Environment Scan 2009

Printing and Graphic Arts Extract

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IBSA
Innovation & Business Skills Australia

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Introduction

The environment scan (Escan) is one mechanism used by Innovation and Business Skills Australia (IBSA) to understand the skill needs within IBSA's industry sectors.

IBSA's industry sector coverage comprises many enabling skills that are relevant to a wide range of industries. The Escan is consequently an important component of IBSA's intelligence gathering and advice processes.

This is the second year in which the Department of Education, Employment and Workplace Relations (DEEWR) has required Industry Skills Councils (ISCs) to prepare an Escan. IBSA has also sought to further enhance the Escan to ensure it is a deep, thorough and substantive research and advice document.

The external environment

The Escan has been undertaken during a period of significant change in the global and national environment. The macro environment is one of economic deceleration and the likely prospect of a global recession in 2009.

Australia will inevitably be impacted on by the global economic downturn, although the extent of the impact is uncertain. For the Australian labour market it foreshadows increased complexity. There will be areas of skill surplus, resulting in unemployment, co-existing with continuing skills needs in other sectors or regions.

These changes and other major trends and policy changes offer both opportunities and threats for vocational education and training (VET) generally. While the six IBSA sectors each confront their own specific skill issues each is affected by these macro-level changes.

The increasingly complex environment calls for greater innovation that depends on developing human capital. Industry stated in an ABS survey (2008) that innovation depends most on skills that fall within IBSA's responsibilities.

Consequently, IBSA has a particularly important role to ensure that training packages are attuned to business needs relating to these innovation skills.

IBSA sector environment

Escan 2009 survey results indicate that businesses in IBSA sectors are continuing to have some difficulty developing an appropriately skilled and flexible workforce. Training can assist in meeting these challenges. The challenge is to ensure training is available that meets business needs, that employers are aware of the training and of its benefits.

Further, there is a need to ensure that individuals considering their education options are aware of the benefits of VET and of specific opportunities offered by acquiring skills in demand. NCVER data (2008) shows that participants are most likely to gain the greatest benefit from completing higher level VET qualifications.

Qualifications are seen as a benefit to individuals, by providing a recognised certification of competency and knowledge, while skill sets mainly benefit the business by meeting a specific business need. However, VET's wider public funding and data collection system is generally focussed on qualifications.

Escan 2009 survey results and stakeholder consultation indicates that businesses frequently do not engage with VET, either because they do not understand it or view VET as excessively bureaucratic. Consequently, there is an opportunity to better match the interests of learners, businesses and government. Wider VET reform, which is presently being led by COAG, is attempting to do this. The Escan confirms that successful VET reform could unlock significant benefits for both industry and individuals.

The Escan has captured the views of industry stakeholders across IBSA's six sectors regarding attitudes to formal and informal training, emerging areas of skill demand and the adequacy of existing VET training for specific occupations. The Escan considers how IBSA training packages can contribute to better VET outcomes. In relation to the IBSA sectors, there are significant differences both in the relevance of training to employment and the level of engagement with VET by industry sectors (Escan 2009 survey).

NCVER data (2008) presented in Chapter 4 shows that improved employment outcomes are clearly correlated to the completion of VET qualifications and the level of qualification completed. Consequently, it is important to monitor VET participation rates and qualification completions within the training packages, as this is one indicator of the effectiveness of each package.

While the complexity associated with training package reviews is acknowledged, stakeholders reported that they consider the review processes to be excessively long. Very long reviews undermine confidence in the process and may detract from the currency of packages once they are implemented. Although this remains an issue for the VET system generally, the training package continuous improvement process that commenced in 2008 is expected to improve the situation.

The rapid change in the external economic environment during 2008 and early 2009 underscores the difficulty in predicting growth and decline in specific occupations and job roles. It is however necessary to develop a sense of business employment intentions. To achieve this Escan 2009 has been developed in two phases:

- The first phase of the Escan obtained industry views via initial stakeholder consultation and survey on expected demand for priority occupations and job roles over both the next 1 – 2 years and around 5 years.
- The second phase subjected a draft Escan report, including survey results of employment intentions, to scrutiny by IBSA industry stakeholders. The final Escan report reflects the feedback obtained during these validation forums.

Chapter 1

Introduction

IBSA is an ISC with responsibility for activities across six industry sectors encompassing business services, cultural and related industries, education, financial services, information and communications technologies (ICT) and printing and graphic arts. IBSA aims to build capability, professionalism and innovative capacity in Australia's workforce in these six industry sectors.

Box 1.1

INNOVATION AND BUSINESS SKILLS AUSTRALIA

IBSA is one of eleven ISCs funded by the Australian Government through DEEWR. ISCs are not-for-profit organisations. They advise and support the use of the national VET system.

The role of ISCs was refined in 2008 and now includes:

- providing industry intelligence to Skills Australia
- providing independent skills and training advice to enterprises
- supporting the development, implementation and continuous improvement of high quality training and workforce development products and services
- working with enterprises, Employment Services Providers and Registered Training Organisations (RTOs) to ensure that individual and enterprise training needs are matched to appropriate training.

IBSA has responsibility for the following six industry sectors, all of which contribute significantly to driving innovation within the Australian economy:

- business services
- cultural and related industries
- education
- financial services
- ICT
- printing and graphic arts.

A significant component of each ISC's role is to ensure the continued relevance and quality of the training packages assigned to its industry sectors. There are eleven training packages associated with IBSA's industry sectors. Many of the skills associated with IBSA's industry sector training packages have significant application in other industry sectors. For example, over 80% of all nationally recognised training packages import units from the Business Services training package.

The cross-sectoral dimension to IBSA's training package and associated job roles adds a level of complexity to identifying factors that influence demand for and supply of employees that are competent in the skills developed by IBSA's training packages.

Source: IBSA

ISCs are responsible for the development and maintenance of training packages associated with each industry sector. Training packages, together with the Australian Quality Training Framework (AQTF) and the Australian Qualifications Framework (AQF), are key elements of the national training system and all play a role in ensuring the quality and relevance of VET in Australia. ISCs have responsibility for the quality of only one component of the national training system, namely the training packages.

Training packages comprise sets of nationally endorsed standards and qualifications for recognising and assessing people's skills in specific industries. Training packages describe the skills and knowledge required to achieve specific qualifications without prescribing how they should be taught or learned. The training is delivered by registered training organisations (RTOs).

Mechanisms are in place to assist with maintaining the quality of training delivered by RTOs. The AQTF is the set of nationally agreed quality assurance arrangements for training and assessment services delivered by RTOs. The AQTF includes standards for registration of training organisations, which are administered by registering bodies in each state and territory such as state training authorities and state education departments. RTOs may include TAFE colleges and institutes, private providers, adult and community education providers, community organisations, schools, higher education institutions, commercial and enterprise training providers, industry bodies, all of which must meed AQTF registration requirements.

The AQF sets out all nationally recognised qualifications, including qualifications in the VET sector, to support quality, consistency and portability of training outcomes across Australia.

IBSA utilises a variety of mechanisms to understand the skill needs within its industry sectors. The Escan is one mechanism through which IBSA reviews the factors influencing the demand for and supply of skills relevant to its industry sectors. The Escan is a comprehensive gathering and analysis of market intelligence — and underpins IBSA's strategic planning, advice and design of training packages. The Escan analyses those factors influencing training and workforce development issues for Australia's innovation and business industries. It considers industry-specific issues, as well as broader social, demographic, technological, economic and labour market influences.

This is the second year that DEEWR has required ISCs to complete an Escan, with the initial Escans recognised as providing valuable input to the national training system (DEEWR 2008).

1.1 Objectives of Escan 2009

The key objective of the Escan is to identify the skills and workforce development priorities for Australia's innovation and business industries and foresee emerging influences on workforce development and training issues. This information is subsequently used by IBSA to refine training packages to meet the needs of industry and identify investment priorities in Australia's VET system. This includes prioritising of the program of activities to continuously improve IBSA's training packages.

Through analysis of a survey of businesses within IBSA sectors conducted specifically for the Escan this report identifies:

- employment expectations over the short-medium term (next 1-2 years) and medium to long term (around 5 years)
- views on the effectiveness of formal training for specific job roles
- views on emerging skills, where there is an increasing training need
- the level of concern related to key issues regarding the economy and the general business environment
- attitudes towards existing workforce, ease of access to training, types of training and government funding of training
- similarities and variance between IBSA sectors, between larger and smaller businesses and between states and territories.

The Escan also reports on trends in training in IBSA sectors, the status and coverage of IBSA training packages and high level views of those packages. This does not attempt to provide the detailed examination of training packages that occurs during formal review processes.

Drawing on the analysis of emerging demand for job roles, comment is made on areas not currently covered by existing training packages and their qualifications. Issues relating to IBSA training packages are provided.

1.2 Escan methodology

The approach taken to develop the 2009 Escan was informed by the 2008 Escan and by guidance material provided by DEEWR.

Desktop research was conducted to identify the major economic, political, social and demographic, environmental and technological issues impacting upon IBSA's industry sectors and on the Australian labour market more generally. This information provided the context against which stakeholders' comments and responses were analysed.

Stakeholder input constitutes a major source of information and was collected in three ways. Early in the conduct of the project, consultations were held with a range of stakeholders in all state and territory capital cities. Stakeholders included: peak bodies in IBSA's industry sectors in addition to employer organisations with cross-sectoral representation; unions; RTOs including TAFE providers; government (state, territory and Commonwealth); Skills Australia; and training advisory bodies in IBSA's industry sectors.

Stakeholders were asked to identify the most pressing workforce issues currently facing their industry (or industries). They were also asked how effectively they felt VET was meeting the needs of their industry and to describe areas where this is being done well and where needs are not being met. Stakeholders were asked to describe the impact that changes in the macro environment were expected to have on workforce issues in the foreseeable future and the implications of such changes on training and development needs and on employee numbers. In particular, stakeholders were asked to identify the job roles that are currently difficult to fill. They were also asked to identify the job roles for which there is likely to be a shortage of skilled applicants over the next five years. Following consultations, the job roles identified were aligned with Australia and New Zealand Standard Classification of Organisations (ANZSCO) codes to facilitate further analysis. ANZSCO codes were used, as this is the standard classification system used by the Australian Bureau of Statistics (ABS).

The second way in which stakeholders' views were considered was through responses to a survey. The survey posed a range of questions regarding employers' concerns regarding a range of issues, estimates of future demand for employees in specific job roles and satisfaction with aspects of VET and IBSA's training packages. The survey was distributed electronically to businesses and other organisations registered on IBSA's database and to stakeholders that during consultation had agreed to respond to the survey, or forward on to their members.

Information from the consultations and survey was analysed against the contextual data sourced during the literature review. The analysis included the construction of 'T-Tests', which allow for comparison of responses on the basis of industry sectors, location or business size, compared to the average response. This is useful in placing responses in an overall context and identifying trends. This information was used to highlight where demand for skilled workers is likely to increase and where it is likely to decline for each industry sector. Areas of concern, labour force issues and training requirements for each industry sector were also identified. The potential consequences for IBSA training packages are discussed, as are the priorities IBSA may adopt to address these issues.

