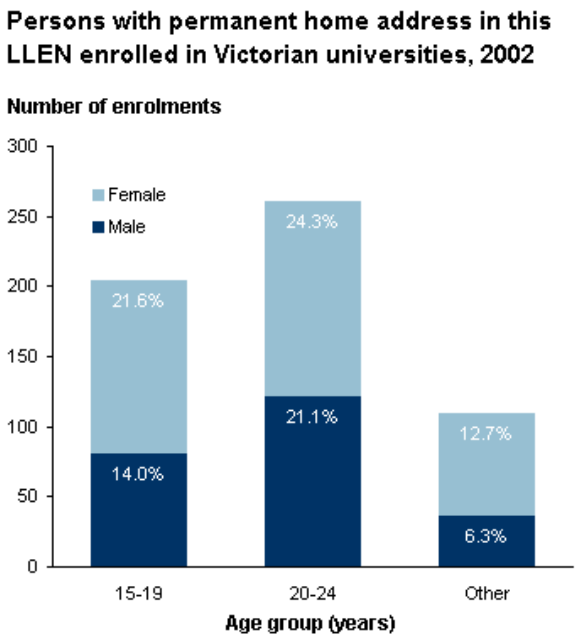


Figure 7: Murray Mallee; University participation in 2002



Post-compulsory secondary schooling

Participation in upper secondary school has a flow-on effect to participation in further and higher education. Figures 8 and 9 indicate participation in Years 10, 11 and 12 for government schools in the Campaspe Cohuna and Murray Mallee regions. In both cases the numbers of girls and boys are only a little different in year ten, but the gap is larger in Year 12, with many more girls participating at this level.

Technological skills

Data on specifically technological skills in the Gannawarra community are scarce. However, one source is the 2001 Census, which asked people to indicate whether, in the previous week, they had used a personal computer at home or had used the Internet at home, at work or elsewhere. Unfortunately, these questions were not asked in the Censuses conducted in 1991 and 1996. Thus, it is not possible to make comparisons over time.

The results indicate that more than a third of the population (34.6%) used a personal computer at home. However, there were significant differences according to age group. Of all personal computer users, about 42% were aged 19 and under and three-quarters were aged 44 years and under. This suggests that the majority of working-age people have access to, and use, a personal computer at home. It indicates a substantial level of at least basic technological literacy in this age group.

About a quarter of the population (2833 – 24.8% of the population) used the Internet – more than half of them (1548) using it at home only, and not at work or elsewhere.

The community thus has some technological skills, particularly among young people. There is potential to increase these skills among older members of the population.

Figure 8: Campaspe Cohuna; Participation in upper secondary schooling

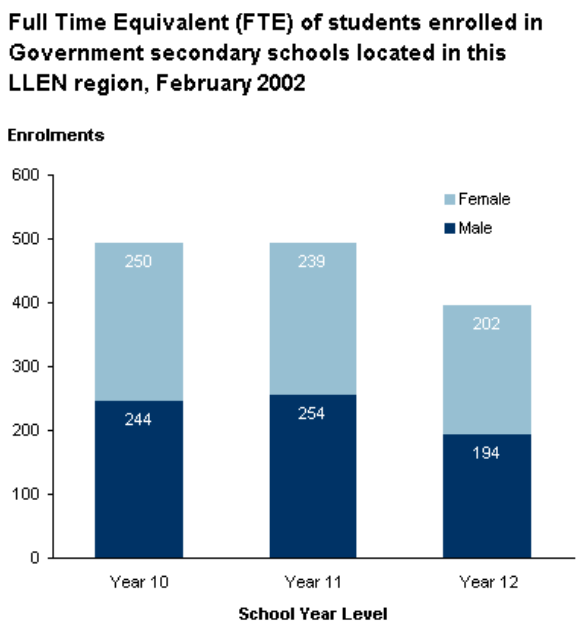
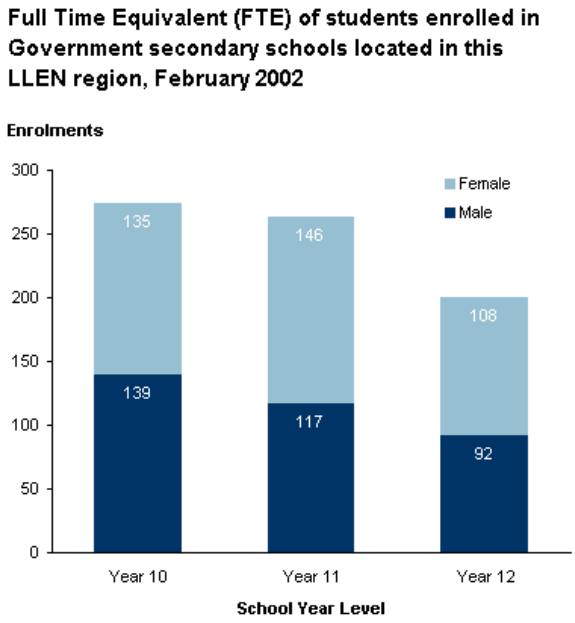


Figure 9: Murray Mallee; Participation in upper secondary schooling



Survey of Enterprises in Gannawarra

Background

Following consultations in the Gannawarra Shire, CEET distributed a survey questionnaire to the 700 individuals and enterprises on the Shire's Business Register. Although the number of responses was low (68), the responses still provide a useful picture of some enterprises in Gannawarra, their learning and training needs and recent experiences. The low response rate may be something of an exaggeration, as it became apparent that some enterprises had received multiple questionnaires (four in one case).

Characteristics of respondents

The enterprises responding to the questionnaire were mostly located in a centre with a population of between 2000 and 5000 people (47 responses) or 'in the country' (24 responses). Only five respondents were in a centre with a population of fewer than 2000 people. A small number were located on more than one site.

Table 7 below shows the respondent enterprises by the sector and industry in which they indicated they operate. Most are in the private sector, only eight are in the public sector and three are religious, voluntary or charitable organisations. A large group of enterprises (12) operate in multiple industries.

Table 7: Survey Respondents – industry by sector

Industry	*non-profit*	*private*	*public*	*(not given)*	*Total*
Accommodation, cafes		2			2
Agriculture -dairy		4		1	5
Agriculture -grain		3		1	4
Agriculture - other		4			4
Communication		1			1
Construction		4	2		6
Education	1	1			2
Finance		3			3
Health	1	4	1		6
Manufacturing		4			4
Mining		1			1
Personal		2			2
Retail		11	2		13
Multiple industries	1	8	2	1	12
Other		1	1		2
Total	**3**	**53**	**8**	**3**	**67**

Table 8 provides further detail about the industry of respondent enterprises by disaggregating the categories 'multiple industries' and 'other'. The table highlights concentrations of activity in three industries in particular – Agriculture, Retail and Manufacturing, with smaller concentrations in Construction, and Health and Community Services. However, it also indicates that enterprises engage in a diverse range of industries. Both these features are likely to have an influence on their skill and training needs.

Table 9 shows the number of years for which the enterprises have been operating. By far the majority had been operating for many years – 84 percent for ten years or more and 48 per cent for more than 20 years. The average number of years an enterprise has been in existence is 30.6 and the average number of years at the same site is only slightly less, at 27.7. Only 11 enterprises (16%) have been operating for less than ten years.

Although not shown in the table, a few enterprises are particularly longstanding. One had been in operation for 130 years at the same location and another for 127 years (60 years in the same location). A third enterprise had been in business for over a century in the same location. Two have been operating for 91 years and another for 90 years (in the same location) and another for 67 years (in the same location).

Most enterprises are thus likely to be an established part of the community of the Shire. Their long existence points to economic stability and resilience – but perhaps it might also indicate a lack of change. It is important to note, however, that there are also five enterprises that are comparatively new, having been established within the last five years. Their presence might indicate renewal and confidence in the economic life of the region. These enterprises are in the Construction, Retail, Manufacturing and multiple industries.

Table 8: Respondent Enterprises by Industry

	No
Agriculture	
- dairy farming	8
- pig farming	1
- grain growing or farming	6
- fruit or grape growing	1
- nursery	1
- other	8
Sub-total	**25**
Retail	18
Manufacturing (including processing)	
- agric-related	7
- other	4
Sub-total	**11**
Construction	9
Health and community services	5
Mining and quarrying	3
Accommodation and cafes	2
Transport and storage	1
Personal services	3
Finance and insurance, property and business	3
Sporting	1
Electricity, gas, water	2
Communication	1
Education	2
Tourism Information	1

Table 9: Respondent Enterprises by Years in Operation

Years	*Number of Enterprises*
Less than three years	3
More than 3 years and less than 5 years	2
More than 5 years and less than 10	6
More than 10 years and less than 20	24
More than 20 years and less than 40	18
More than 40 years	14
Total	**67**

Difficult economic circumstances prevailed in the Gannawarra Shire at the time the questionnaire was administered. A long period of drought followed by a severe dust storm had left morale very low. Nevertheless, less than a quarter of respondents indicate that they are in period of decline and they are vastly outnumbered by enterprises who indicate that they are in a period of growth or consolidation. This is a further sign of economic resilience and stability in the community. It is also perhaps indicative of the levels of support that respondents receive from their community.

The number of respondents indicating that they are in decline may be a cause for concern, however. At 22 per cent of all respondent enterprises they might provide substantial employment opportunities and income for the community. Thus, their failure would possibly be sorely felt. Results are shown in Figure 10 below.

Figure 10: Survey Respondents – Current Business Period

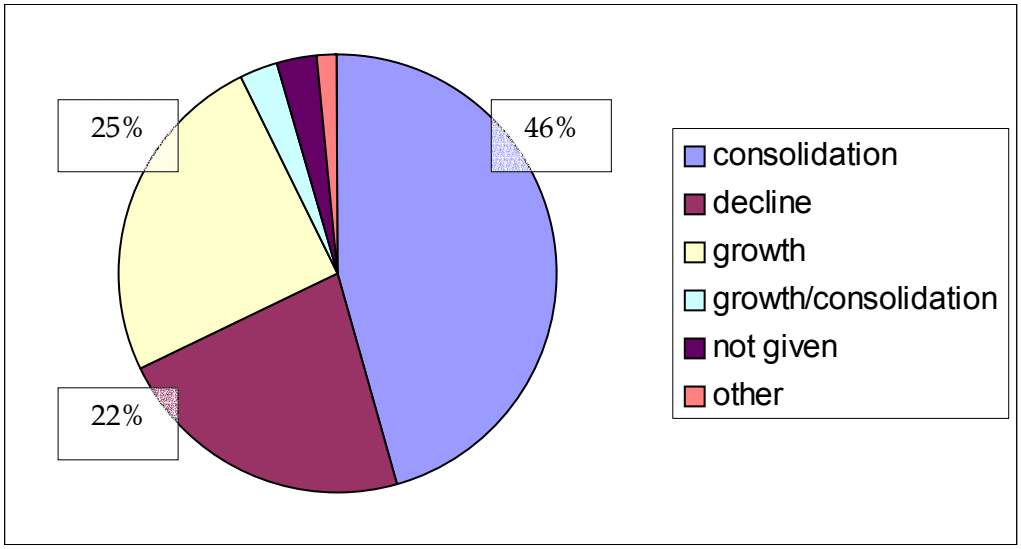


Table 10 shows the results for different industries. Particularly notable are the absence of enterprises in the retail industry in a period of growth – and the large proportion of retail enterprises indicating that they are in decline. Agriculture is also an area of concern, although there are as many respondents in growth as in decline.

