Office of Training and Tertiary Education

Department of Education and Training - Victoria

# Victorian Food Processing Industry

## Industry Report - June 2006

# TABLE OF CONTENTS

# PREAMBLE

The Ministerial Statement *Knowledge and Skills for the Innovation Economy* (2002) announced that the Victorian Learning and Employment Skills Commission (VLESC) would consider a new strategy for establishing strategic directions and priorities for publicly funded Vocational Education and Training (VET) in Victoria. Specifically, the VLESC was to provide more detailed advice on how to determine priorities for public expenditure on VET in an innovation economy.

A *Framework for Establishing Priorities for VET* was subsequently endorsed by the VLESC in order to:

- identify the nature and extent of industry and community training needs (i.e. priority training);
- map those needs against the supply of publicly funded training in order to identify where there is over-supply and/or poor training outcomes (i.e. lower priority training); and
- assess the capacity and develop strategies to re-align lower priority training to high priority training *within* and *between* industry areas.

In 2006, *Maintaining the Advantage: Skilled Victorians* was released and is the Government's strategy to meet the demands of business and industry for a highly qualified and skilled workforce, characterised by older workers, fewer new entrants and potential skill shortages. It builds on the Ministerial Statements *Knowledge and Skills for the Innovation Economy* released in 2002 and *Moving Forward: Making Provincial Victoria the Best Place to Live, Work and* Invest released in 2005.

The following report is a planning document. It updates the policy context and data presented in a similar report published in 2005. It presents findings emerging from research and analysis of the key data used to determine and review state-wide industry priorities for government-funded VET in Victoria. It provides a snapshot of industry characteristics (in 2005), and training supply (2002 to 2005).

The aim of the report is to inform decisions regarding VET priorities at the macro level by analysing the relationship between the factors affecting industry need for training and supply of training. Ongoing consultations with stakeholders are undertaken to review industry training priorities and to support future OTTE training purchasing plans.

This document is the fourth iteration of the Industry Reports. It incorporates the latest employment and industry need data (2005 Labour Force Survey) and training supply data (2005), and should be read in conjunction with the 2004 Industry Report and the 2005 update.

The report refers to industries and occupational groups. Occupational groups are subsets of sectors and Appendix B outlines the concordance between industries, sectors and occupational groups.

**Occupational Groups**

- Baking
- Diary
- Fruit and Vegetables (no delivery 2004 and 2005)
- General
- Meat
- Miller/Confectioner
- Other Foods
- Pharmaceutical Manufacturing
- Wine and Other Beverages

**Employment**

- Between 2001 and 2005 there has been some volatility in the level of employment. In 2005 employment increased slightly by 0.5% or 156 jobs since 2004.

**Occupational Distribution, Change and Qualifications**

- Employment is concentrated among Labourers and Related Workers.
- Between 2001 and 2005, Tradespersons as share of workers declined from 41.9% to 37.3%.

## EXECUTIVE SUMMARY

Globalisation of economic activity and rapid advances in technology are driving major changes in the structure of industry and the nature of work, the way work is organised and the knowledge and skills the workforce requires. This report addresses the training needs for the Food Processing industry.

The evidence base for this Industry Report comprises a number of data sources including data relating to training delivery for 2002 to 2005 and student outcomes (i.e supply data), and industry, employment and labour market data and advice from the ITAB (i.e demand data).

Estimates of the annual demand for labour, derived from forecasts of both industry employment growth and its net replacement rate, indicate that for each year to 2010, an average of around 690 additional workers, will be required by the Food Processing industry. This is equivalent to 2.3% of total industry employment. Most workers will be required in the Baking and Shared Food occupational groups.

The major factors identified as affecting this industry's training needs over the next decade include**:**

- **Globalisation:** Influences that will drive change include strong export demand in the global market, import replacement opportunities, Free Trade Agreements, global retail chains with global sourcing networks, expansion into ethnic, religious and culturally specific products (nationally and internationally). The impact of these change drivers will be varied, including development of new products, use of a range of new technologies and the need for higher level skills.
- **Environmental Sustainability:** Sustainable management of water resources, uptake of water-efficiency practises and waste and packaging minimisation are future challenges, which will require new and updated skill sets.
- **Government quality regulations:** Such as safety, traceability and labelling and bio-security (in line with the Federal Department of Agriculture, Fisheries and Forestry's Food Chain Assurance Advisory Group, which deals with new and emerging risks to the food supply chain). OH&S initiatives (through WorkSafe, Victoria) using best practice to eliminate or control risk. In addition, there is increasing emphasis on external audits, monitoring mechanisms and procedures.
- **Technological Change and Innovation:** For example, new product development, packaging, ethnic, religious and cultural specific products, advances in machinery, information technology and biotechnology.
- **Changing Consumer Attitudes and Behaviours:** In relation to related to health and nutrition, lifestyle choices, convenience foods, cultural, ethnic, religious, obesity, and allergens.

- **Demographic issues:** These range from the ageing population and workforce (need for retraining) to the changing nature and structure of households.

Emerging skills in Food Processing are being driven by technological change, and changes in the mode of production and the supply chain. These create a need:

- for innovation and changed business practice for new markets;
- for supply chain management; and
- more awareness of environmental issues in production and supply methods.

Total student contact hours (SCHs) delivered to the Food Processing industry have decreased by 10.7% over the period 2002 to 2005, however the Milling and Confection occupational group has experienced an increase of 2639.7% increase.

Government-funded enrolments have decreased by 22.4%. Analysis indicates that government-funded training has increased for apprenticeship/traineeship programs, but decreased for non-apprenticeship and traineeship programs.

Over the period 2001 to 2005 there were approximately 3,632 **apprenticeship** commencements in the Food Processing industry with a decrease of 14.9% between 2004 and 2005.

Over the period 2001 to 2005 there were approximately 15,238 **traineeship** commencements in the Food Processing industry, with a decrease of 1.3% between 2004 and 2005.

In 2005, apprentice/traineeship delivery comprised of 48.1% of government-funded enrolments while non-apprentice/traineeship accounted for 51.9% of government-funded enrolments.

Higher education enrolments are insignificant for the Food Processing industry.

The Student Outcomes survey reveals that graduates completers in Food Processing achieve better than Victorian industry average employment outcomes, while module completers achieve lower than average for Victoria.

Implementation of the between industry priority advice will result in an maintenance of effort in government-funded training to the Food Processing industry over the period 2006 to 2008.

# 1 INDUSTRY NEED FOR VET

## 1.1 INTRODUCTION

This section quantifies the future level of industry need for VET, taking account of the different factors affecting an industry's need for training. The projected growth in demand for VET will be influenced by factors such as employment growth, employment turnover, the number of new entrants, concentration of qualifications, skills shortages and emerging skill needs, and the age profile of persons employed in the industry.

The Food Processing industry has experienced some volatility in the level of employment. Between 2001 and 2002, the level of employment increased slightly. This was followed by a decline in 2003 and 2004. In 2005 the level of employment returned to 2003 levels and increased by 0.5%.

The Miller and Confectioner occupational group has experienced significant changes in the level of employment since 2001. In 2001 the level of employment was 860 workers. However, this declined in 2002 and continued to decline in 2003. In 2004 the level of employment reversed and increased by 80%. The increase continued in 2005 when employment significantly grew by 125.4%.