Thirdly, the draft Escan was subject to validation. The draft was circulated to each of the IBSA sector advisory committees (SACs), relevant state and territory training advisory bodies and small and large business representatives (Appendix D provides details of those consulted). During January 2009, the following validation forums were held, in which stakeholders provided feedback on the draft Escan:

- advisory body forum
- six SAC forums (one for each SAC)
- small enterprises forum
- large enterprises forum.

The final Escan incorporates the feedback from industry stakeholders during the validation stage.

1.3 Report outline

- This chapter describes the purpose of the Escan 2009 and outlines the approach taken in preparing the Escan.
- Chapter 2 identifies the major changes in the external environment over the last year and describes the impact of these changes on IBSA's industry sectors.
- Chapter 3 identifies the existing the workforce needs in IBSA's industry sectors and discusses the impact of the changes outlined in Chapter 2 in terms of workforce issues.
- Chapter 4 considers the implications of the analysis in preceding chapters for IBSA's training packages at a strategic level
- Chapter 5 consolidates findings and describes factors which should be considered for the findings of the Escan to be transferred into actions.

Escan 2009 has been approached differently to Escan 2008 and this is reflected in the structure of the report. An objective of the structure of Escan 2009 is for each chapter to build upon and be informed by the previous chapter. Concurrently, specific chapters or sections of chapters may be considered independent of the full report. This offers both an IBSA wide and a sector specific scan of information. The sectoral analysis is however deepened by consideration of other sectors and of the broader IBSA environment.

Chapter 2

The effect of changes in the business environment on IBSA's industry sectors during the last year

Various business surveys, including the Australian Industry Group *National CEO Survey* (2008), have indicated that finding people with the appropriate skills has been a major difficulty confronting Australian employers. This problem is generally referred to as 'skill shortage' (see definition below). Skill shortages have arisen in part because of the sustained period of economic growth enjoyed by Australia over the last decade. Our education and training systems including VET, have struggled to satisfy the resultant demand for skilled labour.

The Australian economy has recently entered a period of uncertainty due to a major change in the global environment. Within the space of a few months, the problem facing many Australian businesses has changed from finding staff to finding customers. Known initially as the global financial crisis, because it began in financial markets in the United States, it is now a global economic problem. This did not noticeably impact upon the Australian economy until around August-September 2008. While a contraction in aggregate demand and slowing Gross Domestic Product (GDP) growth is clearly underway, there is uncertainty about how hard this will hit the Australian economy and labour market, in terms of both the depth and duration of the impact. There is an emerging consensus that 2009 is the most challenging year the global economy has faced for several decades. Consequently, Australia is less likely to avoid a recession.

For the Australian labour market, this environment means increasing complexity. We will see areas of skill surplus and areas of skill shortage. This is already happening, with redundancies apparent in some sectors of manufacturing, mining and finance for example. In other areas, like ICT, acute skill shortages appear likely to continue.

In the face of these challenges and this complexity, VET has a key role in re-skilling people who are affected by the changing labour market – including those who become unemployed. Some people will need to develop new skills, others who left school or training in the good times will return to complete their education. Government and individual investment in VET will almost certainly increase, although private sector investment in training may decrease.

In this changing environment, the IBSA sectors are especially important given the high proportion of enrolment in these sectors as a share of VET overall and the enabling role played by these sectors in relation to the rest of the economy.

Box 2.2

WHAT IS A SKILL SHORTAGE?

The National Centre for Vocational Education Research (NCVER) (Richardson 2007) investigated what is meant by a skill shortage and developed a classification of shortages. NCVER reported as follows:

While the term 'skill shortage' seems to be clear and unambiguous, in reality it is a slippery concept with many meanings. For a shortage to occur, it is necessary for the demand for a particular type of worker to exceed the supply of such workers, but the notions of supply and of demand are themselves quite inexact.

The normal operation of the labour market, including variations in the wages and conditions of the job, will deal satisfactorily with many types of shortage. But it will not work well if there are few people with the required skills who are not already using them and it takes a long time to acquire such skills.

The following scheme for classifying skills shortages is suggested:

Level 1 shortage

- There are few people who have the essential technical skills who are not already using them and there is a long training time to develop the skills.

Level 2 shortage

- There are few people who have the essential technical skills who are not already using them but there is a short training time to develop the skills.

Skills mismatch

- There are sufficient people who have the essential technical skills who are not already using them, but they are not willing to apply for the vacancies under current conditions.

Quality gap

- There are sufficient people with the essential technical skills who are not already using them and who are willing to apply for the vacancies, but they lack some qualities that employers consider are important.

There is no simple reliable measure of the existence of a skill shortage. It is necessary to draw on a range of indicators. The most important component of these indicators is the time taken to fill vacancies for the skill in question.

Source: NCVER February 2007

In this report, the term skill shortage is used when reporting on the views of stakeholders who referred to a skill shortage situation, or when referring to a secondary source that described a skill shortage situation. The report has not sought to verify whether each description of skill shortage provided by these sources complies with the NCVER definition.

2.4 The macro environment

Economic

The global economy

The global economy is decelerating rapidly, with the United States, the United Kingdom and Europe all now believed to be in recession (ANZ 2008).

This downturn was set in motion by the financial situation, which originated from risky credit practices in the sub-prime mortgage sector in the United States in August 2007. Its effects have since permeated global credit markets, causing major disruptions to financial institutions, in what is regarded as 'the most dangerous financial shock to mature financial markets since the 1930s' (World Bank 2008).

As a result of these impacts, companies have struggled to secure credit and raise capital and business and consumer confidence has deteriorated. These have contributed to the collapse of a number of financial institutions and companies in Australia and overseas (International Monetary Fund [IMF] 2008).

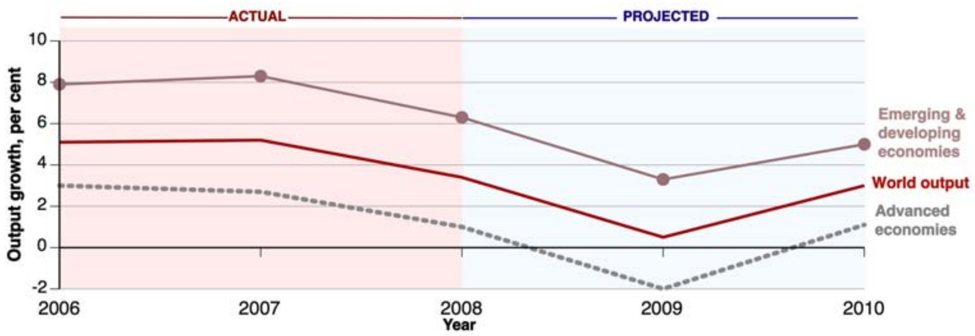
The impacts of these events on the 'real economy' in the United States are already significant, with large-scale redundancies and a major economic retraction underway. In Australia, the impact on the real economy to this point has so far been limited. Across the world, governments have announced large fiscal stimulus packages. Companies with strong balance sheets have called upon their own funds rather than entering debt markets. 2009 will be an extremely difficult year for the global economy and while Australia is expected to fare better than other developed nations, the impact will extend to the Australian economy. Some economic forecasts suggest that Australia will enter into a mild recession in mid-2009, although this is expected to be less severe than for the United States and the United Kingdom (ANZ 2009).

Governments have deployed several measures in efforts to stabilise and stimulate national economies. These measures have included: reducing interest rates; imposing new controls on stock market trading; nationalising key institutions; and extending government guarantees to bank deposits (ANZ 2008).

Despite these measures, annual world economic growth is expected to moderate from 5.2 percent in 2007, to 3.4 percent in 2008, to 0.5 percent in 2009 (see Figure 2.1). The IMF's global world output growth forecast for 2009 — released in January 2009 — reflects a 1.7 percentage point downward revision from forecasts released just months earlier in November 2008. This reflects the speed with which global economic conditions have deteriorated, as well as the overall uncertainty inherent in the current economic climate. The IMF advised that 'we now expect the global economy to come to a virtual halt' (IMF 2009).

Figure 2.1

GLOBAL ECONOMIC GROWTH, 2006–2009



Source: IMF 2009

Key issue: the macro environment

- *The macro environment is one of economic deterioration, with slowing growth and the likely prospect of recession in much of the world during 2009.*
- *There is a high degree of uncertainty about the precise impact on Australia.*

The Australian economy

The Australian economy is experiencing the impacts of the global economic downturn, which is presenting 'the most challenging environment since the recession of the early 1990s and possibly the depression of the 1930s' (ANZ 2008, p. 8).

Australia's economy is viewed as more resilient than many or all of the other advanced economies, although the strength of this resilience is a point of debate. As of late 2008, the IMF had expected Australia's real GDP growth to decrease to 2.5 percent in 2008-09, from 4.5 percent in 2007 (IMF 2008). By late January 2009, the IMF forecast had become more pessimistic, stating that Australia's real GDP will experience a GDP contraction of 0.2 percent in 2009, followed by 1.8 percent growth in 2010 (IMF 2009).

GDP growth in Australia during the September quarter slowed to 0.1 percent seasonally adjusted (ABS 2008h). Australia was one of very few advanced economies with positive growth.

The impact of this global slowdown on Australia will be significant, given that many major trading partners are in, or moving towards recessions that appear to be quite severe by historic standards. Growth in China is also moderating, as described recently by Reserve Bank of Australia (RBA) Governor Glenn Stevens (9 December 2008):

> The most striking real economic fact of the past several months is not continued US economic weakness, but that China's economy has slowed much more quickly than anyone had forecast. Our own estimates suggest that Chinese industrial production probably declined over the four months to October… There is every chance that the rate of growth of China's GDP is currently noticeably below the 8 percent pace that is embodied in various forecasts for 2009.

If China's economy weakens and its demand for Australian exports declines markedly, this undermines the widely held view that China's strength will shelter Australia from the full effects of the global downturn during 2009. As of January 2009, China's GDP growth is forecast to decline to around 7 percent during 2009 (IMF 2009), compared to growth in recent years of around 10–11 percent. China has set a growth target of 8 percent for 2009 (The Age 29/01/2009).