Table 10: Enterprise Stage by Industry

Industry	*Growth*	*Consolidation*	*Decline*
Accommodation and cafes	1	1	1
Agriculture - dairy	2	-	2
Agriculture - grains	-	2	1
Agriculture - other	1	2	-
Total agriculture	3	4	3
Communications	-	1	-
Construction	2	3	1
Finance	1	2	-
Education	1	1	-
Health	1	4	1
Manufacturing/agriculture	2	2	-
Personal services	1		1
Retail	-	6	5
Multiple industries	3	6	3
Other	2	1	-
Total	**17**	**31**	**15**

An interesting result is that whether an enterprise is in a period of growth, consolidation or decline is not related to the age of the business. Older enterprises are not necessarily declining and the youngest enterprises are not necessarily growing. In fact, the average age of enterprises in decline (29) is slightly less than those in growth (31) and very similar to those in consolidation (28).

There is evidence of renewal in some older enterprises in that three of the seventeen in a period of growth have been in operation for at least 90 years. (These are in the agriculture, mining and multiple industries.) One older enterprise (127 years in operation) is also in consolidation. Only one enterprise in decline has been in operation for more than 40 years (130 years in operation).

A good sign of the success of new ventures is that no enterprise less than 5 years old is in decline and only one in this group has been in operation for less than 10 years (in the grain industry). Of the two youngest enterprises (both 1.5 years in operation), one is in growth and the other in consolidation. Similarly, the two next youngest (2.7 and 3 years in operation respectively) are also in growth (the 3 year old enterprise) and consolidation.

Regardless of whether enterprises are in growth, consolidation or decline, most appear to face the challenges of operating in a competitive market. Overall, the vast majority (84 per cent) indicate that competition in the markets in which they operate is medium or strong in intensity.

Strong competition may be a contributing factor to the difficulties of firms in decline. This conclusion is suggested by the fact that a larger group of them indicate competition is strong (53%) than enterprises in growth (47%) or consolidation (39%). Conversely however, enterprises in decline are also more likely than enterprises in the other two categories to indicate that competition is weak.

The results suggest that, for the firms which are in decline, but which are operating in markets where competition is weak, factors other than competition are responsible for their difficulties. These could be many, but might include weak demand for their products or services, inefficiency and structural deficiencies so that costs exceed income, or perhaps a dearth of required inputs such as raw materials or skills.

Of the nine enterprises indicating that competition is weak, three were in dairy farming, two in the retail industry and a further two in health and community services (others were in education and multiple industries). Interestingly, in each case there were at least as many enterprises in the same industry that regarded competition as medium or strong in intensity. This suggests that competition varies in different parts of the same industry (or region); and that perceptions of competition reflect individual enterprises and circumstances.

Table 11: Enterprise Stage by Market Competition

	Growth	*Consolidation*	*Decline*	*Total*
Strong competition	8 (47%)	12 (39%)	8 (53%)	28 (44%)
Medium	6 (35%)	15 (48%)	4 (27%)	25 (40%)
Weak	2 (12%)	4 (13%)	3 (20%)	9 (14%)
Not stated	1	-		1
Total	**17 (100%)**	**31 (100%)**	**15 (100%)**	**63 (100%)**

Another possible reason for differences in views of competition among enterprises in the same industry is that individual firms might operate in different markets. Table 12 shows that 40

enterprises (65 per cent) operate only in local markets, 10 (16 per cent) only in state markets and 7 (11 per cent) in both state and local markets. Only three enterprises operate in export markets (all of them in agriculture). A higher proportion of enterprises in decline operate in local markets only (73 percent) than is the case for enterprises in growth (53 per cent) or consolidation (67 per cent). This suggests a connection between the conditions in local markets and the decline of these enterprises. Perhaps success is more likely to come to those enterprises that venture beyond the boundaries of local markets – or to those that are able to operate in more than one market. These enterprises are likely to require some different skills for success.

Table 12: Enterprise Stage by Markets of Operation

	Growth	*Consolidation*	*Decline*	*Total*
Local	9	20	11	40
State	3	5	2	10
Local/state	4	2	1	7
State/exports	1	1	1	3
All	-	2	-	2
Total	**17**	**30**	**15**	**62**

Another interesting result is that of the seventeen enterprises in a period of growth, more than a third (38 per cent – 6 respondents) indicate that a major customer drives their work culture and practices. This is very high when compared with the proportions of enterprises in a period of consolidation (two of 31) and decline (three of 15). It suggests that success in the current economic climate might be positively correlated to close links with customers. Maintaining close links and ensuring customer satisfaction is likely to require some particular skills.

In the contemporary economic and social environment innovation is also recognised as 'a central ingredient in business success':

> In the current climate, where global markets are opening up daily, new technology, products and services are being produced, and consumers are demanding more choice and better quality, it is only those firms who innovate that prosper in the long term (Institution of Engineers Australia, 2003).

The CEET survey asked respondents if their enterprise used high technology, was subject to technical change or was an innovator. It also asked them if they had undergone organisational change within the previous three years. The results were striking. First, enterprises in decline represent much smaller proportions of firms that are innovators or have re-organised in the past three years than firms in growth or consolidation. They are also under-represented among innovators (19%) or re-organised firms (17%), compared with their representation among all enterprises (24%). Conversely, enterprises in growth are over-represented among innovators (29%) and re-organised firms (39%), compared with their representation among all enterprises (27%). The results suggest that relatively few firms in decline innovate or re-organise, although lack of innovation and re-organisation may be a symptom rather than a cause, or only one of several factors contributing to the decline of the enterprise. Secondly, the results identifying enterprises that have innovated or re-organised by industry, support the conclusion that innovation and organisational change depend on the characteristics of the particular enterprise, rather than on the industry in which it is operating. Within the same industry, some enterprises are innovators and others are not, while some introduce organisational change and others do not.

Table 13: Enterprises that are Innovators or Have Undergone Organisational Change, by period

Period	*Innovator*	*Org change*	*All*
Growth	11 (30%)	7 (37%)	17(27%)
Consolidation	19 (51%)	9 (47%)	31(49%)
Decline	7 (19%)	3 (16%)	15(24%)
Total	**37 (100%)**	**19 (100%)**	**63(100%)**

Table 14: Enterprises Innovating and Re-organising by Industry

Industry	*Innovator*	*Not innovator*	*Organisational change*	*No change*
Accommodation and cafes	-	1	1	1
Agriculture - dairy	3	2	-	5
Agriculture - grain	2	2	2	2
Agriculture -other	3	1	1	3
Communications	1		1	
Construction	4	2		6
Education	2	-	1	1
Finance	3	-	2	1
Health	3	3	3	3
Manufacturing	2	2	1	3
Mining	1	-	1	
Personal services	1	1	1	1
Retail	7	6	3	10
Multi	7	5	4	8
Other	1	1	-	2
Total	**40**	**26**	**21**	**46**

The workforce

Agriculture is the dominant industry in Gannawarra and agricultural enterprises tend not to be large employers of labour. Many are owner-operated and a large proportion of employees are engaged on a part-time or casual basis. The horticulture industry (another industry found in Gannawarra) tends to be similar (WA Primary Industries Training Council, 2001).

Table 15 below shows the number of respondent enterprises with workforces of different sizes. There is clearly a predominance of small and micro enterprises. Of the 67 enterprises which responded to this question in the CEET survey, only 15 (22%) have 10 or more workers. More than a quarter (28%) have only one or two workers, and another 20 (30%) have either three or four workers.

Table 15: Workers in Enterprises of Different Sizes

Number of workers in enterprise	*No. of enterprises*	*% of all enterprises*
1	9	13.4
2	10	14.9
3	12	17.9
4	8[1]	11.9
5	5	7.5
6	2	3.0
7	2	3.0
8	3	4.5
9	1	1.5
10-20	10	14.9
21 and over	5	7.5
Total	**67**	**100**

Note: 1. There were four staff in this office, but the overall company employed more than 100 workers.

The predominance of small and micro enterprises is likely to have implications for education and training. First, training may have a low priority. A number of studies have suggested that the pressures of daily activity that dominate the thinking and practice of very small businesses struggling to survive give learning and training a low priority (Hawke, 2002). Secondly, workers in these enterprises are likely to need multiple skills in order to be able to deal effectively with the many different aspects of the business. Thirdly, it may be difficult for workers in these enterprises to take time out for training, or to attend off-the-job training, because there will be no-one to take their place. Finally, the enterprises may be geographically dispersed throughout the region. It may thus be difficult for training providers to reach them all, or to bring workers together into a group. However, while micro and small industries predominate, most workers in the sample were employed in the larger enterprises. Of 759 workers employed in the respondent enterprises, more than half (56%) are in the five largest enterprises and a further 20 per cent are in enterprises with 10-20 workers. Only a quarter of all workers were employed in enterprises with nine workers or less. Thus, some enterprises are likely to offer a critical mass of workers for training purposes.

Table 16 indicates the basis on which workers are employed. The vast majority of firms employ some of their workers on a full-time permanent basis, with a little under half (29) employing 90 – 100 per cent of their staff on this basis. However, most enterprises employ a mixture of permanent full-time, part-time and casual staff. This may reflect the cyclical nature of some local industries, for instance the need for enterprises in agricultural industries to employ additional staff for harvesting crops or at other times of peak seasonal demand.

Table 16: Employment Arrangements by Enterprises[1]

	No. of enterprises			
% of staff employed on this basis	*Permanent full-time*	*Permanent part-time*	*Short-term contract*	*Casual*
0-24%	3	9	1	8
25-49%	5	14		1
50-59%	8	4		3
60-89%	15	2		1
90-99%	7	3[2]		
100%	22	3		3
Total enterprises	**60**	**35**	**1**	**16**

Notes: (1) In one enterprise 17% of the staff were on work placement, while in another enterprise there was one worker who was the owner's son and another two workers who were owners/partners.
(2) Includes an organisation with a high proportion of voluntary staff.

The results suggest that education and training providers in the region need to take the diversity in employment arrangements into account in providing appropriate opportunities for initial and continuing skill development.

Not shown in the table is the number of enterprises that are owner operated. Responses indicate that this is the vast majority (61 of 67), including the two largest enterprises (defined by the number of workers), which each had over 150 staff. Owner-operated enterprises have been found to face particular training issues. The Western Australia Department of Training and Employment (2000) notes that in businesses that are typically owner-operated and have few permanent employees the provision of structured training is difficult. Most rely on informal training and owners do not believe apprenticeships and/or traineeships provide 'an added level of skill over the informal skilling of workers'. Nevertheless, owners appreciate that certain areas of skill development are critical, such as safety awareness, basic mechanical maintenance and the principles of good teamwork.

Unions have been found to play an important role in supporting skill development for their members (eg. see Selby Smith, Ferrier, Burke, Schofield, Long and Shah, 2002). However, enterprises in Gannawarra are overwhelmingly non-unionised. There were no union members at all in 61 of the 68 enterprises and in the other seven cases half or more of the workers were union members in only three cases (one at 60% and two at 50% of staff). Five percent of workers were union members in one other enterprise and 40 per cent in another two. Low levels of unionisation most probably reflect the pre-dominance of small and micro owner-operated businesses in the region. In the two largest enterprises, each employing over 150 workers, union membership is much higher than average (at 40 and 50 per cent). Lack of unionisation is probably also related to the diversity in employment arrangements noted above. For instance, levels of unionisation generally tend to be lower among casual and contract workers.

The training needs of an enterprise depend on the match between the skills its staff possess, and the skills that the business requires. Table 17 shows that more than half of all enterprises employ workers in two occupational groups: managers and administrators; and clerical and office workers. About a third of the enterprises employ tradespersons and a quarter employ professionals, salespersons and personal service workers, and labourers. The proportions employing operators and technicians and para-professionals are comparatively small.