**Table 1: Employment for Food Processing Industry – Victoria 2001-2005**

| Industry | 2001 Employment | 2002 Employment | 2003 Employment | 2004 Employment | 2005 Employment |
|---|---|---|---|---|---|
| Baking | 8,469 | 6,961 | 7,190 | 6,084 | 7,913 |
| Dairy | 953 | 1,148 | 825 | 919 | 1,098 |
| Meat | 8,272 | 9,778 | 9,244 | 8,704 | 7,735 |
| Miller/Confectioner | 860 | 429 | 164 | 295 | 665 |
| Shared — Food occupational groups | 13,645 | 13,980 | 12,584 | 13,842 | 12,589 |
| **Food Processing** | **32,199** | **32,296** | **30,007** | **29,844** | **30,000** |

Source: ABS, Labour Force Survey, November 2005

Please note that employment figures in Table 1 for the years 2002 to 2005 are based on ABS Labour Force survey data. The ABS uses a sampling approach when collecting this data which has a standard error associated with this method. Consequently, labour force employment figures, particularly when broken down to the sector level, should be treated as indicative only. However, employment figures taken from the 2001 ABS Census are more reliable given that data is derived from a census as opposed to a survey.

## 1.2 FORECAST EMPLOYMENT GROWTH AND NET REPLACEMENT RATES

Workers enter an industry for the first time as a result of both employment growth and turnover within the existing workforce. Both drivers of entry to an industry must be considered in an analysis of the potential future training demand from new workers.

The forecast growth rate for an industry is an estimate of the extent to which employment growth will create training demand from new workers. The annual net replacement rate for an industry is an estimate of the percentage of employed persons within the industry who are hired as a result of turnover, but who have not previously worked in the industry. It translates into the number of workers entering the industry for the first time as a result of turnover and who might be in need of training.

Net replacement rates (or estimates of the proportion of the workforce within an occupation who are new entrants) reflect the difference between the number of people leaving an occupation and the number of re-entrants not previously employed within the occupation.

Table 2 provides the estimates of the annual demand for labour, derived from forecasts of both industry employment growth and its net replacement rate. It indicates that for each year to 2010, an average of 690 additional workers will be required by the Food Processing industry. This is equivalent to 2.3% of the industry's total employment and will be mostly required by the Baking and Shared Food occupational groups.

**Table 2: Forecast Employment Growth and Replacement Demand for Food Processing Industry – Victoria 2005**

| Industry | 2005 Employment | Annual average employment growth 2006-2010 (% pa) | Net replacement rate (NRR) for labour (% pa) | New entrants per annum (no. pa) – based on % in columns 3 & 4 | % of new entrants (column 5) to total industry occupational group employment (column 1) |
|---|---|---|---|---|---|
| Baking | 7,900 | 0.0 | 2.4 | 190 | 2.4 |
| Dairy | 1,100 | 0.5 | 1.6 | 20 | 1.8 |
| Meat | 7,750 | -1.3 | 1.9 | 50 | 0.6 |
| Miller/Confectioner | 650 | 0.1 | 2.1 | 10 | 1.5 |
| Shared — Food occupational groups | 12,600 | 1.8 | 1.3 | 390 | 3.1 |
| **Food Processing** | **30,000** | **0.5** | **1.8** | **690** | **2.3** |

Sources: ABS, Labour Force Survey, November 2005, ABS Canberra (unpublished data), CoPS Monash Model Forecasts, CEET Estimates

## 1.3 SKILLS SHORTAGES

The 2006 DEWR, Skills in Demand for Victoria list identifies the following as skills shortages both for Victoria and nationally:

- Pastry cook

The following occupations may also be in demand in Victoria. However, there is insufficient information to establish a labour market rating for this State:

- Baker; and

- Butcher.

## 1.4 Major Industry Change Drivers

"Change drivers" are large-scale forces that produce change at lower levels of an economy or system. Typically, change drivers are global, social, economic, technological and/or information-based in nature, but also derive from government policy and directions. These create a changing operating environment to which the training system must adapt and, over time, re-align resources to meet these challenges.

### 1.4.1 The Major Change Drivers

The major factors highlighted by the Food Processing industry ITAB as affecting the industry's training needs and responses over the next decade include:

- **Globalisation:** Influences that will drive change include strong export demand in the global market, import replacement opportunities, Free Trade Agreements, global retail chains with global sourcing networks, expansion into ethnic, religious and culturally specific products (nationally and internationally). The variable rate associated with the Australian dollar, bio-security issues and multinationals restructuring, require enterprises to continually review production processes and improve efficiency. Transnational companies may move manufacturing offshore to take advantage of the rise in Asian manufacturing and new low cost producers. Conversely, the expansion of international brands into the Australian market will create competition. Major changes to the structure and operation of the food processing industry will occur over the next 5-10 years due to the emergence of global retail chains. It will include the development of global sourcing networks and cross sector partnerships. The impact of these change drivers will be varied, including development of new products, use of a range of new technologies and the need for higher level skills.
- **Environmental Sustainability:** Sustainable management of water resources, uptake of water-efficiency practises and waste and packaging minimisation are future challenges, which will require new and updated skill sets.
- **Government quality regulations:** Such as safety, traceability and labelling and bio-security (in line with the Federal Department of Agriculture, Fisheries and Forestry's Food Chain Assurance Advisory Group, which deals with new and emerging risks to the food supply chain). OH&S initiatives (through WorkSafe, Victoria) using best practice to eliminate or control risk. In addition, there is increasing emphasis on external audits, monitoring mechanisms and procedures.
- **Technological Change and Innovation:** For example, new product development, packaging, ethnic, religious and cultural specific products, advances in machinery, information technology and biotechnology. Technology will help industry remain competitive by reducing labour costs and facilitating advancements in safety, quality and innovation.

- **Changing Consumer Attitudes and Behaviours:** In relation to related to health and nutrition, lifestyle choices, convenience foods, cultural, ethnic, religious, obesity, and allergens. Some challenges create opportunities for expanding product lines. For example, pre-pared meals are increasingly in demand throughout the developed world and the potential for development of further regulations surrounding allergens management and labelling will influence production processes. Enterprises need multi-skilled workers to accommodate growth and changing market requirements.
- **Demographic and workforce issues:** These range from the ageing population and workforce (need for retraining) to the changing nature and structure of households. Rising living costs could be a further deterrent to attracting young entrants to take up apprenticeships especially in traditional trades such as baking and meat retailing.

Emerging skills in Food Processing are being driven by technological change, and changes in the mode of production and the supply chain. These create a need for:

- innovation and changed business practice for new markets;
- supply chain management; and
- awareness of environmental issues in production and supply methods.

The major change driver factors highlighted by the Food Processing industry above are identical to those factors identified in 2004.

## 1.5 Emerging Skills

As indicated above, emerging skills being driven by technological change, changes in the mode of production and the supply chain that will still create a need:

- for innovation and changed business practice for new markets;
- for supply chain management; and
- more awareness of environmental issues in production and supply methods.

These skills are identical to those identified in 2004.

## 1.6 Conclusion – Industry Need

The Food Processing industry employs a significant number of workers. They are mostly male and employed on a full-time basis. Younger workers are over-represented compared to Victorian industry as a whole. Older cohorts occupy a smaller share of employment. These findings are based on 2001 data and were also noted in the 2004 report.

The qualifications of the workforce are mostly at the Certificate III and IV level, reflecting the concentration of Tradespersons and Related Workers within the industry's workforce. A common point of entry into these occupations is usually through apprenticeship/traineeship training.

Employment within Food Processing occupations has increased by 0.5% since 2004 and the industry is forecast to continue to grow at an average of 0.5% per annum until 2010. More importantly, the rate of turnover, currently estimated at 1.8% of employment per annum, will create a greater number of jobs for workers entering the occupations for the first time. As the workforce ages, there may be an acceleration of employment turnover. Employers will be forced to seek replacement workers at an increasing rate.