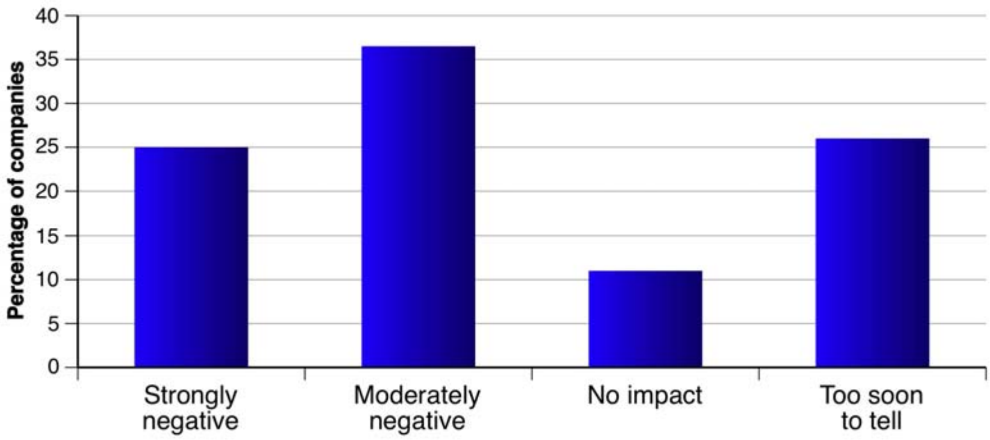
Among the most visible indications of the economic downturn:

- in financial markets, the Australian Stock Exchange (ASX) 200 index in October 2008 was 42 percent lower than in November 2007 (ANZ 2008)
- in commodity markets, the RBA commodity price index fell more than 7 percent between September and November 2008 (RBA 2008a)
- in property markets, the ABS house price index of Australia's eight capital cities fell 1.8 percent in the September quarter 2008 (ABS 2008).

The economic downturn is also impacting upon business activity and expectations. A survey of Australian businesses in October 2008 found that one quarter of firms consider themselves to be seriously impacted by the global economic and financial situation, as shown in Figure 2.2 (Australian Industry Group [AIG] 2008). Another national survey of business expectations for the December quarter 2008 (Dun & Bradstreet 2008) found that the most prevalent concerns for business executives were: movements in the Australian dollar; high fuel prices; continued inflationary pressures; and declining consumer spending. A tightening credit market was expected to have a negative impact on operations for 69 percent of businesses.

Figure 2.2

ECONOMIC AND FINANCIAL SITUATION: OVERALL IMPACT ON BUSINESS

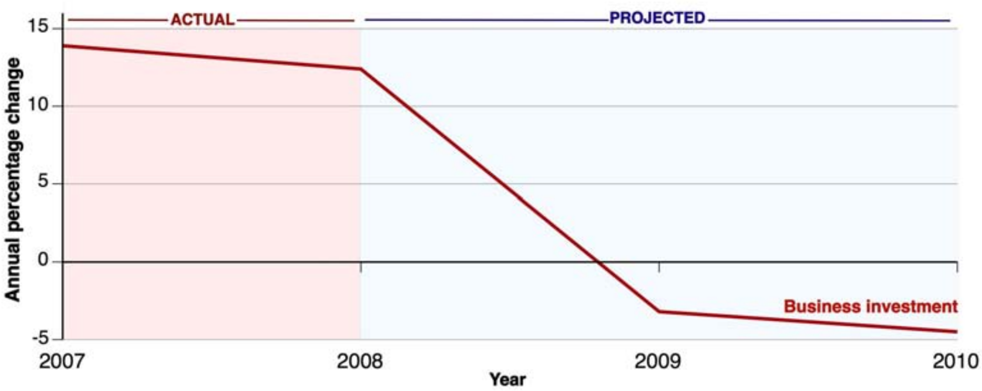


Source: The Australian Industry Group 2008.

Australian businesses have responded to the deteriorating business environment by revising their business plans and reducing production, employment, investment and other costs. Business investment in particular is expected to decline sharply over the next three years, as shown in Figure 2.3 below.

Figure 2.3

BUSINESS INVESTMENT

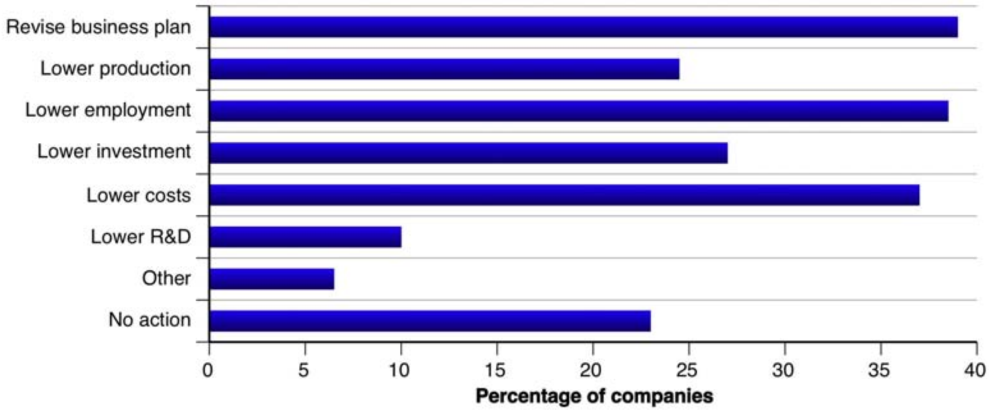


Source: ANZ 2009.

In an October 2008 survey of Australian businesses, only 23 percent were taking no action in response to the economic and financial situation, as shown in Figure 2.4.

Figure 2.4

ACTION TAKEN TO DEAL WITH THE ECONOMIC AND FINANCIAL SITUATION

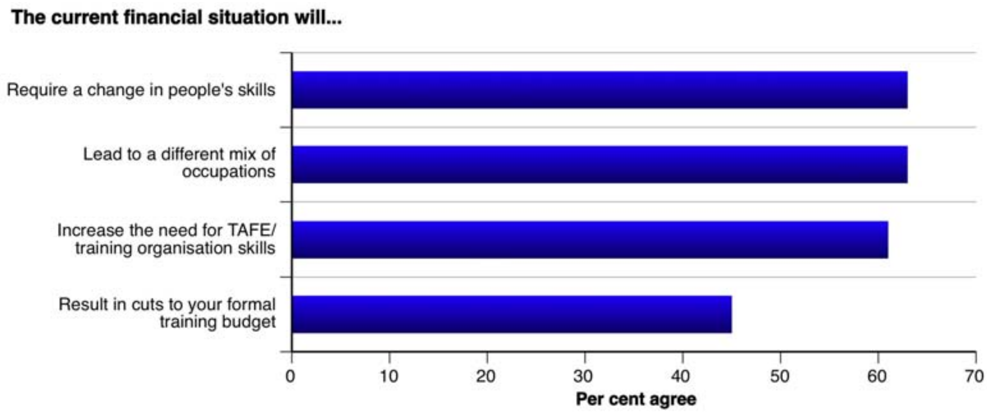


Source: The Australian Industry Group 2008.

The results of the Escan 2009 survey, gives an indication of what the financial situation will mean for business in terms of skill needs and workforce development across the IBSA industry sectors, as shown in Figure 2.5.

Figure 2.5

IMPACT OF THE FINANCIAL SITUATION ON WORKFORCE NEEDS



Source: Escan 2009 survey

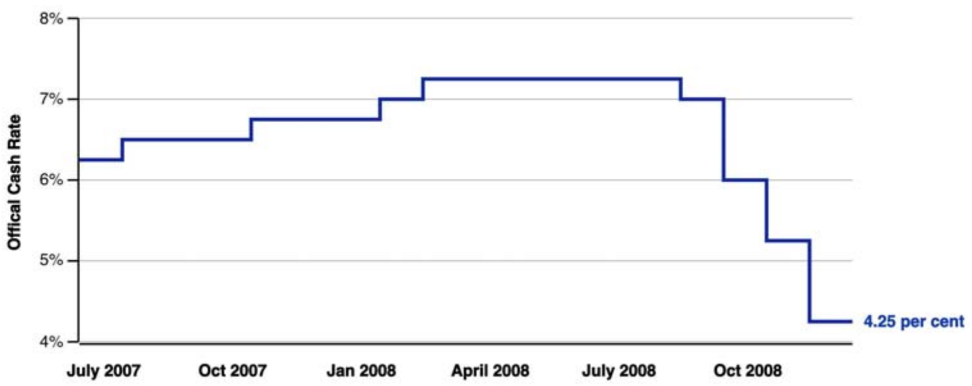
Over 60 percent of respondents indicated they see a need for changes in people's skills. While over 40 percent predict they will need to cut their formal training budget. This indicates a potential for worsening mismatch of skills in supply and those in demand. This in turn leads to demands for a government policy response, with increased government investment in training. This is discussed further in relation to Figure 2.7 below.

The economic challenges outlined above have been met with both monetary and fiscal responses in economic policy.

As Figure 2.6 shows, the RBA has made substantial cuts to official cash rates, with reductions of 100 basis points in October and December 2008, representing the biggest single reductions since 1992. However, the impact of this significant easing of monetary policy is negated by high levels of private debt, combined with diminishing confidence in the economic outlook. Households and businesses are inclined to increase savings or cash reserves and pay down debt during periods of economic uncertainty.

Figure 2.6

RBA OFFICIAL CASH RATE



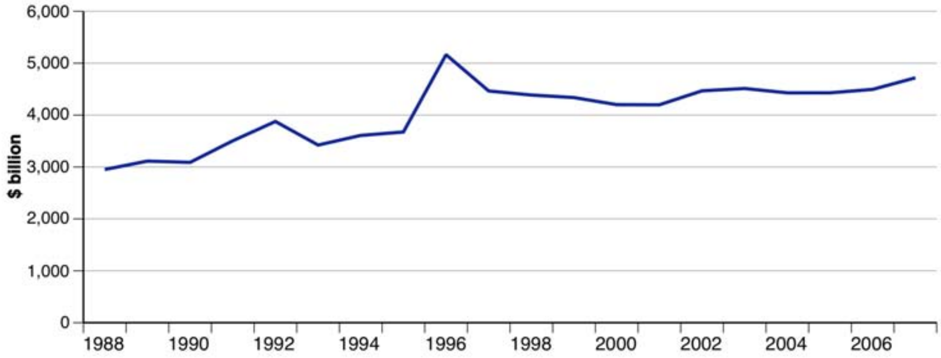
Source: RBA 2008b.

The Australian Government has introduced several measures to stabilise and stimulate the economy. A $10.4 billion fiscal stimulus package (ANZ 2008) is being implemented. The bulk of this expenditure is in the form of cash payments to families, carers and pensioners. The government also guaranteed all bank, building society and credit union deposits for three years and permitted the Australian Office of Financial Management to purchase $8 billion of Residential Mortgage Backed Securities.

Public investment in VET would be expected to increase in response to the economic downturn. As Figure 2.7 shows, increased public investment in VET followed Australia’s 1991 recession and subsequent high levels of unemployment in the early 1990s.

Figure 2.7

PUBLIC INVESTMENT IN VOCATIONAL EDUCATION AND TRAINING, 1988 TO 2008



Note: Prices are adjusted to 2007 values using the Reserve Bank of Australia inflation calculator.

Sources: NCVER 2008; NCVER 2001; NCVER 2003; NCVER 2000; ABS 1998; Griffith University 2001; ABS 1997; ABS 1994; & RBA 2007.

The cycle that would be expected involves:

- declining demand, shown in reduced consumer confidence and spending
- businesses cutting costs – including training and labour – to protect margins
- rising unemployment, as labour is shed as part of cost reduction
- increase in the demand for training as:
  - unemployed or underemployed people access training programs
  - more young people enter training programs for longer (rather than entering the job market)
- increased government investment in training, to directly assist unemployed people and school leavers and facilitate structural adjustment in the economy and labour market when conditions improve
- at the point where growth returns or improves, renewed demand results in those people who have undergone training gaining new or better employment.