Considering the types of skills within the occupational groups indicates that medium to high level skills are important to most enterprises, but that there is still a reasonable level of need for some workers with lower level skills. The small number of enterprises employing technicians and para-professionals is surprising. Either most enterprises have little need for workers with these skills, or there are few workers available in this occupational group.

Table 17: Employment by Occupational Group

Occupational group	*No of enterprises employing workers in this group*	*% all enterprises*	*Skill level*
Managers and administrators	39	57	High
Clerical/office staff	38	56	Low-medium
Tradespersons	23	34	Medium
Professionals	19	28	High
Salespersons and personal service workers	18	26	Medium
Labourers and related workers	17	25	Low
Operators/production personnel/drivers	10	15	Low
Technical and para-professionals	8	12	Medium

Table 18 provides further information about skill needs by showing the number of enterprises employing different proportions of staff within occupational groups. A startling result is the number of enterprises in which all staff are within one occupational group. Three enterprises comprise only managers and administrators, four employ only tradespersons and another two consist only of labourers and related workers. These are most likely to be small or micro-businesses that focus on only one or two activities.

In general, most enterprises appear to employ a diverse mixture of workers. The results emphasise that local enterprises are likely to require education and training providers to supply a fairly broad range of skills (which are important for many enterprises), but also to support the development of more specialised skills that are important for specific enterprises and activities.

Table 18: Proportion of Staff in Each Occupational Group by Number of Enterprises

% of all staff in each group:	*Less than 10%*	*10-19%*	*20-49%*	*50-79%*	*80-99%*	*100%*
	Number of enterprises					
Managers and administrators	7	8	18	3	-	3
Professionals	1	4	8	5	-	1
Technical and para-professionals	3	-	5	-	-	-
Tradespersons	-	3	8	6	2	4
Clerical/office staff	6	9	15	8	-	-
Salespersons & personal service	3	4	3	6	1	1
Operators/production personnel/drivers	-	1	4	3	1	1
Labourers and related workers	2	1	5	5	2	2

Changes in employment can indicate shifts in requirements for skills, perhaps because an enterprise has moved into new markets, has introduced new processes, systems or equipment, or has begun to offer new products or services. Table 19 shows whether employment has risen or fallen over the previous three years in the respondent enterprises. Overall, many enterprises report no change in employment. However, the number of enterprises reporting a rise in employment exceeds the number reporting a decline for all occupational groups except *Salespersons and Personal Service Workers*. This suggests that economic growth in Gannawarra is leading to an increase in employment opportunities in the great majority of occupations.

The gap between the number of enterprises reporting an increase and those reporting a decrease in employment is particularly wide for the more highly skilled occupations. For example, employment of *Managers and Administrators* has decreased in three enterprises but increased in five; the employment of *Professionals* has decreased in two but increased in nine enterprises; and three enterprises report increased employment of *Technical and Para-professionals* while only one reports a decrease. Overall though, the gap is widest in the low to medium skilled occupational group *Clerical/Office Staff.* Only two enterprises report a decrease in employment in this category compared with eight indicating an increase. This suggests that workers with the skills to undertake clerical and office jobs are particularly sought after.

The broad pattern appears to be one of some growth in employment opportunities for all occupational groups. There also appears to be an overall increase in the expected level of skill requirements.

Table 19: Changes in Employment by Occupation and Enterprise (over the previous three years)

	Number of enterprises		
	No Change	*Decreased*	*Increased*
Managers and administrators	40	3	5
Professionals	22	2	9
Technical and para-professionals	20	1	3
Tradespersons	28	2	3
Clerical/office staff	35	2	8
Salespersons and personal service workers	22	3	3
Operators/production personnel/drivers	19	1	2
Labourers and related workers	22	3	4

It is interesting to look at changes in employment for enterprises in periods of growth, consolidation and decline. Table 20 shows enterprises reporting declines and increases in employment over the past three years.

The declines are spread fairly evenly across all occupational groups, although they are very slightly higher among Sales/Service occupations and Managers. Increases are also spread across occupations, but more unevenly. Employment opportunities have increased particularly for Professionals, but they have also grown strongly for Clerical/Office staff. While five enterprises report increased employment of Managers, three indicate they have decreased employment there.

Not surprisingly, firms in a period of growth are substantially under-represented among those reporting declines in employment and over-represented among those reporting increases. The enterprises report increases particularly for two high-skill occupations – Professionals and Managers. This suggests that firms in a period of growth have a special need for the skills required in these occupations – perhaps to steer them while they are innovating, re-organising, entering new markets or introducing new products.

Firms which are in a process of consolidation are very slightly over-represented among those reporting decreases, but more substantially under-represented among those reporting increases in employment. This pattern suggests they are taking strategic decisions about employment– perhaps focussing on strengthening their operations. They appear to see a particular need for professional staff, but little need for additional managers. These enterprises also appear to have increased their clerical/office staff.

Table 20: Number of Enterprises Reporting Decreased or Increased Employment in the Past Three Years, by Occupational Group and Period

	Decreases in Employment				*Increases in Employment*			
	Growth	*Consolidation*	*Decline*	*All*	*Growth*	*Consolidation*	*Decline*	*All*
Labourers		1		1	2	2		4
Operators		1		1	2	-		2
Sales/service	1		2	3	2	1		3
Clerical/office	1		1	2	3	4		7
Trades		1	1	2	2	-	1	3
Technical		1		1	1	1	1	3
Professionals		2		2	4	4	1	9
Managers	1	2		3	4	1	-	5
All	**3**	**8**	**4**	**15**	**20**	**13**	**3**	**36**
	(20%)	**(53%)**	**(27%)**	**(100%)**	**(56%)**	**(36%)**	**(8%)**	**(100%)**

Subtracting the number of enterprises reporting decreases in employment within an occupational group from the number reporting an increase produces the net increase in employment for that group. The highest net increases are indicated below. It is interesting to note that the three occupations indicated as having the strongest growth across all firms are associated with different skill levels. Labourers are considered to require low-level skills, Clerical/Office workers to need low to medium level skills and Professionals high-level skills. Demand for skills by enterprises also appears to rise with skill levels. The results suggest that education and training to develop the required skills will need to be diverse and involve different types of education and training providers.

Table 21: Highest Net Number of Firms Reporting Increases in Employment by Period and Occupation

Firms in growth	*Firms in consolidation*	*All firms*
• Professionals (4) • Managers (3)	• Clerical/office (4)	• Professionals (7) • Clerical/office (5) • Labourers (3)

Table 22 indicates that more than half the enterprises (56%) employ staff with trade qualifications and around a third employ staff with university or other TAFE qualifications (35% and 32% respectively). A small group (11 enterprises) employ staff with 'other' qualifications. These are generally industry or enterprise-specific qualifications. They include specialist courses on chemicals for the dairy industry (20% of the staff of one enterprise), IT courses (45% of the staff of another enterprise), and nursing qualifications (50% of those employed in one enterprise).

In many enterprises a minority of staff (sometimes a small minority) hold a university or TAFE qualification. There are only 11 enterprises in which 40 per cent or more of staff have a university qualification and six in which the same proportion of staff have a TAFE qualification other than a trade. Figures are slightly higher for a trade qualification - 25 enterprises have 40 per cent or more of staff with this qualification.

On the other hand, there are two enterprises in which all the staff have a university qualification, 13 in which all have trade qualifications and another two in which all have another qualification. These are likely to be small or micro-businesses.

Overall it appears that workers with trade qualifications are particularly sought after, but that local enterprises require a fairly broad range of skilled and educated labour, together with some specialised skills in specific areas.

Table 22: Percentage of Staff with Post-school Qualifications by Number of Enterprises

Qualification	*Less than 10% of staff*	*10-39%*	*40-69%*	*70-99%*	*100%*	*All (%)*
	Number of enterprises					
University	1	12	8	1	2	24 (35%)
Trade	1	12	8	4	13	38 (56%)
Other TAFE	3	13	5	1	-	22 (32%)
Other		5	3	1	2	11 (16%)

Table 23 below shows that many respondent enterprises have neither increased nor decreased the number of staff they employ with post-school qualifications in the past three years. For instance, in the case of staff with trade qualifications, thirty enterprises report no change in employment and only one reports an increase.

However, the number of enterprises reporting that they have increased their employment of workers with university qualifications (eight enterprises) is substantially larger than the number reporting they have decreased employment (one). Similarly, five enterprises report that they have increased their employment of staff with non-trade TAFE qualifications, while only one reports a decrease. Thus, the results suggest that there is some growth in demand for workers with these qualifications. Overall however, most enterprises appear only to be replacing staff with post-school qualifications when they leave.

It is striking that only one enterprise reports an increase in employment opportunities over the previous three years for those with a trade qualification, when 56% of all respondent enterprises include tradespeople in their workforce (and in the case of thirteen enterprises tradespeople comprise the total staff of the enterprise). This suggests that the employment of workers with trade qualifications in the region may have reached its peak – and that enterprises have all the trade qualified staff they require.

Table 23: Enterprises Reporting Changes in Employment of Staff with Post-school Qualifications

	Number of enterprises		
Qualifications	*No Change*	*Decreased Employment*	*Increased Employment*
University	20	1	8
Trade	30	-	1
Other TAFE	26	1	5
Other	21	3	2

Opportunities for people to engage in apprenticeships and traineeships in the region appear to be in decline. Table 24 shows that the total number of apprentices and trainees has fallen sharply, from 152 five years ago to 104 three years later and to 79 at the time of the survey. This is a decline of nearly half (48%) over five years. The decline is even greater in the case of apprentices and trainees employed by a Group Training Company. This number fell by two-thirds (from 100 to 33) over the same five-year period.

The decline in apprenticeships has been more marked than for traineeships, at least in the enterprises other than the Group Training Company. Five years ago the ratio of apprentices to trainees was 1 to 1.6, but at the time of the survey the ratio had fallen to 1 to 1.1.

Table 24: Apprentices and Trainees in Respondent Enterprises

	Now	*2 years ago*	*5 years ago*
(1) Apprentices	24	25	32
(2) Trainees	22	29	20
(3) Group Training Company	33	50	100
Total	**79**	**104**	**152**

Discussions in Gannawarra Shire suggest that a number of factors have contributed to this decline. First, economic conditions have been difficult over recent years and enterprises have not been able to take on (or retain) trainees and apprentices. Enterprises appear to be less willing to take on longer-term commitments generally, not just in relation to training. Secondly, increasing levels of education and skill among school leavers (for example, in computing) have, according to some of the enterprises interviewed, led to a greater emphasis on shorter, in-house training activities related to specific enterprise needs than on longer courses of more general training. Thirdly, some enterprises have outsourced work previously undertaken in-house by apprentices (for example, workshops and maintenance). The enterprises taking over this work have not always been able or willing to take on as many apprentices. Finally, a Group Training Company noted increasing difficulties in finding employers willing to employ trainees and (especially) apprentices, even on a less than full-time basis. This might be a temporary shift in attitudes due to the drought and economic difficulties facing the region, but it was suggested in discussions that it could also be indicative of a longer-term shift in attitudes.

In contrast, the number of enterprises employing school students has increased. Table 25 below indicates that eight enterprises employed part-time school students five years ago, compared with ten two years ago and 11 in 2003. However, while the number of enterprises taking school students as workers for part of their school studies increased from 14 five years ago to 16 three years later, it had returned to 14 at the time of the survey.