The 2006 DEWR Skills in Demand List included one Food Processing occupation as experiencing a shortage of skilled labour. Although a training response alone will not address the problem of skill shortages, a supply of skilled new entrants is necessary in a tightening labour market. This will continue to stimulate the demand by industry for Food Processing training.

Applying the MONASH Model employment forecasts and CEET net replacement rates, it is estimated that industry demand for new entrants to Food Processing occupations will be 690 per annum.

The ITAB report has noted that it is a geographically dispersed industry that is undergoing constant change and has identified the need for training for existing workers, as well as entry level training, in thin training markets (particularly in regional areas).

Specific areas of need for knowledge that were identified include:

- nutrition;
- food safety;
- food recall;
- quality assurance and auditing;
- business management;
- trades and other entry level training;
- environmental/waste management;
- innovation;
- quality assurance systems engineers;
- mechanical engineers;
- retail baking;
- food induction – pre-employment training; and
- marketing and promotion – export as well as import replacement.

# 2 VET PROVISION FOR THE FOOD PROCESSING INDUSTRY

## 2.1 INTRODUCTION

In the following discussion, the term 'training delivery' refers only to publicly funded VET delivery and fee-for-service delivery by public providers. Training provided outside the VET system and fee-for-service training delivered by private providers is not included in the analysis, nor is training delivered to Adult, Community and Further Education (ACFE) programs.

## 2.2 INDUSTRY TRAINING[1] - STUDENT CONTACT HOURS

**Industry Level**

- In 2005, SCHs delivered to the Food Processing industry represented 2.4% of all training delivery to industries covered by ITABs in Victoria and 2.4% of government-funded delivery.

- Between 2002 and 2005, total SCHs delivered in the Food Processing industry have declined by 10.7% (see Table 3).

- In 2005, 71.9% of the training delivered in the Food Processing industry was government-funded, a decline of 3.8 percentage points from that delivered in 2004 (see Table 3).

- Between 2002 and 2005 there was a 16.4% decline in government-funded SCHs in the Food Processing industry, from 1,909,209 SCHs in 2002 to 1,596,757 SCHs in 2005 (see Table 3).

- Over the same period fee-for-service delivery in SCHs increased by 8.1%.

- In 2005, the largest share of government-funded training at industry level was the Certificate III level which accounted for 44.8% in SCHs. This was followed by training in Certificate II with 38.6% in SCHs (see Table 3).

- Apprentice/traineeship training increased from 56.8% of all government-funded training delivery in 2002 to 67.2% in 2005 (see Table 3).

- In 2005, non-apprenticeship/traineeship training as measured by SCHs, accounted for 32.8% of all training in the Food Processing industry. There has been a decrease in non-apprenticeship/traineeship delivery since 2002, when it accounted for 43.4% of all government-funded training delivered to the Food Processing industry (see Table 3).

[1] The following tables refer to Student Contact Hours (SCHs) and enrolments at Australian Qualification Framework (AQF) levels. A Student Contact Hour refers to an hour of training delivered to a student.

- TAFE Institutes deliver the vast majority of government-funded training in this field providing 73.7% of training - a decline from 78.4% in 2002. Private providers delivered 23% of government-funded training in 2005, a slight increase of 20.1% in 2002. Delivery by ACE providers has increased from 1.5% in 2002 to 3.3% in 2005.

**Occupational Group Level**

- Over the period 2002 to 2005, total SCH delivery increased in Milling and Confectionery by 269.7% and Baking by 21.2%, with declines in General Foods by 18.3%, Meat by 6.7%, Pharmaceutical Manufacturing by 36.5% and in Wine and Other Beverages by 27.8% (see Tables in Appendix C).

- Over the same period government-funded delivery of SCHs increased by 294.9% in Milling and Confectionery and by 23.8% in Baking, with declines in the Pharmaceutical by 87.9%, General by 32.8%, Meat by 2.5% and in Wine and Other Beverages by 39.2% (see Tables in Appendix C).

**Table 3: Training Delivery in Food Processing from 2002 to 2005 - SCHs**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **2,487,626** | **2,165,821** | **2,189,050** | **2,221,842** |
| **Student Contact Hours** (Government-funded) | **1,909,209** | **1,733,325** | **1,657,527** | **1,596,757** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF LEVEL** [B] | | | | |
| Certificate I | 7.5 | 8.0 | 7.4 | 8.1 |
| Certificate II | 50.8 | 44.9 | 42.5 | 38.6 |
| Certificate III | 34.4 | 38.6 | 43.1 | 44.8 |
| Certificate IV | 4.4 | 3.8 | 3.0 | 2.6 |
| Diploma | 2.8 | 4.5 | 3.9 | 5.2 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.1 | 0.2 | 0.0 | 0.7 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 56.8 | 60.0 | 65.2 | 67.2 |
| Non-Apprentices/Traineeship | 43.2 | 40.0 | 34.8 | 32.8 |
| **Region** | | | | |
| Metro | 36.1 | 36.8 | 38.1 | 35.1 |
| Non-metro | 43.2 | 45.9 | 37.1 | 45.4 |
| Balance | 20.7 | 17.4 | 24.8 | 19.5 |
| **Providers** | | | | |
| TAFE | 78.4 | 76.5 | 74.8 | 73.7 |
| Private Providers | 20.1 | 23.0 | 22.8 | 23.0 |
| ACFE | 1.5 | 0.6 | 2.4 | 3.3 |

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.

## 2.3 Industry Training - Enrolments

- In 2005, there were 13,545 enrolments in training, of which 10,066 were in government-funded training. Total enrolments decreased from 19,666 in 2002. Over this period there was a 22.4% decrease in government-funded enrolments, or an overall decrease of 2,906 enrolments since 2002.

- Over the same period there has been a decline in fee-for-service enrolments of 48%, or a decrease of 3,215 enrolments (see Table 4).

- In 2005, apprentice/traineeship delivery increased from 40.5% in 2002 to 48.1% in 2005 in government-funded enrolments, while non-apprentice/traineeship enrolments decreased from 59.5% in 2002 to 51.9% in 2005.

However, there has been a significant increase in enrolments at the Certificate I level of 68.3% and a significant decline at the Certificate IV level of 60%.

**Table 4: Training Delivery in Food Processing from 2002 to 2005 - Enrolments**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **19,666** | **15,609** | **16,078** | **13,545** |
| **Student Enrolments** (Government-funded) | **12,972** | **11,613** | **11,531** | **10,066** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 12.3 | 15.2 | 18.0 | 20.7 |
| Certificate II | 44.6 | 46.3 | 45.4 | 36.6 |
| Certificate III | 35.6 | 30.8 | 32.8 | 32.4 |
| Certificate IV | 4.5 | 4.2 | 1.9 | 1.8 |
| Diploma | 1.2 | 2.0 | 1.6 | 1.9 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 1.9 | 1.5 | 0.3 | 6.5 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 40.5 | 41.3 | 45.0 | 48.1 |
| Non-Apprentice/Traineeship | 59.5 | 58.7 | 55.0 | 51.9 |
| **Region** | | | | |
| Metro | 32.0 | 26.9 | 26.8 | 24.7 |
| Non-metro | 45.8 | 50.6 | 53.5 | 56.2 |
| Balance | 22.2 | 22.5 | 19.7 | 19.2 |
| **Providers** | | | | |
| TAFE | 79.1 | 79.9 | 72.6 | 74.2 |
| Private Providers | 18.2 | 18.8 | 21.0 | 20.0 |
| ACFE | 2.7 | 1.4 | 6.4 | 5.8 |

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.