The above summary is a simplification of complex events that are still unfolding. There remains considerable uncertainty about Australia's economic and labour market outlook. However, as of early 2009 there are indications that this cycle has commenced. The Australian Government is being called upon to prepare for increasing unemployment by investing in social assistance and retraining programs (ACTU 22/01/2009). The Financial Review recently reported that the government is preparing to announce new measures to support employment and skills training (29/01/2009).

The Australian labour market

Conditions in Australia's labour market are beginning to reflect the downturn in the economy, with indicators of employment trending downwards. This is reflected by the indicators shown in Table 2.1, which together comprise the DEEWR leading indicator of employment. This indicator has decreased for ten consecutive months to November 2008, reflecting a cyclical downturn in employment.

Table 2.1

SELECTED INDICATORS OF EMPLOYMENT, SEASONALLY ADJUSTED

Series	Percentage change over the year	Percentage change over the quarter	Percentage change over the month
ANZ Newspaper Job Ads (November 2008 release)	-34.7 percent	-15.1 percent	-12.2 percent
Westpac–Melbourne Institute Leading Index of Economic Activity (October 2008 release)	3.4 percent	-0.1 percent	-0.1 percent
Westpac-Melbourne Institute Consumer Sentiment Index (October 2008 release)	-28.9 percent	3.8 percent	-11.0 percent

Source: DEEWR 2008a.

In the Dun & Bradstreet Employment Expectations measure for the December quarter 2008, employment growth expectations are at their lowest level since 1991 — 23 percent of executives expect to have fewer staff in the December quarter than they did a year ago (Dun & Bradstreet 2008).

In releasing the ANZ job advertisement index results for November (ANZ 2008a), ANZ stated that over the last two months, newspaper job advertising in Australia has declined by the greatest level in the 30-year history of the survey. It also stated that:

> This tells us that hiring intentions have been heavily impacted by the latest wave of uncertainty and financial distress caused by the global financial crisis.
>
> Warren Hogan, ANZ Head of Australian Economics

Other measures, such as the Roy Morgan estimate of unemployment and underemployment, which uses a more demanding test of employment than the ABS, has recorded steadily increasing unemployment and underemployment in the second half of 2008 (Roy Morgan Research 2008).

For 2009, employment forecasts suggest that the sharpest declines in employment will occur in the construction (5.6 percent decline), manufacturing (4.4 percent decline) and services sectors (0.6 percent decline) (AIG & Deloitte 2009).

Despite a weakening labour market, recruitment issues are likely to be an ongoing challenge for many businesses. A survey of Australian businesses in April 2008 (prior to the major impact of the global financial situation on Australia) found that skills shortages had impacted 68 percent of Australian businesses over the preceding year (AIG/Deloitte 2008). Impacts were found to be most prevalent in the construction (83 percent) and services sectors (78 percent). Large firms reported the highest incidence of skills shortages (81 percent) with fewer shortages for medium- and small-sized firms (65 percent and 60 percent respectively).

Given these findings, even with the impact of the global financial situation flowing through to Australian businesses, the large number of firms reporting skills shortages indicates this situation is likely to continue for many employers, even if it is less severe overall due to easing of what has been a very tight labour market.

Key issue: the Australian economy and labour market

- *Australia will inevitably be affected by the global economic downturn, although the extent of the impact on Australia is uncertain.*
- *For the Australian labour market, the global economic downturn does indicate increased complexity. There will be areas of skill surplus, resulting in unemployment, co-existing with continuing skill shortages in other sectors or regions.*
- *Business is responding and will continue to respond to the changing economic circumstances. This will have implications for VET, which includes a likely increase in the demand for VET and public spending on VET in 2009 and beyond.*
- *VET will be critical as a facilitator of the structural adjustment that should result from changes in the external economic environment.*

The political and policy environment

The change of federal government in November 2007 has led to changes across many aspects of government policy over the past twelve months. Some of the significant changes targeting issues of productivity and education are set out in Table 2.2.

Table 2.2

NEW AUSTRALIAN GOVERNMENT INITIATIVES, 12 MONTHS TO NOVEMBER 2008

Productivity initiatives
Economic reform
• Enacted tax reforms in June 2008. • Commenced a review of Australia's tax and transfer system (the Henry Review). • Introduced several initiatives to reduce the regulatory burden on business. • Introduced several regulatory reforms to streamline business regulation nationally. • Introduced reforms to the Trade Practices Act.
Improving infrastructure
• Established Infrastructure Australia and the Council of Australian Governments (COAG) Infrastructure Working Group. • Announced the establishment of: the Building Australia Fund to invest in economic infrastructure; the Education Investment Fund to invest in higher education and VET; and the Health and Hospitals Fund, to invest in health infrastructure. • $4.7 billion infrastructure package over three years, including $1.6 billion for TAFE and university infrastructure.
Education and workforce productivity
• Plans to provide 701 000 training places in the VET sector over five years, known as the Productivity Places Program (PPP). • $2.5 billion Trade Training Centres in Schools program. • $98 million over four years for Year 9–12 individuals engaged in education and training to participate in on-the-job training. • $1.2 billion over five years for ICT in schools. • $238.6 million over four years for the Scholarships for a Competitive Future program to increase the number of higher education graduates in areas of skills shortages. • Establishing a national curriculum. • $533.5 million over five years to deliver universal access to early learning for all Australian children in the year before formal schooling. • Major review of Australia's higher education system (the Bradley Review — see Box 2.3).

Source: Department of the Prime Minister and Cabinet 2008

As shown in this table, the Australian Government has announced several VET or VET related initiatives to progress its objectives for education, training and workforce development. Through these policies, government is seeking to increase course completions to avert projected shortages and modernising and improving course quality.

Although the proportion of people with non-school qualifications has increased over the last decade (to 54 percent from 42 percent), this still represents a large share of the population who hold no post-school qualification (ABS 2008). As expressed by the Minister for Education and Minister for Employment and Workplace Relations, Hon. Julia Gillard MP:

> The ABS 2007 Survey of Education and Work tells us that over 7 million Australians aged 15-64 now hold no post-school qualification. We have to significantly reduce that number over the next decade.

A further challenge is to match qualifications being undertaken with those that are in demand. This requires the active involvement of industry, as well as the commitment of governments. Industry has an important role, in ensuring that VET participants and prospective participants are aware of the benefits and opportunities offered by various career pathways and job roles.

To emphasise this point, the current economic uncertainty notwithstanding, Australia faces a significant shortfall in the supply of workers with the required vocational qualifications. The National Policy Skills Collaboration, involving industry groups and unions (April 2008), recently stated that 87 percent of jobs require post-school qualifications but 50 percent of the workforce lacks these qualifications. There is an estimated shortfall of 240,000 VET qualified people by 2016. This could be averted by steadily increasing completion rates at the rate of 2 percent per year.

VET is positioned as a key element of the COAG National Reform Agenda. By 2020, VET aims to:

- halve the proportion of people aged 20–64 years without certificate III or higher qualifications
- double the number of diploma and advanced diploma completions.

To achieve these aims, the Government has established a new statutory body, Skills Australia, to provide independent advice on the demand for skills and public investments in training. Skills Australia has advised that it will be depending on industry skills councils to advise it of the latest developments affecting skill needs. Moreover, Skills Australia has recognised that the state and territory training advisory bodies also have an important role to play. There is an ongoing challenge in ensuring that the advice provided by these bodies is timely, coordinated and pertinent.

The government also initiated a major review of higher education (the Bradley Review; see Box 2.3), which will inform future higher education policy. The review will have significant implications for the VET sector.

Box 2.3

THE REVIEW OF HIGHER EDUCATION

The Review of Higher Education examined the future direction for Australia's higher education sector. It released its final report to the Hon Julia Gillard MP, Deputy Prime Minister and Minister for Education, Employment, Workplace Relations and Social Inclusion, in December 2008.

The review identifies a number of challenges confronting Australia's higher education system, among them: declining global competitiveness, shortages of well-qualified people and limited accessibility to disadvantaged groups.

The review advocates a more holistic and coherent approach to the provision and planning of tertiary education across VET and higher education. The review proposes a 'continuum approach' to tertiary education, which would overcome inconsistencies between the two sectors, particularly relating to funding and regulation arrangements.

- *Funding* — addressing funding inconsistencies by: introducing a tertiary entitlement funding model across higher education and VET; extending income contingent loans to VET students; and giving the Australian Government responsibility for funding higher education.
- *Regulation* — regulatory processes could be streamlined across states and territories by introducing an independent national regulatory agency.

However, the review also acknowledges that diversity between tertiary education sectors is necessary to meet the range learner, industry and social needs. At the same time, the system needs to be such that differences between the sectors do not restrict the ability of people to move between them.

The review identifies several characteristics of an effective higher education system, which underlie many of its recommendations. These characteristics include:

- equal value being given to VET and higher education, reflecting the importance of their different roles in the development of skills and knowledge and their contributions to our economy and society
- recognising that institutions may have a primary mission in one sector, but should still be able to offer qualifications in the other sector as under current arrangements
- sharing and coordinating an information base and approach to anticipating future labour market needs, industry needs and demographic trends
- capacity for the tertiary system to provide integrated responses to workforce needs for industries and enterprises, including those in disadvantaged or under-represented community groups
- an efficient regulatory and accountability framework
- clearer and stronger pathways between the sectors in both directions.

Source: DEEWR 2008b.

Some stakeholders, including the Australian Chamber of Commerce and Industry, have called for greater integration of the higher education and VET sectors in submissions to the review. The review has accepted greater integration as a priority and this will be a major policy issue in 2009. This will be of direct relevance to IBSA, given its qualifications have a relatively high potential volume of articulation to university level programs, particularly across the business services area.

An increasing proportion of learners are being admitted to university on the basis of prior VET study, from 8.9 percent of participants beginning undergraduate degrees in 2002 to 10.1 percent in 2006. Similarly, the proportion of university participants gaining credit for prior VET study has also increased, from 2.6 percent beginning undergraduate studies in 2002 to 3.4 percent in 2006 (DEEWR 2008b).

If adopted by government, the review recommendations will have significant implications for VET generally, including IBSA. This is explored in further detail in Chapter 5.

