

# **Senate Inquiry into Current and Future Skills Needs**

**A submission by the**

**Australian National Training Authority**

**March 2003**



**AUSTRALIAN  
NATIONAL TRAINING  
AUTHORITY**

## **Terms of Reference**

The inquiry is to report on:

- a) Areas of skills shortage and labour demand in different areas and locations, with particular emphasis on projecting future skills requirements.
- b) The effectiveness of current Commonwealth, State and Territory education, training and employment policies, and programs and mechanisms for meeting current and future skills need, and any recommended improvements.
- c) The effectiveness of industry strategies to meet current and emerging skill needs.
- d) The performance and capacity of Job Network to match skills availability with labour market needs on a regional basis and the need for improvements.
- e) Strategies to anticipate the vocational education and training needs flowing from industry restructuring and redundancies, and any recommended improvements.
- f) Consultation arrangements with industry, unions and the community on labour-market trends and skills demand in particular, and any recommended appropriate changes.

## **1 Introduction**

- 1.1 Since ANTA began operation in 1992, there has been a significant shift in how Australian skill needs have been met through vocational education and training (VET).
- 1.2 Over the past decade, there has been an increase in education and training associated with service industries and related occupations, faster growth than that experienced in the 'traditional trade' industries.<sup>1</sup>
- 1.3 This trend reflects the fact that service industries are increasingly contributing to economic growth and are using the VET sector more and more to skill their workforce - retail, business services, tourism and hospitality are among some of the fastest growing sectors.
- 1.4 The skill sets in the traditional trades have not remained static either - technology and innovation has revolutionised industries like manufacturing and automotive. The industries which had traditionally used VET are not the same today as they were even a decade ago.
- 1.5 Internationalisation and competitive pressures have also shifted the focus to the need to provide more generic and employability skills to enable businesses to operate more effectively and efficiently in an increasingly global marketplace.
- 1.6 Photonics, biotechnology and rapidly changing communications and information technology industries are having major impacts on Australian industry and on the skills required by the Australian workforce.
- 1.7 New occupations can emerge quite quickly and skill shortages naturally occur. Technology, innovation, new management practices and different work processes also changes how work is done in other industries meaning that skill shortages occur as the industries catch up to the new work practices that these factors inevitably bring about.
- 1.8 In 1992, it is doubtful that anyone could have predicted the skills required today, particularly in the areas of the emerging technologies. It is even more doubtful that we will know what the skill needs of the nation will be in 2013.
- 1.9 However, what we can do, and what we have done, is to ensure that the education and training system is as responsive as possible to the changing skill needs of the Australian workforce - that industry knows that if it needs skills and knowledge, it can turn to the VET sector for a quick response. We cannot predict the future, but we can plan for it.
- 1.10 Over the last five years, many partners have worked together to build a quality national VET system that meets client needs. This has been done by focussing not only on what industry - the ultimate end user of workforce skills - needs from the VET system, but also on the skill needs of individual learners.
- 1.11 Training Packages have been introduced and are being embedded in a wide range of industry training settings, industry advisory arrangements are in place, and being strengthened, to ensure the sector is getting the best possible advice on industry skill

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<sup>1</sup> NCVER *Vocational education and training in Australia 1991 to 2000* page 8.

needs and training organisations are developing stronger partnerships with their local business communities. This has all been done within a solid quality framework.

- 1.12 While further work is needed, the VET sector is delivering skills to an increasing number of Australians. In 2001, 1.76 million students participated in publicly funded VET. In 1992, there were just over one million students.
- 1.13 The new national strategy for vocational education and training, which is currently being developed, will be looking at the strategies and activities needed to take the sector to 2010.
- 1.14 A major piece of work on future demand and growth for VET to 2010, which could have informed this submission, is not yet finalised. The report will be considered by Ministers in June.
- 1.15 Notwithstanding that, this submission focuses on a range of issues which cut across the terms of reference for the inquiry, including:
  - ▶ Features of the national VET system which help meet the skill needs of Australian industry
  - ▶ Improving industry advice in the VET sector
  - ▶ Understanding the nature of skill shortages
  - ▶ Future skill needs.
- 1.16 Before proceeding, it is important to understand the role of ANTA.