## 2.4 Regional Distribution of Training

Training for the Food Processing industry is concentrated in the non-metropolitan study areas (56.2% of the Victorian total enrolments), with Goulburn Ovens accounting for the largest share with 25.3% of total Food Processing industry enrolments in Victoria. Training in metropolitan study areas accounts for 24.7% of enrolments. A balance of 19.2% of enrolments was delivered in modes that cannot be readily attributed to regions (see Table 5).

Between 2002 and 2005 enrolments decreased in both metropolitan and non-metropolitan study areas by 40.2% and 4.9%, respectively.

In 2005, 35.1% of government-funded training as measured by SCHs, was delivered in metropolitan study areas and 45.4% in non-metropolitan regions. A balance of 19.5% was delivered in modes that cannot be readily attributed to regions.

Between 2002 and 2005 delivery of SCHs in metropolitan and non-metropolitan study areas decreased by 18.7% and 12.2%, respectively.

In terms of growth, the region that has experienced the greatest increase is East Gippsland Study Area with growth of 196% in enrolments and 91% in SCHs (see Table 5).

**Table 5: Government-funded Training for Food Processing Industry by OTTE Study Areas – 2005**

| OTTE Study Area | Regional Share of Enrolments | Growth in enrolments 2002-2005 % | Regional Share of SCHs | Growth in SCHs 2002-2005% |
|---|---|---|---|---|
| Ballarat | 0.7 | -90.9 | 1.0 | -90.9 |
| Bendigo | 3.4 | -59.3 | 1.7 | -60.6 |
| Central Gippsland | 2.1 | -13.2 | 4.1 | 47.4 |
| East Gippsland | 5.1 | 196.0 | 1.7 | 91.0 |
| Geelong | 5.2 | 66.7 | 2.6 | 62.8 |
| Goulburn Ovens | 25.3 | 47.6 | 16.6 | 9.7 |
| Southwest | 9.1 | -12.0 | 11.8 | 9.8 |
| Sunraysia | 4.4 | -35.4 | 5.0 | 13.6 |
| Wodonga | 0.8 | -27.9 | 1.0 | -8.0 |
| **Non-Metropolitan** | **56.2** | **-4.9** | **45.4** | **-12.2** |
| North West | 7.6 | -40.5 | 8.6 | -39.0 |
| CBD | 9.0 | -56.2 | 15.8 | -14.2 |
| South East | 5.5 | 15.4 | 7.2 | 9.6 |
| Eastern | 2.5 | -18.3 | 3.6 | -13.8 |
| **Metropolitan** | **24.7** | **-40.2** | **35.1** | **-18.7** |
| **Balance** | 19.2 | -32.8 | 19.5 | -21.1 |
| **Total (number)** | **10,066** | **-2,906** | **1,596,757** | **-312,452** |

Source: 2005 OTTE Student Statistical Collection

## 2.5 SUMMARY

The key characteristics of the Food Processing industry between 2002 and 2005 are summerised below.

**SCHs**

- Total SCHs have declined by 10.7% over the period 2002-2005.
- Over the same period government-funded SCHs declined by 16.4%.
- Fee-for-service delivery increased by 8.1%.

**Enrolments**

- Total student enrolments have decreased from 19,666 in 2002 to 13,545 in 2005.
- Over the same period government-funded enrolments have decreased by 22.4%.
- Fee-for-service delivery has significantly declined by 48%.

## 2.6 APPRENTICESHIPS AND TRAINEESHIPS

This section briefly comments on apprenticeship and traineeship participation for the Food Processing industry and is based on apprenticeships and traineeships across all qualification and AQF levels.

### 2.6.1 APPRENTICESHIPS

Over the period 2001 to 2005 there were approximately 3,632 apprenticeship commencements in the Food Processing industry, with a decrease of 14.9% between 2004 and 2005 (see Table 6.1).

**Table 6.1: Apprenticeship Commencements for the Food Processing Industry, 2001 to 2005**

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Commencements | 751 | 711 | 856 | 710 | 604 |

Source: OTTE Delta database of apprentices and trainees

### 2.6.2 TRAINEESHIPS

Over the period 2001 to 2005 there were approximately 15,238 traineeship commencements in the Food Processing industry, with a slight increase of 1.3% between 2004 and 2005 (see Table 6.2).

**Table 6.2: Traineeship Commencements for the Food Processing Industry, 2001 to 2005**

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Commencements | 2,955 | 2,965 | 3,799 | 2,742 | 2,777 |

Source: OTTE Delta database of apprentices and trainees

# 3 VET IN SCHOOLS ACTIVITY

The data relating to VET in Schools (VETiS) is drawn from the Victorian Curriculum and Assessment Authority's register of students engaged in VET programs that contribute to the Victorian Certificate of Education (VCE) and the Victorian Certificate of Applied Learning (VCAL).

Some high school students undertake VET courses at TAFE Institutes on a taster basis, as well through School Based New Apprenticeships (SBNAs).

Table 7 provides the VETiS data from 2002 to 2005, relating to all VET (including SBNAs) which counts towards a senior secondary certificate and/or a VET certificate, and provided either at the student's home school or by TAFE.

**Table 7: VET in Schools Completions for the Food Industry by Year**

| Industry – Occupational Groups | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Food Processing** | **1** | **11** | **5** | **7** |
| Baking | | | 1 | |
| Dairy | | | | |
| Meat | | | | |
| Milling and Confection | | | | |
| Fruit and Vegetables | | | | |
| Wine and Other Beverages | 1 | 9 | 4 | 7 |
| General | | 2 | | |
| Pharmaceutical Manufacturing | | | | |
| Other Foods | | | | |
| **VICTORIAN TOTAL for all industries** | **7,809** | **9,191** | **13,073** | **13,127** |

Source: Victorian Curriculum and Assessment Authority

The table indicates some volatility in the total number of students undertaking VETiS activities with initial growth in 2003 followed by a decline in 2004. In 2005 Food Processing enrolments represent 0.05% of all VETiS enrolments

# 4 HIGHER EDUCATION

In this section of the report, data on 2004 enrolments in higher education qualifications and estimated graduates in fields of study of relevance to the industry are presented.

**Table 8: Higher Education Enrolments in the Food Processing Industry 2004**

| | Bachelor Degree | Grad. Diploma/ Certif. | Higher Degree | Other Qualif. | Total enrols | Estim. Grads 2004 |
|---|---|---|---|---|---|---|
| **Food Processing** | **4** | **0** | **4** | **0** | **8** | **4** |
| **VICTORIAN TOTAL** | **115,768** | **13,001** | **24,335** | **544** | **153,648** | **45,882** |

Graduates from some higher education courses compete with VET graduates for employment. This needs to be taken into account in any assessment of the balance between training supply and industry need. Data on year of commencement and whether students were undertaking single or combined degrees were therefore used in deriving an estimate of the number of students likely to graduate in 2004.

Higher education graduates make up a very small proportion of potential new entrants into the Food Processing industry. Competition between VET and higher education for new entrant positions is therefore insignificant.

# 5 VET STUDENT INTENTIONS

The concept of segments is used to summarise student intentions in undertaking training. The segments were derived from student responses to a question at enrolment on reason for study. Just over half of 2004 student enrolments replied to the question — well above the minimum required to provide a statistically valid view of the VET population. The approach used to defining each segment is defined in Appendix A.

The following table provides a summary of the segmentation data for government-funded students in Food Processing industry.