Findings: political and policy environment

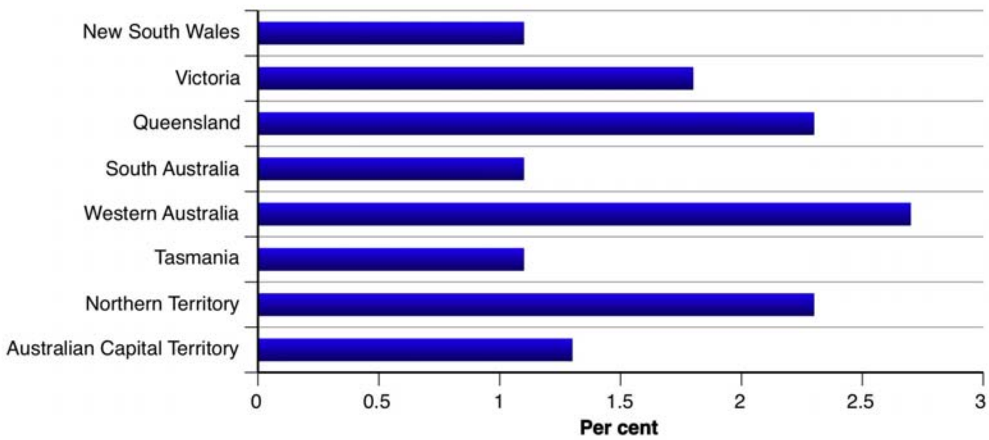
- *The policy focus on post school education, including VET, is expected to sharpen in 2009 as implementation of policy initiatives of the Australian Government gain momentum.*
- *A major policy issue is expected to be greater integration of the VET and higher education systems. This has significant implications for IBSA's areas of responsibility.*

Social and demographic change

Social and demographic changes occur over prolonged time periods. Several trends relating to population, workforce participation and engagement with VET have become increasingly apparent over recent years.

Figure 2.8

POPULATION GROWTH, BY STATE AND TERRITORY, YEAR TO JUNE 2008



Source: ABS 2008b.

Figures show that over the year to June 2008, those states and territories with the highest rates of population growth were also those with leading economic growth rates over the same period, namely Western Australia (5.2 percent economic growth), Queensland (5.3 percent economic growth) and the Northern Territory (3.9 percent) (ABS 2008c)[1].

A prominent social trend over the past decade has been the increase in workforce participation, particularly among females and middle-aged Australians. This is shown by the workforce participation rates in Table 2.3. Notably, from 1996 – 2006, participation among all females increased by 5.2 percent, while participation among females aged 55-64 increased by more than 17 percent.

[1] Economic growth figures refer to growth in Gross State Product volume measure.

Table 2.3

WORKFORCE PARTICIPATION

Population group	1996 Participation rate (percent)	2006 Participation rate (percent)	Increase (percent)
People aged 55–64 years			
Males aged 55-64 years	61.2	67.9	**6.7**
Females aged 55-64 years	30.9	48.1	**17.2**
Australia			
Males	71.4	71.5	**0.1**
Females	52.8	58.0	**5.2**

Source: ABS 2008e.

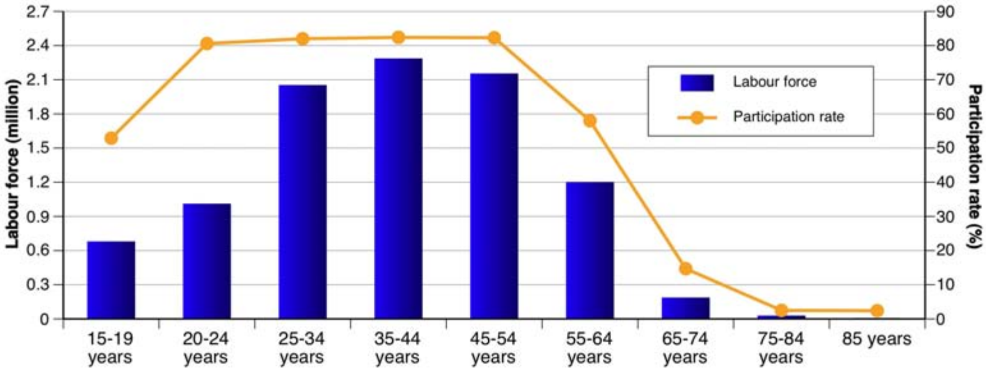
Among the key drivers of the increase in workforce participation is the increase in part-time work, particularly for women, as well as the sustained period of economic growth between 1996 and 2008 (ABS 2008f).

This is significant in that the nature of employment patterns and job roles is changing. Increasing participation by women in particular will continue to increase the need for greater flexibility in work hours for both women and men to enable a balance between work and family commitments. More workplaces will need to accommodate employees fulfilling their family care responsibilities. This will also assist workplaces to attract and retain workers.

The ageing of Australia's population, already evident in the current age structure, is expected to continue. This is the result of sustained low levels of fertility combined with increasing life expectancy at birth. The median age of Australia's population (36.8 years at 30 June 2007) is projected to increase to between 38.7 years and 40.7 years in 2026 (ABS 2008d). The age profile of Australia’s workforce is shown in Figure 2.9.

Figure 2.9

AGE OF WORKFORCE



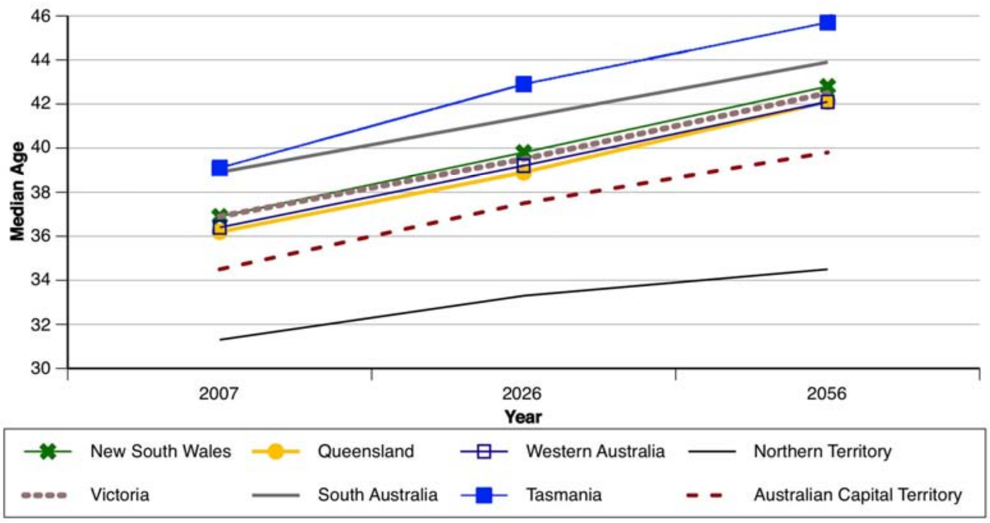
Note: Figures exclude those persons whose labour force status was not stated, which accounted for 1.04 million people in 2006.

Source: ABS 2008f.

South Australia and Tasmania have the most rapidly ageing populations, as shown in Figure 2.10. However, as the steadily increasing median age in each jurisdiction indicates, Australia faces workforce policy issues caused by ageing.

Figure 2.10

MEDIAN AGE, OBSERVED AND PROJECTED, BY STATE AND TERRITORY



Source: ABS 2008d.

There are several expected implications of an ageing population for VET. The number of VET participants aged over 45 years increased from 2006 to 2007, while the enrolments of younger participants declined – as shown in Table 2.4. However, the latter could be a result of the buoyant labour market at that time, which tends to attract participants from training into paid work. 2009 is likely to witness an increase in VET enrolments due to tightening in the labour market.

There are not only more people moving towards retirement, also, these individuals will increasingly seek to make a phased transition from full time work to retirement. This again will increase the need for flexibility in employment arrangements and place new demands on employers to manage these arrangements. Additionally, some employees who had been approaching retirement will now plan to work for longer due to the impact of the global financial situation on superannuation earnings.

From an employer perspective, given Australia's ageing population and the risk of an inadequate supply of qualified skilled labour, shortages are likely to remain a longer-term issue beyond the difficult period faced at present. In light of this, some businesses will be reluctant to hastily reduce employment levels, knowing that they could again face shortages in the relatively near future.

Table 2.4

VET STUDENT AGE PROFILE, 2003–07

Age	2003 ('000)	2004 ('000)	2005 ('000)	2006 ('000)	2007 ('000)	2006-07 % change
14 years and under	10.1	10.3	10.8	10.8	11.0	1.1
15–19 years	364.8	367.8	382.5	427.9	433.2	1.3
20–24 years	276.6	266.4	273.0	277.1	275.6	-0.5
25–44 years	660.4	601.0	602.6	589.2	586.1	-0.5
45–64 years	324.6	297.0	311.8	302.5	310.4	2.6
65 years and over	33.1	25.7	28.5	25.9	26.5	2.0
Not known	57.9	38.2	41.6	42.5	22.1	-47.9
Total	**1727.5**	**1606.4**	**1650.8**	**1675.9**	**1664.9**	**-0.66**

Source: NCVER 2008.

Findings: social and demographic change

- *States and territories with the highest rates of population growth were also those with leading economic growth rates, namely Western Australia, Queensland and the Northern Territory.*
- *Overall, Australia's population continues to age – as do other developed nations.*
- *The ageing population and the significant increase in the participation of women in the workforce will drive the development of significantly more flexible workplaces.*
- *Employers who respond with greater flexibility will find benefits in employee attraction and retention.*
- *There are likely to be implications for VET including a significant opportunity to attract more participants aged over 45 years.*

Environmental changes

Public awareness and concern about environmental issues continued to increase during the past 12 months. This is mainly due to the issue of climate change. International and domestic policy responses to climate change and other environmental issues will have profound effects on the Australian economy and workforce. It is thus relevant to note some of the key policy developments in this area in the last year:

- *Ratification of the Kyoto Protocol* — Australia formally ratified the Kyoto Protocol in December 2007, committing Australia to meet targets to reduce its greenhouse gas emissions (Prime Minister of Australia, December 2008).
- *Carbon Pollution Reduction Scheme (CPRS)* — the Government released its CPRS Green Paper in July 2008 and announced the government's policy in December. The scheme is expected to commence in 2010 (Department of Climate Change, July 2008).

- *Carbon Capture and Storage* — the Government established a $100 million Global Carbon Capture and Storage Initiative to accelerate the development and deployment of carbon capture and storage technology (Department of Climate Change, July 2008).
- *The Garnaut Climate Change Review*, provided its final report to government on 30 September 2008. The review advised government of policy options under a more ambitious and a less ambitious regime of targets for emission reduction by 2020 and 2050 (Garnaut, R 2008).
- Major climate change meetings were held in Bali, Indonesia and Poznan, Poland with a view to reaching a global agreement to tackle climate change. A further major meeting is planned for Copenhagen, Denmark. The objective is to agree on binding global targets for emissions reduction, which would in turn be legislated by each country (United Nations 2008).

New skills will be required for the purposes of compliance with the CPRS and as part of a general shift among businesses towards reducing their environmental impact in response to concerns among consumers. Also, government stimulus related expenditure is likely to focus on environmental oriented projects and expenditure, which will have an immediate impact on the demand for 'green' skills.

Key issue: environmental changes

- *So called 'green skills' will be of increasing importance as the effects of national and global carbon reduction schemes flows through the economy and consumers increasingly consider environmental sustainability in their purchasing decisions.*

Innovation and technology

As mentioned previously, a major development in Australia's innovation policy in 2008 has been the Review of the National Innovation System (Venturous Australia, led by Dr Terry Cutler; see Box 2.4). This has particular significance to IBSA, given its role in the development of innovation skills.

