

Background Paper

Monitoring post-secondary education and training in Australia
– practice and policy developments relevant to the
NSW Public Health Officer Training Program



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Executive summary

The New South Wales Public Health Officer Training Program is a service-based postgraduate level public health training program established in 1990 by the NSW Department of Health. The Program's overall aim is to contribute to the development of a workforce with the capacity to plan, implement and evaluate public health interventions. The Program employs individuals with a Master of Public Health (or equivalent level of qualification) for three years, during which they address eleven competency areas through work in the field.

The Program is currently seeking accreditation within the higher education sector, following 13 years of accreditation within the vocational education and training (VET) sector. Prompted by the shift between sectors, the Program is considering how best to implement a systematic way of measuring quality that represents best practice in quality assurance in public health education and training.

The first step in developing a monitoring framework was a scoping exercise, which sought to span the range of organisations that undertake monitoring of education and training at the post-secondary level in Australia and to describe in broad terms the policies and instruments used to collect information. This report summarises the findings. The scoping exercise included material published up to 2005, outlining strategies that extend to the year 2010. However, it should be noted that new surveys and policy documents are released on an ongoing basis.

Monitoring of post-secondary education in Australia

The information gathered by the different surveys and other data collection tools discussed in this report, while varying in intent and quality, may be useful for benchmarking by other programs.

- Several national surveys with high participation rates (greater than 90 per cent response rates) have been coordinated through the Australian Bureau of Statistics to obtain information about the quality of

education and training of those in the workforce. The information is gathered for strategic planning and policy development by governments and institutions. It has also been useful for setting priorities at the national level to improve the quality, coverage and use of education and training statistics.

- There are regular surveys with large sample sizes in both the VET and higher education sectors, which provide broad level information, based on low response rates (around 50 per cent). This information has limited use for policy and planning at the individual program level, but is useful for comparison between jurisdictions and institutions within the respective sectors.
- The independent Australian Universities Quality Agency began audits of self-accrediting higher education institutions examining issues such as course structure, content, academic standards and course length as well as graduate outcomes in 2001.
- There is a range of ongoing or developing administrative data collections that include information related to administering education and training such as course name and course completion information.
- Within public health, course questionnaires have used in-depth questioning to review the quality and outcomes of learning to inform course development and to determine local workforce development issues. These questionnaires have generally not been standardised between all public health courses so there is very little good quality time series data related to quality and performance of public health education and training nationally, nor can this information be used to compare courses.
- There have been several 'one-off' surveys such as the *Public Health Workforce Survey* (1994), which explore a range of topics specific to the public health workforce but these have not been repeated to assess trends.

Key findings

Standards

A number of documents provide standards for monitoring the quality of post-secondary education. Being familiar with these national standards will help to ensure that individual programs are comparable and standardised where relevant and possible:

- the *Australian Qualifications Framework* (MCEETYA 1995), which sets out agreed protocols to ensure that all awards from school through to postgraduate study are standardised;
- *Measuring Learning in Australia* (Trewin 2004), which outlines priorities and actions for the development of education and training information;
- the *Dictionary of Standards for Education and Training Statistics* (NETSU 2004), which includes a core set of data definitions, classifications and standards for education and training purposes.
- the *Australian Quality Training Framework* (ANTA 2001), which outlines standards for a nationally consistent vocational education and training system;
- *Shaping our Future* (ANTA 2004), which includes measures and data sources for vocational and educational training;
- the *Australian Higher Education Quality Assurance Framework* (DETYA 2000), which provides an overview of quality assurance in the Australian higher education sector; and
- the *National Protocols for Higher Education Approval Processes* (MCEETYA 2000), which aim to ensure consistent criteria and standards across Australian universities.

Performance indicators

Review of higher education performance indicators has identified the need to establish key indicators for the sector that are reported on a regular basis and are overseen by an appropriate governing body and external auditor.

In the VET sector a set of key performance measures inform a national action plan for collecting and reporting information.

Monitoring specific to public health

Within the higher education sector, existing postgraduate training programs share some outcomes around course content and learning. Individual postgraduate public health courses have been monitoring course experience and graduate destination specific to public health and aspects of their monitoring tools could potentially be adapted for use by other programs.

The VET sector's goals of achieving quality training that has an impact on workforce outcomes, performance and quality, as well as its use of competency-based training, are useful considerations for any monitoring program, particularly a workplace-based program. The sector also explores employer needs and satisfaction with graduate skill levels.

This summary of collections presented in this report provides a reference point when determining how to systematically monitor a small, employer-funded program such as the NSW Public Health Officer Training Program.

While programs may be able to reflect on and, where possible, adapt the monitoring tools of other courses in order to demonstrate the quality in the delivery and outcomes of training that is aligned with sector requirements, their unique aims, course structures and competencies must be taken into account.

There is a strong need to integrate the results of monitoring into strategic planning in order to improve education and training. This is usually achieved through reporting to a governing body.

Section 1

Background

The NSW Public Health Officer Training Program is a postgraduate public health training program delivered through the workplace by the NSW Department of Health. The Program creates a bridge between higher education learning in public health and specialist public health practice. It employs individuals with a Master of Public Health (or equivalent level of qualification) for three years, during which they are expected to address, through work in the field, a range of competency areas such as infectious diseases, epidemiology, policy and health promotion (NSW Health 2000).

The Program uses a wide variety of information and has developed a database to support administrative functions and meet reporting requirements. It also regularly conducts evaluations of training sessions and of assessment and review processes. It now seeks to establish a monitoring framework and performance indicators by which it can readily and regularly judge the quality of the delivery and outcomes of its training.

While the Program already complies with VET sector quality requirements, the current move to seek accreditation in the higher education sector has necessitated a better understanding of monitoring requirements in both sectors, as well as of best practice in quality assurance of public health education and training. For this reason, a scoping exercise was undertaken to examine current monitoring practice in education and training¹ in Australia, in both the VET and higher education sectors. In particular within the higher education sector, there was a focus on the monitoring undertaken in relation to postgraduate public health courses and training programs.

The scoping exercise aimed to:

- define current practice and the existing evidence base for monitoring learning;
- review relevant policy standards and strategic planning documents;
- determine the range of information collected by organisations to monitor the quality of education and training, the processes used to collect this information and the way in which it is used, with a focus on material related to on-course experience and student outcomes; and
- identify generic data elements and monitoring requirements between and within sectors.

The methods, findings and conclusions drawn from the exercise are presented. In addition, Appendices A to C provide supporting detail of the information gathered by the different surveys and other data collection tools:

- Appendix A lists information gathered as part of national data collections, including the Survey of Education and Work and the Survey of Education, Training and Information Technology;
- Appendix B lists standards, performance indicators and information collected in the VET sector; and
- Appendix C summarises information collected in the higher education sector.

These appendices may be useful for benchmarking by other programs and courses.

1 The education and training sectors have only recently started referring to the broad concept of monitoring 'learning' as a flexible term encompassing a wide range of educational and training activities, rather than monitoring 'education', as the acquisition of knowledge within a formal setting or 'training' as the acquisition of job-related skills (Trewin 2004, p.2). However, 'learning' has only recently been adopted and for this reason, the term 'education and training' is used throughout this document.

Section 2

Methods

The approach taken to identifying relevant Australian literature and examples of current practice within Australian post-secondary education involved:

- review of the literature; and
- direct contact with relevant organisations.

Search strategy

A single researcher collected recent policy documents, information papers, reports, questionnaires and surveys relating to education and training between March 2004 and June 2005. Documents were obtained via web-based searching using key terms in the field of education and training, such as 'higher education', 'vocational education and training', 'monitoring training', 'monitoring learning', 'educational outcomes', 'employer satisfaction', 'graduate destination', 'student outcomes', 'monitoring standards', 'course experience', 'quality of education and training', 'benchmarking education' and 'indicators of training and development'. Relevant documents were also followed up from reference lists cited in existing documents.

Websites from educational providers and research organisations such as the National Centre for Vocational Education and Research and the Graduate Careers Council of Australia and state and territory government departments of education and training were purposefully searched for information.

The documents were examined to ascertain their purpose, audience, the methods used and results. Where relevant, the performance indicators and the measurement tools used to collect information were summarised.

Some significant work published after the research for the scoping exercise was completed has also been referred to by this report.

Direct contact

Email and telephone contact was made with key informants within the relevant sectors, research institutions, government departments and authorities to:

- obtain and / or verify information;
- discuss the implications of various documents; or
- ascertain policy directions.

Groups with whom contact was made included:

- the Australian Bureau of Statistics;
- the Graduate Careers Council of Australia;
- the National Centre for Vocational Education and Research;
- Master of Public Health Programs at the University of New South Wales, University of Sydney; University of Queensland and Curtin University in Western Australia, and the Victorian Consortium of Public Health; and
- the Masters of Applied Epidemiology Program at the Australian National University.

Findings

3.1 Organisations responsible for monitoring education and training in Australia and their principal data collections

Summary 3.1

National organisations responsible for monitoring post-secondary education

Australian Bureau of Statistics

- National Education and Training Statistics Unit
- Australian Statistics Advisory Council
- Education and Training Statistics Advisory Group

Vocational education and training sector

- National Centre for Vocational Education and Research, for the Australian National Training Authority

Higher education sector

- Graduate Careers Council of Australia
- Australian Universities Quality Agency
- Australian Vice Chancellors' Committee
- Australian Council for Educational Research

Governance structures

- Australian Government Department of Education, Science and Training
- Ministerial Council on Education, Employment, Training and Youth Affairs
- Australian National Training Authority
Ministerial Council

National organisations responsible for monitoring post-secondary education

A number of national bodies are responsible for overall monitoring of the quality of education and training in Australia.

Australian Bureau of Statistics

The Australian Bureau of Statistics covers all sectors within education, working with state and territory governments and other stakeholders to administer national workforce-directed surveys, set standards for measuring education and training and develop national priorities in the field. The following bodies are coordinated within the Australian Bureau of Statistics:

- The National Education and Training Statistics Unit, which was established in partnership with the Australian Government Commonwealth Department of Education, Training and Youth Affairs (now called the Department of Education, Science and Training), the Australian National Training Authority, and relevant agencies in all states and territories. The National Education and Training Statistics Unit develops policies, provides data covering a wide range of education and training issues, and coordinates the development and provision of national statistics in the field.
- The Australian Statistics Advisory Council, which advises the Australian Bureau of Statistics on education and training issues and priorities.
- The Education and Training Statistics Advisory Group, which determines the information to be collected in the national surveys and provides formal links between the National Education and Training Statistics Unit, existing statistical committees and working groups in the various sectors, collection specialists and analysts in the field of education and training statistics.

Department of Education, Science and Training

The Department of Education, Science and Training is the Australian government department with responsibility for administering higher education funding and for developing and administering higher education policy and programs. The responsibilities and functions of the Australian National Training Authority were transferred to the Department in October 2006.

Vocational education and training sector

The National Centre for Vocational Education Research collects and analyses national VET statistics and survey data and provides research findings on vocational education and training.

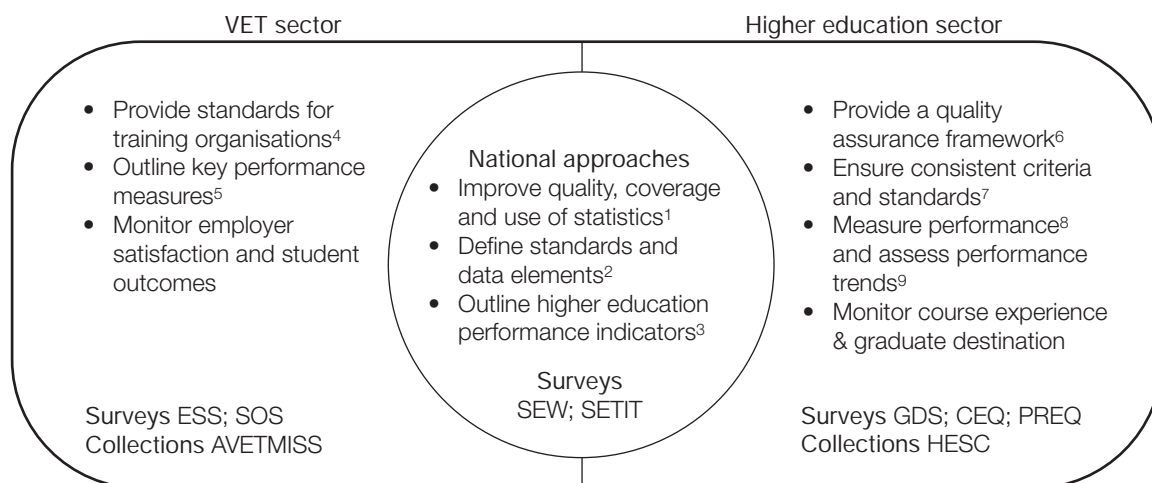
Higher education sector

The Graduate Careers Council of Australia (a peak body with representatives from employers, universities and government that formed more than 20 years ago) researches first destinations and salaries of graduates and interprets trends in employment with special reference to graduate employment.

The Australian Universities Quality Agency, established in 2001, is an independent national agency that audits the sector on issues such as course structure, content, academic standards and course length as well as graduate outcomes.

The Australian Vice Chancellors' Committee² is the peak body representing the university sector.

Figure 1 Overview of the monitoring of post-secondary education and training in Australia



Notes:

AVETMISS=Australian Vocational Education and Training Management Information Statistical Standard; CEQ=Course Experience Questionnaire; ESS=Employer Satisfaction Survey; GDS=Graduate Destination Survey; HESC=Higher Education Statistics Collection; PREQ=Postgraduate Research Experience Questionnaire; SEW=Survey of Education and Work; SETIT=Survey of Education, Training and Information Technology; SOS=Student Outcomes Survey; VET=Vocational Education and Training.

- 1 *Measuring Learning in Australia: Plan to Improve the Quality, Coverage and Use of Education and Training Statistics* (Trewin 2004).
- 2 *Dictionary of Standards for Education and Training Statistics* (NETSU 2004).
- 3 *Characteristics and Performance Indicators of Australian Higher Education Institutions* (DEST 2001).

- 4 *Australian Quality Training Framework* (ANTA 2001).
- 5 *Review of Research: Measuring the Outcomes of Vocational Education and Training (ANTA 2000); Shaping our Future: Australia's National Strategy for Vocational Education and Training: Final Report and Action Plan 2004–2005* (ANTA 2003; 2004).
- 6 *The Australian Higher Education Quality Assurance Framework* (DETYA 2000).
- 7 *National Protocols for Higher Education Approval Process* (MCEETYA 2000).
- 8 *Characteristics and Performance Indicators of Australian Higher Education Institutions* (DEST 2001); *A Review of Higher Education Outcome Performance Indicators* (DEST & Assess Economics 2005).
- 9 *Benchmarking: A Manual for Australian Universities* (McKinnin et al 2000).