## **2 The Australian National Training Authority**

- 2.1 ANTA was established by the *Australian National Training Authority Act 1992* to promote the development of a national VET system. ANTA's objectives are specified in an ANTA Agreement that is negotiated between the Commonwealth, States and Territories. The Agreement provides for a joint partnership between governments and industry.
- 2.2 ANTA is a Commonwealth statutory authority with an industry-based Board that reports to and advises the ANTA Ministerial Council consisting of the Ministers from each State and Territory and the Commonwealth who are responsible for VET. The Commonwealth Minister chairs the Ministerial Council.
- 2.3 ANTA's role is to work co-operatively with governments, industry partners, equity groups, provider representatives and other key groups to build a fully integrated, quality, national VET system that meets client needs. Our clients are learners, the employers who hire them, and the communities in which they live.
- 2.4 ANTA does this by advising the Ministerial Council on national policy, strategy, priorities, goals and objectives. ANTA also has key planning and reporting responsibilities, distributes Commonwealth funding for the national system to States and Territories and administers a range of national projects and national programs. ANTA does not have a direct role in the administration of the system - that is the responsibility of the States and Territories.

- 2.5 One of ANTA's key functions is to embody industry leadership and advice into the decision-making processes of the sector. To help with this, ANTA developed a set of industry advisory arrangements to ensure that industry's voice is heard. These arrangements have carried forward a major shift in the VET sector around Training Packages and have been influential in shaping the system's response to changing industry skill needs. Current arrangements are under review and will be discussed in a later section of this paper.

### **3 The National VET system and meeting industry skill needs**

- 3.1 Industry leadership is at the heart of the Australian VET system and the reforms of the last ten years have been all about better positioning the VET sector to meet current and emerging skill needs of industry and individuals.
- 3.2 Industry defines the skill outcomes to be achieved by students in the VET sector. This represents a major shift in the conduct and make-up of VET in Australia. Known as **competency based training**, it is quite different from what was in existence even in the early 1990's, which featured time-based programs dependent on institutional practices and strictly defined pathways. What exists now is a system in which skills and knowledge are recognised based on demonstrated experience - experience which can be gained from a wide range of settings, including on-the-job.
- 3.3 These outcomes are defined in **Training Packages**, which spell out the competencies industry expects learners to have to work in the industry, as well qualification and assessment guidelines. They represent a snapshot of the contemporary skill needs of Australian industry. Training Packages are regularly reviewed by industry to ensure the skill outcomes defined in the Packages are as up to date as possible, taking into account both the current and future skill needs of the particular industry.
- 3.4 As at March 2003, 70 industry and seven enterprise Training Packages have been endorsed. There are five additional industry and two enterprise Training Packages under development. Nine reviews have been completed and a further 41 reviews are in progress. The reviews have focussed on continuous improvement following from feedback on implementation over a three year period. There has also been a national focus on reducing the duplication of units and improving the consistency of units across the Training Packages of different industries. ANTA is currently heading a high level review of Training Packages to ensure they meet and continue to meet current and future skill needs.
- 3.5 Another important feature of the national system is that of the **nationally recognised qualification**. This represents a move away from the myriad of local courses available in 1994, when employers had little understanding of their content and value, to a structure in which there are now consistent definitions and standards across Australia for all levels of Certificates and Diplomas. These are defined in the **Australian Qualifications Framework**, which underpins qualifications issued in the upper level of secondary schooling, in VET and in higher education. People who possess a nationally recognised qualification can go anywhere else in Australia and have their skills recognised. ANTA is currently working on a 'skills passport' to assist in the recognition of skills and knowledge.
- 3.6 The current legislative framework does not fully support a nationally consistent vocational education and training system. In November 2002, Ministers agreed to a

range of model clauses, the enactment of which, or substantially similar provisions, in State and Territory vocational education and training legislation will ensure the requirements for a national registration and accreditation scheme are met. The model clauses will also remove the legislative barriers to New Apprenticeship pathways and implement a nationally agreed training agreement.