Box 2.4

THE REVIEW OF THE NATIONAL INNOVATION SYSTEM

Venturous Australia — Building Strength in Innovation was commissioned by the Minister for Innovation, The Hon. Kim Carr and prepared by a panel led by Dr Terry Cutler. Of particular relevance to Escan 2009, the report's action plan emphasised:

- the importance of entrepreneurial firms and innovative workplaces, which operate in an environment where innovation is encouraged
- that human capital — which is the stock of knowledge and skill — is critical to innovation
- building high quality human capital requires attention at all levels of education: from early childhood education and schooling, through VET and higher education.

A formal Government response is expected in early 2009.

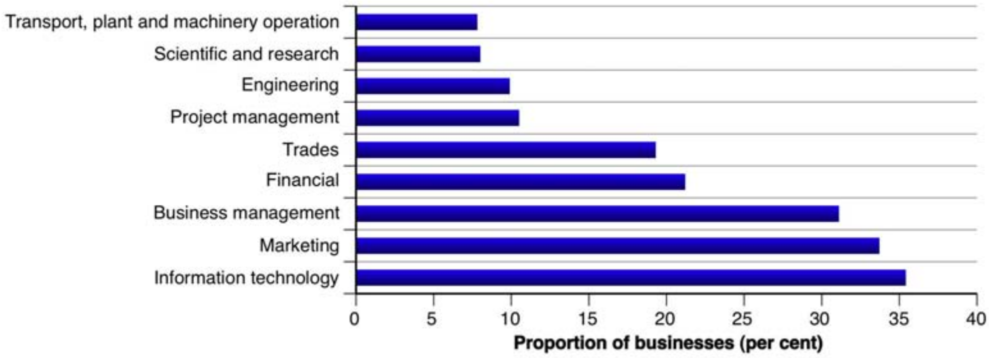
Source: Cutler & Company 2008.

The review highlights the role for human capital as a key driver of innovation. Further, many of the skills that are most often needed by Australian businesses to drive innovation relate to IBSA industry skill sectors. As shown in Figure 2.11, the four skills most commonly used to undertake innovative activities — information technology, marketing, business management and financial skills — are encompassed by IBSA skill sectors.

Cultural and related industries stakeholders also stressed the role of this sector in contributing to innovation. The Cultural Ministers Council (CMC) has identified that governments and businesses are increasingly aware of the important role of creativity and the creative industries as drivers for innovation and economic growth in the broader economy (CMC 2008).

Figure 2.11

SKILLS USED FOR INNOVATIVE ACTIVITIES, AUSTRALIAN BUSINESSES, 2006-07



Source: ABS 2008h.

There is some evidence that the level of innovation by Australian businesses is being constrained by skills shortages. A survey of Australian businesses (AIG/Deloitte 2008) found that innovation within 42 percent of businesses was being restricted by skills shortages. The impact of skills shortages was particularly apparent for small businesses, with 46 percent of small businesses affected. The impact of these findings and their implications for policy are discussed in the survey report (p 28).

> There appears to be a clear link between skill shortages and a lack of innovative ability in Australian firms. This suggests that policies which help lift the nation's skills base will have direct and positive effects on business innovation in Australia. Conversely, worsening skill shortages will continue to hurt the innovative ability of Australian firms.

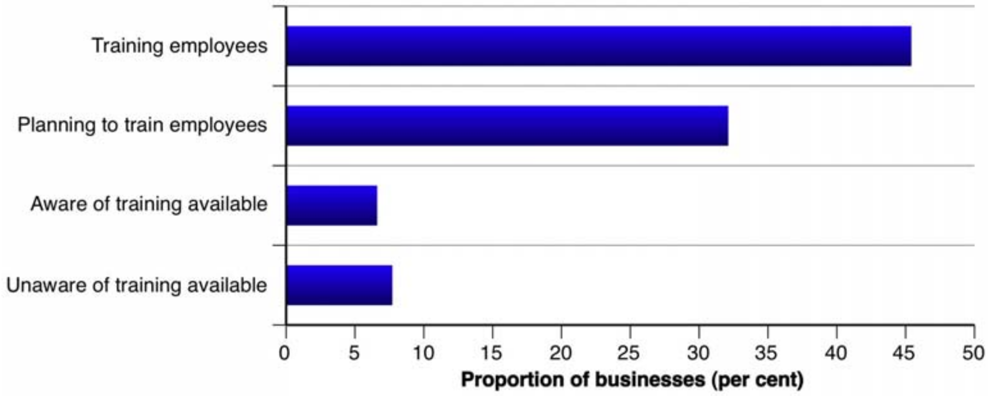
Sixty six (66) percent of all business respondents used up-skilling as an innovation strategy, reinforcing the strong linkages between skills and innovation. This was particularly the case in the services sector, where 82 percent of respondents had used the strategy (AIG/Deloitte 2008). These findings are consistent with findings from an ABS survey, which found that the leading barrier to innovation identified by businesses was a 'lack of skilled persons', cited by 34.5 percent of respondents (ABS 2008h).

In the same ABS survey, the leading motivations for innovation in Australian businesses were found to be profit-related drivers, cited by 76 percent of businesses. It is perhaps unsurprising that an AIG survey of Australian businesses found that only 10 percent of business respondents were cutting back on research and development in response to the economic downturn (AIG 2008), given that innovation is recognised by business as being a driver of profitability.

Most Australian businesses (77 percent) are training, or planning to train, their staff in the use of new technologies, as shown in Figure 2.12 (AIG/Deloitte 2008). However, a small proportion of businesses (8 percent) are unaware of the training available to enable them to respond to emerging technologies.

Figure 2.12

RESPONSE TO EMERGING TECHNOLOGIES

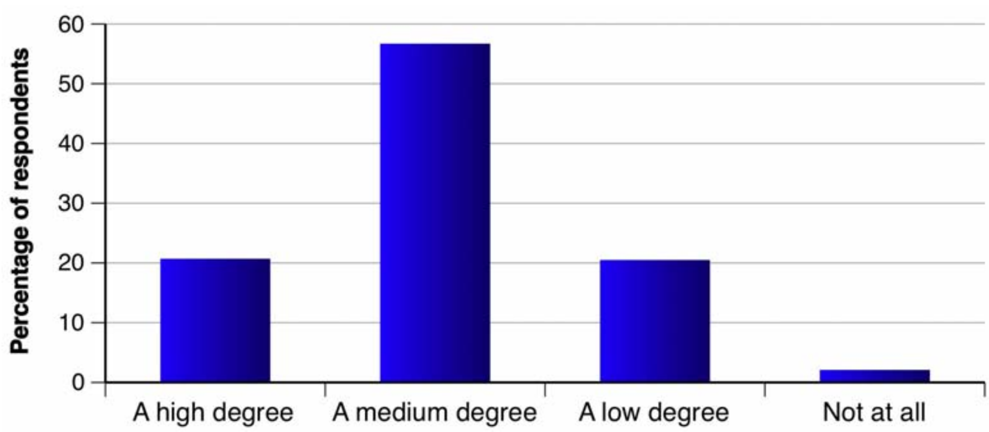


Source: Australian Industry Group and Deloitte 2008.

Survey findings also suggest that training efforts in new technologies are needed. Only 21 percent of business respondents expressed a high level of confidence that their staff possess the necessary skills to take advantage of emerging technologies, with an equal proportion of firms declaring a low level of confidence. The largest proportion expressed medium level confidence.

Figure 2.13

CONFIDENCE IN EMPLOYEES HAVING SKILLS FOR EMERGING TECHNOLOGIES



Source: The Australian Industry Group and Deloitte 2008.

Findings: Innovation and technology

- *Innovation depends on human capital – which VET develops. Businesses also state that innovation depends on skills that fall within IBSA's responsibilities.*
- *Consequently, IBSA has a particularly important role. This will require a high level of responsiveness to ensure that training packages are meeting business needs.*
- *Structural adjustment resulting from the current shifts in the economic environment will be valuable to Australia in the long term if it expedites the innovation capacity of individual businesses and the Australian economy as a whole.*

2.5 The IBSA sector environment

The IBSA sectors are relatively diverse, although they share in common an important enabling role in the Australian economy. While the sectors can be seen as industries in their own right, skills that are aligned with IBSA sectors are frequently used across many parts of the economy. The following provides examples of the need for these skills in other industries:

- business services skills include customer service, administration and management – these have heavy usage in areas such as retail and financial services
- cultural and related industries skills are used by education providers (e.g. librarian assistants), hospitality businesses (e.g. staging and lighting) and tourism (e.g. live performances)
- education skills are used by workplace assessors, trainers and consultants in many different companies and in specialised professional services firms
- finance skills are required in the management of all organisations, including in all forms of small businesses
- ICT skills are required for the information and communication infrastructure and systems that all businesses depend on to function effectively, they are used heavily in industries such as manufacturing, finance and business services
- printing and graphic arts skills are required by many businesses including advertising agencies, larger law firms and government.

As the above list suggests, a distinction can be drawn between industries and IBSA sectors. An industry is a group of business units carrying out similar productive activities (see ABS 2008j for details of Australia's industrial classification, the Australia and New Zealand Standard Industry Classification [ANZSIC]). The IBSA sectors are based on training packages[2], which are comprised of competency standards, assessment guidelines and a qualifications framework.

[2] RTOs are responsible for implementing training packages. This involves delivering training, assessing competency, undertaking assessment and issuing qualifications.

For IBSA to fulfil its dual role of providing advice to government and continuously improving training packages it must have a contemporary understanding of the industries that are most aligned to its training packages. Given IBSA's wide coverage and the enabling role of IBSA sectors, IBSA must also possess a high level of understanding of labour market conditions and trends more broadly.

For the purposes of Escan 2009, the main implications of IBSA's wide coverage are twofold:

- Firstly, there are employees with skills that relate to the IBSA sectors and training packages employed across all industry sectors. Therefore changes in conditions that impact on other sectors will also impact on demand for IBSA training packages.
- Secondly, IBSA sectors are of fundamental importance to Australia's economic performance and productivity. This point is further emphasised given the importance of skills within IBSA's responsibilities for innovation (Figure 2.10).

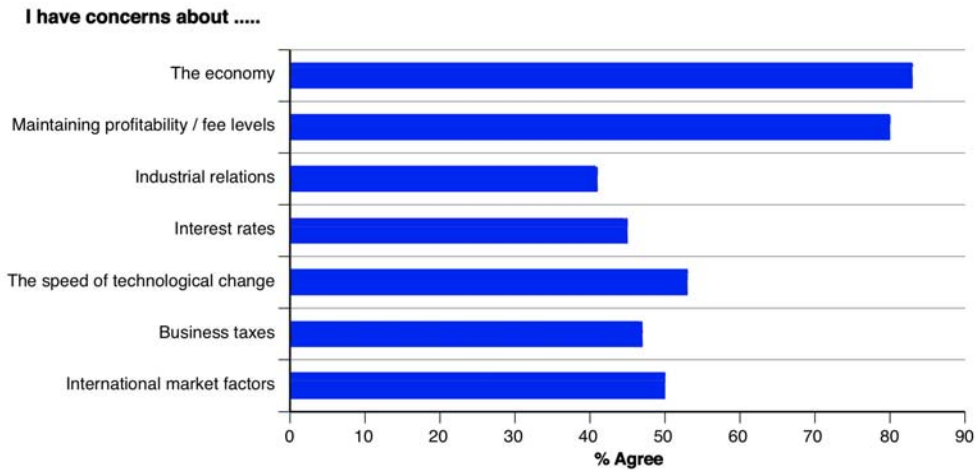
Of the IBSA sectors, all are service based except printing and graphic arts (which is manufacturing based). Significantly, service sector activity has been contracting for most of 2008 and the fall has been particularly steep in the latter part of the year (AiG Performance Services Index November 2008).