2 From May 2007, the Australian Vice Chancellors' Committee became Universities Australia with the adoption of a new constitution and a new focus.

The Australian Council for Educational Research is a non-government educational research organisation that conducts research and development projects to support education policy makers and practitioners.

Major national data collections and their governance structures

The VET and higher education sectors each have a small number of data collections that are published and which are administered by different groups. However, there is some overlap in the ministerial councils and national data agencies that are responsible for these. Both sectors involve the Department of Education, Science and Training and the Australian Bureau of Statistics in their information collections and report to the Ministerial Council on Education, Employment, Training and Youth Affairs. The VET sector also reports to the Australian National Training Authority Ministerial Council.

Figure 1 gives an overview of the area, showing how national approaches relate to specific surveys and collections in both the VET and higher education sectors. The surveys and data collections are discussed in Sections 2.2 to 2.4.

3.2 Australian Bureau of Statistics

Summary 3.2

Publications establishing standards for monitoring quality

Measuring Learning in Australia: Plan to Improve the Quality, Coverage and Use of Education and Training Statistics (Trewin 2004)

A statement of agreed priorities and actions for the development of education and training information over the next three years developed by the National Education and Training Statistics Unit in consultation with governments, Australian National Training Authority and the Australian Bureau of Statistics. The Plan establishes lines of responsibility and outlines 28 priorities for 2004–2007.

Dictionary of Standards for Education and Training Statistics (NETSU 2004)

Includes a core set of data definitions, classifications and standards for education and training statistics.

Surveys

Survey of Education and Work (ABS, annual)

Provides a snapshot of schooling, qualifications, field, previous and current study, unmet demand and apprenticeships. Conducted annually as a computer-assisted telephone interview survey (95% response rate).

Survey of Education, Training and Information Technology (ABS 2001a)

Covers qualifications, study, and a large component regarding workforce related training. Conducted as a face-to-face survey (>90% response rate).

The Australian Bureau of Statistics also provides some education and training-related information through other regular and one-off surveys which are jointly funded with other bodies (e.g. Household and Expenditure Survey, Survey of Adult Literacy and Life Skills).

Related appendices

- Appendix A1 (page 24) – Survey of Education and Work
- Appendix A2 (page 25) – Survey of Education, Training and Information Technology

There has been recent growth in the monitoring of quality of the delivery and outcomes of education and training. This is associated with an increasing need to justify and attract funding for programs, as well as to provide information for policy and planning purposes.

While information describing education and training within Australia has evolved over time it has largely remained 'sector-specific' and useful for comparative purposes rather than strategic planning. Information is available through a range of organisations but the collection of information has not necessarily been well-coordinated. Consequently there is a growing need for statistical infrastructure at the national level to allow for, among other things (Trewin 2004):

- a more comprehensive and integrated view of education and training;
- increased relevance, comparability and quality of statistics; and
- improved use of data.

The education and training environment has undergone significant changes over recent years. There has been an increase in the number of educational providers and an emphasis on matching skills for employment and industry within both the VET and the higher education sectors. There is now greater concentration on the development of competency-based training packages and curriculum (Nutbeam 2002; Trewin 2004). As a result of rapid change and lack of coordination between and within sectors, measurement standards and priorities at the national level have lagged. The large capital investment required for programs to conduct monitoring also means that most institutions are limited in their capacity to engage with and enact existing national priorities related to benchmarking the quality of their programs.

Publications establishing standards for monitoring quality

Measuring Learning in Australia: Plan to Improve the Quality, Coverage and Use of Education and Training Statistics

In 2004, NETSU released a nationwide *Plan to Improve the Quality, Coverage and Use of Education and Training Statistics* (Trewin 2004). The development of the Plan involved considerable consultation with major policy agencies and key stakeholders, including the Australian Bureau of Statistics, Department of Education, Science and Training, state and territory departments of education and training, the Australian National Training Authority, the National Centre for Vocational Education and Research, the Australian Council for Education Research and the Australian Vice Chancellor's

Committee. The Plan was endorsed by the Australian National Training Authority and the Australian Education Systems Officials Committee. The Plan covers the whole of the education field, from early childhood to lifelong learning and addresses issues of improving the information set, actions and timeframes, as well as coordination roles.

The Plan reflects key directions and establishes 28 priorities that cover all education sectors for the period 2004–07. The priorities include (Trewin 2004):

- the need for a stable program of data sources;
- the move to increase reporting on outcomes rather than inputs;
- the interest in improving financial statistics and their transparency;
- the emerging need for data across the sectors to be presented and analysed in a holistic manner, and to include reporting on minority groups; and
- the need to maximise the use of existing collections, including administrative by-product databases.

The priorities are broad in nature and encompass the national picture. There are two developments with particular relevance to public health education and training:

- the increasing use of statistical standards, with a *Dictionary of Standards for Education and Training Statistics* agreed upon in December 2002 and released in 2004 (see below); and
- the intention to improve the consistency of information collected on enrolments in private higher education institutions – in 2003, the Department of Education Science and Training piloted the collection of a limited set of enrolment information from non-government funded higher education institutions, with the intention to fully introduce the collection in the future (this project was incomplete at the time of this research).

Dictionary of Standards for Education and Training Statistics

The Dictionary is a reference document that defines standards and outlines methods for the use of 19 data elements in statistical, administrative and service provision settings in the field of education and training. The data elements included were chosen by the Australian Bureau of Statistics and other agencies as those that provide a range of information relevant to the measurement of education and training in Australia. It is intended that the Dictionary will be used by government, academic and private sector organisations where appropriate in data collection activities. The intention is that this will improve the comparability and consistency of education and training data derived from different sources.

Version 1 of the Dictionary was released in 2004 (NETSU 2004). The National Education and Training Statistics Unit will contact stakeholders about their usage of the Dictionary and based on responses, propose future directions, including any further work on a second version. Version 2 could expand to encompass standards for other data elements which are used within the education and training sector.

Surveys

The following surveys, which are part of the core program of data collection solely funded by the Australian Bureau of Statistics, collect information about education and training at the national level:

- the five-yearly Census of Population and Housing;
- the annual household Survey of Education and Work, which provides a snapshot of participation in education, educational attainment and education-to-work transition;
- the four-yearly household Survey of Education, Training and Information Technology, which provides an in-depth picture of educational attainment and work-related training;
- the four-yearly General Social Survey, and six-yearly National Aboriginal and Torres Strait Islander Social Survey, which provide inter-linkages between education and training and other areas of social concern; and
- the regular compilation of economic statistics that are relevant to education and training, in particular the Australian National Accounts and the Public Finance data sets.

Of these surveys, the most detailed in regards to education and training are the Survey of Education and Work and the Survey of Education, Training and Information Technology.

Survey of Education and Work

The Survey of Education and Work (ABS 2001b) is conducted mainly as a computer-assisted telephone interview. It is conjointly done with the Monthly Population Survey on an annual basis. As such it includes a relatively small snapshot of information about education and training when compared with the Survey of Education and Training, which has greater detail. It includes a sample of 43,000 to 45,000 people aged between 15 and 64 years and has a response rate of approximately 94 per cent. It covers schooling, qualifications, field, previous and current study, unmet demand (people who deferred places or missed out on training) and apprenticeships. Information collected through the survey is outlined in Appendix A1.

Survey of Education, Training and Information Technology

The Survey of Education and Training was first administered in 1989, and was repeated in 1993. It was amended and administered again in 1997, 2001 and 2005. It is conducted as a face-to-face interview based on a computer questionnaire with randomly sampled (geographical sample) households, nationwide with people aged between 15 and 74 years. About 25,000 people participate. The response rate is over 90 per cent. The Survey obtains a wide range of information about education and training because each person is interviewed for approximately 20 minutes on issues such as qualifications, study, and workforce-related training. The survey also pursues course non-completers, grouping the reasons for non-completion as work-related, personal/family-related and other. Appendix A2 outlines information collected through the survey in 2005.

Other Australian Bureau of Statistics surveys

A range of other surveys, administered by the Australian Bureau of Statistics and jointly funded with other bodies, collect information relevant to education and training. Another survey in the Australian Bureau of Statistics work program is the Survey of Adult Literacy and Life Skills (jointly funded by Departments of Education, Science and Training and of Employment and Workplace Relations and the Australian Bureau of Statistics), which is administered every 10 years, and was last conducted in 2006. The survey involves an interview with one member per household, including a sample of about 9,000 people.

In addition to these surveys, the Australian Bureau of Statistics has also traditionally provided some education and training-related information on household expenditure and education from the Household Income and Expenditure Survey, time spent on educational activities from the Time Use Survey, and employer-related training issues from the Employer-based Training Expenditure and Practices Survey (not planned to be repeated since 2002 as it is funded by industry). Other general surveys include questions on educational attainment as a source of demographic information to allow analysis against the study factor.

In December 2002, the Australian Bureau of Statistics released its first education and training indicators report, *Education and Training Indicators, Australia 2002* (ABS 2002), providing a national snapshot on a range of data including training providers, financial resources, human resources, participation in education and training, and outputs and outcomes.

3.3 Vocational education and training (VET) sector

The vocational education and training (VET) sector provides post-compulsory education and training, up to and including qualifications at the level of graduate diploma. In Australia, providers of vocational education and training comprise the state and territory TAFE systems, adult and community education providers, agricultural

colleges, and the VET operations of some universities, schools, community organisations, industry skill centres and commercial and enterprise training providers through educational institutions such as TAFE and private providers. VET qualifications provide people with occupational or work-related knowledge and skills. The VET sector uses monitoring to judge the relevance of vocational training to the skills demanded in the workplace and the satisfaction of students and employees with the training.

Summary 3.3

Publications establishing standards for monitoring quality

Australian Quality Training Framework (ANTA 2001)

A standard that outlines the requirements of training organisations with regard to the quality provision of training.

Review of Research: Measuring the Outcomes of Vocational Education and Training (ANTA 2000)

Outlines key performance measures that the sector intended to institute in a monitoring program by 2003.

Shaping our Future: Australia's National Strategy for Vocational Education and Training: Final Report (ANTA 2003)

Updated version of the document above but also targets specific information about the outcomes for Indigenous Australians and the level of employer adoption of, and satisfaction with, vocational education and training in meeting the skill needs of their workforce.

Shaping our Future: Australia's National Strategy for Vocational Education and Training 2004-2010: Action Plan 2004-2005 (ANTA 2004)

Includes the measures and their data sources for the Shaping our Future Strategy outlined above.

Data collections

Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS, ANTA, NCVET)

These collections include mainly administrative information that is used to determine the pool of total VET training and conduct sampling for specific surveys.

Surveys

Survey of Employer Views on Vocational Education and Training (also called the Employer Satisfaction Survey) (NCVER)

Covers employer views on the adequacy, quality, relevance, availability and value of VET, and whether it meets the needs of employer organisations (conducted four-yearly; 50% response rate).

Student Outcomes Survey (NCVER)

Measures participation in further study, employment status before and after the course (in relation to the level of qualification, field or stream and demographics), student reasons for studying, whether they achieved their aims, perception of the relevance of training to their job and satisfaction with aspects of the course. Survey includes course non-completers (conducted annually; 45% response rate).

Related appendices

- Appendix B1 (page 27) – Standards for registered training organisations
- Appendix B2 (page 27) – Key performance measures, 2000
- Appendix B3 (page 28) – Reporting against key performance measures, 2002
- Appendix B4 (page 29) – National priority actions, 2004–2005
- Appendix B5 (page 29) – Key performance measures endorsed in 2003
- Appendix B6 (page 30) – Information collected using the Employer Satisfaction Survey, 2001
- Appendix B7 (page 31) – Results from the Survey of Employer Views on Vocational Education and Training, 2001
- Appendices B8–B10 (pages 34 to 36) – Student Outcomes Survey

Publications establishing standards for monitoring quality

Australian Quality Training Framework

The *Australian Quality Training Framework* (ANTA 2001) was endorsed by the Australian National Training Authority Ministerial Council in June 2001 and was fully implemented by July 2002. The Framework provides the basis for a nationally consistent VET system. It includes two sets of standards, one for registered training organisations and one for state and territory registering / course accrediting bodies. The standards that registered training organisations are expected to meet seek to establish a common quality and integrity for training. The standards are listed in Appendix B1.

Review of Research: Measuring the Outcomes of Vocational Education and Training

The Australian National Training Authority Ministerial Council developed the *Review of Research* (ANTA 2000) in partnership with industry. The document outlines eight key performance measures that the sector intended to institute within its monitoring program by 2003:

- skills outputs produced annually within the domain of formally recognised VET
- stocks of VET skills against desired levels
- employers' views on the relevance of skills acquired through VET
- student employment outcomes and prospects before and after participation in VET
- VET participation, outputs and outcomes achieved by client groups
- actual public expenditure per publicly funded output
- actual public expenditure per total recognised output
- total expenditure on vocational education and training.

Interpretations of the key performance measures are outlined in Appendix B2. For key performance measures 6 to 8, the terms were poorly defined. However, from the annual report on the results released by Australian National Training Authority (2002) (see Appendix B3) it can be inferred that 'publicly funded outputs' relate to the training delivered by the public sector.

Shaping our Future: Australia's National Strategy for Vocational Education and Training

This strategic document endorsed in 2003 by the ANTA Ministerial Council (ANTA 2003) included six revised key performance measures, which were agreed in principle subject to the completion of the key performance

measure implementation plan. The key performance measures are outlined in Appendix B4. As with the previous measures, these include student participation and student outcomes from VET (employment outcomes and benefits) and expenditure per publicly funded unit of training (delivered).

They differ by targeting specific information about the outcomes for Indigenous Australians (as opposed to a more general measure on different client groups) and including a measure, to be further developed, on the level of community awareness and engagement with vocational education and training to assist with economic growth and social development. In addition, they target the level of employer adoption of, and satisfaction with, vocational education and training in meeting the skill needs of their workforce. Rather than merely targeting employer satisfaction with recent graduates, the new measure focuses more on satisfaction with training in matching skills for employment.

The measures and their data sources are listed in *Shaping our Future: Australia's National Strategy for Vocational Education and Training 2004-2010: Action Plan 2004-2005* (ANTA 2004). The action plan will be updated over the life of the strategy. The first one includes the six priority actions that are outlined in Appendix B4.