**Table 9: 2004 VET Student Segments - Government-funded**

| Segment | | % Share | % of share | | | |
|---|---|---|---|---|---|---|
| | | | **Male** | **< 25** | **TAFE** | **Unemp.** |
| Employment Seekers | Apprentices/Trainees | 54.5 | 71.74 | 52.95 | 65.61 | 1.34 |
| | Labour Market Entrant | 1.7 | 59.86 | 97.18 | 95.42 | 47.18 |
| | Job Seekers | 3.3 | 49.19 | 0.00 | 87.30 | 53.24 |
| Career Improvers | Skill Improvers | 31.9 | 54.90 | 20.48 | 71.30 | 7.68 |
| | Career Changers | 1.2 | 45.63 | 13.59 | 88.35 | 30.10 |
| | Self Employed | 2.4 | 52.81 | 7.26 | 83.50 | 16.17 |
| Self Developers | Personal Developers | 4.7 | 50.84 | 30.63 | 86.37 | 36.14 |
| | Basics | 0.0 | | | | |
| | Bridgers | 0.3 | 40.63 | 65.63 | 71.88 | 31.26 |

Source: 2004 OTTE Segmentation Data, Performance Evaluation Unit

As shown in Table 9, the majority of students undertaking training were employment seekers (59.5%). These 'Job Seekers' are mostly male, aged less than 25 seeking to become an apprentice/trainee. 'Career Improvers' had an overall percentage share of 35.5%. They are mostly males whose reason for undertaking study was to improve their skills for their current job or to get a better job.

# 6 EMPLOYMENT OUTCOMES

Each May, the National Centre for Vocational Education and Research (NCVER) conducts a survey of persons who undertook VET in the preceding calendar year. The NCVER collects data on a range of variables including:

- motivations for undertaking VET; and
- employment outcomes and the relevance of VET undertaken to the survey respondents' employment, at the time of the survey.

The Student Outcomes survey reveals the following:

- graduate completers in the Food Processing industry achieve better than Victorian industry average employment outcomes by 6.5 percentage points;
- module completers have a lower than average employment outcome for Victoria by 9.6 percentage points;
- both graduates and module completers reported that they undertook study for vocational reasons recording higher than the Victorian industry average by 10.1 and 1.2 percentage points, respectively; and
- 79.1% of graduates reported that their training was relevant to their employment which is higher than the Victorian industry average of 74.4%.

## 6.1 GRADUATE OUTCOMES

Survey results for **graduates** who completed training in the Food Processing Industry in 2004 and who were surveyed at 31 May 2005 revealed that:

- their participation in VET was motivated by a range of reasons:
  - 88.3% undertook training with the intention of gaining employment in the Food Processing Industry compared to the Victorian average of 78.2%; and
  - 11.7% undertook training for personal interest or other reasons compared to the Victorian average of 21.8%;
- 88.1% were employed, but not necessarily in the Food Processing industry, occupational groups, compared to the Victorian average of 81.6%; and
- 79.1% found their training to be of relevance to their employment compared to 74.4% of the Victorian industry average.

## 6.2 MODULE COMPLETERS OUTCOMES

Survey results for persons who completed competencies in the Food Processing Industry in 2004 and who were surveyed at 31 May 2005 reveal that:

- their participation in VET was motivated by a range of reasons:
  - 70.1% undertook training with the intention of gaining employment in Food Processing Industry occupational groups, compared to the Victorian industry average of 68.9%; and
  - 29.9% undertook training for personal interest or other reasons, compared to the Victorian industry average of 31.1%;
- 67.7% were employed, but not necessarily in the Food Processing industry, occupational groups, compared to the Victorian industry average of 77.3%; and
- 58% found their training to be of relevance to their employment compared to 63.6% of the Victorian industry average.

# 7 PRIORITIES

## 7.1 BETWEEN INDUSTRY PRIORITIES

In 2005, the priorities work was extended to include a process for realigning training resources '*between industry*' areas. The *industry shares* model was designed to assess an industry's need for training relative to other industries.

The model compared an industry's share of training effort with its share of the need for training across all Victorian industries and focused on the skill needs of industry, return on training investment and government policy.

For the Food Processing Industry, the model uncovered a virtual balance between the industry's need for training and its share of current training delivery. According to the 2004 data, the industry's share of government funded training approximated its share of training need. However the process did reveal that continuing *within* industry shifts were necessary to better align resources. The model recommended shifts to Baking from Meat occupational group.

In 2005, based on 2004 data, the *between* industry priorities advice for Primary industry was 'maintain that the share of government-funded training'.

The advice for 2006 is that overall the Food Processing Industry remains close to **balance** and government-funded training effort should be **maintained** based on:

- analysis of 2005 delivery data; and
- review of moderating factors.

### 7.1.1 ANALYSIS OF 2005 DELIVERY DATA

Analysis of the 2005 delivery data continues to show that the share of training effort for the Food Processing industry and share of industry need is close to overall balance. A decrease of 16.8% in government-funded training was largely offset by an increase in fee-for-service delivery in 2005. The industry's updated share of training need remains largely unchanged despite marginal decreases in both the Meat and Baking occupational groups. Following consideration of the moderating factors discussed in Section 7.1.2 below, the relationship between the industry's share of training effort and training need remains unchanged.

### 7.1.2 REVIEW OF MODERATING FACTORS

A key process in reviewing VET priorities for 2006 is adjusting the gap between training need and effort based on qualitative data for additional or updated moderating factors. The annual Change Driver reports provided by Victorian Industry Training Boards (ITABs) and Study Area reference groups are important sources of qualitative data. The conclusion, following a review of updated moderating factors, is that the difference between training need and effort is not significant, but a trend towards an overall decrease in training effort will be monitored.

The impact of following moderating factors was considered:

- ***Rate of Change -*** The Food Processing industry has experienced a rapid rate of growth over the past decade. High level investment in greenfield sites and new technologies during this period will continue to shape the industry over the next five years. This growth has been accompanied by global economic and local environmental and regulatory factors that will continue to challenge the industry in the short and medium term.

- ***Scope of Change -*** There is pressure to improve skills in the industry to support rapid change in consumer demands, business practice (including supply chain management), production methods (including emphasis on environmental issues) and regulation. Globalisation, rapid technological change and increasing competition also impact on the industry's need for training.

- ***Government Policy –*** The Ministerial Statement, *Moving Forward: Making Provincial Victoria the Best Place to Live, Work and Invest* has targeted funds for programs to address the need of recruitment needs of the industry. The government has targeted the Food industry for export growth resulting in increased regulation related to traceability of product, food safety and OH&S. This may result in additional training requirements.

  *'Maintaining the Advantage – Skilled Victorians'* commits the Government to providing opportunities to existing and older workers to increase and update their skills to meet the challenges of an economy increasingly driven by innovation. The target group is Victorians aged 35-64 who do not have Year 12 or equivalent qualification. A significant proportion of Food Processing workers, in particular, do not have post secondary qualifications.

- ***Fee-for Service -*** Historically, the gap between training need and government-funded training effort is reduced by the contribution of fee-for-service delivery. In 2005 fee-for-service delivery increased by 8.1% and represented more than 28% of all training in Food processing.