In relation to IBSA's coverage, as NCVER reports, in 2007 there were more participants enrolled in IBSA training packages (292,600 participants in total) than any other industry skills council grouping. Chapter 4 provides further analysis of enrolment and completions across IBSA's training packages.

Following is an overview of how changes in the external environment have affected IBSA's sectors. While broad trends are discussed, the focus is on the last 12-months. This includes key trends in those sectors and discussion of the position of the sector within the broader economy and labour market. As an overall observation, Figure 2.14 presents reported attitudes in response to a series of possible concerns provided in the Escan 2009 survey. Overall, most businesses have concerns about the economy and maintaining profitability levels. This finding is consistent with feedback from stakeholders, who advised that the economy is now a major point of uncertainty and concern.

Figure 2.14

BUSINESS CONCERNS ACROSS IBSA SECTORS



Source: Escan 2009 survey

Printing and Graphic Arts

The printing industry is characterised by declining employment and static output (IBIS World 2008). Capital costs are relatively high, due to an ongoing process of technological advancement. Concurrently, there are examples of significant innovation and a view that printing does offer a promising career path, provided this can be communicated effectively to prospective recruits.

There are two distinct printing industry segments. Firstly, heavy printing, which comprises industrial scale printing plants for the production of large print runs. The other segment is small-scale specialised printing using digital offset machinery. Improved printing technology and economies of scale no longer acting as a barrier has opened opportunities for the latter type of print business. People with printing and graphic arts skills are also employed in advertising firms, legal firms, government and other businesses involved in preparing printed material, including packaging.

Across both segments, the printing industry has a large number of independent, small to medium sized operations. The four largest printing firms account for approximately 18 percent of industry revenue (IBIS World 2008). Concentration is increasing and further consolidation is likely.

Box 2.5

PRINTING – STAKEHOLDER VIEWS

Printing has historically been a manufacturing based industry, but as entry to the sector is easier and the focus shifts towards meeting individual client needs, it is taking on more of the characteristics of a service sector. Service based businesses require different skills – such as sales, relationship management and general business acumen.

The industry is finding it difficult to attract new entrants. This could be addressed by changing perceptions of a career in printing. New technologies open possibilities that make printing an exciting career option.

The diversity of opportunities offered by a career in printing and graphic arts is not necessarily widely known.

Apprenticeships are the traditional pathway into heavy industrial printing, with a high level of job specialisation in different components of the printing process. This career structure is being challenged by the changed preferences of young people starting a career and by changing technology. Stakeholders reported difficulty in the recruitment and retention of apprentices, which discourages employers from embarking on the employment of apprentices.

While the apprenticeship model is well known, industry does not necessarily have a well developed understanding of the content of the printing and graphic arts training package and there is a lack of RTOs that deliver competencies and qualifications of the package.

If industry consolidation continues as expected, this will see an increased proportion of large operators. Large operators may take a more strategic approach to training and skill development. NCVER has found that small business generally tends not to provide structured training for their employees (2007) and the printing industry presently has a high proportion of small operators.

During 2008, new capital expenditure in the printing, publishing and recorded media industry fell (ABS). For the 12 months to September total new capital expenditure stood at $564 million, a result that is 8.4 percent lower than for the same period of the preceding year. The Printing Industry Association (3 December 2008) reported that the slowing investment is due to two factors:

- slowdown in general economic activity and the corresponding rise in idle capacity
- ongoing industry rationalisation which is bringing good quality second-hand capital equipment on to the market, which are a substitute for new equipment.

Overall, while printing is relatively static in terms of output and employment growth, the sector offers many opportunities as a consequence of technology and innovation. Printing and graphic arts skills are needed in numerous areas of the economy and the nature of these opportunities is not necessarily widely known to school leavers. Printing is becoming more service based and traditional career paths and training structures are being challenged. While apprenticeships have been common in the past, the way people are trained for printing careers could evolve further but this is being restrained somewhat by a lack of RTOs who deliver printing qualifications.

Key findings: the IBSA sector environment

- *During 2008, skill shortages continued to be a primary concern of employers in IBSA's sectors. The sense of skill shortage will ease during 2009 due to changing labour market conditions but employers will continue to find it difficult to find certain skills.*

- *Despite expected deterioration in the business services industry during 2009, business services skills are likely to remain in demand, as they are useful to employment in many job roles across the economy. However, VET graduates in this sector may find themselves increasingly competing with university graduates.*

- *There are dynamics in the cultural and related industries that challenge VET and IBSA. It must both meet the demands of participants for specialisation and excellence, while also seamlessly integrating those components from other training packages that are of increasing relevance to the cultural industries. This includes integration with other areas of IBSA responsibility, such as ICT and business services.*

- *For education to attract, maintain and develop a well skilled workforce into the future, it will need to ensure that this is viewed as an attractive career. This is likely to involve the development of highly flexible working arrangements (this is already occurring but is likely to proceed further) and increased remuneration, which is industry competitive. Innovative partnership based delivery arrangements will become more important, as the traditional classroom model will not be as suited to either teachers or participants. There may be opportunities for VET training to play an expanded role across the wider education sector.*

- *For financial services, the sudden change in the external environment is having a significant impact on the sector. There is considerable uncertainty about how severe this will be or what this will mean for VET. So far, the skills provided for through VET generally remain in high demand in the sector. Some enterprises have adopted innovative approaches to workforce development in this sector, in order to meet their specific business needs.*

- *ICT has acute skill needs – at a time when the importance of ICT to the wider economy is growing rapidly. Addressing this problem will require a concerted and coordinated response from industry and government to promote careers in ICT and ensure that the pathways into ICT are open to as many participants as possible.*

- *While printing is relatively static in terms of output and employment growth, the sector offers many opportunities as a consequence of technology and innovation. Printing and graphic arts skills are needed in numerous areas of the economy, and the nature of these opportunities is not necessarily widely known to school leavers. Printing is becoming more service based and traditional career paths and training structures are being challenged. While apprenticeships have been common in the past, the way people are trained for printing careers could evolve further but this is being restrained somewhat by a lack of RTOs who deliver printing qualifications.*

Chapter 3

Existing and emerging workforce needs in IBSA's industry sectors

This chapter provides more detail on the high level analysis discussed in Chapter 2, including a sector-by-sector analysis of the existing and emerging workforce needs in IBSA's industry sectors. The results are informed by a survey of organisations across IBSA sectors, undertaken specifically for the Escan 2009. This is supplemented by information gathered from ABS ANZSIC data and from stakeholder consultation conducted for the Escan.

3.6 Employment in IBSA sectors

Appendix D sets out the level of employment in the industries of most relevance to IBSA. These industries comprise a large proportion of the Australian labour force.

Employment in Australia as at 30 June 2008 totalled 10 715 700 persons (ABS 6202.0 Labour Force) and total 2008-09 employment in the IBSA industries totals approximately 3.127 million persons. Therefore, employment in those industries, which are most closely aligned with IBSA sectors, is approximately 29 percent of the employed labour force.

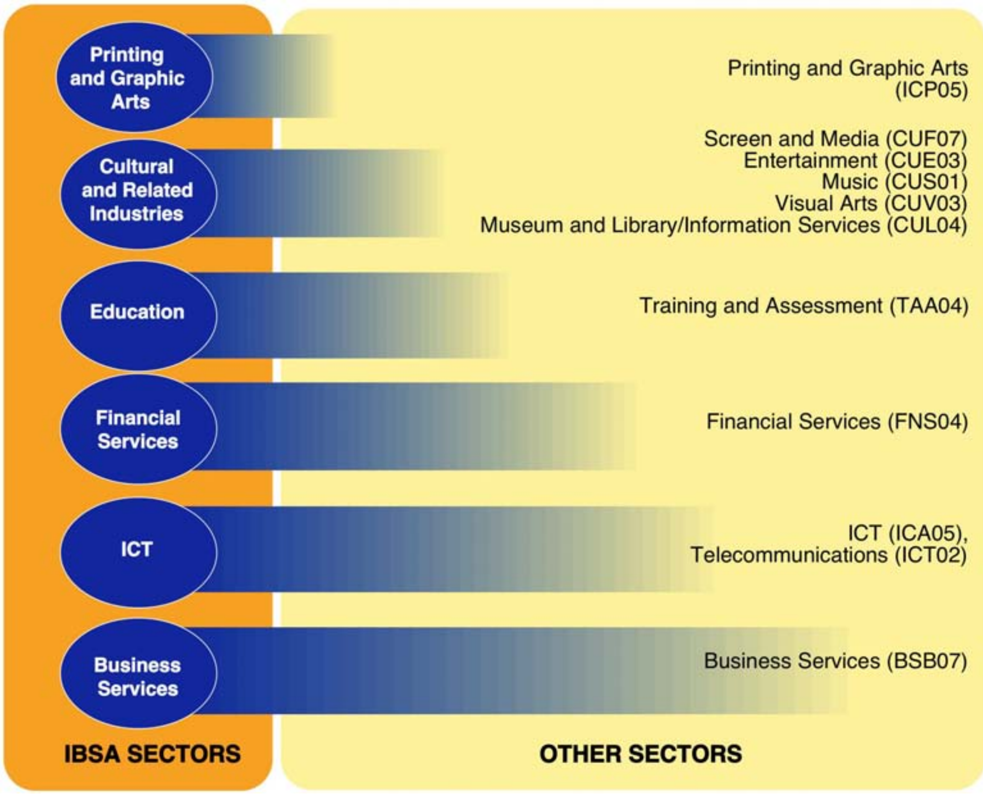
However, as explained in Chapter 2, the situation is somewhat more complex than this suggests given the enabling role of the IBSA sectors. This means that many people who might have a particular skill specialisation do not necessarily work in the corresponding industry (e.g. an ICT professional who works in manufacturing).

A further complication is that there are varying levels of VET training for different occupations and job roles ranging from: job roles trained exclusively by VET; to job roles trained partially or sometimes by VET; to job roles that are not trained by VET. There are also areas where VET may not play a significant role in workforce training at present, but could in the future.

Figure 3.15 shows the relationship between IBSA training packages, IBSA industry sectors and their coverage across the economy in simplified form.

Figure 3.15

IBSA SECTORS AND RELATED TRAINING PACKAGES



3.7 Escan 2009 survey

As described in Chapter 1, a survey of organisations in IBSA industry sectors formed a component of the Escan. This chapter summarises the survey results relating to existing and emerging workforce needs in IBSA's sectors. This extends to a comparison based on business location and size. Key points in relation to the survey are as follows:

- The survey was conducted from 18 November 2008 to 2 December 2008.
- The survey was undertaken online. Respondents linked to the survey from an email sent by IBSA to the IBSA contact database. The email was sent to approximately 28,000 recipients.
- Responding to the survey was voluntary. There were a total of 1097 valid responses.
- Findings have only been reported if a minimum of ten responses were received in response to specific job roles / occupations.