Shaping our Future: Australia's National Strategy for Vocational Education and Training 2004-2010: Action Plan 2004-2005

Measuring Learning in Australia: Plan to Improve the Quality, Coverage and use of Education and Training Statistics (Trewin 2004) outlines seven priorities for the VET sector that are supported by the National Training Statistics Committee and are integral to the national VET strategy 2004-2010. They include: the need to determine the characteristics of the VET workforce; the longer-term outcomes of VET participants and non-module completers; as well as outcomes for Indigenous Australians.

Data collections

Australian Vocational Education and Training Management Information Statistical Standard

The VET sector has a separate set of standards regarding the collection of publicly funded training data for administrative purposes under arrangements with relevant training authorities by the National Centre for Vocational Education and Research for the Australian National Training Authority. Registered training organisations are expected to collect data according to the Australian Vocational Education and Training Management

Information Statistical Standard, much of which is sent to the National Centre for Vocational Education and Research. A range of collections sits under the Standard, including the Provider Collection, the Apprentice and Trainee Collection, and the Financial Collection. These collections cover topics such as: the name of the training organisation; the location of the training provider; the name of the course; the name of the module / competency; information about the client; whether there is a client disability, prior educational achievements of the client; enrolment information; and unit of competency completed. The Standard sets out that evidence of competency completion includes evidence of work submitted or instructor notes based on personal interviews or an attendance role. The National Training and Statistics Committee is the official group governing this data. It is from this data that the pool of total VET training is determined and the sampling for specific surveys is conducted.

Surveys

The VET sector collects information through the National Centre for Vocational Education and Research using two surveys, which commenced in the 1990s:

- a national survey of employer views on VET, The Survey of Employer Views on Vocational Education and Training (also called Employer Satisfaction Survey); and
- the Graduate Destination Survey, re-named the Student Outcomes Survey.

The Survey of Employer Views on Vocational Education and Training

This Survey covers employer views on the adequacy, quality, relevance, availability and value of vocational education and training and whether or not it meets the needs of employer organisations. In the past it has explored satisfaction with course delivery, relevance of course content and graduate skills to industry, appropriateness of assessment and reasons behind employment outcomes for people who have recently graduated from VET (see Appendix B6). More recently (the 2005 survey) it has concentrated on answering the updated key performance measures (Appendix B5) regarding the level of employer adoption of, and satisfaction with, vocational education and training in meeting the skill needs of their workforce. It no longer concentrates on recent VET graduates, but targets the broader workforce on the issue of training.

The survey is developed by the National Centre for Vocational Education and Research and then outsourced to a private provider as a computer-assisted telephone interview questionnaire. This was previously administered two and three yearly, and is now administered every four years (1995, 1997, 1999 and 2001, 2005). The survey samples Australian businesses listed in the electronic yellow pages. Survey respondents are the most senior managers responsible for staff training in any workplace or the manager of the organisation. The response rate has been about 50 per cent in the past and the sample has been 5,000 people. The information reported on using the 2001 survey data is presented in Appendix B7.

The Student Outcomes Survey

This survey measures participation in further study, employment status before and after the course in relation to the level of qualification, field or stream and demographics, reasons for studying and achievement of aims, perception of the relevance of training to job and satisfaction with aspects of the course (Appendix B8).

The survey (consisting of 60 questions) is developed by the National Centre for Vocational Education and Research in consultation with industry groups, employers and training authorities and its delivery is then outsourced. It is sent to VET graduands from TAFE institutes, adult and community education providers and registered private providers, by April 30 each year. It samples 300,000 students in a large sample year and 79,000 in a small sample year and has approximately a 45 per cent response rate, based on a reminder card and a selective sample of telephone reminders. The survey can also be completed online. The Student Outcomes Survey for non-completers covers employment and training-related reasons and personal reasons and asks the person to then select the main reason for non-completion.

From 1999 onwards, the Student Outcomes Survey included students who completed modules as well as graduands (course completers) and asks them the same questions (except for information on further study) as well as an add-on questionnaire (Appendix B9), which covers further study. Some survey development work has been conducted in the last few years, aimed at improving sequencing and question style. A new question style was recently piloted on 2000 graduates to check the validity. Subsequently, some new questions and sequencing was adopted for the 2005 questionnaire. A sample of the report on the 2001 to 2002 survey is included in Appendix B10.

3.4 Higher education sector

Higher education is defined as post-secondary education offered by a university or other recognised higher education institution, or through Open Learning Australia, leading to the award of a degree or higher level qualification.

In the 1970s the Commonwealth began promoting a climate of self-assessment in higher education. In the 1980s monitoring became increasingly focused on efficiency, effectiveness and public accountability (DETYA 2000). In the 1990s a comprehensive set of measures to enhance the quality of higher education teaching and

Summary 3.4

Publications establishing standards for monitoring quality

The Australian Higher Education Quality Assurance Framework (DETYA 2000)

Provides an overview of quality assurance in the Australian higher education sector and outlines Australia's current quality assessment framework.

National Protocols for Higher Education Approval Processes (MCEETYA 2000)

Designed to ensure consistent criteria and standards across Australia in such matters as the recognition of new universities, the operation of overseas higher education institutions in Australia, and the accreditation of higher education courses offered by non self-accrediting providers.

Benchmarking: A Manual for Australian Universities (McKinnin et al 2000)

Provides tools for assessing performance trends to assist continuous self-improvement activities at universities. It outlines 67 benchmarks that can be condensed into a critical set of 25.

Key Statistics on Higher Education: Outcomes of Education (AVCC 2003)

Uses information from a number of Australian government agencies, research bodies and international organisations to list a wide range of educational outcomes suitable to large-scale institutional monitoring.

Characteristics and Performance Indicators of Australian Higher Education Institutions (DEST 2001)

Describes 360 indicators for measuring performance in higher education including student, staff, finance, research and outcome indicators.

A Review of Higher Education Outcome Performance Indicators (DEST and Access Economics 2005)

Presents an overview of higher education performance indicators, and assesses their robustness.

Measuring Learning in Australia (Trewin 2004)

Outlines initiatives that will have an impact on information needs in the higher education sector: the Higher Education Information Management System and the review of data reporting requirements for higher education students as part of this system.

Data collections

The Higher Education Statistics Collection (DEST & ABS)

A comprehensive set of statistics collected from publicly funded institutions.

Surveys

The Graduate Destination Survey (Graduate Careers Council of Australia)

Aims to determine the type of work, study or further activity students do following their degree, methods used by graduates to seek employment and, for those graduates in employment, those methods that led to their employment (administered annually, response rate 50%).

The Course Experience Questionnaire (Graduate Careers Council of Australia)

Designed to assess various aspects of the student's course experience, the scales cover the quality of teaching, clarity of goals and standards, level of workload, nature of assessment, enhancement of generic skills and overall satisfaction with course experience (administered annually in line with the Graduate Destination Survey, response rate 60%).

Postgraduate Research Experience Questionnaire (Graduate Careers Council of Australia)

This is similar to the Graduate Destination Survey and targets postgraduate students and the research experience, including thesis assessment, research skills and supervision (administered annually in line with the Graduate Destination Survey, response rate 55%).

Summary 3.4 (continued)

Public Health Workforce Survey

(Commonwealth Department of Human Services and Health and the University of New South Wales)

This one-off survey in 1994 aimed to provide information regarding the public health workforce and its education and training requirements. Participants were asked questions covering demographics, employment history, work status, current employment, education history and career aspirations.

Surveys of participants in postgraduate public health courses

Some institutions survey the participants of their public health courses to assess the quality and outcomes of their training. The results have been incorporated into university quality review cycles.

Related appendices

- Appendix C1 (page 37) – Relevant benchmarks from *Benchmarking: a Manual for Australian Universities*
- Appendix C2 (page 37) – Educational outcomes reported in *Key Statistics on Higher Education: Outcomes of Education*
- Appendix C3 (page 38) – Characteristics and performance indicators of Australian higher education institutions
- Appendix C4 (page 38) – Summary of performance indicators used to review higher education outcome performance
- Appendix C5 (page 39) – Higher education sector Graduate Destination Survey, 2005
- Appendices C6–C7 (pages 40–41) – Course Experience Questionnaire, 2005
- Appendix C8 (page 42) – Postgraduate Research Experience Questionnaire
- Appendices C9–C11 (pages 42 to 45) – Survey of the Public Health Workforce, 1994
- Appendix C12 (page 46) – Public Health Program Evaluation Questionnaire, 2004
- Appendix C13 (page 48) – The Higher Education: Public Health Education Research and Practice Questionnaire
- Appendix C14 (page 49) – Survey from the Population Health Program at the University of Queensland

research were announced, with funding being linked to the demonstration of a high level of quality assurance.

Unlike the VET sector, higher education has no designated performance measures. Each provider is expected to be responsible for monitoring the quality of its own education and training in a formal and cyclical way, with monitoring by external assessors. The Committee for Quality Assurance in Higher Education was established in 1992 to provide advice on quality assurance issues, conduct independent audits of institutional quality policies and procedures and make recommendations to government on the allocation of annual quality-related funds.

Self-accrediting higher education providers, such as universities, have the authority to accredit their own programs and primary responsibility for their own academic standards and the quality assurance processes that underpin them. Self-accrediting providers are answerable to a governing body, usually a council or senate, which is in turn accountable to the Australian government.

Universities have been required to produce Quality Assurance and Improvement Plans covering outcomes in teaching and learning since 1998 (DETYA 1998). Within the quality assurance and improvement cycles, higher education providers are now expected to formally review their courses and outcomes with the participation of external assessors, and / or obtain external feedback using periodic surveys (DETYA 1999). There has been a gradual growth in auditing and benchmarking education and training.

The independent Australian Universities Quality Agency began audits in 2001. Conducted on a five-yearly basis for self-accrediting institutions, these cover course structure, content, academic standards, course length, expectations of entry-level skills and experience, and graduate outcomes. Each institution is required to provide detail of the strategies used to achieve goals and the indicators used to assess their success (DETYA 2000, p. 15). The responsibility for acting on the findings rests with the governing body.

At the public health course or program level, a range of questionnaires has been used to review the quality, key performance and outcomes of learning. These questionnaires have generally not been administered in a standardised way by all public health courses so there are very few good time-series data related to the quality and performance of public health education and training nationally and no capacity to compare between courses. Students completing public health courses around Australia are also sampled for the national graduate surveys.

Publications establishing standards for monitoring quality

The Australian Higher Education Quality Assurance Framework

This document outlines quality assurance and monitoring within the higher education sector (DETYA 2000), to guide each higher education provider in monitoring the quality of its own education and training in a formal and cyclical way.

National Protocols for Higher Education Approval Processes

To help ensure common accreditation processes across all states and territories, the higher education sector endorsed *National Protocols for Higher Education Approval Processes* (MCEETYA 2000). The Protocols cover: criteria and processes for recognition of universities; overseas and higher education institutions seeking to operate in Australia; the accreditation of higher education courses to be offered by non self-accrediting providers; the delivery arrangements involving other organisations; and endorsement of courses for overseas students.

Non self-accrediting institutions — institutions that offer higher education courses outside of universities — are expected to demonstrate strong involvement of relevant experts in ensuring appropriate quality assurance processes. These processes are expected to cover peer assessment, external examination and the involvement of professional bodies in the accreditation of the course to a standard acceptable within the sector. Under the Protocols, courses operating outside of universities must satisfy the award level requirements set by the *Australian Qualifications Framework*, which sets out agreed protocols to ensure all awards from school through to postgraduate study are standardised.

These courses need to: be comparable to courses at the same level at Australian universities; be able to be successfully delivered at the level proposed; have appropriate financial and other arrangements to permit successful course delivery; and demonstrate the capacity to run the course. These accreditation processes are intended to ensure 'that the standards of a course are appropriate for the qualification to which it leads and that the course and methods of delivery are likely to achieve its purpose' (AUQA 2005, p20), as reflected by the *Australian Qualifications Framework* for each award level. Assessment panels determine whether the quality and educational value of a course are equivalent to those required for a qualification of the same type in an Australian university in terms of (AUQA 2005, p. 25):

- the overall goals and learning requirements of the course
- course entry requirements
- breadth and depth of the course content
- structure of the course in terms of the mix of general and specialised knowledge and skills to be developed
- duration and workload of the course
- methods of delivery and assessment.

It is suggested that non self-accrediting higher education providers engage in a regular high quality monitoring and reporting cycle to ensure the auditing agency is able to distinguish between those institutions with a good track record and those that need more intensive scrutiny between accreditation phases.

Benchmarking: A Manual for Australian Universities

The release of *Benchmarking: a Manual for Australian Universities* (McKinnin et al 2000) in 2000 aimed to provide tools for assessing performance trends in order to assist continuous self-improvement activities at universities. The manual outlines 67 benchmarks that can be reduced to a smaller critical set of 25. The benchmarks target large-scale institutional monitoring, including topics such as governance, planning and management, external impact, financial and physical infrastructure, learning and teaching, student support, research, library and information services, internationalisation and staff. They are mainly outcomes-focused. On the whole, the benchmarks are not related to student outcomes. A sample of the benchmarks is given in Appendix C1.

Key Statistics on Higher Education: Outcomes of Education

In 2003, the Australian Vice-Chancellor's Committee (the council of Australia's university presidents from self-accrediting higher education institutions) released *Key Statistics on Higher Education: Outcomes of Education* (AVCC 2003). This document draws on information from a number of Australian government agencies, research bodies and international organisations. A wide range of educational outcomes is listed in the report, which targets large-scale institutional monitoring, as opposed to smaller scale training programs. A snapshot of the outcomes monitored is given in Appendix C2.

Characteristics and Performance Indicators of Australian Higher Education Institutions

The Department of Education, Science and Training has released a series of papers regarding performance

indicators within the higher education sector. The first, *Diversity and Performance of Australian Universities* (DEET 1994), outlined 41 indicators including some analysis related to student unit cost to graduates per teacher and equity of student outcomes. It was followed by *Diversity in Australian Higher Education Institutions* (DEET 1996), which contained some analysis over time including 68 indicators, with an increased number of indicators on finance and research.

The third report, *The Characteristics and Performance of Higher Education Institutions* (DETYA 1998), contained 360 indicators, with more emphasis on the environment, institutional characteristics and adjusted student outcomes (grouping outcomes for similar universities). The *Characteristics and Performance Indicators of Australian Higher Education Institutions, 2000* (DEST 2001) outlines the latest approach taken, using what appears to be the same number of indicators, but analysed and presented in more depth. The indicators include student indicators, staff indicators, finance indicators, research indicators and outcome indicators. A snapshot of the indicators is listed in Appendix C3.