- 3.7 Alongside this has been a concerted effort to introduce standards into the delivery of training by Registered Training Organisations so that the clients of the system can be assured they receive a quality learning experience. Known as the **Australian Quality Training Framework** (AQTF), it covers the standards required for the registration of training organisations and the accreditation of courses by the relevant State and Territory bodies. Public, private, enterprise and community providers that meet the standards can be registered to deliver nationally recognised qualifications. This has led to the opening up of the training market, providing for more choice for clients while assuring quality and consistency across the nation.
- 3.8 One of the major success stories of the last five or six years has been the revamping of the apprenticeship and traineeship system through **New Apprenticeships**. Building on competency based training and the increasing penetration of Training Packages, apprenticeship and traineeship opportunities were opened in a much wider range of industries and occupations.
- 3.9 In 1990, some 93% of all apprenticeships and traineeships were in the traditional trades, which represented only 14% of all jobs in Australia<sup>2</sup>. Today, while skill trades still represent over half of all apprenticeships and traineeships, clerical, sales and service occupations, which make up almost a third of all Australian jobs, now covers 30% of apprenticeship and traineeship places.
- 3.10 In 1995, there were 135,900 apprentices and trainees in training. By the end of 2002, this figure had jumped to over 370,000. Opportunities for women, Indigenous people, people with a disability and people from a non-speaking background have grown strongly over this time.
- 3.11 Another important development in recent years has been the rapid expansion of **VET in schools**. VET in schools enables students to gain work ready skills while they are attending school, thereby making them more attractive to a prospective employer. There is a wide range of programs being delivered throughout Australia delivering nationally recognised skills. Latest figures show that some 170,000 school students are participating in VET in schools programs.
- 3.12 ANTA is working with industry and the States and Territories to develop a new range of courses at Certificate I level which are more generic in nature and could provide the opportunity for students to access training in a broader range of areas. ANTA is also engaged in collaborative work to address concerns over the quality of VET in schools programs. More detail on these issues can be found in ANTA's submission to the House of Representatives Standing Committee on Education and Training's Inquiry into Vocational Education in Schools.

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<sup>2</sup> NCVET *Australian Apprenticeships: Fact Fiction and Future (Research at a Glance)* p7

## **4 Industry Advisory Arrangements**

- 4.1 One of the main ways of identifying and addressing industry skill needs is to ensure the needs of the end users are heard and clearly understood. This underpins the importance of robust industry advisory arrangements.
- 4.2 The ANTA Board is currently reviewing the national industry advisory arrangements. New arrangements are expected to be announced shortly to strengthen industry leadership of VET activity.
- 4.3 Industry skills councils are being proposed to:
- ▶ actively support the development, implementation and continuous improvement of high quality, nationally recognised training products and services, and
  - ▶ assist industries, enterprises and their workforce to integrate skill development with business goals and support accurate industry intelligence on future directions.
- 4.4 A National Industry Skills Forum is also proposed as a mechanism to bring the leaders of industry together to discuss, among other things, future skills needed to support a competitive Australian economy.

### **Industry advice in current planning for the VET sector**

- 4.5 Under current planning arrangements, industry advice on future directions is included in the report on directions and resource allocation presented to Ministers each year in November. This report essentially sets out the activities to be undertaken to address agreed national priorities as well as funding arrangements for the VET sector in the following year.
- 4.6 In the report for 2003 (presented to Ministers in November 2002), an analysis of strategic industry plans was included as context for the planning horizon covered by the report. These industry plans were prepared by the bodies comprising the national industry advisory arrangements in 2002.
- 4.7 Some of the trends identified by industry in the coming years include:
- ▶ For most industries the relentless pressure on costs, quality and productivity produced by globalisation and competition is increasing the demand for high quality and skilled labour.
  - ▶ The relationship between the introduction of new technology, new work processes and the rapid evolution of new products and services is seen to require new approaches to learning and skill development, with a much greater premium on ongoing and “just in time” training.
  - ▶ There is an increasing emphasis on the skills required to operate in global markets, including international business skills.
  - ▶ There is an increasing need for integrated approaches to skill enhancement encompassing the development of a learning culture within firms and across industries and more effective approaches to employee recruitment, retention and retraining.