Discussions in Gannawarra Shire indicated that there is a real commitment to the region, its young people and its future by a range of the local enterprises. In a number of cases, enterprises were providing school students with work or work experience opportunities as a community contribution as well as a direct response to enterprise needs.

Table 25: Enterprises with School Students as Workers

	Now	*2 years ago*	*5 years ago*
As part-time employees			
(i) No. of students	18	21	18
(ii) No. of enterprises	11	10	8
As part of school studies			
(i) No. of students	30	37	32
(ii) No. of enterprises	14	16	14

Skill needs and training

The survey results suggest that most enterprises see generic skills and attributes as particularly important. More than two thirds of the enterprises highlighted four types of generic skills as important in their working environment: communicating ideas and information; co-operative attitudes; planning and organising; and using mathematical techniques/problem solving. More than half of the respondent enterprises also regarded another two generic skills (namely working with others and in teams; and initiative), as important. In contrast, comparatively few enterprises (26 or 41% of the total respondents) gave importance to the specific skill of 'using technology'.

Table 26 shows that there are some differences between the enterprises in growth, consolidation or decline. In general, the proportion of firms regarding a particular skill or attribute as important is largest among those enterprises which are in growth, slightly smaller for those in consolidation and smallest for those in decline. This suggests that skill needs are usually greatest while an enterprise is growing, are slightly lower while it is consolidating and fewer still when it is in decline. However, in contrast to this general pattern, the proportion of enterprises regarding skills in 'using technology' as important is similar for all three groups. The responses also highlighted variations between particular enterprises. For example, while 38 enterprises rated 'working with others and in teams' as very important, five placed no importance on it at all.

Table 26: Enterprises Indicating Generic Skills or Attributes as Important or Very Important (for Growing, Consolidating and Declining Enterprises)

	Communi-cating ideas and info.	*Planning and organising*	*Using maths techniques/ solving problems*	*Using technology*	*Working with others and in teams*	*Initiative*	*Co-operative attitudes*	*All*
Growth	13 (76%)	13 (76%)	13 (76%)	7 (41%)	13 (76%)	11 (65%)	11 (65%)	17
Consolidation	23 (74%)	21 (68%)	21 (68%)	13 (42%)	18 (58%)	16 (52%)	23 (74%)	31
Decline	10 (67%)	8 (53%)	8 (53%)	6 (40%)	6 (40%)	7 (47%)	10 (67%)	15
All	**46**	**42**	**42**	**26**	**37**	**34**	**44**	**63**

The importance of technological skills is affirmed by the results shown in Table 27 below, which indicate that more than two-third of enterprises (40 or 68% of all the respondent enterprises) have required training for their staff in skills for new technologies in the past three years. In particular, this type of training has been sought by sixteen of the eighteen enterprises in a period of growth.

Table 27: Enterprises Requiring Training in Skills for New Technologies, by Period

Period	*No*	*Yes*	*All*
Growth	2	16	18
Consolidation	10	14	24
Decline	5	9	14
Other	2	1	3
All	**19**	**40**	**59**

Table 28 below indicates these enterprises by industry. There is only one industry in which none of this type of training has been required – accommodation and cafes - and only two in which the number of enterprises not requiring it exceeds the number that has – dairy farming and retail. The difference was particularly striking for enterprises in the retail industry.

Table 28: Enterprises Requiring Training in Skills for New Technologies, by Industry

Industry	*No*	*Yes*	*(Not stated)*	*All*
Accommodation and cafes	2			2
Agriculture - dairy	3	2		5
Agriculture - grain		3	1	4
Agriculture - other	1	3		4
Communication		1		1
Construction	2	2	2	6
Education		2		2
Finance		3		3
Health and community services	1	4	1	6
Manufacturing	1	3		4
Mining		1		1
Personal services		2		2
Retail	7	3	3	13
Multi industries	1	10	1	12
Other		1	1	2
All	**18**	**40**	**9**	**67**

Over the last three years the majority of enterprises (44 of 62 respondents) have required *more* education and training overall. Table 29 below shows the number requiring and not requiring more training according to whether the enterprise is in a period of growth, consolidation or decline. A majority of firms in all periods indicate that they have needed more training – even firms in decline – but there are some differences between the firms in different periods.

The need for more training is particularly strong among enterprises in growth. Of the total of 18 enterprises indicating that they are in this period, only three (17%) have not needed more training. Enterprises in growth are also substantially over-represented among all enterprises indicating a need for more training. The results suggest that as a firm grows, its need for training increases. The need for additional training may also be associated with the tendency for firms in this period to innovate and re-organise, which was noted earlier.

A smaller but still substantial majority of those enterprises which are in a period of consolidation (66%) have also required more training. However, enterprises in consolidation are under-represented among all those indicating a need for more training and more than half of all the enterprises that have not required more training (56%) are in a period of consolidation. The results suggest that, as a firm consolidates, its needs for training may stabilise – it will still need training, and some additional training is required, but its needs are not as strong as those of firms in a period of growth. Some additional training may be needed to support innovation and re-organisation – though to a lesser extent than for firms in growth.

Perhaps surprisingly, the number of firms in decline that have needed more training (nine) also exceeds the number that have not (five). The proportion of firms indicating an additional training need is also similar to that for firms in consolidation (64%, compared with 66%). It may well be that many firms in this period seek additional training to assist them in moving out of decline and into consolidation or growth. As noted earlier, firms in decline are much less likely than firms in other periods to engage in innovation or re-organisation; and thus they are also less likely to seek additional training to support their activities.

Table 29: Enterprises Indicating They Have Required More Training Over the Past Three Years, by Period

Period	*No*	*Yes*	*All*
Growth	3 (17%)	15 (34%)	18 (29%)
Consolidation	10 (56%)	19 (43%)	29 (47%)
Decline	5 (28%)	9 (21%)	14 (23%)
Other		1 (2%)	1 (2%)
All	**18 (100%)**	**44 (100%)**	**62 (100%)**

Table 30 below shows that enterprises in all industries indicate that they have needed more training over the past three years.

Table 30: Enterprises Indicating They Have Required More Training Over the Past Three Years, by Industry

Industry	*No*	*Yes*	*0ther*	*All*
Accommodation and cafes		2		2
Agriculture - dairy	3	2		5
Agriculture - grain		3	1	4
Agriculture - other	2	2		4
Communication		1		1
Construction	3	2	1	6
Education		2		2
Finance		3		3
Health and community services		6		6
Manufacturing	1	3		4
Mining		1		1
Personal services		1	1	2
Retail	6	6	1	13
Multi industries	4	8		12
Other		2		2
All	**19**	**44**	**4**	**67**

There are only two industries in which the number of enterprises not requiring additional training exceeds those that have: Construction; and Dairy farming. Enterprises in the Retail industry appear to be ambivalent about more training in that as many indicate they have needed it, as have not.

A small majority of enterprises (57%) have required *different* types of training over the past three years. Among enterprises indicating a need for different types of training, those in a period of growth are particularly over-represented (75% of such enterprises) and those in consolidation are substantially under-represented (45%). Results thus indicate that the training needs of firms in growth are much more likely to change than those of firms in consolidation or decline. This may also reflect the increased tendency of firms in a period of growth to engage in innovation or organisational change.

Table 31: Enterprises Requiring Different Types of Training Over the Past Three Years, by Period

Period	*No*	*Yes*	*All*
Growth	4 (15%)	12 (38%)	16 (28%)
Consolidation	16 (62%)	13 (41%)	29 (50%)
Decline	6 (23%)	7 (22%)	13 (22%)
All	**26 (100%)**	**32 (100%)**	**58 (100%)**

The survey asked enterprises a number of questions about their support for different forms of education and training. The results are summarised in Table 32 below. They show mixed levels of support for formal and informal training. The number of enterprises that do not provide support for various forms of training appears to be a matter of some concern – from the point of view of both the worker and the enterprise.

The largest group of enterprises (43) pay for employees to attend external conferences and training activities. The next largest group of enterprises (34) fund fees for staff to undertake courses in educational institutions. Slightly fewer than half of the total number of respondent enterprises (31) provide in-house opportunities for their employees to undertake formal training to upgrade their skills. Twenty-five enterprises provide apprenticeships and/or traineeships to ensure a supply of skills for their enterprise. More informally, 27 enterprises run training sessions as needed to support changes in technologies and work processes, while 24 bring in outside experts to provide training sessions for their employees.

Table 32: Number of Enterprises Supporting Various Forms of Training

	Yes
Pay for employees to attend external conferences/training activities.	43
Fund/refund fees for courses in educational institutions.	34
Provide opportunities, in-house, for employees to undertake formal training to upgrade their skills.	31
Run training sessions as needed to support changes in technologies/work processes.	27
Provide apprenticeships/traineeships to ensure a supply of skills.	25
Bring in outside experts to provide training sessions for employees.	24

The Responsiveness of Education and Training Providers

The survey asked enterprises how much they relied on established education and training systems for standard occupational skills training. The results shown in Table 33 indicate that many fewer

enterprises rely on the system 'a great deal' or 'quite a lot' (25 enterprises or 38% of the total number of respondents) than 'not very much' or 'not at all' (40 enterprises or 62% of all the respondents). Levels of reliance are particularly low among firms in decline (4 of 15; or 27%) compared with those in growth (56%) or consolidation (34%). It is of interest that the growing firms, which might be expected to have changing needs or more difficult requests for the established education and training systems to meet, are much more likely to state that they have their needs satisfactorily met than those firms which are in decline or in a consolidation phase. This suggests that a good relationship between users and providers depends on the actions of both parties, not the actions of providers alone.

Table 33: Enterprise Reliance on Established Education and Training Systems, by Period

Period	*Quite a lot*	*A great deal*	*Not very much*	*Not at all*	*All*
Growth	8	2	5	3	18
Consolidation	10		11	8	29
Decline	2	2	10	1	15
Other	1			2	3
All	**21**	**4**	**26**	**14**	**65**

The survey results indicate that some industries rely on the established education and training system more than others. For instance, in health and community services four out of six enterprises rely on the system 'quite a lot' or a 'great deal' and in manufacturing three out of four. However, only two of six do so in construction, four of 13 in retail and five of 12 in multi industries. There were four industries in which no enterprises rely on the system 'a great deal' or 'quite a lot': accommodation and cafes; dairy; communication; and personal services.

Table 34: Enterprise Reliance on Established Education and Training Systems, by Industry

Industry	*A great deal*	*Quite a lot*	*Not very much*	*Not at all*	*All*
Accommodation and cafes			1		1
Agriculture -dairy			4	1	5
Agriculture -grain		2	2		4
Agriculture -other		1	1	1	3
Communication			1		1
Construction	1	1	2	2	6
Education	1				1
Finance		1	2		3
Health and community services	1	3	2		6
Manufacturing		3		1	4
Mining		1			1
Personal services			2		2
Retail		4	4	5	13
Multi industries	1	4	5	2	12
Other		1		2	3
All	**4**	**21**	**26**	**14**	**65**

There were also variations within a specific industry. For instance, within agriculture no enterprise engaged in dairying indicated that it relied on the established education and training system more than 'not very much', but in the grains area, as many enterprises rely on it 'quite a lot' as 'not very much'.

The low level of reliance on the established education and training system which is indicated by the survey responses raises a question about where enterprises seek to meet their needs for education and training. If they are not looking within the established formal system then where are they seeking the training they require, if at all? Another question that arises is whether the low level of reliance reflects poor experiences with the system or that the formal established system does not provide the types of training required. The survey results provide some useful pointers in relation to these matters.