A Review of Higher Education Outcome Performance Indicators

In April 2005, the Department of Education, Science and Training published a report by Access Economics Pty Ltd called *A Review of Higher Education Outcome Performance Indicators* (DEST & Access Economics 2005). The report aimed to present an overview of higher education performance indicators and to assess their robustness. To do so, the report reviewed the quality of survey data with respect to response rates, definitions and the statistical properties of the indicators used. The report summarised the wide range of performance indicators used by the Department, including financial, staff, research, student and outcome indicators into the groupings (see Appendix C4). The report does not address the issue of creating overall performance indicators or attributing indicators to the allocation of funding within higher education.

The report suggested that working with more than eight indicators would reduce the likelihood of highlighting differences in university performance, and that indicators should not be too narrow. The findings of the report largely relate to technical statistical issues related to the designated indicators.

Measuring Learning in Australia

The document *Measuring Learning in Australia: Plan to Improve the Quality, Coverage and Use of Education and*

Training Statistics (Trewin 2004) outlines initiatives in the higher education sector that will have an impact on information needs. These are the Higher Education Information Management System, which is being introduced by the Department of Education, Science and Training in consultation with the sector and the review of data reporting requirements for higher education students as part of this. The System involves the development of web-based monitoring, which is being implemented progressively from 1 January 2005. It aims to improve the timeliness, accessibility and accuracy of information on students, institutions and finance. To develop the new monitoring system, a joint committee of the Department and The Australian Vice-Chancellor's Committee are reviewing the data reporting requirements within the sector, including surveys like the Graduate Destination Survey and the Course Experience Questionnaire.

Data collections

The Higher Education Statistics Collection

The Higher Education Group at the Australian Government Department of Education, Science and Training collects information from publicly funded institutions under the advice of the National Education and Training Statistics Unit within the Australian Bureau of Statistics. The Australian Bureau of Statistics publishes data from the collections in *Year Book Australia*. The Higher Education Group manages a comprehensive set of statistics collections referred to as *The Higher Education Statistics Collection*. Data included relate to:

- courses conducted by higher education institutions;
- numbers and characteristics of students undertaking courses;
- student load;
- completion of units of study and courses;
- students' liabilities under the Higher Education Contribution Scheme;
- numbers and characteristics of staff in higher education institutions;
- income and expenditure for higher education institutions;
- research activity; and
- educational profiles of higher education institutions.

Surveys

The higher education sector (undergraduate and postgraduate) collects most information using two national graduate surveys, conducted annually by the universities themselves with the support of the Graduate

Careers Council of Australia. The surveys are the Graduate Destination Survey, and the Course Experience Questionnaire. The sector also administers a Postgraduate Research Experience Questionnaire (Centre for Quality Assurance and Statistical Services 2003). The sector does not conduct an employer satisfaction survey.

The Graduate Destination Survey

The Graduate Destination Survey aims to determine the type of work, study or further activities that students carry out following their degree. It also identifies the methods used by graduates to seek employment and, for those graduates in employment, the methods that led to their employment. Topic areas included in the Survey are outlined in Appendix C5.

The survey commenced in the 1970s but reliable time-series data is available since 1990. It is conducted on 30 April and 31 October to capture those students who are completing a Bachelor, three-year Diploma, Graduate or Postgraduate Diploma, Masters degree or higher degree in the six months prior to these dates. The up-to-date survey is released to institutions in April each year, with slight modifications to the questions. Each tertiary institution administers the survey for their graduates by post in conjunction with the Course Experience Questionnaire or the Postgraduate Research Experience Questionnaire (for those completing a research-based higher degree, e.g. Masters by research or PhD).

The Survey is collected, analysed and reported by the Graduate Careers Council of Australia, which is funded by participating tertiary providers to do so. The survey has a response rate of 50 per cent. There is some telephone follow-up of non-responders. Each participating institution receives a file with its results.

Tertiary providers participate in the survey on a voluntary basis. All participating tertiary providers are expected to include a set of core questions, but there is some capacity to include additional questions.

Course Experience Questionnaire

The Course Experience Questionnaire was established around 1993 and is unique to the higher education sector. It is designed to assess various aspects of the student's course experience. It is administered as a set of scales and covers the quality of teaching, the clarity of goals and standards, the level of workload, the nature of assessment and the enhancement of generic skills and overall satisfaction with course experience. As part of the survey, students are asked to agree or disagree (five-point

scale) with 25 statements related to their perceptions of the overall quality of their course (Appendix C6).

The questionnaire is administered, collected and analysed in conjunction with the Graduate Destination Survey, and is located on the back page of that survey. It has a response rate of approximately 60 per cent.

In April 2001, the Department of Education Training and Youth Affairs released a paper titled *Further Development of the Course Experience Questionnaire* (McInnes 2001). The paper outlines work done by the Centre for the Study of Higher Education and the Assessment Research Centre of the University of Melbourne to develop an extended version of the Course Experience Questionnaire, to encompass more themes than are possible in the existing questionnaire. The project was commissioned in response to growing concerns within the higher education community that important dimensions of the student experience were not being explored by the existing Course Experience Questionnaire.

From October 2002, universities have been able to tailor the Course Experience Questionnaire to the needs of their own institutions, using the extended instrument. The condition is that the three scales, 'good teaching', 'generic skills' and 'overall satisfaction' from the original Course Experience Questionnaire remain intact (to meet the reporting requirement set out by the Department). Universities are free to include a range of other areas on an extended version (see Appendix C7).

Postgraduate Research Experience Questionnaire

In addition to the surveys done at the undergraduate level, the postgraduate sector has one additional survey, the Postgraduate Research Experience Questionnaire. This is very similar to the Graduate Destination Survey. It is conducted in association with postgraduate research courses, and covers topics such as supervision, development and educational support issues (see Appendix C8). The response rate is approximately 55 per cent.

Public Health Workforce Survey

The Commonwealth Department of Human Services and Health and the University of New South Wales conducted a one-off survey in 1994 (UNSW 1999). It followed the public health workforce survey done in New Zealand and aimed to provide information on the public health workforce and its education and training requirements. It was designed to profile services within various regions or organisational areas, describing services and staff. This included surveys on employers of public health graduates

(Appendix C9), students in programs and graduates (Appendix C10) and specific questions about demographic, educational and employment profiles of the public health workforce (Appendix C11).

All participants were asked questions covering demographics, employment history, work status, current employment, education history and career aspirations as outlined in Appendix C11. Since the 1994 survey has not been repeated, the findings have become outdated. Other than the Public Health Workforce Survey, little is being done on a holistic basis to estimate the ongoing needs of the public health workforce, and to establish employer satisfaction with the outcomes.

Examples of surveys of participants in postgraduate public health education

- The **University of New South Wales** conducts the Public Health Program Evaluation Questionnaire to obtain information on graduate destination following completion of the Master of Public Health. It was developed from the 1994 Survey of the Public Health Workforce (outlined above) and is specific to the aims and structure of masters training in public health (Appendix C12). It has been conducted in 1994, 1997 (with Sydney University), 1999 and 2005. It was previously a paper-based survey, which over time has come to include a range of questions regarding competencies for work and employment. In 1999 the knowledge and skills section was enhanced to cover issues related to the diversity of the workforce and frequently changing roles in public health. By 2005, the paper-based survey had become too cumbersome and was reduced to a smaller electronic questionnaire of 20 questions.
 - The **Victorian Consortium of Public Health** uses a questionnaire to monitor the quality of postgraduate public health training, called the Higher Education Public Health Education Research and Practice Survey (see Appendix C13), which also originated from the 1994 Survey of the Public Health Workforce.
 - The Master of Applied Epidemiology program at the **Australian National University** conducts a brief questionnaire with its graduates at course exit to indicate their contact details, previous employment, whether they would like to be part of the alumni, where they are going post-graduation (what their job title is, their branch, full employer name), current area of interest and whether they would like to receive the twice yearly newsletter and scholarship and / or job information. There is no attempt to analyse course outcomes.
- **Monitoring of the Population Health Program at the University of Queensland** occurs as part of the quality assurance and improvement cycles that have taken place across the university since 1998 to review curriculum. The university accesses an evaluation service called 'Teddi Evaluations'. The range of evaluation methods used includes:
 - the University of Queensland Student Experience Survey, which is conducted biennially to assess students' perceptions of teaching, program and course quality; the acquisition and development of graduate attributes; the quality of teaching and learning facilities, resources and services; and the quality of general facilities, resources and services;
 - the 't-val', which monitors teaching and supervision and is conducted by lecturers to gather information about the delivery of specific course subjects;
 - the institutional course evaluation instrument, which is used to evaluate course subject on a rotating three-yearly cycle, and has recently been updated to an annual cycle to inform curriculum review;
 - the Graduate Destination Survey; and
 - the Course Experience Questionnaire.

Another survey was conducted by the Public Health Program in September 1998 and sent to past and currently enrolled students of the Program through the University of Queensland, where their contact details were known. This survey aimed to provide information to help make decisions about implementing changes in course content and structure and to improve the dissertation component of the course (see Appendix C14).

Section 4

Discussion

This paper outlines the range of organisations that undertake monitoring of education and training activity in Australia and describes in broad terms their policies and the instruments they use to collect information. The scoping exercise included material published up to 2005, outlining strategies that extend to the year 2010. However, it should be noted that new surveys and policy documents are released on an ongoing basis.

There is little in the published literature about the mobility, growth and diversity of the public health workforce in Australia, or the quality of delivery and outcomes of public health education and training.

National level

At the national level, a range of high quality data is available from the Australian Bureau of Statistics through the Survey of Education and Work and more importantly, the Survey of Education and Training and Information Technology. These surveys have been useful for setting priorities at the national level to improve the quality, coverage and use of education and training statistics.

In general there is a gap between policy recommendations on monitoring learning and actual data collection at the national level. Some of the gaps in the national information base relate to the long-term impact of training, generic skills attained, effects on long-term career progression, effects on teaching and outcomes for course non-completers. This is linked to the need to determine valid methods and survey instruments and to understand that gold-standard measures of system performance and outcomes often do not match the realities of developing measurement instruments and funding surveys. As a result, annual surveys in both the VET and higher education sectors are still changing.

Higher education and VET sectors

The *Australian Qualifications Framework* (MCEETYA 1995) and the *Higher Education Quality Assurance Framework* (DETYA 2000) provide the standards for developing a monitoring program within the higher education sector, including the need to establish key indicators that are reported on a regular basis, and overseen by an appropriate

governing body and external auditor. In the VET sector a set of key performance measures inform a national action plan for collecting and reporting information.

The main bodies conducting educational monitoring programs (and measuring time-series indicators) include the National Centre for Vocational Education and Research, the Graduate Careers Council of Australia and the Australian Bureau of Statistics. The VET and higher education sectors have over a decade of data from annual surveys — the Course Experience Questionnaire (higher education), Student Outcomes Survey (VET) / Graduate Destination Survey or Postgraduate Research Experience Questionnaire (higher education) and Employer Satisfaction Survey (VET). Most of these surveys monitor student outcomes and course experience, in varying levels of detail. Only the VET sector has explored workforce outcomes related to employer satisfaction; for example, whether employers perceive that graduates meet desired skill levels in the workplace.

These surveys have low participation rates (around 50 per cent) and few pursue non-completers. Collecting such broad-based information means it has limited use for policy and planning at the individual program level. It is, however, useful for comparative purposes between jurisdictions and institutions within the respective sectors.

Postgraduate public health

A range of questionnaires target postgraduate public health training within the higher education sector. These vary and are focused on course experiences and student outcomes specific to individual programs. The need for these questionnaires demonstrates that other monitoring undertaken within the sector is not specific enough to guide course development.

Generally, the public health sector is moving towards classifications and the development of performance measures that assess workforce outcomes related to training and development activities. Since research for this scoping exercise was completed, the Public Health Classifications Project, published in December 2005 by the National Public Health Partnership, has been a

significant step towards developing a classification system, in consultation with industry. This system provides a framework for measuring the quality and performance standards of a range of public health activities (including education and training interventions) (NPHP 2006). The Classifications Project aims to enhance 'the quality and consistency of reported information on public health activity, performance, investment and expenditure'.

The Public Health Education and Research Program is a Department of Health and Ageing initiative that funds universities and other organisations across Australia to develop and deliver population health education, training and research. A finding of four reviews conducted through the Program between 1991 and 1998 was that public health required the development of benchmarks to establish minimum quality standards and assist in comparing course content and outcomes. A further review in 2005 included a recommendation that 'the Department should commission work to establish comparative criteria for assessing the quantity and quality of teaching and research outputs for ... funded programs' (DOHA 2005, p50). This work aims to ensure a standardised quality of postgraduate public health courses across Australia.

Lessons for public health training programs developing monitoring frameworks

- National policies such as *Measuring Learning in Australia* (Trewin 2004), *The Australian Higher Education Quality Assurance Framework* (DETYA 2000) and *National Protocols for Higher Education Approval Processes* (MCEETYA 2000) provide a sound basis for programs to develop a monitoring framework. Being familiar with these national standards will help to ensure that individual programs are comparable and standardised where relevant and possible.
- Within the higher education sector, existing postgraduate training programs share some outcomes around course content and learning. Individual postgraduate public health courses have been monitoring course experience and graduate destination specific to public health and aspects of their monitoring tools could potentially be adapted for use by other programs as well as to help determine the features of a consistent and quality-oriented tool that might be adapted nationally.
- The VET sector's goals of achieving quality training that has an impact on workforce outcomes, performance and quality, as well as its use of competency-based

training, are useful considerations for any monitoring program, particularly a workplace-based program. The VET sector also explores employer needs and satisfaction with graduate skill levels and thereby starts to make the link between education and training and workforce development issues.

- While programs may be able to reflect on and where possible adapt the monitoring tools of other courses in order to demonstrate the quality in the delivery and outcomes of training that is aligned with sector requirements, their unique aims, course structures and competencies must be taken into account.
- There is a strong need to integrate the results of monitoring into strategic planning in order to improve education and training. This is usually achieved through reporting to a governing body.
- There has been a lot of work done to identify suitable indicators at a broad level but this work would need to be adapted to meet the strategic goals of individual programs.

This paper provides an overview of the broad range of work being undertaken to monitor the quality of education and training in Australia, including public health education and training. It outlines the range of administrative collections, as well as standardised surveys and strategic documents that provide a background to changing policy regarding monitoring of education and training, as well as the aims, structure and content of monitoring programs delivered by various organisations. This work, which is of varying quality, is useful to reflect on when developing a monitoring framework for public health education and training. However, when applying this learning to specific programs, the distinctive goals, course structure and content need to be considered.