- ▶ Retraining the existing workforce is rapidly emerging as a priority issue, given:
    - demographic changes;
    - changing work processes and job requirements;
    - technological change; and
    - the difficulty some industries have in attracting young people or retaining existing workers.
  - ▶ The need to address skill shortages and adjust products and outputs accordingly continues to be an ongoing issue.
  - ▶ Training implications of emerging regulatory, health and safety and environmental requirements and international standards are becoming apparent in a number of industries.
  - ▶ The quality of training provision remains an ongoing concern in a significant number of industries, together with the need for innovative solutions to be made available to meet the needs of specific enterprises.
  - ▶ Effective marketing of the benefits of training and new products and opportunities is seen as critical for both individuals and enterprises to gain an understanding of, and confidence in, what the VET system has to offer.
  - ▶ An emerging issue for some industries is the relationship with the higher education sector, particularly in terms of course articulation.
  - ▶ Some organisations also raised the issue of skills recognition, including the development of skills cards or records within their industry sectors. Although this issue has had a problematic history at a national level the proliferation of different arrangements across industry sectors would not seem to be desirable in terms of the recognition of skills across industry sectors.
- 4.8 For the most part, these issues are being addressed in planned priorities and activities of the sector.

## **5 Understanding Skill Shortages**

- 5.1 Skill shortages can occur for a range of reasons - often intermixed and often complex. They can be dependent on the stage of the economic and business cycle - periods of rapid growth are often associated with a shortage of readily available skilled labour. Industrial factors, like wage rates, conditions and licensing arrangements, may impact on the supply of skilled labour. There are also perception issues where, for whatever reason, people may not want to choose a career in a particular industry.
- 5.2 Skill shortages are also not static. While it is true that some industries experience persistent skill shortages, the nature of the skills required changes over time due to advances in technology and changing work practices.
- 5.3 For example, the retail automotive industry has had persistent skill shortages, yet the skills required in the industry today are quite different to what they were even ten years ago. Now, the jobs are much more reliant on computer skills than the traditional 'grease monkey' image. This is also true for industries like the manufacturing industry



which often has the tag of a 'dirty' industry, something that does not truly reflect the modern workplace.

- 5.4 Identifying skill needs and addressing shortages is, therefore, quite a difficult task. Finding solutions extends beyond the purview of any one group - be they government or industry. From the perspective of the VET sector, many solutions to skill shortages are not related to training.
- 5.5 To expand on this there are a number of influences or elements as part of the career decision-making process, including:
  - ▶ A person's interest in a particular field or occupation
  - ▶ Whether the person feels they have the ability to perform based on their achievements in comparable study areas to date
  - ▶ The career information they have available to inform their decision making
  - ▶ Influences from their teachers, peers or parents (particularly important for young people)
  - ▶ Economic conditions like wages, employment prospects and training costs
  - ▶ Non-financial factors like the image and status of the occupation, the tasks involved and development opportunities.
- 5.6 What this says is that even with the best government programs in place, there are factors beyond the control of government that can determine whether skill needs are met or not.
- 5.7 The Commonwealth Government, through the National Industry Skills Initiative, is working in partnership with a range of industries experiencing skill shortages to identify what actions can be taken by government, by industry and by industry and government working in partnership. More information on this can be obtained from [www.skillsinitiative.gov.au](http://www.skillsinitiative.gov.au).

## **6 Future Skill Needs**

### **Modelling Future Skills**

- 6.1 Despite the discussion above about the rapidly changing nature of skills in the workforce, many attempts are made at predicting the skill needs of the future through the use of models. This section covers the model that ANTA currently uses as well as provides an overview of a major research project underway that attempts to target more clearly future demand and growth for VET.

### Monash Forecasts

- 6.2 The Centre of Policy Studies at Monash University provides an employment forecasting service to ANTA as well as to a range of other government and private sector clients.
- 6.3 The most recent forecasts indicate some large differences in employment growth rates across industries. Although the overall level of employment is forecast to increase by 10.8% over the eight years from 2001-02 to 2009-10, some industries such as Property and Business Services, and Cultural and Recreational Services are anticipated to expand at more than twice the average rate. Other industries such as Manufacturing are

forecast to experience almost no employment growth, while Electricity, Gas and Water Supply is forecast to experience a decrease in employment. The forecasts are summarised in Table 1.