First, most of the firms that say they have needed *more* training in the past three years indicate that the education and training system has been able to provide it and that they have been reasonably satisfied. Table 35 shows that only six of 45 enterprises responding to this question in the survey indicated dissatisfaction (13%). Of the growing enterprises 13 of 15 (87%) were either 'very well' or 'reasonably well' satisfied. However, overall only 10 of the 45 enterprises were 'very well' satisfied and thus there appears to be some room for improvement. In particular, firms in consolidation were disproportionately represented among those expressing dissatisfaction (they represented 67% of all the enterprises expressing dissatisfaction), suggesting that firms in this period may have particular needs that are not being well served. Interestingly, 70% of the declining firms said they were 'very well' or 'reasonably well' satisfied with the responses from the established education and training system to the enterprise's need for more training.

Table 35: Firms Needing More Training in the Past Three Years, by Period – How Education and Training Providers Have Responded

Period	*Badly/poorly*	*Acceptably*	*Reasonably well*	*Very well*	*All*
Growth	1	1	10	3	15
Consolidation	4	5	7	4	20
Decline	1	2	4	3	10
All	**6**	**8**	**21**	**10**	**45**

Secondly, providing *different* types of education and training can be more challenging and difficult for providers than providing enterprises with *more* education and training (especially if 'more' generally means 'more of the same'). There were also fewer responses from enterprises to this question in the CEET survey (34 compared to 65 above). Most of the firms which indicated that they have needed different training over the past three years (28 of 34, or 82%) indicated that the education system had been able to provide this training and that they are 'acceptably', 'reasonably well', or 'very well satisfied'. As was the case with enterprises seeking more training, only a minority indicated dissatisfaction. However, this was a higher proportion of all the firms answering the question (18% for 'different' training compared with 13% for 'more' training), so that there appears to be even more room for improvement in meeting enterprise needs.

Again, there were significant differences between enterprises. The levels of satisfaction were particularly high among the growing firms, with ten out of twelve respondents (83%) indicating that their needs had been 'reasonably well' or 'very well' met. However, the levels of satisfaction were much lower among firms in consolidation, with seven out of thirteen (54%) indicating an 'acceptably' or 'badly/poorly' response. Again, it is interesting that two-thirds of the enterprises in

decline were 'very well' or 'reasonably well' satisfied with the response they had received from the established education and training providers ie. a higher proportion than among the firms which were consolidating.

Table 36: Firms Needing Different Training in the Past Three Years, by Period – How Education and Training Providers Have Responded

Period	*Badly/ poorly*	*Acceptably*	*Reasonably well*	*Very well*	*All*
Growth	1	1	9	1	12
Consolidation	2	5	6	-	13
Decline	3	-	3	3	9
All	**6**	**6**	**18**	**4**	**34**

Overall, there were quite significant levels of dissatisfaction among enterprises which had required training for *skills in new technology* over the previous three years. Nine of the thirty such enterprises (30%) indicated dissatisfaction. However, the level of dissatisfaction is even higher among enterprises in a period of growth (44%), which is a disconcerting and worrying finding. It is also a contrast to earlier findings, where the enterprises in growth tended to be more satisfied with the responses from the established education and training system than were the enterprises in decline or in a consolidation phase.

Table 37: Enterprises Needing Training for Skills in New Technologies, by Period - Satisfaction With Response

Period	*Satisfied*	*Dissatisfied*	*All*
Growth	5	4	9
Consolidation	9	2	11
Decline	5	3	8
Other	2		2
All	**21**	**9**	**30**

Some enterprises which were dissatisfied with the responses from the established education and training system might be able to provide what they need from their own resources. The survey asked enterprises to indicate how much training staff undertook and where the training occurred, either in-house (within the enterprise) or elsewhere (away from the enterprise).

The results, summarised in Table 38 below, indicate that where staff undertake 'a great deal' of training they are more likely to do so in-house (26 enterprises) than away from the enterprise (9 enterprises). Conversely, where staff do 'very little' training they are more likely to do it outside the enterprise (28 enterprises) than in-house (14 enterprises). This suggests that for enterprises where training is more substantial, internal systems and processes are more likely to have been developed to provide it. In contrast, enterprises that require little training prefer to seek assistance from elsewhere – perhaps because they do not want to take on the responsibility of providing it themselves or because the training required is more general than specific to their needs.

Table 38: Enterprises Undertaking Training In-house and Externally

	Very Little	*Some*	*A Great Deal*
In-house	14	26	26
Away from the enterprise	28	28	9
Total	**42**	**54**	**35**

When the enterprises in Table 38 were disaggregated by industry, there were some interesting results (see Table 39). First, no enterprise in the accommodation and cafes industry indicated that it used either type of training, though there are several enterprises in this industry among respondents. Secondly, external training appeared to be more clearly preferred in only two industries (construction and retail), while in-house training appeared to be preferred in only one (education) – and perhaps also in communication and mining, although in the case of each of these two industries there was only one survey respondent who answered the question. In most industries both forms of training were used fairly equally. However, it should be noted that the number of enterprises in most industries was small.

Table 39: Enterprises Using In-house or External Training by Industry

Industry	*Using in-house training*	*Using external training*
Accommodation and cafes	-	-
Agriculture -dairy	1	1
Agriculture -grain	2	2
Agriculture -other	3	2
Communication	1	-
Construction	1	3
Education	2	-
Finance	2	2
Health and community services	3	2
Manufacturing	1	2
Mining	1	-
Personal services	2	1
Retail	3	5
Multi industries	6	5
Other	1	1
Total	**29**	**26**

Enterprises were asked to indicate some of the types of internal training they undertake. Their responses appear to fall into three main groups:

- *Training for cross-industry skills that might also be contextualised to a specific industry*: eg. occupational health and safety, workcover, customer relations, industrial relations, marketing, quality assurance, book-keeping, accounting and taxation law, 'upgrading' and computer technology.
- *Training for skills that are specific to a particular industry*: eg dairy operations and pasture management, animal husbandry, agricultural science, and retail sales.

- *Training for skills for a particular enterprise*: eg office procedures, computer hardware support, product training and product knowledge, 'laser grading, tractor care and maintenance'.

Sometimes the training covered quite diverse areas in the same enterprise, such as marketing, occupational health and safety, and quality assurance activities; computer technology and journalism; or 'bookkeeping and farming'.

Further information about the sources of education and training that enterprises use is contained in the responses to a question in the CEET survey which asked enterprises where they obtain additional education and training when they require it. Overall, enterprises used a wide range of sources, but a public training provider such as a TAFE institute was still the most common source, being used by more than half the enterprises responding to the CEET survey. Professional or industry associations were the next most important source, being used by over 40 per cent of enterprises. About a third of the respondent enterprises used, firstly, equipment manufacturers or suppliers and secondly, their own internal training resources; and slightly fewer enterprises used an adult or community education provider or a private training provider. Smaller numbers used a group training company (12), university (7) or other source (2). About 57% of the enterprise responses related to formal educational and training providers (ie. other than schools), while the remaining 43% related to various other providers, such as professional or industry providers (16%), equipment manufacturers or suppliers (13%) or the internal training resources of the enterprise itself (13%).

Enterprises were also asked how satisfied they were with the response they received from the sources they had used. Most seemed reasonably satisfied. 110 responses (64%) were 'satisfactory', 51 were 'reasonable (30%) and only ten were (6%) 'unsatisfactory'. 'Unsatisfactory' ratings were widely spread across the different sources, rather than concentrated among one or two categories of education and training provider. The number of unsatisfactory ratings was greatest for TAFE (4), but more enterprises were using TAFE than any other provider and an equal number of unsatisfactory ratings were received for 'professional or industry associations' and 'equipment manufacturers or suppliers' combined.

Table 40: Additional Training for Enterprises, Sources and Satisfaction

	Enterprises using	*Experience was*		
		Satisfactory	*Reasonable*	*Unsatisfactory*
A public provider eg. TAFE	39	23	12	4
A private training provider	19	14	5	-
A Group Training Company	12	7	5	-
An ACE provider	20	15	5	-
A university	7	5	1	1
Professional or industry associations	28	16	10	2
Equipment manufacturers or suppliers	22	10	10	2
Enterprise's own internal training resources	22	18	3	1
Other providers	2	2	-	-
All	**171**	**110**	**51**	**10**

Respondents were asked to give examples where they had found the response from education and training providers to be 'particularly good'. The willingness of training providers to be flexible, to negotiate and to adapt to meet the particular needs of the enterprise was important for many of the respondents. Examples included: 'by providing correspondence programs'; 'they have been able to co-ordinate on site training'; 'training providers travelled to the town to deliver training sessions'; 'accessibility and contact'; 'regular attendance to workplace'; 'relates to our business'; 'training has been appropriate'; 'specific short courses eg. computer bookkeeping' and 'help was readily available'.

The quality of the program was mentioned as an important consideration by a few firms: 'quality of course'; 'awareness of OH&S'; providing good computer skills'; and 'good postgraduate courses'.

Some commented on the price, or value for money such as: 'good price' and 'we pay highly for it and generally get good response'.

Some cited particular training providers or sources of support such as 'TAFE Bendigo', or 'Gannawarra Shire'. Another respondent noted that information had been 'gained easily with one phone call'.

Respondents were also given the opportunity to give examples, if they felt the response from education and training providers had been 'particularly unsatisfactory for your enterprise'. Failure of providers to negotiate, to be flexible and to adapt to the needs of the enterprises was important. Examples included: 'nothing specific to our needs'; and 'geographic location, block release'.

However, what appeared to be more important for a number of respondents was their inability to find and access appropriate training within the region. Examples of such comments included: 'not provided locally – participants needed to travel to Bendigo, Echuca, Shepparton and Melbourne – involved a great deal of time away from the workplace'; 'courses required not provided in country areas'; 'unable to find suitable courses and upgrade skills for staff'; few courses in marketing and promotion'; travel time a discouraging factor' and 'remote from workplace'.

Several enterprises indicated that they had some very specific training needs that could not be addressed satisfactorily. Examples included: 'changes to taxation law is not something institutions can provide at the coal face'; 'very little of the outside training covers any computer POS sale, point knowledge, retail sales applications' and 'ag. apprenticeship – too much abstract detail when really basic skills needed – plumbing, fencing'.

Finally, several respondents expressed concern with the quality of the training and follow-up. Examples of such comments included: 'poor resources (eg. lack of training tools eg. whiteboards'); 'lack of understanding'; very little or no contact after training has been completed'; 'failing to use real examples from the agribusiness field'; 'courses are rushed and not preparing students as thoroughly as we would like'; 'have not provided enough time' and 'can't think of anything local that is particularly good'.

Summary and Conclusions

Innovation, Change and Skills

Gannawarra is facing some difficult challenges. It has a declining population that has a high proportion of older people and that is ageing. Its labour force has fewer qualifications than is average for Victoria. It suffers difficult environmental conditions of periodic drought and the effects of long-term rises in the level of salinity. Many of its enterprises are small owner-operated businesses with limited resources. Many young people, particularly young women, leave the region following compulsory education –to pursue studies or employment elsewhere. Employment opportunities are limited, with many enterprises employing a small number of full-time permanent staff and supplementing them with part-time and casual labour as needed. The region's major industry, agriculture, faces strong competition in export and domestic markets. Several of its industries also tend to be co-dependent. For instance, the fortunes of the local retail industry, a major employer, are linked with those of agriculture. When farm incomes fall so do those of local retail businesses. Similarly the manufacturing industry, another major employer, concentrates on agriculture-related products (eg. food processing, stock feed, farm machinery) and thus is also dependent on continued economic success in agriculture

However, there are some positive signs that the region has a capacity to meet these challenges. The resilience of local enterprises is demonstrated by the fact that many of them have been in existence for a long time. Skill levels in the community are rising, particularly the number of people holding advanced diploma, diploma or certificate qualifications. Despite difficult economic circumstances following prolonged drought, local enterprises continue to employ apprentices and trainees, though in reduced numbers, and about three-quarters of the enterprises responding to the CEET survey indicated that they are in a period of growth or consolidation. Firms in growth or consolidation outnumber those in decline in all industries except dairy farming, where the numbers are the same. There are no businesses less than five years old in decline and conversely there are some very 'old' enterprises in growth – for instance, six responding to the survey have been in operation for 90 years or more.