## 7.2 Within Industry Priorities

*Within Industry Priorities* address imbalances between the share of training effort and the share of need for training for occupational groups within the Food Processing Industry. It is important to note the following:

- all **L profile** training ie all apprenticeship and traineeship training is **high priority**;

- a **higher priority** for government funding is given to an occupational group if its share of the total training need is significantly less than its share of the training effort. Where there is an imbalance between the share of training effort and the need for training, critical skills needs and the training needs of new entrants could be addressed by transferring training effort from occupational groups *within* the industry that have been assessed as having a lower priority for training based on current shares of delivery and need;

- a **lower priority** is given to an occupational group identified as having a significantly greater share of the industry's training effort compared to its share of the need for training. Training should be realigned from low priority occupational group's to ensure all occupational groups within an industry have a reasonable share of the government-funded training delivered to the industry. *This does not mean that providers will be expected to cease delivery in these types of training;*
- for training that has not been identified as either higher or lower priority in these reports, it is intended that providers will generally maintain the status quo with regard to the share of delivery to the occupational group and meet any growth in demand for government-funded training through a re-alignment of effort from lower priority training.

## ***Higher Priority***

### Baking

- The difference between the training effort and need remains despite an increase of 0.5% in government-funded training in 2005. Re-alignment in 2005 reduced the discrepancy between training effort and need.

## ***Lower Priority***

### Meat

- The share of training effort for the Meat occupational group continued to exceed training need in 2005. However, re-alignment in 2005 reduced the discrepancy between training effort. Government-funded training in the meat occupational group declined by 2.5%.

# 8 CONCLUSION

Priorities advice for government-funded training:

- ***Between Industry***

  - **Balanced -** The Food Processing industry is in balance and therefore training effort should be maintained.

- ***Within Industry***

  - **Higher Priority** - ***Baking*** occupational group (*and all apprenticeships and traineeships within Food Processing)* as the share of need continues to exceed training effort; and

  - **Lower Priority** - ***Meat*** occupational group as the share of training effort exceeds the share of training need.

The share of training effort needs to be re-aligned within the Food Processing industry to take into account some of the internal imbalances. It is recommended that training effort be re-distributed from the Meat occupational group to the Baking occupational group.

- ***ITAB Advice***

Based on ITAB advice, the training provided should address the following skills needs:

- nutrition;
- food safety;
- food recall;
- quality assurance and auditing;
- business management (including frontline management);
- trades and other entry level training;
- environmental/waste management;
- innovation;
- quality assurance systems engineers;
- mechanical engineers;
- retail baking;
- food induction – pre-employment training;
- literacy and numeracy; and
- marketing and promotion – export as well as import replacement.

# APPENDIX A VET STUDENT SEGMENTS

The approach used to defining each segment is defined in the following table.

***Defining Student Segments Based on Reason for Study***

| Group | Segment | Business Rule / Reason for Study |
|---|---|---|
| Employment Seekers | Apprentices/Trainees | Apprentice/Trainee |
| | Labour Market Entrants | "To get a job" **and** under 25; **or** "To try for a different career" **and** under 20 |
| | Job Seekers | "To get a job" **and** 25 and older |
| Career Improvers | Self Employed | "To develop my existing business"; **or** "To start my own business" |
| | Career Changers | "To try for a different career" **and** 20 and older |
| | Skill Improvers | "To get a better job or promotion"; **or** "It was a requirement of my job"; **or** "I wanted extra skills for my job" |
| Self Developers | Personal Developers | "For personal interest" **or** "For self development"; **and** Field of Education **is not** "Mixed Field Programs" **nor** "Language and Literature" |
| | Basics | "For personal interest" **or** "For self development"; **and** Field of Education **is** "Mixed Field Programs" **and** **is** "Language and Literature" |
| | Bridgers | "To get into another course or study" |
| | Other | "Other reasons" |

# APPENDIX B SECTORS AND OCCUPATIONAL GROUPS

**Table B.1: Occupational groups to sectors concordance**

| ITAB | Occupational Group | Industry | Sector |
|---|---|---|---|
| Food Processing | Baking | General Manufacturing | Food Processing |
| | Dairy | | |
| | Fruit and Vegetables | | |
| | General | | |
| | Meat | | |
| | Milling and Confection | | |
| | Other Foods | | |
| | Pharmaceutical Manufacturing | | |
| | Wine and Other Beverages | | |

# APPENDIX C SUMMARY OF GOVERNMENT-FUNDED VET PROVISION, 2002-2005, FOR FOOD PROCESSING OCCUPATIONAL GROUPS

**Table C.1: Training delivery as SCHs in Baking, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **269,823** | **319,953** | **317,377** | **326,853** |
| **Student Contact Hours** (Government-funded) | **253,472** | **310,055** | **312,429** | **313,882** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF LEVEL** [B] | | | | |
| Certificate I | 13.7 | 10.0 | 4.2 | 5.3 |
| Certificate II | 23.1 | 23.4 | 16.8 | 2.8 |
| Certificate III | 63.3 | 66.6 | 79.0 | 91.7 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.2 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 99.6 | 98.7 | 95.4 | 94.2 |
| Non-Apprentice/Traineeship | 0.4 | 1.3 | 4.6 | 5.8 |
| **Region** | | | | |
| Metro | 54.2 | 48.9 | 44.1 | 46.5 |
| Non-metro | 44.4 | 43.4 | 11.7 | 11.0 |
| Balance [c] | 1.5 | 7.8 | 44.2 | 42.4 |
| **Providers** | | | | |
| TAFE | 100.0 | 99.4 | 99.9 | 100.0 |
| Private Providers | 0.0 | 0.6 | 0.1 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes:
(a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.2: Training delivery as enrolments in Baking, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **1,901** | **1,795** | **1,567** | **1,505** |
| **Student Enrolments** (Government-funded) | **1,606** | **1,660** | **1,483** | **1,386** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 12.2 | 20.4 | 9.3 | 12.5 |
| Certificate II | 12.3 | 20.7 | 15.0 | 3.5 |
| Certificate III | 75.5 | 58.9 | 75.7 | 83.8 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.3 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 99.9 | 98.7 | 94.4 | 87.5 |
| Non-Apprentice/Traineeship | 0.1 | 1.3 | 5.6 | 12.5 |
| **Region** | | | | |
| Metro | 61.9 | 52.3 | 46.0 | 40.2 |
| Non-metro | 36.7 | 33.9 | 12.4 | 15.0 |
| Balance [c] | 1.4 | 13.9 | 41.6 | 44.8 |
| **Providers** | | | | |
| TAFE | 100.0 | 98.9 | 99.9 | 100.0 |
| Private Providers | 0.0 | 1.1 | 0.1 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes:
(a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.3: Training delivery as SCHs in Dairy, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **1,310** | **420** | **3,380** | **0** |
| **Student Contact Hours** (Government-funded) | **690** | **0** | **3,380** | **0** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF LEVEL** [B] | | | | |
| Certificate I | 0.0 | | 0.0 | |
| Certificate II | 0.0 | | 0.0 | |
| Certificate III | 100.0 | | 100.0 | |
| Certificate IV | 0.0 | | 0.0 | |
| Diploma | 0.0 | | 0.0 | |
| Advanced Diploma | 0.0 | | 0.0 | |
| Other | 0.0 | | 0.0 | |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | | 100.0 | |
| Non-Apprentice/Traineeship | 100.0 | | 0.0 | |
| **Region** | | | | |
| Metro | 100.0 | | 100.0 | |
| Non-metro | 0.0 | | 0.0 | |
| Balance [c] | 0.0 | | 0.0 | |
| **Providers** | | | | |
| TAFE | 100.0 | | 0.0 | |
| Private Providers | 0.0 | | 100.0 | |
| ACFE | 0.0 | | 0.0 | |