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A National data collection

A1 Information collected through the Survey of Education and Work, 2004

Topic areas	Information collected
Completed educational qualifications	<ul style="list-style-type: none"> ■ Whether completed any educational qualifications ■ Number of qualifications completed ■ Level of highest qualification completed ■ Main field of study for that qualification ■ Whether qualification was completed in Australia ■ Year qualification was completed
Enrolled in study 2003	<ul style="list-style-type: none"> ■ Whether enrolled in a course of study at an educational institution in 2003 ■ Whether course is for trade certificate, diploma, degree or any other educational qualification ■ Whether completed educational qualification studied for ■ Level of qualification ■ Main field of study ■ Whether study was full-time ■ Type of educational institution or organisation
Current study (enrolled before 2003)	<ul style="list-style-type: none"> ■ Whether currently enrolled in any course of study at an educational institution ■ Whether course of study is for a trade certificate, diploma, degree or any other educational qualification ■ Level of qualification ■ Main field of study ■ Whether study was full-time ■ Type of educational institution or organisation ■ Year last attended full-time study ■ When finished full-time study ■ Whether completion of full-time study = completion of course ■ Whether changed study arrangements (why)
Enrolment in study this year	<ul style="list-style-type: none"> ■ Apply to enrol in study this year ■ Got a place in a course ■ Main reason for unsuccessful application ■ Type of institution ■ Preferred institution ■ Currently trainee of any kind ■ Started traineeship in last 12 months ■ Main field of study for traineeship

Source: ABS (2001b)

A2 Information collected through the Survey of Education, Training and Information Technology, 2005

Topic areas	Information collected
Traineeship last 12 months	<ul style="list-style-type: none"> ■ Currently an apprentice or trainee ■ Started traineeship in last 12 months ■ How much did you earn and what period does it cover ■ Share of profit or loss from business
Looking for work	<ul style="list-style-type: none"> ■ Looking for work in last month, means of looking ■ When will you begin looking for work
Capacity to work	<ul style="list-style-type: none"> ■ Like a job if had suitable childcare ■ Capacity to start job if offered in next four weeks
Last job	<ul style="list-style-type: none"> ■ Occupation in last job ■ Kind of service carried out by the employer ■ Name of employer ■ Hours worked ■ Entitlements ■ Belong to union
Providing training on the job	<ul style="list-style-type: none"> ■ Training received as part of employment, direct and indirect involvement in development of course / modules etc. ■ To whom do you provide training ■ Qualifications related to training and education ■ Time spent providing training
Attendance at formal training	<ul style="list-style-type: none"> ■ Work related training attended, names of courses ■ Days attended training ■ Hours spent training ■ Payment for training ■ Training in work time ■ Help do job better ■ Delivered in house or externally ■ Methods of delivery ■ Training related to job skills, promotion, transferability, get a job, change jobs, promotion, pay rise, do different work in current job ■ Any work related training you wanted to do but didn't ■ Reasons why (work-related, course-related, personal and other)
Informal training	<ul style="list-style-type: none"> ■ Informal training within last 12 months, teaching yourself etc.
Education	<ul style="list-style-type: none"> ■ Secondary schooling
Educational qualifications completed	<ul style="list-style-type: none"> ■ Number completed ■ Most recent one completed ■ Main field of study ■ Completed in Australia ■ Type of educational institution ■ Year completed qualification
Highest qualification	<ul style="list-style-type: none"> ■ Highest qualification completed ■ Same as most recent qualification ■ Level of highest qualification ■ Main field of study ■ Completed in Australia ■ Type of educational institution ■ Year completed qualification
2 nd highest qualification	<ul style="list-style-type: none"> ■ 2nd highest qualification completed ■ Same as most recent qualification ■ Level of qualification ■ Main field of study ■ Completed in Australia ■ Type of educational institution ■ Year completed qualification

A2 Information collected through the Survey of Education, Training and Information Technology, 2005 (cont'd)

Topic areas	Information collected
3 rd highest qualification	<ul style="list-style-type: none"> ■ 3rd highest qualification completed ■ Same as most recent qualification ■ Level of qualification ■ Main field of study ■ Completed in Australia ■ Type of educational institution ■ Year completed qualification
Courses enrolled in	<ul style="list-style-type: none"> ■ Level of course qualification ■ Main field of study ■ Type of institution attended ■ Reasons for enrolment ■ Contact hours ■ Full time ■ Methods of delivery ■ Main method ■ Recognition of prior learning ■ Financial support ■ Year commenced ■ Main activity in 12 months prior to course ■ Main reasons not completed qualification (work-related, course-related, personal and other) ■ Cease studying
Any other educational qualifications you wanted to study for	<ul style="list-style-type: none"> ■ Reasons why not (work-related, course-related, personal and other)
Demographics	<ul style="list-style-type: none"> ■ Come from Australia for the course, Australian citizen ■ Language first spoken as a child ■ Language other than English at home ■ Language mainly spoken at home ■ Consider yourself to speak English very well, well, or not well ■ Country of mother's birth ■ Country of father's birth ■ Disability
Information technology	<ul style="list-style-type: none"> ■ Household use of computers, laptops, notebooks etc. <ul style="list-style-type: none"> - How many computers - How often used - Main reason for not having computer at home (cost, interest, no need, don't know how to use, access elsewhere etc.) ■ Access to internet <ul style="list-style-type: none"> - Means of access - No. computers with internet access - How often accessed - Main reason for not having access - Plans to get internet access - Fixed telephone lines to home ■ Used a computer at home last 12 months <ul style="list-style-type: none"> - How often - Which purpose - Access internet ■ Used a computer at work last 12 months <ul style="list-style-type: none"> - How often - Which purpose - Access internet ■ Use at other places ■ Purchase goods via internet ■ Total value of goods ■ Pay online for goods ■ Use of government services via web ■ Pay bills

Source: ABS (2001a)

B Standards, performance and information collected in the vocational education and training (VET) sector

B1 Standards for registered training organisations

Standards for registered training organisations	
■	Have documented systems for quality training and assessment
■	Conduct an internal audit at least annually
■	Have documented agreements with other organisations when they provide training or assessment in partnership
■	Have written procedures for recruitment, induction and professional development of staff
■	Use trainers and assessors with specified competencies
■	Follow explicit requirements for quality assurance in assessment
■	Have a recognition of prior learning process in place and offer to recognise the prior learning of all learners on enrolment
■	Follow specific requirements for developing, validating and implementing learning and assessment strategies.

Source: ANTA (2001)

B2 Key performance measures, 2000

No	Definition	Interpretation
1	Skills outputs produced annually within the domain of formally recognised VET	Skills outputs annually, including student load, enrolment and completion of modules.
2	Stocks of VET skills against desired levels	Relates to the degree to which the VET output is meeting national industry demand. Need to use labour force statistics and include consideration for labour market supply and demand by state and territory. Easier to measure national supply than national demand. It can also be informed by the degree of national industry under-employment.
3	Employer's views on the relevance of skills acquired through VET	Relevance of trainee's skills as judged by recent employer. It judges the capacity of the VET system to produce trainees with the right mix of skills to meet current demands from the employer's perspective (rather than the national perspective, trainer or trainees perspective). It can also be informed by the degree of local under-employment.
4	Student employment outcomes and prospects before and after participation in VET	Labour market outcomes including access to employment and employment rate for different groups of trainees, earnings, promotional capacity, enrolment in further study
5	VET participation, outputs and outcomes achieved by client groups	Participation in training and employment outcomes for different groups. This is the only 'equity'-related measure. It includes consideration of outputs and outcomes for the following groups: <ul style="list-style-type: none"> ■ Females ■ Rural and remote residents ■ Indigenous Australians ■ NESB background ■ People with disability Employment outcomes include access to employment, employment, earnings, promotions, and enrolment in further study. The emphasis here is consideration of access to and achievement of employment for those otherwise disadvantaged.
6	Actual public expenditure per publicly funded unit	
7	Actual public expenditure per total recognised output	
8	Total expenditure on vocational education and training	

Source: ANTA (2000)

B3 Reporting against key performance measures, 2002

Topic areas	Information collected
Recognised vocational education and training skills outputs (KPM1)	<ul style="list-style-type: none"> ■ Units of competency achieved ■ Completion of qualifications ■ Rate of success for students (achieving competence in nearly all the units of competency) ■ Hours of training activity ■ Number of VET clients
Stocks of skills versus desired levels (KPM2)	<ul style="list-style-type: none"> ■ Growth of VET qualifications among working age Australians compared with population growth ■ Employment of VET graduates in various industry groups ■ Employment growth in occupation groups where VET qualifications do not represent the majority of employees (proportion of job openings in industries with highest job openings for people with VET qualifications) ■ Unmet demand for VET places, (percentage applied to VET who did not get a place) ■ Percentage of people with VET versus higher ed qualifications as highest post school qualification
Employer satisfaction with VET (KPM3)	<ul style="list-style-type: none"> ■ Satisfaction with graduates skills ■ Overall satisfaction with graduates of non-TAFE versus TAFE ■ Practical job skills ■ Employment by small versus large businesses
Student outcome measures from VET (KPM4)	<ul style="list-style-type: none"> ■ Employment rate ■ Further study ■ This rate among students specifically seeking an immediate employment related benefit from training ■ Change from casual to permanent employment ■ Satisfaction with outcomes by age group
Participation, outputs and outcomes for client groups (KPM5)	<ul style="list-style-type: none"> ■ New apprenticeships by women ■ Employment outcomes for indigenous graduates ■ Participation by people with disability ■ Participation and performance by rural and remote students. ■ Completion of qualifications by NESB
Efficiency performance (KPM6/7)	<ul style="list-style-type: none"> ■ Unit cost per hour of publicly funded vocational education and training
Total expenditure on vocational education and training (KPM8)	<ul style="list-style-type: none"> ■ Estimated total expenditure on VET ■ Expenditure on training by public and private employers (ABS) ■ Individuals conducting some training in the workplace without support from employers ■ Individual expenditure on vocational training.

Source: ANTA (2002)

B4 National priority actions, 2004–2005

Action area	Outline of some of the actions re: data collection information management under each action
Generate strategies to enable vocational education and training to respond to emerging skill needs for the future world of work	
Implement agreed Australian National Training Authority ministerial council recommendations from the high level review of Training Packages to improve Training Packages for industry, individuals and providers and strengthen teaching and learning outcomes	
Build a strong empirical and evidence base on which to develop options for ministers on the future resourcing of vocational education and training	
Develop and implement a strategic plan to respond to emerging skill needs of the mature age workforce and our ageing population	Propose training and recognition responses to meet current needs. Establish baseline data re: current skill levels and access to training
Conduct targeted research to complement and strengthen regional and community development initiatives across Australia	Focus areas to include the role of VET in building social and economic capital, developing a set of indicators and measures to assess the contribution of VET
Increase training opportunities leading to sustainable employment for indigenous Australians.	Reduce gaps in knowledge

Source: ANTA (2004)

B5 Key performance measures endorsed in 2003

Key performance measure	Outline
The level of student participation and achievement in vocational education and training	The number of people doing VET, number of qualifications, competencies, modules they attain through recognised processes.
The level of student employment outcomes and benefits after training with their training program	The proportions of students who improve their employment or do further study after VET completion or perceive benefit from training. Proportion satisfied with training.
The level of employer adoption of, and satisfaction with, vocational education and training in meeting the skill needs of their workforce.	The proportion of employers aware of, and who adopted VET to meet skill needs in workforce. Proportion of employers satisfied with VET in meeting skill needs.
The extent to which Indigenous Australians engage with and achieve positive outcomes from vocational education and training	The proportion of indigenous people doing VET, No. qualifications, competencies achieved. Proportion who improve employment following training, or do further study or perceive benefit from completing training
The level of community awareness and engagement with vocational education and training to assist with economic growth and social development	This measure requires further development
The efficiency of Australia's vocational education and training system	Government recurrent expenditure per publicly funded VET output.

Source: ANTA (2003)

B6 Information collected using the Employer Satisfaction Survey, 2001

Topic areas included in the survey	Information collected
Background of the employer organisation	<ul style="list-style-type: none"> ■ Number of employees ■ Main type of business activity ■ Number of employers with TAFE qualifications or similar (apprenticeships, traineeships, diplomas, associate diplomas or certificate courses)
VET qualified workers are current employees	<ul style="list-style-type: none"> ■ Completed qualifications in last two years ■ Trained by TAFE or non TAFE providers ■ Institution ■ Level of qualification ■ Completed before took up employment with organisation ■ Area ■ Type of training (apprenticeship etc.)
No VET qualified workers as current employees	<ul style="list-style-type: none"> ■ Reasons no staff with VET qualifications
No recent recruitment of VET qualified workers	<ul style="list-style-type: none"> ■ Reasons
Importance and satisfaction with graduate courses	<ul style="list-style-type: none"> ■ Importance of training to the organisation: <ul style="list-style-type: none"> - Relevance of course content - Balance of theory and practice - Method of assessment - Teacher availability - Teacher industry experience ■ Which would you like to see improve ■ Satisfaction with the course: <ul style="list-style-type: none"> - Relevance of course content - Balance of theory and practice - Method of assessment - Teacher availability - Teacher industry experience ■ Overall satisfaction with course
Importance and satisfaction with graduate work skills	<ul style="list-style-type: none"> ■ Importance of skills gained through course: <ul style="list-style-type: none"> - Oral communication - A professional approach to work - Problem-solving skills - The ability to use initiative - Practical job skills - Ability to work as part of a team - Computer skills - Ability to adapt to changes in workplace - A positive attitude toward work - Ability to work with minimal supervision - Ability to use current technology in the workplace ■ Which skill most like to see improve ■ Satisfaction with skills gained through the course: <ul style="list-style-type: none"> - Oral communication - A professional approach to work - Problem-solving skills - The ability to use initiative - Practical job skills - Ability to work as part of a team - Computer skills - Ability to adapt to changes in workplace - A positive attitude toward work - Ability to work with minimal supervision - Ability to use current technology in the workplace ■ Overall satisfaction with skills learned

B6 Information collected using the Employer Satisfaction Survey, 2001 (cont'd)