Innovation is very much part of the agenda within the community to assist in meeting the challenges and is supported by the local government's Business Development Unit. Salt, sand and sun are among the factors driving and shaping the innovation effort. Salt, because rising levels of salinity are forcing local enterprises to confront traditional practices and find new ways of doing things – or move to different products, or forms of business. Taking opportunity from adversity, the harvesting of salt (epsomite) is among the new ventures being developed within the Shire. Sand, because the region suffers the effects of periodic drought that can severely curtail agricultural production, creating economic hardship that flows on to other industries in the region, magnifying the regional economic downturn. The mining of mineral sands is among the new ventures which are under development in the surrounding district. Sun, because Gannawarra's warm and dry climate, together with the region's many lakes and rivers, provides the basis for ongoing development of a thriving tourism industry, but also is enabling promotion of the region as the 'new Mediterranean'. The production of grapes and olives, with related value-adding activities, and other fruits suitable to the climate, are being promoted by the Shire in conjunction with the neighbouring municipalities of Greater Bendigo and Loddon. This initiative, which has received state government funding support, recognises that some changes in skill requirements will occur and thus incorporates planning to deliver appropriate training in the region (www.newmediterranean.com.au).

Another factor driving innovation is the more efficient use of water for irrigation. The availability of water from the local rivers has enabled the development and success of many agricultural ventures in the region, such as dairy farming and grain production. However, the environmental damage that this has contributed to, including salinisation and the effects of depleted river flows, have now been recognised and the region is under pressure to use irrigated water more efficiently, effectively and frugally.

Despite, and perhaps also because of, the difficult circumstances that have been experienced in Gannawarra over recent years, innovation is a significant activity. However, it is not always recognised as innovation. A large proportion of enterprises are engaged in innovative activities, and innovation has considerable support from local and state governments, education and training providers, and other networks. Enterprise skill needs are changing. It is not clear that this reflects innovation, but a connection appears likely. For instance, the provision of training to meet skill needs is an important component of the initiative to develop 'the new Mediterranean' in Gannawarra and neighbouring regions.

Innovation is also being driven by factors affecting industries in many other parts of Australia, such as increased competition (84% of survey respondents indicated that competition in the markets in which they operate is medium or strong in intensity) and changing consumer preferences. For instance, agriculture in the region is innovating to increase efficiency, meet new consumer preferences for products (eg. organic produce) and product quality (eg. 'clean' pork). A substantial proportion of the enterprises in Gannawarra engage in innovation. Importantly, firms which state that they are in a period of growth or consolidation are over-represented among innovators.

The education and training needs of local enterprises are changing. Most have required 'more training' in recent years and many have required 'different training'. In both cases, these are particularly firms in growth or consolidation. Most of these enterprises have also required training for skills in new technologies. This is particularly noticeable among the firms in growth. Employment is shifting toward people with higher level skills and most enterprises are requiring 'more training', to lift skill levels. In particular, firms that are growing – that will provide future employment opportunities – need more and different training and technological skills training.

While 62% of the enterprises stated that they depend 'not very much' or 'not at all' on the established education and training system for standard occupational skills training (compared to 38% which stated that they relied on it 'a great deal' or 'quite a lot') there are differences by industry. For example, enterprises in health and community services, and in manufacturing (and to a lesser extent in education and mining), appear to be more reliant on the established education and training system than those in construction, retail, accommodation and cafes, dairy farming, communication and personal services.

Overall, most enterprises use a range of different education and training providers and options to meet their skill and training needs. Sometimes they use a TAFE institute, private training provider or group training company but depending on what they need they might also use an adult and community education provider, a university, an industry body, an equipment manufacturer, outside experts or in-house training. Firms that do a lot of training prefer to use in-house resources, whereas enterprises that undertake less training prefer to seek assistance from elsewhere and undertake training away from the enterprise.

Examples of 'good responses' from the established education and training system which were cited by enterprises are of four main kinds:

- flexibility, adaptability and willingness to negotiate to meet the needs of the business,
- high quality of the program,
- value for money (but not necessarily low cost),
- references to individual providers (eg. Bendigo Regional Institute of TAFE, Gannawarra Shire).

Examples of 'poor responses' are almost the opposite of these, including: inability to access appropriate training within the region; failure to negotiate; specific needs of the business were not met; low quality programs and poor follow-up.

Unfortunately, many firms are unhappy with the response from the established education and training providers to their changing needs. Alarmingly, enterprises in growth, as well as many in a period of consolidation, are over-represented among them. While there will always be some enterprises (hopefully a small number) that are dissatisfied with the response to their needs from the established education and training system, the proportion indicating that responses were only 'acceptable', together with those indicating dissatisfaction, is a cause for concern. Dissatisfaction is particularly high among firms needing training for skills in new technologies– especially among the firms in growth. The proportion of enterprises that are dissatisfied with the response to their need for 'different training' is also higher than the proportion who are dissatisfied with the response to their need for 'more training'. There appears to be considerable room to improve the response to the changing education and training needs of enterprises in Gannawarra. In particular, education and training providers might give greater consideration to updating their provision as enterprise needs change, as well as engaging more closely with enterprises to negotiate ways of meeting their particular needs.

Some Major Findings from the CEET Study

Discussions with enterprises in the region revealed that, while mindful of their business needs, they were also highly aware of their contribution to the local community, for example, in providing opportunities for work experience for school students, facilitating apprenticeship and traineeship training, and supporting a competitive skill base in the region. They take a broad view of service to the community that includes a commitment to providing training opportunities.

However, there are marked differences between them in the opportunities open to their staff and there appear to be a substantial number of enterprises whose staff do not receive much support for their education and training. Changes in the Australian labour market are tending to reallocate some of the responsibility for training (and its cost) from enterprises to individual workers. Nevertheless, the number of enterprises that do not provide support for various forms of training appears to be a matter of some concern (from the point of view of both the worker and the enterprise).

Enterprises in Gannawarra use a wide range of sources to provide for their education and training needs and some appear to have a significant preference for informal over formal and for in-house over external options. The inter-sectoral divisions that can apply in the education and training system between schools and TAFE, between public and private providers or between VET and universities, appear to be of limited relevance to the enterprises in Gannawarra. What appears to be required is a broad range of education and training provision, from a range of sources and with

close co-operation between them. Enterprises, individuals and communities appear to be seeking a broad range of opportunities to choose from, plus particular specialised opportunities to meet particular needs. The barriers between the sectors and the different providers need to be as low as possible.

Education and training providers face a challenge to provide the broad opportunities which are clearly required, for example for different occupations and industries, and for initial and ongoing education, and also to provide the specialised training which is needed to meet the specific needs of particular enterprises and individuals. In relation to specialised training, small numbers, some specific needs and changing requirements mean that not everything can be provided everywhere. However, it is important to ensure that individuals are not excluded from appropriate education and training opportunities, because they work in an enterprise environment that does not support training or because they are unable to travel to those locations where education and training opportunities are available. Individual and community needs for education and training are important, as well as enterprise requirements.

There is clearly a balance of formal and informal provision of education and training in Gannawarra. This is important and desirable, but to what extent is it optimal and are there ways in which the relationships (and thus the overall provision of education and training, and the benefits obtained from it) could be improved? For example, where enterprises provide informal, in-house training and are supportive of it, could the specialist knowledge of education providers assist in improving delivery? Conversely, are there ways in which the specialised and contemporary knowledge of professional or industry associations, or of equipment manufacturers and suppliers, could be more effectively used by formal education and training institutions to enhance their programs? Given the importance many of the enterprises in the sample attached to generic skills and competencies perhaps this is another potential area for greater collaboration between enterprises, specialist education and training providers, and the wider community.

Among respondents to the CEET survey it was encouraging to see the strong commitment to education and training among many small enterprises – for their own needs, for individual opportunities and for community strengthening. Given the recognised difficulties in achieving a commitment to training in small and medium-sized businesses in Australia this is a significant achievement in Gannawarra. On the other hand, there are many enterprises in the sample that do not support much training or skill acquisition, which is likely to prove disadvantageous, especially in the longer term (for the enterprise itself and for its workers). There may be ways in which the broad range of education and training providers can build on the successes that have been achieved to extend education and training coverage for enterprises and individuals.

Finally, there appears to be a genuine desire on the part of a number of enterprises and education and training providers in the region to seek a closer partnership. This is not to say that they will always see matters in exactly the same way or put an identical priority on alternative approaches. But the education and training providers appear to accept that enterprise views of what is working well, what is not working so well and how the arrangements could be improved, need to be gathered, understood and constructively considered. Similarly, it was apparent from discussion with a number of enterprises in the Shire that they recognised that the education and training providers are doing many things well, make a major contribution to local enterprises, individuals and the community, and are willing to work constructively with enterprises. The basis appeared to exist for an even closer and more productive partnership to develop.

There was considerable discussion, both with enterprises and with education and training providers, about just how to interpret the survey responses concerning levels of satisfaction or

dissatisfaction with the levels of attention given to enterprise training needs by providers. Some enterprises appear to be completely satisfied and are not seeking significant changes in the current level or type of provision. Some are dissatisfied with the current performance of the education and training arrangements in meeting their needs. Sometimes their criticisms had a sharp edge. A third group indicated that the responses were 'acceptable' In the discussions which were held in Gannawarra to consider the draft findings from the research, it was recognised that it is impossible for education and training providers to satisfy all of their customers all of the time. Nevertheless, the survey results warrant further consideration. A comment made by both enterprises and providers was that the weaknesses which were identified tended to be less in relation to content than in relation to other matters, such as the timing and location of training.

National Implications of the Gannawarra 'Story'

The challenges facing the Gannawarra community are not unique, but typical of those confronting many other regions throughout Australia. Thus the 'story' behind these challenges, and the efforts that are being made to address them at local and state levels, provide some lessons and pointers that may be important and useful more widely throughout the country. The story also highlights where national action could assist in supporting these efforts.

First, Gannawarra faces challenges arising from the spread of global markets for products and services. Local businesses and industry face a need to re-establish and consolidate economic success in changed circumstances. In the face of heightened competition, efficiency is vital to remaining competitive and assuring future economic success. Attention is also necessary to changes in consumer requirements. In Gannawarra this means responding to demand for new and different products and services, for products of higher and more consistent quality, for 'clean, green' products and sustainable production methods.

A second challenge facing Gannawarra is the need to find better ways to cope with, and respond to, degradation of the environment. Much of Gannawarra's past economic success has been built on exploitation of the region's natural resources of sunshine, water and arable land. However, land and water are now badly affected by rising salinisation and increasing demand. They can no longer serve the community to the same extent. There is thus a need to change some long-accepted practices, to halt and reverse existing problems and to identify some new ventures for the future to take the place of those that are now less viable.