Source: 2005 OTTE Student Statistical Collection
Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.4: Training delivery as enrolments in Dairy, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **50** | **21** | **7** | **0** |
| **Student Enrolments** (Government-funded) | **26** | **0** | **7** | **0** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 0.0 | | 0.0 | |
| Certificate II | 0.0 | | 0.0 | |
| Certificate III | 100.0 | | 100.0 | |
| Certificate IV | 0.0 | | 0.0 | |
| Diploma | 0.0 | | 0.0 | |
| Advanced Diploma | 0.0 | | 0.0 | |
| Other | 0.0 | | 0.0 | |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | | 100.0 | |
| Non-Apprentice/Traineeship | 100.0 | | 0.0 | |
| **Region** | | | | |
| Metro | 100.0 | | 100.0 | |
| Non-metro | 0.0 | | 0.0 | |
| Balance [c] | 0.0 | | 0.0 | |
| **Providers** | | | | |
| TAFE | 100.0 | | 0.0 | |
| Private Providers | 0.0 | | 100.0 | |
| ACFE | 0.0 | | 0.0 | |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.5: Training delivery as SCHs in General, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **1,100,924** | **924,484** | **924,370** | **899,749** |
| **Student Contact Hours** (Government-funded) | **805,922** | **700,419** | **604,261** | **541,929** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF Level** [B] | | | | |
| Certificate I | 10.9 | 10.3 | 13.0 | 16.2 |
| Certificate II | 50.8 | 47.7 | 37.3 | 27.9 |
| Certificate III | 24.9 | 29.1 | 37.6 | 40.6 |
| Certificate IV | 8.2 | 6.4 | 6.2 | 5.6 |
| Diploma | 4.9 | 6.2 | 5.9 | 7.9 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.3 | 0.4 | 0.0 | 1.8 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 32.6 | 33.8 | 43.1 | 43.4 |
| Non-Apprentice/Traineeship | 67.4 | 66.2 | 56.9 | 56.6 |
| **Region** | | | | |
| Metro | 32.0 | 35.4 | 37.7 | 40.7 |
| Non-metro | 34.3 | 42.8 | 44.9 | 49.0 |
| Balance [c] | 33.7 | 21.8 | 17.3 | 10.4 |
| **Providers** | | | | |
| TAFE | 79.9 | 72.6 | 62.8 | 56.9 |
| Private Providers | 17.4 | 26.6 | 31.1 | 35.5 |
| ACFE | 2.7 | 0.8 | 6.1 | 7.6 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.6: Training delivery as enrolments in General, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **11,481** | **9,631** | **9,981** | **7,201** |
| **Student Enrolments** (Government-funded) | **7,257** | **6,759** | **6,537** | **5,252** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 13.5 | 18.8 | 28.0 | 34.7 |
| Certificate II | 45.5 | 48.6 | 42.7 | 29.1 |
| Certificate III | 29.6 | 22.3 | 25.3 | 20.1 |
| Certificate IV | 6.7 | 5.8 | 2.2 | 2.2 |
| Diploma | 1.4 | 1.8 | 1.4 | 1.6 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 3.4 | 2.6 | 0.5 | 12.4 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 19.7 | 18.4 | 26.0 | 22.2 |
| Non-Apprentice/Traineeship | 80.3 | 81.6 | 74.0 | 77.8 |
| **Region** | | | | |
| Metro | 26.3 | 21.3 | 21.7 | 18.4 |
| Non-metro | 42.0 | 55.0 | 65.9 | 68.3 |
| Balance [c] | 31.8 | 23.7 | 12.4 | 13.3 |
| **Providers** | | | | |
| TAFE | 79.5 | 76.4 | 65.8 | 68.6 |
| Private Providers | 16.0 | 21.6 | 23.1 | 21.4 |
| ACFE | 4.5 | 2.0 | 11.1 | 10.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.7: Training delivery as SCHs in Meat, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **830,331** | **674,099** | **748,300** | **774,773** |
| **Student Contact Hours** (Government-funded) | **620,920** | **514,781** | **580,615** | **605,110** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF Level** [b] | | | | |
| Certificate I | 2.1 | 6.5 | 5.2 | 3.7 |
| Certificate II | 66.6 | 54.2 | 64.0 | 68.7 |
| Certificate III | 27.5 | 32.5 | 27.0 | 23.9 |
| Certificate IV | 2.3 | 4.1 | 2.2 | 1.8 |
| Diploma | 1.4 | 2.6 | 1.7 | 1.8 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 81.0 | 86.7 | 83.5 | 83.6 |
| Non-Apprentice/Traineeship | 19.0 | 13.3 | 16.5 | 16.4 |
| **Region** | | | | |
| Metro | 39.5 | 34.0 | 36.4 | 24.3 |
| Non-metro | 45.4 | 48.8 | 37.1 | 57.0 |
| Balance [c] | 15.0 | 17.2 | 26.5 | 18.7 |
| **Providers** | | | | |
| TAFE | 61.0 | 59.2 | 68.1 | 71.1 |
| Private Providers | 39.0 | 40.8 | 31.9 | 28.9 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.8: Training delivery as enrolments in Meat, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **3,422** | **2,816** | **3,329** | **3,862** |
| **Student Enrolments** (Government-funded) | **2,657** | **2,109** | **2,605** | **2,789** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [b] | | | | |
| Certificate I | 3.5 | 6.1 | 3.8 | 2.8 |
| Certificate II | 65.0 | 54.9 | 66.3 | 67.3 |
| Certificate III | 27.3 | 32.5 | 25.5 | 26.2 |
| Certificate IV | 3.4 | 4.3 | 2.8 | 2.5 |
| Diploma | 0.8 | 2.2 | 1.6 | 1.2 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 75.9 | 82.7 | 74.4 | 83.3 |
| Non-Apprentice/Traineeship | 24.1 | 17.3 | 25.6 | 16.7 |
| **Region** | | | | |
| Metro | 36.7 | 26.5 | 28.9 | 27.6 |
| Non-metro | 50.8 | 49.8 | 44.8 | 51.8 |
| Balance [c] | 12.4 | 23.7 | 26.3 | 20.6 |
| **Providers** | | | | |
| TAFE | 54.9 | 66.6 | 65.7 | 68.1 |
| Private Providers | 45.1 | 33.4 | 34.3 | 31.9 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.9: Training delivery as SCHs in Milling and Confection, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **5,829** | **15,060** | **10,676** | **21,551** |
| **Student Contact Hours** (Government-funded) | **3,966** | **9,521** | **6,658** | **15,661** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF Level** [B] | | | | |
| Certificate I | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate II | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate III | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate IV | 73.1 | 2.1 | 0.0 | 0.0 |
| Diploma | 26.9 | 97.9 | 100.0 | 100.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | 0.0 | 0.0 | 0.0 |
| Non-Apprentice/Traineeship | 100.0 | 100.0 | 100.0 | 100.0 |
| **Region** | | | | |
| Metro | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-metro | 0.0 | 0.0 | 0.0 | 0.0 |
| Balance [c] | 0.0 | 0.0 | 0.0 | 0.0 |
| **Providers** | | | | |
| TAFE | 100.0 | 100.0 | 100.0 | 100.0 |
| Private Providers | 0.0 | 0.0 | 0.0 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.10: Training delivery as enrolments in Milling and Confection, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **115** | **136** | **110** | **155** |
| **Student Enrolments** (Government-funded) | **14** | **28** | **15** | **23** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate II | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate III | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate IV | 64.3 | 10.7 | 0.0 | 0.0 |
| Diploma | 35.7 | 89.3 | 100.0 | 100.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | 0.0 | 0.0 | 0.0 |
| Non-Apprentice/Traineeship | 100.0 | 100.0 | 100.0 | 100.0 |
| **Region** | | | | |
| Metro | 100.0 | 100.0 | 100.0 | 100.0 |
| Non-metro | 0.0 | 0.0 | 0.0 | 0.0 |
| Balance [c] | 0.0 | 0.0 | 0.0 | 0.0 |
| **Providers** | | | | |
| TAFE | 100.0 | 100.0 | 100.0 | 100.0 |
| Private Providers | 0.0 | 0.0 | 0.0 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.11: Training delivery as SCHs in Pharmaceutical Manufacturing, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **33,065** | **35,610** | **25,960** | **20,990** |
| **Student Contact Hours** (Government-funded) | **33,065** | **35,610** | **14,790** | **4,010** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs | Share of gov't -funded SCHs |
| **AQF Level** [b] | | | | |
| Certificate I | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate II | 81.9 | 100.0 | 98.9 | 94.0 |
| Certificate III | 18.1 | 0.0 | 1.1 | 6.0 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | 3.7 | 29.4 | 100.0 |
| Non-Apprentice/Traineeship | 100.0 | 96.3 | 70.6 | 0.0 |
| **Region** | | | | |
| Metro | 24.3 | 0.0 | 18.6 | 46.1 |
| Non-metro | 0.0 | 0.0 | 0.0 | 0.0 |
| Balance [c] | 75.7 | 100.0 | 81.4 | 53.9 |
| **Providers** | | | | |
| TAFE | 100.0 | 100.0 | 100.0 | 100.0 |
| Private Providers | 0.0 | 0.0 | 0.0 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.12: Training delivery as enrolments in Pharmaceutical Manufacturing, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **251** | **284** | **220** | **75** |
| **Student Enrolments** (Government-funded) | **251** | **284** | **158** | **21** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 0.0 | 0.0 | 0.0 | 0.0 |
| Certificate II | 87.6 | 100.0 | 98.7 | 95.2 |
| Certificate III | 12.4 | 0.0 | 1.3 | 4.8 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 0.0 | 2.8 | 12.7 | 100.0 |
| Non-Apprentice/Traineeship | 100.0 | 97.2 | 87.3 | 0.0 |
| **Region** | | | | |
| Metro | 15.9 | 0.0 | 7.0 | 52.4 |
| Non-metro | 0.0 | 0.0 | 0.0 | 0.0 |
| Balance [c] | 84.1 | 100.0 | 93.0 | 47.6 |
| **Providers** | | | | |
| TAFE | 100.0 | 100.0 | 100.0 | 100.0 |
| Private Providers | 0.0 | 0.0 | 0.0 | 0.0 |
| ACFE | 0.0 | 0.0 | 0.0 | 0.0 |