Topic areas included in the survey	Information collected
Attitudes to work ethic	<ul style="list-style-type: none"> ■ Importance of ethic of VET graduates ■ Qualities of 'work ethic' ■ Who do you think is responsible for instilling work ethic in graduates ■ Satisfaction with work ethic of recent graduates
Overall satisfaction with training providers	
General impressions of VET	<p>Level of agreement that:</p> <ul style="list-style-type: none"> ■ It is more cost effective to recruit trained people than train people on the job ■ On the job skills more useful than skills obtained through formal education ■ VET system is providing appropriately skilled graduates ■ Training pays through worker productivity ■ VET system needs to provide more practical job skills ■ Employers should have more input into course content ■ VET system does not account for employer needs ■ Difficult to tell what a person can do from their qualifications ■ Qualifications should be based on what person can actually do rather than years of training completed ■ Should be more work experience or work placements as part of VET ■ VET assessment process needs to be improved to assist employers in comparing skills of prospective employees ■ Graduates have adequate literacy and numeracy skills for the workplace demands
Level of interaction with Training Providers	<ul style="list-style-type: none"> ■ Any contact with providers ■ Frequency of contact ■ Form of contact ■ Satisfaction with contact ■ Areas of training delivery had contact about: <ul style="list-style-type: none"> - Course content - Balance of theory and practice - Assessment process - Course times - Course duration - Course venues - Course cost - New course development - None ■ Would you like more contact ■ Do you want contact with training providers
Level of interaction with Training Providers	<ul style="list-style-type: none"> ■ Do you want contact to include course-related matters ■ In what areas of training would you like to have input ■ Choice between TAFE and non-TAFE providers if providers offer similar courses ■ Main reasons: <ul style="list-style-type: none"> - Credibility - Recognition etc. ■ Would it depend upon: <ul style="list-style-type: none"> - Cost - Quality of course or teacher - Type of course - Reputation of course - Accreditation - Location - Time factors - Course content - Other ■ Do you have sufficient information to choose course provider ■ Additional information needed

B6 Information collected using the Employer Satisfaction Survey, 2001 (cont'd)

Topic areas included in the survey	Information collected
Training knowledge and practice	<ul style="list-style-type: none"> ■ Main source of information on VET ■ Subsidies for training ■ Methods of training conducted: <ul style="list-style-type: none"> - On the job - In house - External ■ Types of training most used ■ Accreditation of in house courses ■ Use of Training Packages ■ Use of organisations to provide external training in last 12 months ■ Amount of change in balance between recognised training compared with non recognised training provided by organisation ■ Work experience students ■ Approached to provide work experience
Suggestions for improvement	<ul style="list-style-type: none"> ■ Course content: <ul style="list-style-type: none"> - Specific / relevance/ focussed to industry needs - Provide more practical training - Keep up with technology ■ Communication: <ul style="list-style-type: none"> - Seek more industry input - Improve contact with training providers - Provide more info to employers regarding courses - Provide teachers with more industry knowledge - Providers should communicate with employers regarding student progress - Providers should visit businesses more ■ Flexibility: <ul style="list-style-type: none"> - Be more flexible regarding timetables - Provide more distance education - Provide cheaper courses - Better assessment - Improve facilities - Instil more social relations skills in graduates ■ Changes in industry that could affect training requirements in future: <ul style="list-style-type: none"> - Government influences - Economic climate - Technological advance - Changes in training standards

Source: NCVET (2005)

B7 Results from the Survey of Employer Views on VET, 2001

Topic areas reported on	Information reported from the ESS
Employer views of VET, 1995–2001	<ul style="list-style-type: none"> ■ Overall satisfaction with VET ■ VET system providing graduates with skills appropriate to employer needs ■ Training pays for itself through increased worker productivity ■ The VET system does not take into account the needs of employers
Type of training provider	<ul style="list-style-type: none"> ■ Employers with only TAFE trained graduates ■ Employers with only non-TAFE trained graduates ■ Employers with both TAFE and non-TAFE trained graduates
Employer general views on VET	<p>Level of agreement (% agree or strongly agree) with the following statements:</p> <ul style="list-style-type: none"> ■ It is more cost-effective to recruit trained people than to train people on the job ■ On the job skills are more useful than skills obtained through formal education ■ The VET system is providing graduates with skills appropriate to employers needs ■ Training pays for itself through increased worker productivity ■ The VET system needs to provide more practical job skills ■ Employers should have more input into course content ■ The VET system does not take into account the needs of employers ■ It is difficult to tell what a person can actually do from their qualifications

B7 Results from the Survey of Employer Views on VET, 2001 (cont'd)

Topic areas reported on	Information reported from the ESS
Employer general views on VET	<ul style="list-style-type: none"> ■ Qualifications should be based on what the person can actually do, rather than how many years of training completed ■ There should be more work experience or work placements as part of vocational training ■ VET assessment process needs to be improved to assist employers in comparing the skills of prospective employees ■ Graduates have adequate literacy and numeracy skills for the demands of the workplace
Interstate comparisons between employers of recent VET graduates	<ul style="list-style-type: none"> ■ Satisfaction with VET providers ■ Strong agreement that training pays for itself through increased worker productivity ■ Strong agreement that VET is providing graduates with skills appropriate to employer needs ■ Percentage that subsidised the cost or provided paid time off work for employee to attend training in last 12 months
Overall employer satisfaction with VET providers	<ul style="list-style-type: none"> ■ Percentage of employers in each industry who gave a rating of 6 or more for level of satisfaction with VET providers
Satisfaction with VET delivery and highest priority for improvement	<ul style="list-style-type: none"> ■ Employers of recent VET graduates ■ Percentage very or quite satisfied ■ Percentage rating aspect highest priority for improvement: <ul style="list-style-type: none"> - The ability to use initiative - Oral communication - A professional approach to work - Problem-solving skills - Practical job skills - A positive attitude to work - Ability to work as part of a team - Ability to adapt to changes in the workplace - Ability to work with minimal supervision - Computer skills - Ability to use current technology in the workplace - Graduate's work ethic
Course delivery	<ul style="list-style-type: none"> ■ Employers of recent VET graduates, at least one of whom finished their course after commencing their current employment ■ Percentage very or quite satisfied ■ Percentage rating aspect highest priority for improvement: <ul style="list-style-type: none"> - Relevance of course content - Course balance between theory and practice - Teacher industry experience - Method of assessment
Employers with no VET graduate employees	<ul style="list-style-type: none"> ■ Reasons for not employing VET graduates <ul style="list-style-type: none"> - Qualifications not relevant to industry - All training requirements provided in house - Fully qualified people not required, staff attend only the modules relevant to our operations - Have staff currently studying for such qualifications - Not aware of training available to suit our requirements - We have not been happy with the quality of VET qualifications - Other - Don't know
Selected training practices: Employer provided training (employers who subsidised or paid for employees' training by business size and type of training)	<ul style="list-style-type: none"> ■ Small, medium and large businesses ■ Training provided in house or externally ■ Employers with VET graduates vs no VET graduates
Employer contact with training providers	<ul style="list-style-type: none"> ■ Employers who have contact with training providers by satisfaction (very satisfied, quite satisfied etc) with form of contact by employers with VET graduates vs no VET graduates

Source: NCVER (2001)

B8 Student Outcomes Survey (graduates, 2003)

Topic areas included in survey	Information collected
Personal details	<ul style="list-style-type: none"> ■ Whether of Aboriginal and/or Torres Strait Islander origin ■ Country of birth ■ Language other than English spoken at home – English proficiency ■ Disability – Type of disability
Before starting the course	<ul style="list-style-type: none"> ■ Highest level of schooling completed before starting the course ■ When started course (while at school, within 12 months of leaving, more than 12 months after leaving) ■ Qualifications completed since leaving school
Six months before course	<ul style="list-style-type: none"> ■ Whether any study was done leading to a qualification or trade certificate ■ Whether in full or part-time employment ■ Basis of employment (wage / own business etc.) ■ Occupation ■ Main tasks ■ Kind of industry, business or service ■ No. hours worked a week ■ Sick leave and paid holiday leave entitlements ■ Whether actively looked for work
About course of study	<ul style="list-style-type: none"> ■ Whether moved from usual address to do the course – Main reason moved ■ Start and finish dates ■ No. hours per week attended classes ■ Delivery location (classroom, workplace etc.) ■ Modes of delivery <ul style="list-style-type: none"> – Main mode of delivery – Most satisfying mode of delivery ■ Whether any recognition of prior learning awarded ■ Whether course was part of apprenticeship or traineeship ■ Sources of income during course ■ Main reason for doing course ■ Whether course helped achieve main reason
Employment during final semester	<ul style="list-style-type: none"> ■ Full-time or part-time employment during final semester ■ Type of support provided by employer ■ Whether employer was the same employer as before the course
Work situation as at 30 May 2003	<ul style="list-style-type: none"> ■ Whether employed in any kind of job ■ Basis of employment (wage / own business etc.) ■ Whether employer is the same employer as during the course ■ Sick leave and paid holiday leave entitlements ■ Occupation ■ Main tasks ■ Kind of industry, business or service ■ Whether employer is a government department or agency ■ No. people work at workplace address ■ No. people work for employer in total in Australia ■ No. hours usually work a week ■ Earnings ■ Job related benefits resulting from undertaking course ■ Length of time taken to find a job after course ■ Whether job is the first full-time job ever had ■ Relevance of course to job ■ Whether actively looking for work ■ Whether looking for work in the same field as field of study
Further study	<ul style="list-style-type: none"> ■ Whether enrolled in any course following this course ■ Level of qualification ■ No. hours per week attend classes ■ Where enrolled (type of institution) ■ Full name of facility ■ Full name of course ■ Main reason for studying the qualification ■ Whether any recognition of prior learning awarded ■ Whether field of study is similar to last course or current job

B8 Student Outcomes Survey (graduates, 2003) (cont'd)

Topic areas included in survey	Information collected
Opinions of the course (level of agreement with the statements using a 5 point scale):	<ul style="list-style-type: none"> ■ The teaching staff motivated me to do my best work ■ The staff put a lot of time into commenting on my work ■ The staff made a real effort to understand the difficulties I might be having ■ The teaching staff normally gave me helpful feedback on how I was going ■ My instructors were extremely good at explaining things ■ The teaching staff worked hard to make their subjects interesting ■ The library resources were appropriate for my needs ■ The information technology in teaching and learning was effective ■ It was made clear what resources were available to help me learn ■ The study materials were clear and concise ■ Course materials were relevant and up to date ■ The library services were readily accessible ■ I was able to access information technology resources when I needed them ■ I was satisfied with the course and careers advice provided ■ Health, welfare and counselling services met my requirements ■ Relevant learning resources were accessible when I needed them ■ The course developed my problem solving skills ■ The course sharpened my analytic skills ■ The course helped me develop my ability to work as a team member ■ As a result of my course, I feel more confident about tackling unfamiliar problems ■ The course improved my skills in written communication ■ My course helped me to develop the ability to plan my own work
Overall satisfaction with course	<ul style="list-style-type: none"> ■ Level of satisfaction with the quality of the course
Future enrolment	<ul style="list-style-type: none"> ■ Whether would enrol in another course at same institution
Suggestions for improvement	<ul style="list-style-type: none"> ■ Suggestions for improving the course

Source: NCVET (2002)

B9 Student Outcomes Survey (non-completers,* 2003)

Topic areas included in survey	Information collected
Personal details	<ul style="list-style-type: none"> ■ Whether still enrolled in training ■ Whether currently enrolled in any other training at a TAFE institution ■ Level of qualification awarded for this training ■ Whether completed all training required to gain the qualification ■ Whether intend to complete this training ■ Whether intended to do more training after completing this training
Reasons for choosing not to undertake more training	<ul style="list-style-type: none"> ■ Employment related reasons: <ul style="list-style-type: none"> - Changed jobs or started a new job - Lost job - Got skills needed for my job - Other employment reasons (specify) - Gained what I wanted from the training completed - Transferred to or started other training - Training no longer related to my plans - Training not what I expected - Training timetable not flexible enough - Other training reasons (specify) ■ Personal reasons: <ul style="list-style-type: none"> - Moved from the area - Illness - Family reasons - Financial reasons - Too many time pressures - Other personal reasons (specify) ■ Other major reason (specify) ■ Main reason from the list above ■ Completed at least one module but did not graduate

Source: NCVET (2003)

B10 Student Outcomes Survey, 2001–02

Topic areas included in report	Information collected
Student characteristics	<ul style="list-style-type: none"> ■ Sex ■ Age (categorical) ■ Student geographic region <ul style="list-style-type: none"> – Capital city – Other metro – Rural – Remote – Outside Australia – Unknown ■ Indigenous ■ Disability
Student participation by age	
Type of student	<ul style="list-style-type: none"> ■ Student (overseas or local) ■ Study mode (part-time or full-time)
Subject enrolments by outcome	<ul style="list-style-type: none"> ■ Assessed – passed ■ Recognition of prior learning ■ Assessed – failed ■ Credit transfer ■ Withdrawn ■ Continuing studies ■ Not assessed (completed) ■ Not completed (included not stated)
VET activity by provider type	<ul style="list-style-type: none"> ■ Number of students <ul style="list-style-type: none"> – TAFE – Community – Other registered
VET activity by provider type	<ul style="list-style-type: none"> ■ Subject enrolment <ul style="list-style-type: none"> – TAFE – Community – Other registered ■ Annual hours of VET delivery <ul style="list-style-type: none"> – TAFE – Community – Other registered
VET in schools activity	
Inter-state comparisons	<ul style="list-style-type: none"> ■ Student number ■ Sex ■ Subject enrolment ■ Hours of delivery ■ Major level of education ■ Students by major field of education
Qualification level	
Qualification level and provider type	
Major field of education, students and hours of delivery	
National training package profile	<ul style="list-style-type: none"> ■ Students ■ Units of competency attained ■ Hours of training
Historical perspective	<ul style="list-style-type: none"> ■ Time series on number of students by sex and state

Source: NCVET (2003)

C Information collected in the higher education sector

C1 Relevant benchmarks from *Benchmarking: a Manual for Australian Universities*

Benchmarks	Description
6.1 Learning and teaching plan	A learning and teaching plan is an essential framework, addressing issues of priorities and strategies within given resources
6.2 Course establishment processes	The qualitative assessment of the learning environment for students, assessment of course demand, course renewal and quality assurance activities
6.3 Scholarly teaching	Monitoring the scholarliness of the teaching undertaken by staff
6.4 Teaching environment	Induction of teaching staff, matching of staff workload with experience, a system of supervision, an appraisal of teaching effectiveness, mentoring and development opportunities
6.5 Effective academic review processes	Envisages a rigorous, systematic academic review process
6.6 Fitness of courses	The fit between the course outcomes of graduates and what skills it is proposed they achieve
6.7 Student progress ratio	The ratio of student modules passed over total modules enrolled in
6.8 First to second year retention trends	Provides a warning of potential problem areas
6.9 Equity quantitative success	Access, participation, retention and success for different groups
6.10 Student satisfaction	The course satisfaction questionnaire shows learning experience
6.11 Employability of Australian graduates	Use the Graduate Destination Survey to figure the graduates employed versus the employment rate for the region.