**Table 1: Employment Growth by Industry, Australia, 2001-02 to 2009-10**

INDUSTRY	2001-02	2009-10	Change
Agriculture, Forestry & Fishing	438,300	431,400	-1.6%
Mining	80,900	81,300	0.5%
Manufacturing	1,098,200	1,103,500	0.5%
Electricity, Gas & Water Supply	66,800	55,200	-17.4%
Construction	705,800	785,700	11.3%
Wholesale Trade	435,500	481,100	10.5%
Retail Trade	1,394,500	1,531,700	9.8%
Accommodation, Cafes & Restaurants	463,900	536,900	15.7%
Transport & Storage	414,800	445,100	7.3%
Communication Services	169,500	190,700	12.5%
Finance & Insurance	349,400	348,800	-0.2%
Property & Business Services	1,043,300	1,352,300	29.6%
Government Administration and Defence	393,300	398,500	1.3%
Education	645,800	734,300	13.7%
Health & Community Services	908,700	1,027,700	13.1%
Cultural & Recreational Services	234,000	299,800	28.1%
Personal & Other Services	364,800	402,100	10.2%
TOTAL All Industries	9,207,400	10,206,100	10.8%

Source: Monash University, Centre of Policy Studies (2002) Employment Forecasts, December 2002.

- 6.4 The skill sets required across industries are affected by the occupational profile of that industry. Therefore, it is also important to look at changes taking place in the occupational composition of the workforce when examining possible scenarios for future skill needs.
- 6.5 As can be seen in Table 2, the Professionals occupational category is forecast to experience the strongest growth over the decade to 2010. Occupational categories which are typically aligned with vocational education and training, such as Associate Professionals and Intermediate Clerical, Sales and Service Workers are also forecast to experience strong growth.
- 6.6 Although the traditional VET area of the Tradespersons and Related Workers occupations is forecast to experience below average employment growth, this figure may significantly understate the emphasis that needs to be placed on skills development for this group. This is because of the trades being a traditional staging ground for progression to other occupations at the same or higher skill levels.
- 6.7 Further, an investigation at the broad industry and occupational level masks the changing nature of skills and knowledge within the industry and the impact of demographic factors (like the ageing workforce) on the demand for skills. It also does not identify how employment changes translate to demand for skills and how that, in turn, relates to the demand for VET.

**Table 2: Employment Growth by Occupation, Australia, 2001-02 to 2009-10**

OCCUPATION	2001-02	2009-10	Change
Managers and Administrators	719,000	797,600	10.9%
Professionals	1,704,600	2,051,100	20.3%
Associate Professionals	1,086,200	1,239,100	14.1%
Tradespersons & Related Workers	1,176,900	1,218,000	3.5%
Advanced Clerical & Service Workers	398,500	393,500	-1.3%
Intermediate Clerical, Sales & Service Workers	1,575,700	1,817,500	15.3%
Intermediate Production & Transport Workers	794,300	843,700	6.2%
Elementary Clerical, Sales & Service Workers	903,600	949,200	5.0%
Labourers & Related Workers	848,500	896,600	5.7%
TOTAL All Occupations	9,207,400	10,206,100	10.8%

Source: Monash University, Centre of Policy Studies (2002) Employment Forecasts, December 2002.

### Future Demand and Growth for VET to 2010

- 6.8 ANTA is currently managing a project on future demand and growth for VET to 2010 which is attempting to more explicitly define the links identified above. In summary, the project involves:
- ▶ conducting labour market forecasts by occupation and by industry to 2010, taking into account factors like demographic and technological change
  - ▶ examining policy developments and their possible influences on demand for skills
  - ▶ considering changes in skill demands and the propensity to participate in VET.
- 6.9 The final report will be provided to the Ministerial Council for their consideration in June 2003 and could be made available to the Committee immediately thereafter.