Source: 2005 OTTE Student Statistical Collection

Notes:
(a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.13: Training delivery as SCHs in Wine and Other Beverages, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **246,344** | **196,195** | **158,951** | **177,902** |
| **Student Contact Hours** (Government-funded) | **191,174** | **162,939** | **135,394** | **116,165** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCH | Share of gov't -funded SCH | Share of gov't -funded SCH | Share of gov't -funded SCH |
| **AQF Level** [B] | | | | |
| Certificate I | 4.2 | 1.3 | 0.8 | 1.3 |
| Certificate II | 32.2 | 35.0 | 30.3 | 32.1 |
| Certificate III | 61.5 | 56.3 | 59.1 | 54.3 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 2.1 | 7.4 | 9.7 | 12.3 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 34.6 | 30.9 | 22.5 | 27.0 |
| Non-Apprentice/Traineeship | 65.4 | 69.1 | 77.5 | 73.0 |
| **Region** | | | | |
| Metro | 19.3 | 32.7 | 31.1 | 26.1 |
| Non-metro | 80.4 | 67.2 | 67.5 | 68.6 |
| Balance [c] | 0.3 | 0.1 | 1.4 | 5.3 |
| **Providers** | | | | |
| TAFE | 95.4 | 97.5 | 97.7 | 90.5 |
| Private Providers | 0.6 | 0.0 | 0.4 | 0.3 |
| ACFE | 4.0 | 2.5 | 2.0 | 9.2 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.14: Training delivery as enrolments in Wine and Other Beverages, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **2,446** | **926** | **858** | **745** |
| **Student Enrolments** (Government-funded) | **1,161** | **773** | **726** | **595** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | 28.3 | 3.2 | 1.1 | 2.5 |
| Certificate II | 29.1 | 40.0 | 46.1 | 36.0 |
| Certificate III | 40.6 | 51.9 | 46.7 | 52.6 |
| Certificate IV | 0.0 | 0.0 | 0.0 | 0.0 |
| Diploma | 2.1 | 4.9 | 6.1 | 8.9 |
| Advanced Diploma | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | 17.8 | 21.1 | 17.1 | 20.2 |
| Non-Apprentice/Traineeship | 82.2 | 78.9 | 82.9 | 79.8 |
| **Region** | | | | |
| Metro | 17.1 | 29.6 | 28.5 | 26.2 |
| Non-metro | 82.4 | 70.1 | 70.1 | 69.4 |
| Balance [c] | 0.5 | 0.3 | 1.4 | 4.4 |
| **Providers** | | | | |
| TAFE | 97.5 | 97.3 | 96.6 | 90.3 |
| Private Providers | 0.3 | 0.0 | 0.8 | 0.5 |
| ACFE | 2.2 | 2.7 | 2.6 | 9.2 |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.15: Training delivery as SCHs in Other Foods, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Contact Hours** (all funding sources)[a] | **0** | **0** | **36** | **24** |
| **Student Contact Hours** (Government-funded) | **0** | **0** | **0** | **0** |
| **Characteristics of Government-funded training** | Share of gov't -funded SCH | Share of gov't -funded SCH | Share of gov't -funded SCH | Share of gov't -funded SCH |
| **AQF Level** [B] | | | | |
| Certificate I | | | | |
| Certificate II | | | | |
| Certificate III | | | | |
| Certificate IV | | | | |
| Diploma | | | | |
| Advanced Diploma | | | | |
| Other | | | | |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | | | | |
| Non-Apprentice/Traineeship | | | | |
| **Region** | | | | |
| Metro | | | | |
| Non-metro | | | | |
| Balance [c] | | | | |
| **Providers** | | | | |
| TAFE | | | | |
| Private Providers | | | | |
| ACFE | | | | |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.

**Table C.16: Training delivery as enrolments in Other Foods, 2002-2005**

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Total Student Enrolments** (all funding sources)[a] | **0** | **0** | **6** | **2** |
| **Student Enrolments** (Government-funded) | **0** | **0** | **0** | **0** |
| **Characteristics of Government-funded training** | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments | Share of gov't -funded enrolments |
| **AQF Level** [B] | | | | |
| Certificate I | | | | |
| Certificate II | | | | |
| Certificate III | | | | |
| Certificate IV | | | | |
| Diploma | | | | |
| Advanced Diploma | | | | |
| Other | | | | |
| **Type of study** [b] | | | | |
| Apprenticeships/Traineeships | | | | |
| Non-Apprentice/Traineeship | | | | |
| **Region** | | | | |
| Metro | | | | |
| Non-metro | | | | |
| Balance [c] | | | | |
| **Providers** | | | | |
| TAFE | | | | |
| Private Providers | | | | |
| ACFE | | | | |

Source: 2005 OTTE Student Statistical Collection

Notes: (a) Data do not included fee-for-service delivery by private providers.
(b) Includes not defined and secondary schools.
(c) Includes students from interstate and overseas and those studying at virtual campuses.