A third challenge facing Gannawarra is the need to address the hardship caused by the widespread social and economic difficulties that occur when periods of agricultural prosperity are followed by downturns (eg. caused by drought or other natural disasters). Agriculture is the main industry in Gannawarra and many other industries in the region are dependent on its continued prosperity for their own economic success. When agriculture is enjoying economic success the other industries are also likely to prosper, but when agriculture is suffering, they also will face an economic downturn. Finding ways to create a more even pattern of economic highs and lows would help to soften the impact and ensure more sustainable levels of social and economic well-being.

A further challenge, also widely felt throughout regional Australia, is the loss of young people. In Gannawarra many young people leave the region to pursue education or work opportunities elsewhere – often in Melbourne or larger regional centres. Some of these young people return, but many others do not. Consequently, the region has a high proportion of older residents – 17.8% are over 65 years, compared with 12.8% of the population of Victoria in 2001. Some may wish to return later and might benefit from assistance to do so.

This exodus of young people has a number of outcomes, two of which are particularly important in considering VET. First, Gannawarra's workforce comprises large numbers of older workers. This means that as new ventures, new equipment and practices are introduced there tend to be high levels of demand for re-training of existing workers. Secondly, there is a de-stabilising gender imbalance in the region as more young women than men leave to study and many never return. This occurs because young women tend to pursue university opportunities – and there is no university campus in Gannawarra - while young men are more likely to take up work and study opportunities (including in VET) closer to home. When the young women fail to return, their male peers can find it difficult to establish their own families. Consequently, their commitment to the community may be weakened and there may be instability in the community, with the potential for harmful social and economic consequences.

Many of the ways in which the Gannawarra community is *responding to these challenges* are typical of responses to similar circumstances in other parts of Australia. First, the community is drawing on its local resources of ideas, creativity and entrepreneurialism – its intellectual capital. This has resulted in some new ventures being set up including the harvesting of salt and the introduction of agricultural products that are suited to the climate and that are also in high demand among consumers.

Secondly, businesses and industries in the region are adopting new practices, systems, processes or equipment that result from research and development work outside the region – for instance in industry research centres.

Both these types of responses are creating some learning, education and training needs. Over the past few years enterprises in the region have required *more* training – but even more importantly they have required some *different* training. Unfortunately, the needs of many of them are not being met and dissatisfaction with training provision is higher than it should be. This is particularly important when it occurs among innovative and growing enterprises.

However, these difficulties are now being assisted by an initiative that is specifically Victorian - the creation of *local learning and employment networks* (LLENs), which bring together local education and training providers, enterprises, community and industry representatives to:

- identify gaps in the provision of education and training locally,
- plan the development and delivery of educational programs for young people which will assist in meeting the targets for better completion rates and employment outcomes,
- take a strategic approach to developing pathways for local young people, especially those at risk of dropping out,
- monitor these pathways and outcomes to ensure they are beneficial to young people, and
- advise the Victorian Learning and Employment Skills Commission (VLESC) on the needs of young people in the area (www.llen.vic.gov.au).

LLENs were introduced by the Victorian government in its *Pathways and Standards* policy as one of a number of measures responding to the report of the *2000 Ministerial Review of Post Compulsory Education and Training Pathways in Victoria* (the Kirby Report), which highlighted the importance of partnerships between government and communities and the need to develop local responses to the diverse needs of communities (www.det.vic.gov.au/postcomp/policy/default.htm#kirept). The Kirby report recommended the establishment of networks of education and training providers, industry and other agencies to create a cooperative approach to planning at the local level. They

were also to be responsible for community renewal and strengthening; minimising duplication and wasteful competition; and acknowledging that communities and industry shared responsibility and ownership of post compulsory education and training.

In addition to their local role, LLENs are charged with providing advice and information to government about post compulsory education, training and employment in Victoria in partnership with the Victorian Learning and Employment Skills Commission (VLESC). VLESC was also created in response to the recommendations of the Kirby report and followed the restructure of the former State Training Board. LLENs now operate through the Victorian Department of Education and Training (www.llen.vic.gov.au/llen/about/policy.htm.)

Though the LLENs are still relatively new, the Gannawarra example suggests that they are already proving to be successful in strengthening relationships between education and training providers, communities and industry. They are playing a significant role in ensuring attention to learning, skills and training needs at the local level. They are contributing to the establishment of cooperative approaches in their regions. For instance, Attachment 2 demonstrates that the two LLENs that cover Gannawarra (the Murray Mallee and Campaspe Cohuna LLENs) have introduced a number of initiatives in response to local needs. The success of the LLENs suggests that, if adapted to suit local conditions, similar networks might also be successful in other parts of Australia in improving planning for, and provision of, education and training to meet local needs. They could assist communities to address the sorts of challenges which are illustrated by the experience of Gannawarra.

References

Cranwell, P. D. (2002), *The VIIIth Biennial Conference of the Australasian Pig Science Association* held in Adelaide, South Australia, 25th to 28th November 2001. *Part II. The Reviews & One-page Papers*, www.apsa.asn.au

Hawke, Geof (2002), *Patterns of 'non-standard' employment: The differing responses of industry sectors*, Working paper no 02-05, Research Centre Vocational Education and Training, University of Technology, Sydney.

Institution of Engineers Australia (2003), *Policy Position, Innovation and Growth*, www.ieaust.org.au/policy/research/downloads/policies/innovation and growth.doc

Selby Smith, C., Ferrier, F., Burke, G., Schofield, K., Long, M. and Shah, C. (2002), *Lifelong Learning and the World of Work: CEET's Surveys for the ACCI, ACTU and ANTA*, Monash University-ACER, Centre for the Economics of Education and Training (also www.education.monash.edu.au/centres/ceet).

WA Primary Industries Training Council (2001), *Industry Training Plan*, www.pitc.org/pdf/ITP2002.pdf

WA Department of Training and Employment (2000), *Future vocational education and training needs of the Great Southern region*, www.training.wa.gov.au/sub-sites/stsweb/regions/greatsouthern/reports/GtSRegReport.pdf

Attachment 1: REGIONAL DEVELOPMENT, SKILL NEEDS AND TRAINING

SECTION A: Your enterprise

A1 **Location:** In a centre with 2-5,000 people ☐ under 2,000 people ☐ in the country ☐

A2 **Are you in:** the private sector ☐ the public sector ☐ religious/voluntary/charitable ☐

A3 **In which industry does your enterprise operate?**

Agriculture
- dairy farming ☐
- pig farming ☐
- grain growing or farming ☐
- fruit or grape growing ☐
- other ☐

Electricity, gas, water ☐

Retail ☐

Mining & quarrying ☐

Construction ☐

Accommodation & cafes ☐

Cultural & recreational ☐

Government administration & defence ☐

Personal services ☐

Finance & insurance, property & business ☐

Manufacturing (including processing)
- agric. related ☐
- other ☐

Wholesale ☐

Transport & storage ☐

Communication ☐

Health & community services ☐

Education ☐

A4 **How long has this enterprise been operating**: In total? …… years. In this location? …… years

A5 **How many workers?** (eg, 1, 7, 15, over 100) …… workers

A6 **What percentage of your staff are** (total = 100%)
Permanent full-time…….% Permanent part-time…….% Short-term contract ……..%
Casual …….% Other……..% (please specify) ……

A7 **Do you own your business?** **Yes/No**

A8 **Is your enterprise** (please tick more than one box if appropriate)

- In a period of Growth ☐ Decline ☐ Consolidation ☐
- In a market where competition is: Strong ☐ Medium ☐ Weak ☐
- Using high technology, subject to significant technical change, or an innovator? **Yes/No**
- One where culture/practices are driven by a major customer? **Yes/No**

A9 **Has your enterprise recently had significant structural or organisational change?** **Yes/No**

A10 **Does your enterprise operate in:**
Local markets ☐ State or national markets ☐ Export markets ☐

A11 **What percentage of your workforce is a member of a union? ……%**

SECTION B: Skill needs in your enterprise at this location

B1 **What percentage of total employment is in each of these occupations? (Total = 100%)**

Managers and Administrators	……%	Clerical/Office Staff	……..%
Professionals	……%	Salespersons and Personal Service Workers	……..%
Technical and Para-professionals	…….%	Operators/Production Personnel/Drivers	……..%
Tradespersons	……..%	Labourers and Related Workers	……..%

B2 **Has employment risen or fallen in these occupations over the last three years?**

	Decreased	No change	Increased
Managers and Administrators			
Professionals			
Technical and Para-professionals			
Tradespersons			
Clerical/Office Staff			
Salespersons and Personal Service Workers			
Operators/Production Personnel/Drivers			
Labourers and Related Workers			

B3 **What percentage of those employed have post-school qualifications?**

University …….% Trade …….% Other TAFE …….%
Other …….% (please specify) ……..……..……..……..……..

B4 **Has employment changed for those with post-school qualifications in the last three years?**

	Decreased	No change	Increased
University			
Trade			
Other TAFE			
Other			

B5 **How many apprentices/trainees have you employed?**

	Now	2 years ago	5 years ago
Apprentices			
Trainees			

B6 **How many school students work in your enterprise (during a year)?**

	Now	2 years ago	5 years ago
As part-time employees			
As part of school studies			

B7 **How much training takes place in-house within your enterprise?**

Very little ☐ Some ☐ A great deal ☐

B8 **How much training do your staff undertake away from the enterprise?**

Very little ☐ Some ☐ A great deal ☐

B9 **Are there (two or three) particular fields of study (eg. engineering, science, industrial relations) in which you do a lot of internal training?** (Please specify) …….

SECTION C: Responsiveness of education and training providers (eg schools, TAFE)

C1 **Over the last three years has your enterprise required *more* education and training?** **Yes/No**

If *yes*, has the education and training system been able to provide it?

very well □ reasonably well □ acceptably □ poorly □ badly □

C2 **Over the last three years has your enterprise required *different types* of education and training?** **Yes/No**

If *yes*, has the education and training system been able to provide it?

very well □ reasonably well □ acceptably □ poorly □ badly □

C3 **In what ways has the response from education and training providers**

(i) been particularly good? (Please give an example)

…….

…….

(ii) been particularly unsatisfactory for your enterprise? (Please give an example)

…….

…….

C4 **Do education and training providers meet the needs of your enterprise:**

very well □ reasonably well □ acceptably □ poorly □ badly □

C5 **When your enterprise requires additional education and training**

(i) do you try to obtain it from:		(ii) If *yes,* how ***satisfactory*** do you find them? *(Please circle as appropriate)*		
A public provider eg. a TAFE college	Yes/No	Satisfactory	Reasonable	Unsatisfactory
A private training provider	Yes/No	Satisfactory	Reasonable	Unsatisfactory
A Group Training Company	Yes/No	Satisfactory	Reasonable	Unsatisfactory
An adult and community education provider	Yes/No	Satisfactory	Reasonable	Unsatisfactory
A university	Yes/No	Satisfactory	Reasonable	Unsatisfactory
Professional or industry associations	Yes/No	Satisfactory	Reasonable	Unsatisfactory
Equipment manufacturers or suppliers	Yes/No	Satisfactory	Reasonable	Unsatisfactory
Your enterprise's own internal training resources	Yes/No	Satisfactory	Reasonable	Unsatisfactory
Other providers (please specify)……	Yes/No	Satisfactory	Reasonable	Unsatisfactory

C6 **Did your enterprise require training for skills in new technology in the last three years?** **Yes/No**

If *yes*, (i) have you initially provided it in-house? **Yes/No**

(ii) have you initially relied on outside providers? **Yes/No**

(iii) were you dissatisfied with the institutional training systems? **Yes/No**

C7 **To what extent has your enterprise relied on the established education and training system for the supply of standard occupational skills training?**

A great deal □ Quite a lot □ Not very much □ Not at all □

C8 **Which of the following statements apply to your enterprise?**

We provide apprenticeships/traineeships to ensure a supply of skills. **Yes/No**

We provide opportunities, in-house, for employees to undertake formal training to upgrade their skills. **Yes/No**

We run training sessions as needed to support changes in technologies/work processes. **Yes/No**

We bring in outside experts to provide training sessions for employees. **Yes/No**

We pay for employees to attend external conferences/training activities. **Yes/No**

We fund/refund fees for courses in educational institutions. **Yes/No**

Other: (please elaborate) **Yes/No**

C9 **How important are the following generic skills and competencies for your enterprise?**

	Importance *(Please circle as appropriate)*
Communicating ideas and information	None….Somewhat……..Moderate……...A lot
Planning and organising	None….Somewhat……..Moderate……...A lot
Using mathematical techniques/solving problems	None….Somewhat……..Moderate……...A lot
Using technology	None….Somewhat……..Moderate……...A lot
Working with others and in teams	None….Somewhat……..Moderate…….. A lot
Initiative	None….Somewhat……..Moderate…….. A lot
Cooperative attitudes	None…Somewhat……..Moderate…….. A lot

Thank you for your contribution to this important research.
Please fill in the box below, fold the questionnaire, place it in the prepaid envelope and post it back.