Source: McKinnin et al (2000)

C2 Educational outcomes reported in *Key statistics on Higher Education: Outcomes of Education*

Educational outcomes reported
■ Award course completion
■ Percentage of graduates by field of study and level of education
■ Percentage of qualifications awarded to females by type of education and subject category
■ Percentage of Bachelor degree graduates available for full time employment
■ Activities of graduates available for full-time employment by course level, field of study, and sex
■ Median annual starting salary by course of study
■ Non completion by remoteness
■ Ongoing study and employment profile
■ Highest qualification for academic staff

Source: Australian Vice-Chancellor's Committee (2003)

C3 Characteristics and performance indicators of Australian higher education institutions

Characteristics	Performance indicators
Progress rates	<ul style="list-style-type: none"> ■ Commencing undergraduate students 1999–2000 ■ Non commencing undergraduate students 1999–2000 ■ Postgraduate coursework students 1999–2000
Attrition rates	<ul style="list-style-type: none"> ■ Commencing undergraduate students 1999 ■ Non-commencing undergraduate students 1999 ■ Postgraduate coursework students 1999 ■ Actual EFTSU / expected EFTSU given commencements 1999 – 2000
Graduate full time employment	<ul style="list-style-type: none"> ■ Graduate full time employment 1998–2000
Graduate full time study	<ul style="list-style-type: none"> ■ Graduate full time study 1998–2000
Graduate salary	<ul style="list-style-type: none"> ■ Graduate salary 1998–2000
CEQ overall satisfaction 1998-2000	<ul style="list-style-type: none"> ■ Graduate overall satisfaction 1998–2000
CEQ good teaching 1998-2000	<ul style="list-style-type: none"> ■ Graduate good teaching 1998–2000
CEQ generic skills	<ul style="list-style-type: none"> ■ Graduate generic skills 1998–2000

Notes: CEQ=Course Experience Questionnaire; EFTSU=equivalent full-time student unit

Source: DEST (2000)

See also: www.dest.gov.au/highered/statistics/outcomes/default.htm.

C4 Summary of performance indicators used to review higher education outcome performance

Performance indicator	Definition	Data sources
Progress rates	Student load passed as a proportion of load attempted each year	Higher education institutions and DEST
Attrition / retention rates	Proportion of students in a particular year who neither graduate nor continue studying in an award course at the same institution in the following year	Higher education institutions and DEST
Graduate full time employment	Proportion of graduates in full time employment of those who are available for full time employment	GCCA Graduate Destination Survey
Graduate full time study	Proportion of graduates in full time study	GCCA Graduate Destination Survey
Graduate salary	Starting salaries of graduates	GCCA Graduate Destination Survey
CEQ overall satisfaction	Graduates overall satisfaction with the quality of their course	GCCA Course Experience Questionnaire
CEQ good teaching	Graduates satisfaction with their course in terms of feedback, assistance, interest shown by teaching staff	GCCA Course Experience Questionnaire
CEQ generic skills	Satisfaction with their course in terms of imparting analytical, communication, problem solving, team work skills etc.	GCCA Course Experience Questionnaire

Notes: GCCA=Graduate Careers Council of Australia; DEST=Department of Education, Science and Training

Source: DEST & Access Economics (2005)

C5 Higher education sector Graduate Destination Survey, 2005

Topic area	Information collected
About you	<ul style="list-style-type: none"> ■ Sex ■ Age at 30 April 2005 ■ Permanent resident in Australia ■ Whereabouts as at 30 April 2005 <ul style="list-style-type: none"> – if Australia, postcode – if overseas, country ■ Whether you describe yourself as having a disability ■ Whether you are of Aboriginal or Torres Strait Islander origin ■ Main language spoken at home (English / other)
Your course	<ul style="list-style-type: none"> ■ Title of the award e.g. Bachelor of Science ■ Major fields of study ■ Level of award ■ Whether award is part of a combined or double degree ■ Situation: <ul style="list-style-type: none"> – HECS paid upfront – Deferred some or all – International fee paying – Australian fee paying ■ Year of commencement ■ Type attendance is wholly or mainly full-time / wholly or mainly part-time ■ Whether mode of study is wholly or mainly internal / wholly or mainly or external ■ Whether any credit or advanced standing was received ■ What was your highest previous qualification title ■ Level of that previous qualification
Work in your final year	<ul style="list-style-type: none"> ■ Whether had any kind of paid job during final year ■ Whether employment was usually full-time / part-time / casual ■ Whether employer provided financial support for studies ■ Whether employer provided time off in lieu ■ Whether still with that employer
What were you doing on 30 April 2005	<ul style="list-style-type: none"> ■ Whether studying full-time / part-time / not in study ■ Whether in paid work: <ul style="list-style-type: none"> – Working full-time or accepted full-time job – Working full-time but seeking different job – Working part-time but seeking full-time work – Working part-time but not seeking full-time work – Not working but seeking full-time work only – Not working but seeking part-time work only – Not working but seeking any work (full-time or part-time) – Not working and unavailable for study or paid work – Not working and unavailable for paid work.
Main paid work	<ul style="list-style-type: none"> ■ Employer's name in full ■ Whether working in Australia <ul style="list-style-type: none"> – if yes, postcode – if no, country working in ■ Whether self employed ■ Type of employer: <ul style="list-style-type: none"> – Education, public – Education, private – Government Federal – Government, state/territory – Government, local – Private sector – Non-profit – Other, not known ■ Type of business carried out by employer ■ Date started this job ■ Occupation

C5 Higher education sector Graduate Destination Survey, 2005 (cont'd)

Topic area	Information collected
Main paid work (continued)	<ul style="list-style-type: none"> ■ Main tasks or duties e.g. teaching primary school children ■ How first found out about this job: <ul style="list-style-type: none"> - University career service - Careers fair or information session - Other university source (e.g. faculty, lecturer) - Advertisement in newspaper - Advertisement on internet - Family / friends - Approached by employer directly - Approached by an employer - Employment agency - Work contacts / networks - Other (specify) ■ No. hours worked in main job in an average week ■ Whether employment is permanent / short term / other ■ Gross annual salary in \$ Australia ■ Whether job is first full-time job of any sort
Further study	<ul style="list-style-type: none"> ■ Title of award ■ Major fields of study ■ Level of award ■ Whether attendance is wholly or mainly full-time / wholly or mainly part-time ■ Whether mode of study is wholly or mainly internal / wholly or mainly or external ■ Name of institution ■ Month of beginning this award
Job search strategies	<ul style="list-style-type: none"> ■ If actively sought employment during the last year, strategies or sources of information you used: <ul style="list-style-type: none"> - University career service - Careers fair or information session - Other university source (e.g. faculty, lecturer) - Advertisement in newspaper - Advertisement on internet - Family / friends - Approached by employer directly - Approached by an employer - Employment agency - Work contacts / networks - Other (specify)

Source: Graduate Careers Council of Australia (2005b)

C6 The Course Experience Questionnaire, 2005

Information collected
<p>Level of agreement with the following statements (using a 5 point scale of agree /disagree):</p> <ul style="list-style-type: none"> ■ It was always easy to know the standard of work expected ■ The course developed my problem-solving skills ■ The teaching staff of this course motivated me to do my best work ■ The work load was too heavy ■ The course sharpened my analytic skills ■ I usually had a clear idea of where I was going and what was expected of me in this course ■ The staff put a lot of time into commenting on my work ■ To do well in this course, all you really needed was a good memory ■ The course helped me develop my ability to work as a team member ■ As a result of my course, I feel confident about tackling unfamiliar problems ■ The course improved my skills in written communication

C6 The Course Experience Questionnaire, 2005

Information collected
<p>Level of agreement with the following statements (using a 5 point scale of agree /disagree):</p> <ul style="list-style-type: none"> ■ The staff seemed more interested in testing what I had memorised than what I had understood ■ It was often hard to discover what was expected of me in this course ■ I was generally given enough time to understand the things I had to learn ■ The staff made a real effort to understand the difficulties I might be having with my work ■ The assessment methods employed in this course required an in-depth understanding of the course content ■ The teaching staff normally gave me helpful feedback on how I was going ■ My lecturers were extremely good at explaining things ■ Too many staff asked me questions just about facts ■ The teaching staff worked hard to make their subjects interesting ■ There was a lot of pressure on me as a student in this course ■ My course helped me to develop the ability to plan my own work ■ The sheer volume of work to be got through in this course meant that it couldn't all be thoroughly comprehended ■ The staff made it clear right from the start what they expected from students ■ Overall, I was satisfied with the quality of this course <p>The best aspects of your course Aspects of your course most in need of improvement</p>

Source: Graduate Careers Council of Australia (2005a)

C7 Extended Course Experience Questionnaire, proposed in 2001

Topic area	Information collected
Student support scale (SSS)	<p>Level of agreement with the following statements (using a 5 point scale of agree / disagree):</p> <ul style="list-style-type: none"> ■ The library services were readily accessible ■ I was able to access information technology resources when I needed them ■ I was satisfied with the course and careers advice provided ■ Health, welfare and counselling services met my requirements ■ Relevant learning resources were accessible when I needed them
Learning resources scale (LRS)	<p>Level of agreement with the following statements (using a 5 point scale of agree / disagree):</p> <ul style="list-style-type: none"> ■ The library resources were appropriate for my needs ■ Where it was used, the information technology in teaching and learning was effective ■ It was made clear what resources were available to help me learn ■ The study materials were clear and concise ■ Course materials were relevant and up to date
Graduate qualities scale (GQS)	<p>Level of agreement with the following statements (using a 5 point scale of agree / disagree):</p> <ul style="list-style-type: none"> ■ University stimulated my enthusiasm for further learning ■ The course provided me with a broad overview of my field of knowledge ■ My university experience encouraged me to value perspectives other than my own ■ I learned to apply principles from this course to new situations ■ The course developed my confidence to investigate new ideas ■ I consider what I learned valuable for my future
Intellectual motivation scale (IMS)	<p>Level of agreement with the following statements (using a 5 point scale of agree / disagree):</p> <ul style="list-style-type: none"> ■ I found my studies intellectually stimulating ■ I found the course motivating ■ The course has stimulated my interest in the field of study ■ Overall, my university experience was worthwhile

Source: www.monash.edu.au/cheq/research/ceq.htm

C8 Postgraduate Research Experience Questionnaire

Topic area	Information collected
Supervision, thesis development, educational support, skills acquired, and assessment	<p>Level of agreement with the following statements (using a 5 point scale of agree / disagree):</p> <ul style="list-style-type: none"> ■ Supervision was available when I needed it ■ The thesis examination process was fair ■ I had access to a suitable working space ■ I developed an understanding of the standard of work expected ■ The department provided the opportunities for social contact with other postgraduate students ■ My research further developed my problem solving skills ■ My supervisors made a real effort to understand difficulties I faced ■ I had good access to the technical support I needed ■ I was integrated into the department's community ■ I learned to develop my ideas and present them in my written work ■ I understood the required standard for the thesis ■ I was able to organise good access to the necessary equipment ■ My supervisors provided the additional information relevant to my topic ■ My research sharpened my analytic skills ■ I was satisfied with the thesis examination process ■ The department provided the opportunities for me to become involved in the broader research culture ■ I was given good guidance in topic selection and refinement ■ I had good access to computing facilities and services ■ I understood the requirements of thesis examination ■ Doing my research helped me to develop my ability to plan my own work ■ My supervisors provided helpful feedback on my progress ■ A good seminar program for postgraduate students was provided ■ The research ambience in the department or faculty stimulated my work ■ I received good guidance in my literature search ■ The examination of my thesis was completed in reasonable time ■ As a result of my research, I feel confident about tackling unfamiliar problems ■ There was appropriate financial support for research activities ■ Overall, I was satisfied with the quality of my higher degree research experience.

Source: Graduate Careers Council of Australia (2005c)

C9 Survey of the Public Health Workforce, 1994 — service program coordinators and managers

Topic area	Information collected
Background details	<ul style="list-style-type: none"> ■ Contact name ■ Name of service ■ Address of service ■ Are you responsible for managing service ■ List programs / services
Service	<ul style="list-style-type: none"> ■ Is your service in health sector ■ Indicate the organisation within which your service is based ■ Postcode of service ■ Area in which service operates (capital city, rural major, rural other etc.)
Staffing profile	<ul style="list-style-type: none"> ■ Number of staff in public health functions – permanent or temporary ■ Vacancies for staff ■ Anticipated changes to number of PH functions next year, next 1–5 years (increased no. decreased no., no change) ■ Encountered any difficulties regarding recruitment of staff due to shortage of qualified applicants, suitably experienced applicants (specify) ■ Suggestions proposed to overcome recruitment difficulties
Role of service	<ul style="list-style-type: none"> ■ Major functions of program for which responsible ■ Provide service to following areas? mental health etc (target areas) ■ If so, comment on type of involvement ■ What are the most important services you work with closely? ■ Within health, outside health

C9 Survey of the Public Health Workforce, 1994 — service program coordinators and managers

Topic area	Information collected
Staff training	<ul style="list-style-type: none"> ■ In order to strengthen performance of service, any training needs of current staff ■ What kinds of training programs were provided to your public health staff in the last two years?
Additional comments	

Source: (DHS & UNSW 1999)

C10 Survey of the Public Health Workforce, 1994 — graduates and students

Topic area	Information collected
Background details	<ul style="list-style-type: none"> ■ Sex ■ Country of birth ■ Age group ■ Main occupation before started public health
Educational background	<ul style="list-style-type: none"> ■ Formal courses completed following secondary school (public health and other post-secondary or tertiary education): <ul style="list-style-type: none"> - Course - Institution - Year completed ■ Currently enrolled in tertiary course: <ul style="list-style-type: none"> - Course - Institution - Year enrolled ■ Student status for public health course (Internal part time / full time or external / distance education or mixed) ■ Overseas paying student ■ Coursework or research
	<ul style="list-style-type: none"> ■ Main reasons initially enrolled (promotion, change career, gain employment, skills etc) ■ Main reasons why studied at the chosen uni ■ Specialisation in mind (specify) ■ Research project ■ Topic ■ Funding for study ■ Extent to which course met expectations ■ Subject profile
Past and current employment	<ul style="list-style-type: none"> ■ Employed before enrolment (full-time / part-time etc.): <ul style="list-style-type: none"> - Where employed (employer name, title of position, area of work) - Sector of employment (health / non health) - Type of organisation - Postcode of employment ■ Currently employed: <ul style="list-style-type: none"> - Where employed (employer name, title of position, area of work) - Sector of employment (health / non health) - Type of organisation - Postcode of employment - Do you consider yourself to be part of the public health workforce? - What functions do you perform on the job - Which is your major function (management etc) ■ Do you anticipate career changes in the next five years (specify) ■ Undertaking or planning to do further study (specify)
Knowledge and skills in public health	<ul style="list-style-type: none"> ■ Determine skills and knowledge in relation to importance to practice, level of competence, the extent to which they were covered in course and level of additional training required: <ul style="list-style-type: none"> - Identify demographic factors which influence public health - Identify social and cultural factors which influence public health - Identify economic and political factors which influence public health - Identify environmental factors which influence public health