### **Emerging Technologies**

- 6.10 Even without detailed forecasting models, a little is already known about the skills needs of the next five to ten years. One of the areas typically identified when discussing future skill shortages is that of the emerging technologies.
- 6.11 According to the NCVER, “the boundaries between emerging and traditional industries are very fluid. Innovations in process and knowledge infusion in traditional industries and opportunities for new and old technologies to converge need to be considered as part of emerging industries.”<sup>3</sup>
- 6.12 Industries that are typically identified as emerging industries include information technology, biotechnology, nanotechnology, micro-electronics, telecommunications (including photonics), environmental management and materials technology. Many of these technologies are enabling technologies and can work across many industries.
- 6.13 By their nature, the skill needs of these industries, and the industries on which they impact, change rapidly. The shelf life of skills has become much shorter than was the

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3 NCVER (2003) *Meta-analysis: New approaches to identifying the training needs of new and emerging industries and occupations* draft working document

case even five to ten years ago. This poses particular challenges for how skills are identified and training provided in time to meet the skill needs of the affected workforce.

- 6.14 The focus for meeting the skill needs of these industries is on flexibility, a quick and innovative response, while at the same time delivering a quality skills and knowledge outcome. 'Just in time' education and training is important.
- 6.15 These issues pose challenges for how Training Packages and training products are designed and implemented, as well as for how VET providers interact and respond to the needs of these industries. ANTA is working with relevant stakeholders to work through these issues.
- 6.16 Emerging industries is also a topic for investigation by the Commonwealth government's National Industry Skills Initiative (report not yet released).

### **Employability Skills**

- 6.17 Employers are seeking a more highly skilled workforce with generic and employability skills as well as technical skills. The incorporation of such skills in VET programs is a priority to assist enterprises in responding to the needs of the modern economy and to ensure that individuals can respond to the changing demands of the workforce and maintain their employability.
- 6.18 A recent BCA/ACCI report, *Employability Skills for the Future*, reported that a broader range of key skills is required by industry. These skills include communication, teamwork, problem solving, initiative and enterprise, planning and organising, the capacity for self-management, the capacity to learn and the ability to use technology.
- 6.19 The study also identified personal attributes that contribute to overall employability. While these may be more contentious, the evaluation and reporting of attributes is regarded as important by employers and they understand that this extends beyond the formal VET system.
- 6.20 ANTA is working with industry and the States and Territories to identify the best way generic and employability skills can be embedded in VET programs.
- 6.21 The school and university sectors are also exploring approaches to the employability skills. At the request of the Ministerial Council for Employment, Education, Training and Youth Affairs (MCEETYA) in July 2002, ANTA is co-ordinating a collaborative cross-sectoral approach to assessing the feasibility of implementing the employability skills framework in an integrated and phased manner across the formal education and training sectors. A collective report will be provided to ANTA MINCO and MCEETYA in 2003.

### **Community Development**

- 6.22 Another challenge for the future is the continuing importance of the community. Increasingly, people are looking for the skills they need to develop their local community to be economically, socially and environmentally sustainable. Given the presence of usually a TAFE or other VET provider in most communities, VET can be in a unique position to provide the skills to meet the economic needs of regional development. The Adult and Community Education sector is also an important provider of education and skills to communities.

- 6.23 In looking at future skill needs, it is important to acknowledge that the skills and abilities of all Australians must be recognised and valued. People who face physical, economic or other barriers need particular attention if their skills are to be developed. As such, when looking at future skill needs for Australia, there must be a focus on addressing these barriers.
- 6.24 For the broadest range of social, economic and environmental reasons, it is essential that the potential of Indigenous societies is realised in the shaping of a future Australia. However, the competencies needed in Indigenous communities usually are broader than the technical or 'job skills'. Instead other skills are needed, like community leadership and governance, financial literacy and business management. Flexible and culturally sensitive responses to these skill needs are important. ANTA currently has a blueprint for increasing opportunities for Indigenous Australians in VET (*Partners in a Learning Culture*), which sets out a national plan of action to improve training and employment outcomes for Indigenous people.
- 6.25 ANTA also manages a blueprint for improving outcomes for people with a disability in VET. The blueprint takes a 'whole of life' approach to meeting individual needs, recognising that VET has to work with other services and support networks to deliver good outcomes.