Chris Selby Smith and Fran Ferrier

Optional Additional Information

(a) If you would like a copy of the report when it is completed, tick here □

(b) If you would be happy to talk more about these issues later, tick here □

Name: ……..…….

Address: ……..….

…….

Phone

or E-mail……

Attachment 2: Initiatives of the LLENs in Gannawarra Shire

1. The Murray Mallee LLEN

From: www.llen.vic.gov.au/llen/about/initiatives/mm.htm - MM2

VCAL
MMLLEN has been active in bringing community organisations to the table to support VCAL programs. Some of these projects include Community Radio involvement and training, leadership programs, small business and project management training and development. There are 75 VCAL students at three secondary schools in the region in 2003.

Skills Development
MMLLEN is developing a project with Gannawarra Shire and Small Business Victoria to build awareness of skills development among small business owners. This culture shift will expand the provision of VET in schools (May 2003).

Work Experience
20 businesses in Swan Hill and Kerang are working with MMLLEN on a project to reduce the burden on employers offering work placements and work experience.

ECEF
Mallee Vocational Consortium, an ECEF cluster, has become a sub-committee of MMLLEN. This relationship is enhancing the relationship between the LLEN and employers, which is being pursued through personal visits to employers.

Industry Jobs Broker
MMLEN is acting as a broker for major local employers (including IXL) that had manufacturing jobs vacant but could not attract local young people. Employers found the education and training system too complicated to navigate.

Indigenous Role Models
MMLEN is supporting a project that gives Koorie students a chance to 'shadow' Koorie adults in a range of occupations. The project aims to provide role models, but also to show young people how their learning at school is applied in the workplace. This activity was already in place in an ad hoc way - MMLLEN provided the opportunity to expand the scale of the program, in partnership with the local Koorie community and VAEAI. There are now four schools, both primary and secondary, working on the program with the LLEN.

Indigenous Futures
MMLLEN brought together a worker from the Ballarat & District Aboriginal Co-Op, managing the 'Koorie Leaders of the Future' project, and a local team managing a similar project called 'Pathfinder'. Two secondary colleges are now working with the LLEN on the Koorie 'Student Futures' program.

Indigenous Voice
MMLLEN is working with the local Koorie community on a project called 'Giving the Youth a Voice'. The project tackles substance abuse issues through engaging young Koorie people in the development and performance of theatre. The project is funded through the Community Initiatives

Program, with a project worker to be employed by the LLEN and funded by the Aboriginal Justice Forum. Participants will have access to learning at TAFE as part of the Youth Pathways Program.

Homelessness
MMLLEN facilitated meetings in Swan Hill and Kerang in response to the DHS Youth Homelessness Strategy. These meetings have resulted in a cross-sectoral approach to providing learning support for young people with accommodation difficulties.

Theatre
MMLLEN is working with local government authorities to develop theatre and arts-based initiatives that aim to re-engage young people, and in particular to connect with indigenous and migrant youth.

Lead On
Lead On is working with MMLLEN to develop local research projects, and planning is underway for an information package about local careers. The young Lead On members are engaged in developing and managing projects from the inception stage.

Education Provider Network
MMLLEN facilitated meetings of six Registered Training Organisations (RTOs) in Swan Hill, including the local TAFE campus. The meetings led to the development of a 'competitive network' which will share information about program offerings, and refer students to other local RTOs if they do not offer (or have no places available in) the students' program of choice.

2. Campaspe Cohuna LLEN
From*:* www.llen.vic.gov.au/llen/about/initiatives/cco.htm#CCO1

VCAL Network
CCoLLEN established a VCAL network of three providers to share resources and implementation strategies, one of which is offering a themed (Koorie studies) VCAL.

Indigenous
CCoLLEN provided a seeding grant for the Warma Education Centre, which aims to attract Koorie young people who are not in formal education. The Centre will provide them with a welcoming environment, and then expose them to possible pathways and opportunities. This initiative will draw on other Koorie youth and adults from the community to support the young people. It is proposed that, in future, the Centre will provide cultural education to local industries.

Focus Groups
CCoLLEN staff visited eight secondary schools and an ACE provider (where disengaged young people were gathered) and gained feedback from an average of twelve young people per session. These young people represented a range of abilities, age groups, town and rural backgrounds, etc. The young people were then invited to a two-hour forum to hear schools, employers, providers and community organisations address the issues raised. 60 young people attended and were enthusiastic, united and strong in saying they want to be involved in future CCoLLEN decision-making and project implementation.

MONASH UNIVERSITY - ACER

CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING

Working Papers (free)

Papers 21 onwards can be downloaded from the website
www.education.monash.edu.au/centres/ceet/

1. Maglen, L & Selby Smith, C 1995, *Pricing options; a report to the New South Wales TAFE Commission*.
2. Maglen, L 1995, *The role of education and training in the economy*.
3. Karmel, T 1996, *The demand for secondary schooling*.
4. not available
5. Anderson, D 1996, *Reading the market: a review of literature on the VET market in Australia*.
6. Harrold, R 1996, *Resource allocation in VET*.
7. Selby Smith, J, Selby Smith, C & Ferrier F, 1996, *Survey of users in 1996 User Choice Pilot Projects.*
8. Selby Smith, J, Selby Smith, C & Ferrier F, 1996, *Key policy issues in the implementation of User Choice.*
9. Selby Smith, C & Ferrier, F 1996, *The economic impact of VET*.
10. Curtain, R 1996, *Is Australia locked into a low skills equilibrium?*
11. Long, M 1996, *Perceptions of improvement in job performance by participants in training courses, Results from the 1993 Survey of Training and Education*.
12. Selby Smith C, Selby Smith, J, 1997, *Third party access and separation of roles in the implementation of User Choice*.
13. Groot, W 1997, *Enterprise-related training: a survey*.
14. Shah, C 1997, *Recurrent teacher cost per student by key learning areas*.
15. Malley, J 1997, *Entry level training and new apprenticeships: delivery and funding options.*
16. Anderson, D 1997, *Student perceptions of career development and employment services in TAFE*.
17. Madden, D & Selby Smith, C 1997, *The cost of training in a large training hospital: a pilot study.*
18. Maglen, L & Hopkins, S 1998, *Linking VET to productivity differences: an evaluation of the Prais Program and its implications for Australia.*

CEET, Faculty of Education, Building 6, Monash University, Victoria 3800, Australia
Telephone 61 3 9905 9157 Facsimile 61 3 9905 9184 Email ceet@monash.edu.au
http://www.education.monash.edu.au/centres/ceet

19. Burke, G 1998, *Expenditure on education and training: estimates by sector and course.*

20. Long, M & Burke, G 1998, *An analysis of the 1997 Training Practices Survey.*

21. Maglen, L & Shah, C 1999, *Emerging occupational patterns in Australia in the era of globalisation and rapid technological change: implications for education and training.*

22. Abbott, M & Doucouliagos, C 1999, *Technical and scale efficiency of Vocational Education and Training Institutions: the case of the New Zealand Polytechnic.*

23. Ferrier, F & *Wells, R* 1999, *Human resource reporting: some exploratory case studies in Australian enterprises.*

24. Selby Smith, C 1999, *The relationships between research and research decision-making in education: an empirical investigation.*

26. Hopkins, S 2000, *VET and the voluntary sector: dealing with ambiguities*.

27. Shah, C 2000, *Employment shifts in the TAFE workforce in Victoria, 1993-98.*

28. Selby Smith, C & Ferrier, F 2000, *CEET's stocktake of the economics of vocational education and training.*

29. Long, M 2000, *Analysis of longitudinal data: participation in VET.*

30. Burke, G 2000, *Financing vocational training and lifelong learning.*

31. McKenzie, P 2000, *Pathways for youth in Australia.*

32. Maglen, L & Hopkins, S 2000, *Australia in the emerging global knowledge economy: changing employment patterns – 1986-7 to 1999-00.*

33. *Teicher, J*, Shah, C & *Griffin, G* 2000 *Australian immigration: the triumph of economics over prejudice?*

34. Maglen, L & Hopkins, S 2000, *Stepping offshore: an examination of Australia's bilateral program-based assistance for the development of Vocational Education and Training in its region.*

35. Jongbloed, B 2001, *Performance-based funding in Higher Education: an International survey.*

36. Selby Smith, C & Ferrier, F 2001, *User Choice: the experience since 1998*.

37. Long, M 2001, *The effect of firm-based training on earnings*.

38. Selby Smith, C & Hopkins, S 2001, *Learning through TAFE for voluntary and paid work: a survey of TAFE students*.

39. Maglen, L 2001, *Australians working in a global economy and what this means for education and training.*

40. Ferrier, F & Selby Smith, C 2001, *The experience of User Choice. Do the size and location of the firm make a difference*? A re-analysis of the results obtained from a survey of employer views conducted by the Australian Chamber of Commerce and Industry March 2001.

41. Long, M 2002, *What is Happening to Training? What the ABS Training Surveys tell us*.

42. Long, M & *Fischer, J* 2002, *Leading edge enterprises: insights into employment and training practices.*

43. Shah, C & Burke, G 2002, *Job growth and replacement needs in nursing occupations*.
44. Anderson, D, in press, *Before and after Rio: sustainable development and VET in Australia.*
45. Long, M 2002, *Workplace training: the experience of young Australian workers.*
46. Burke, G 2002, *Financing lifelong learning for all: an international perspective.*
47. Ferrier, F & Selby Smith, C 2003, *An investigation of ACCI's User Choice proposals.*
48. Shah, C & Burke, G 2003, *Future job openings: Australia in the knowledge economy*.
49. Ferrier, F & Selby Smith, C 2003, *The user choice experience of Australian firms: a further investigation.*
50. Burke, G 2003, *Australia's educational expenditures*.
51. Shah, C & Burke, G, 2003, *Completion and partial completion of courses in TAFE, Australia.*
52. Shah, C & Burke, G, 2003, *Skill shortages: concepts, measurement and implications.*
53. Burke, G & White, P, 2003, *Price measures in education and training: opening a discussion.*
54. Noonan, P, Burke, G, & White, P, 2004, *Policy development in VET: analysis for selected countries.*
55. Smith, C & Ferrier, F, 2004, *Regional development, innovation, skill needs and training: A pilot study in the Shire of Gannawarra, Victoria*