C10 Survey of the Public Health Workforce, 1994 — graduates and students (cont'd)

Topic area	Information collected
Knowledge and skills in public health	<ul style="list-style-type: none"> ■ Determine skills and knowledge in relation to importance to practice, level of competence, the extent to which they were covered in course and level of additional training required: <ul style="list-style-type: none"> – Design and conduct epidemiological studies to assess health status of population – Identify public health targets and priorities for Australians – Use quantitative analysis in assessment of public health programs and services – Use computer software packages for statistical data analysis – Critically appraise published literature – Prepare reports and articles on public health issues – Design and conduct economic analyses of public health programs and services – Interpret health related laws and regulations in Australia – Identify public health targets and priorities for special population groups – Describe issues in international health – Explain how public health law programs operate at different levels of the health system – Describe the particular issues relating to mental health programs and services – Demonstrate a working knowledge of diseases of major public health importance – Make provisional assessments of threats to health arising from the physical environment
Knowledge and skills in public health	<ul style="list-style-type: none"> ■ Determine skills and knowledge in relation to importance to practice, level of competence, the extent to which they were covered in course and level of additional training required: <ul style="list-style-type: none"> – Identify demographic factors which influence public health – Identify social and cultural factors which influence public health – Identify economic and political factors which influence public health – Identify environmental factors which influence public health – Design and conduct epidemiological studies to assess health status of population – Identify public health targets and priorities for Australians – Use quantitative analysis in assessment of public health programs and services – Use computer software packages for statistical data analysis – Critically appraise published literature – Prepare reports and articles on public health issues – Design and conduct economic analyses of public health programs and services – Interpret health related laws and regulations in Australia – Identify public health targets and priorities for special population groups – Describe issues in international health – Explain how public health law programs operate at different levels of the health system – Describe the particular issues relating to mental health programs and services – Demonstrate a working knowledge of diseases of major public health importance – Make provisional assessments of threats to health arising from the physical environment
Knowledge and skills in public health (continued)	<ul style="list-style-type: none"> – Work effectively in multi-disciplinary teams – Communicate effectively on health matters including appropriate use of media – Advocate effectively with governments to influence health policy – Demonstrate a working knowledge of models of behaviour change – Design and conduct a health promotion/education program – Identify major ethical issues relating to health programs and services – Plan and manage health programs and services – Evaluate the effectiveness of health programs and services – Facilitate and participate in community development activities. ■ Did your postgraduate training: <ul style="list-style-type: none"> – Prepare you well for the job – Influence your commitment to your career – Help decide which area to work in – Help obtain a job – Help obtain a promotion or preferred position – Help make a career change – Assist in professional life – Increase understanding of public health issues ■ Identify skills or knowledge required that were not adequate in course ■ Strengths and weaknesses of course ■ Changes you would recommend to course

Source: (DHS & UNSW 1999)

C11 **Survey of the Public Health Workforce, 1994 — demographics, employment history, work status, current employment, education history and career aspirations**

Topic area	Information collected
Demographics	<ul style="list-style-type: none"> ■ Sex ■ Aboriginal or Torres Strait Islander origin ■ Postcode of residence in Australia ■ Specify age group ■ Current occupation ■ Membership of professional associations (Public Health Association of Australia, Community Health Association, Australasian Faculty of Public Health Medicine, Australian Association of Health Promotion Professionals, Australian College of Health Service Executives, other)
Employment history	<ul style="list-style-type: none"> ■ Worked in health related area ■ If no, what was your occupation ■ What was first job on entering health workforce ■ How many years been working in total since leaving school
Work status	<ul style="list-style-type: none"> ■ Primary work status last 5 years, 1 year, current and anticipated in 12 months time (working in public health and related field, clinical and other health sector area, non health related area, studying etc.) ■ Last 5 years, worked in public health overseas ■ Indicate countries, major areas of work undertaken
Current employment	<ul style="list-style-type: none"> ■ Main job ■ Name of employer ■ Title of position ■ In what area ■ Work in more than one location (how many) ■ Category of main work location (city etc.) ■ Job in health sector ■ Type of organisation ■ Main work setting ■ Years in current job ■ Other paid employment
Employment mode (main job)	<ul style="list-style-type: none"> ■ Wage, sessional, fee for service, contract, other
Employment status	<ul style="list-style-type: none"> ■ Permanent, full-time, part-time, job share, casual ■ Specific time spent working in programs targeting mental health etc. ■ Hours per week on average spent in each area (management, policy and planning, administration and support, health personnel, communicable diseases, non communicable disease surveillance, clinical services, monitoring inspection, development and administration of public health law, health promotion, health program evaluation, other research, community development and advocacy, other etc.) ■ Rate your competency in the areas ticked and indicate whether you need additional training (areas as above)
Education history	<ul style="list-style-type: none"> ■ Initial highest academic qualification ■ Highest qualification ■ Current studying ■ Continuing education / professional development past present and intended ■ Difficulty undertaking further education and training relevant to current position, main reasons ■ Course improved to meet education needs
Career aspirations	<ul style="list-style-type: none"> ■ Intending career in public health ■ See any obstacles in continuing to advance career, specify ■ Have prospects for advancement in career, reason why ■ What would you chose as your preferred role in five years time

Source: DSHS & UNSW (1994)

C12 Public Health Program Evaluation Questionnaire, 2004

Topic area	Information collected
Demographics	<ul style="list-style-type: none"> ■ Sex ■ Country of birth ■ Year of birth ■ English main language at home ■ English your first language ■ Qualifications before started course ■ University qualification from ■ Year qualification conferred (1999) ■ Enrolment status (full-time / part-time) ■ If external, main reason why chose this (geography, job commitments, family etc.)
Employment before commencing course	<ul style="list-style-type: none"> ■ Employment status when enrolled ■ Main professional occupation before course ■ Setting of employment ■ Functions performed in job ■ Main function performed
Course information	<ul style="list-style-type: none"> ■ Main reason enrolled (to get promotion, increase professional competence, commence new career etc.) ■ Reasons for deciding to study at UNSW ■ Specialisation intended ■ Area intending to specialise in ■ Intention to conduct major project ■ If no, why not?
Employment since commencing the course	<ul style="list-style-type: none"> ■ Change job or new job during course ■ What is new job ■ On completing coursework, what did you do ■ Current employment ■ Setting of current employment ■ Current main professional occupation ■ Time spent on public health in present occupation (full-time / part-time / no time) ■ Functions performed in the job ■ Main function
Attitudes to public health course	<ul style="list-style-type: none"> ■ Use of course: <ul style="list-style-type: none"> - In achieving employment or promotion - Influencing career commitment - Extent to which the course - Met expectations - Provide skills - Add to knowledge - Prepare you for public health career - Prepare you for your current job - Help decide area of work interest - Help promotion - Help career change - Assist in professional life ■ Are you undertaking further education or training in public health ■ Plan to undertake more formal training in public health ■ How strongly would you recommend the course to others ■ Any topics like to have studied but not offered ■ Any areas you consider essential to public health not included in course

C12 Public Health Program Evaluation Questionnaire, 2004 (cont'd)

Topic area	Information collected
Attitudes to public health course	<ul style="list-style-type: none"> ■ Comment on the: Importance (How important is this area in your present work? (not, some, very); UNSW contribution (How much did your study at UNSW contribute to your knowledge and skills in this area? not some very); Competence (How competent are you in this area? (not, some, very) of knowledge and skills in public health including ability to: <ul style="list-style-type: none"> - Understand health system structures and the drivers of health system change - Identify scope role and functions of public health in relation to health system, other sectors and society - Apply common/standard biostatistical methods - Apply qualitative concepts and methods to your practice as appropriate - Understand the basic principles and concepts of descriptive epidemiology - Understand the principles of disease prevention and control - Conduct research in public health - Critically appraise research in public health - Understand the contribution of the biological sciences to the health of populations
Attitudes to public health course (continued)	<ul style="list-style-type: none"> - Understand the contribution of environmental sciences to the health of populations - Understand the contribution of the behavioural sciences to the health of individuals and populations - Understand the contribution of the social science disciplines (sociology, anthropology, political science) to the health of populations - Understand the contribution of economics concepts and principles to public health - Identify, contrast and apply the primary approaches for setting priorities in health - Plan and manage programs - Evaluate programs and services - Develop and analyse policy - Design a health promoting intervention for an individual, community or organisation - Advocate and lobby to support the health of populations - Demonstrate effective written and oral communication in a range of contexts. - Facilitate group/team work and operate effectively as a member of a group or team - Use information technology to effectively communicate, locate information and analyse data - Use analytical, critical thinking, and problem-solving skills to make decisions effectively. - Ability to operate effectively across a range of cultural settings. - Ability to work effectively within culturally diverse groups. - Appreciate current policy debates in global and international health

Source: UNSW (2005)

C13 The Higher Education – Public Health Education Research and Practice Survey

Topic area	Information collected
Background information	<ul style="list-style-type: none"> ■ Year of birth ■ Sex ■ Indigenous background ■ Resident status (Australia / overseas) ■ Main language other than English spoken where you live permanently
Training and experience before started MPH course	<ul style="list-style-type: none"> ■ Degree or certificate and year completed ■ Describe job when started course (occupation and setting eg. A district nurse attached to a community health centre in Broadmeadows) ■ How found out about the course
MPH training and experience	<ul style="list-style-type: none"> ■ Year of commencement MPH – University ■ Year of completion – University ■ Still enrolled – University ■ Specialist stream ■ Reasons enrolled in MPH – Main reasons ■ Why chose specific university – Main reason ■ Funding for MPH ■ Scholarship funding increasing access to course ■ University where did coursework / major project ■ Mandatory to do major project ■ Title of research project ■ Description of how arrived at research topic ■ Workplace based research topic ■ List workplace ■ Importance to MPH curriculum of: <ul style="list-style-type: none"> – Learning about the structures of public health at all levels – Being able to identify the drivers of public health including policy, law, research – Understanding the principles of disease causation (biological, environmental, behavioural, social and cultural) – Understanding social and cultural determinants of health – Understanding quantitative data and methods of quantitative data collection – Understanding qualitative data and methods of qualitative data collection – Developing an ability to critically analyse / interpret evidence presented in a range of research papers, reports, and policy documents
MPH training and experience	<ul style="list-style-type: none"> ■ Importance to MPH curriculum of: <ul style="list-style-type: none"> – Ability to apply the principles of programme planning, management and evaluation – Understanding the principles of health promotion at individual, community and organisational levels and the ability to apply the principles of health programme implementation strategies – Ability to develop (professionally) critical and supportive professional relationships to enable personal reflexivity – Developing knowledge of the role of research evidence in informing public health policy – Actively conducting research for a project/thesis – Other (specify) ■ Overall satisfaction rating with MPH course
The difference the MPH has made to career	<ul style="list-style-type: none"> ■ MPH contributed to your ability to develop and carry out the following with particular respect to your workplace: <ul style="list-style-type: none"> – Project planning – Preparation for evaluation – Problem-solving – Policy development – Critical analysis – Communication – Networking across disciplines – Teamwork – Identifying and locating information – Synthesise information – Understand models of public health practice – Understand mechanisms of public health service delivery – Other (specify)

C13 The Higher Education – Public Health Education Research and Practice Survey

Topic area	Information collected
The difference the MPH has made to career	<ul style="list-style-type: none"> ■ Indicate how the statements in the following list apply with respect to the impact of your MPH training: <ul style="list-style-type: none"> – My postgraduate training has increased the number of job opportunities available to me – My postgraduate training did not adequately prepare me for my subsequent positions – I have more responsibility in my current job because of my postgraduate training – I would have secured my current job even without a postgraduate training – I am on the same salary in my current job as I would be without postgraduate degree – I am able to perform my current job at a higher level of effectiveness because of my postgraduate training – My postgraduate training is not relevant to the day-to-day work of my current job – I have been asked to join groups / committees because I have postgraduate training in public health – My career path has not met the expectations I had when I enrolled for my postgraduate training in public health – The impact of my contributions to the community was enhanced by my postgraduate public health training – I have no plans to undertake further study in public health in the future – The MPH experience has broadened my view of public health – Other (specify) ■ Overall rating of whether MPH prepared you for public health practice: <ul style="list-style-type: none"> – I feel that my MPH has prepared me excellently for public health practice – I feel that my MPH has prepared me adequately for public health practice in most areas ■ I feel that my MPH has partially <ul style="list-style-type: none"> – prepared me for public health practice in some areas – I do not feel that my MPH has prepared me at all for public health practice – Which subjects have most influenced your professional understanding, outlook and views – Which areas and subjects have most influenced your career choice – Undertaken further public health or other training ■ How strongly recommend course to others ■ Description of career intentions ■ Reflections

Notes: MPH=Masters of Public Health

Source: Victorian Consortium of Public Health (2004a)

C14 Survey from the Population Health Program at the University of Queensland to evaluate course content in relation to supporting dissertation development

Topic area	Information collected
Preparation for dissertation	The coursework subjects provide a good basis for preparing a detailed dissertation proposal (5 point scale from strongly agree to strongly disagree)
	I believe that the coursework should include a compulsory transition subject/s designed to enable students to plan their dissertation (5 point scale from strongly agree to strongly disagree)
	If such a subject were part of the course requirements what topics would you like it to cover? (open ended response)
	Do you have any comments on how the structure of content of the coursework subjects could be improved to assist students in the management of their dissertation? (open ended response)

Source: <http://www.uq.edu.au/teaching-learning/index.html?page=7426> (accessed 3 Nov 2006)

Abbreviations

ABS	Australian Bureau of Statistics
ANTA	Australian National Training Authority
AVCC	Australian Vice-Chancellor's Committee
AVETMISS	Australian Vocational Education and Training Management Information Statistical Standard
CEQ	Course Experience Questionnaire
DEST	Australian Government Department of Education, Science and Training; (Previously known as the Department of Employment Training and Youth Affairs (DETYA), and before that the Department of Education, Employment and Training (DEET))
ESS	Employer Satisfaction Survey
GCCA	Graduate Careers Council of Australia
GDS	Graduate Destination Survey
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
MPH	Masters of Public Health
NCVER	National Centre for Vocational Education and Research
NETSU	National Education and Training Statistics Unit
SETIT	Survey of Education and Training and Information Technology
SEW	Survey of Education and Work
SOS	Student Outcomes Survey
VET	Vocational Education and Training

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