- In the analysis of responses from a given industry, state/territory or region that follows, the response is sometimes reported as being above or below average. This compares the average of responses for that industry, state/territory or region, with the average of all responses. For example, if Education is reported to be 10 percent above average, this refers to the average response of respondents who identified themselves as working in the education sector, compared to the average of all responses.

Interpreting the survey results

The survey asked respondents for their views on a range of matters related to the workforce needs of their business. Employment intentions are but one part of the survey. Other survey results are reported throughout Escan 2009.

These data have been sought based on DEEWR advice that it is seeking to obtain greater quantification of employment intentions.

While this objective is acknowledged, the rapid change in the external economic environment during 2008 underscores the difficulty in reliably predicting growth and decline in specific occupations and job roles.

Attracting responses to surveys such as this is difficult. To encourage as many responses as possible the survey was sent to all organisations on the IBSA database. The spread of organisations on the database is not necessarily representative of the size of IBSA's six sectors, or of the range of sub-sectors within each of the sectors.

Interpreting the employment intentions results

The sectoral breakdown of the survey results regarding employment intentions should be viewed as an indicative point in time overview, please note:

The results are merely indicative. They do not constitute an employment forecast and should not be interpreted as a forecast of employment for specific jobs.

- Those surveyed were:
  - asked to offer a view on 'number of employees by occupation'
  - given a list of occupations / job roles to select from for that sector
  - asked to advise of the number of employees in that occupation now; in 1 – 2 years; and in about 5 years.
- The list of occupations / job roles for each sector was aligned with ANZSCO codes where possible. The list was based on occupations / job roles thought to either be in demand based on Escan 2008 and work undertaken previously for the PPP.
- This approach was used because it would be impractical to ask survey respondents to choose from every occupation / job role that exists in each IBSA sector.

- The inclusion of a job role / occupation in a particular sector should not be interpreted as suggested that a given job is only employed in that industry. On the contrary, in recognition of the cross-sectoral nature of employment for many of the job roles surveyed respondents could provide a response for any job role surveyed.
- In surveying employment intentions, the survey located four occupations / job roles with skills most closely associated with the Financial Services Training Package, under business services: finance manager, accountant, accounts clerk and bookkeeper. They are reported in this chapter under business services, as this is where they were placed in the survey. Appendix A appropriately references these occupations / job roles to the Financial Services Training Package. This is not considered a significant issue for the purposes of survey analysis for the reason described in the dot point immediately above.
- Although there were 1097 valid responses to the survey, the sample size for responses to questions about employment intentions for specific occupations / job roles is less than 1097. This is because respondents would only be expected to respond to employment intentions for the sector in which they identify their organisation as belonging to.
- Total responses from each sector are as follows (the total of the list below is 1394. This is higher than the 1097 total valid responses to the survey as respondents could choose more than one sector):
  - Education – 823
  - Business Services – 233
  - Cultural and Related – 125
  - ICT – 107
  - Finance – 63
  - Printing – 43.
- The results reported in the respective boxes in this chapter are weighted to account for the volume of responses received. All occupations / job roles for which a valid sample of ten responses was received are listed. Occupations / job roles are listed from highest survey result ranking (biggest increase or decrease) to lowest ranking (smallest increase or decrease).

Reporting of findings of Escan 2009 validation stage

The draft Escan was presented to IBSA stakeholders for consideration and validation. Stakeholders involved in the validation stage were as follows:

- each of the six IBSA sector advisory committees (SACs)
- the IBSA advisory body network, which comprises state training advisory bodies relevant to IBSA's sectors
- forum of larger businesses
- forum of smaller businesses.

The purpose of the validation stage was to test the findings of the draft Escan on stakeholders with detailed sector specific knowledge.

This included testing the findings of the survey, both generally and as it related to employment intentions.

Feedback received during the validation stage has been reported in this chapter under a specified heading for each of IBSA's six sectors.

In those instances where the validation stage resulted in a survey finding not being verified, this has also been reported along with an explanation.

In some instances, additional source material was identified during the validation stage. This is referred to and reported where appropriate.

Overall survey results

Employment intentions

Box 3.6 ranks the occupations from across the six IBSA sectors for which those surveyed considered growth likely over around five years. (See Appendix A for full list of occupations in demand.)

Box 3.6

OCCUPATIONS / JOB ROLES: GROWTH CONSIDERED LIKELY OVER AROUND FIVE YEARS

- Call or Contact Centre Operator
- Receptionist
- Training and Development Professional
- Call or Contact Centre Team Leader
- Telemarketer
- Workplace VET Trainer / Assessor
- Education / Teachers' Aide
- Customer Contact Manager
- Sales and Marketing / Business Development Manager
- Sales Representative
- Human Resource Administrator / Manager
- Multimedia Specialist and Web Developer
- Training Centre Manager
- General Administrative Officer
- Business Policy and Planning Manager
- Vocational Education Teacher
- OHS Manager
- Contract Program and Project Manager / Administrator
- Career Counsellor / Adviser
- Curriculum Advisory Teacher E-Learning
- Market Research Analyst
- Financial Planner
- Education Adviser and Reviewer
- ICT Help Desk Officer
- Computer Network Professionals
- OH&S Officer / Advisor
- Accountant
- Corporate Services Manager
- Web Designer
- Software and Applications Programmer
- Personal Assistant / Secretary
- Para-legal Professional
- Database and Systems Administrator or ICT Security Specialist
- Graphic Designer
- ICT Network and Support Professional
- Teacher of English to speakers of non-English background
- ICT Support Technician
- Technical Writers
- HR Clerk / HR Officer

Source: Escan 2009 survey

Box 3.7 ranks those occupations, from across the six IBSA sectors, for which those surveyed considered decline likely over around five years.

Box 3.7

OCCUPATIONS / JOB ROLES: DECLINE CONSIDERED LIKELY OVER AROUND FIVE YEARS

- Office and Practice Manager
- Accounts Clerk
- Supply and Distribution Manager
- Account Manager
- Finance Manager
- Curriculum Advisory Teacher
- General Manager
- Auditors
- Telecommunications Technical Specialist
- Payroll Clerk
- Printing Machining and Production
- Library Assistant
- Graphic Pre-press Trades Worker including pre-press designer
- Printer's Assistant

Source: Escan 2009 survey

Employment intentions – validation stage feedback

Stakeholder responses to specific results are discussed in the sectoral survey results below. As a general observation, stakeholders expressed concern about predictions of employment growth or decline in specific job roles being used as a basis for any subsequent decisions that will impact on the supply or funding of training for corresponding job roles. Stakeholders were of the view that the uncertain and deteriorating economic climate will demand a general increase in public investment in training across many of the IBSA areas of responsibility. The advice from stakeholders has been incorporated in the presentation of employment intentions.

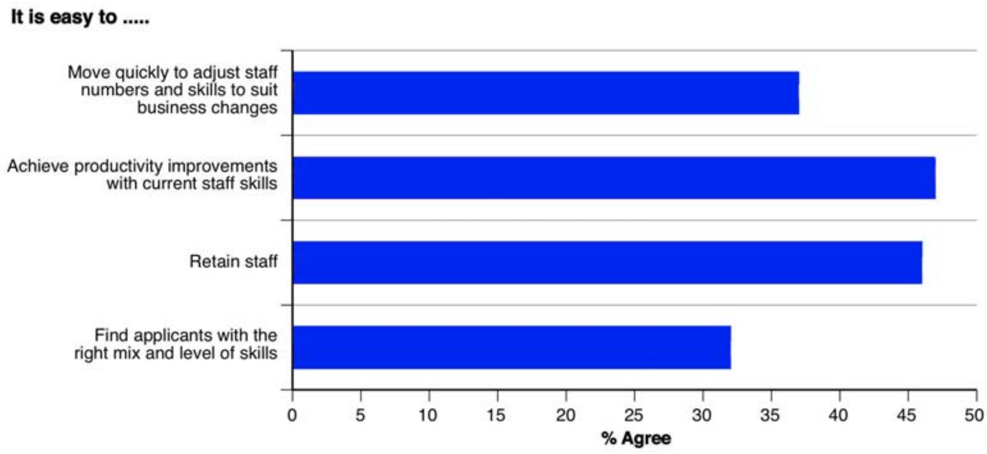
Workforce issues

Figure 3.16 summarises the views of survey respondents in relation to key workforce issues. The results suggest that businesses from the IBSA sectors are continuing to have some difficulty finding staff with the right skills; with only one-third agreeing that it is easy to find applicants with the right mix of skills. Slightly more find it easy to move staff quickly in response to business changes. While staff retention and achieving productivity improvements are comparatively less of a concern, there was still a majority who found it is less than easy to achieve these objectives.

These results suggest a need for a better trained workforce: to help businesses find applicants with the right mix and level of skills and to achieve productivity improvements.

Figure 3.16

IBSA SECTORS — WORKFORCE



Source: Escan 2009 survey

Workforce issues – validation stage feedback

Stakeholders advised that, as indicated in Figure 3.16, staff retention has been a major issue in some of IBSA's sectors, particularly in financial services and printing. However, staff retention is expected to become less of an issue if the labour market deteriorates, as staff will seek to consolidate their existing position rather than moving quickly between jobs, as has tended to occur in some areas in recent years.

Findings: overall survey

- *Organisations in IBSA sectors are continuing to have some difficulty developing an appropriately skilled and flexible workforce and in retaining staff.*
- *Retaining staff is expected to become less of an issue as employees increasingly seek to consolidate their existing positions.*
- *Training can assist businesses in meeting these challenges. This includes training of current and prospective employees.*
- *The challenge is to ensure training that meets business' needs is available, that employers are aware of the training's availability and of its benefits.*

Sectoral survey results

The following sections provide a breakdown of survey results from each IBSA sector in terms of:

- employment intentions of the sector
- attitudes of the sector
- validation stage feedback.

The reporting of employment intentions has been described above.

In reporting the attitudes of the sector, the views of each sector are compared with the average of views expressed by all respondents. The analysis includes consideration of the overall survey response to the expected impact of: the financial situation on workforce needs (see Figure 2.5); concerns across IBSA sectors (see Figure 2.14); attitudes to the organisation's current workforce (see Figure 3.16); attitudes to training (see Figure 4.18); attitudes to informal training (see Figure 4.19); and training needs (see Figure 4.20).

Where the term 'occupations' is used, this should also be taken to include 'job roles'. The significance of this is that some jobs may combine several components of formally classified occupations. These components are 'job roles'.

Two main data sources are cited in relation to the employment intentions and attitudes of each sector:

- The ABS: Labour Force, Australia, Detailed, Quarterly, August 2008 (Cat no. 6291.0.55.003).
- The Escan 2009 survey, undertaken specifically for the Escan, as described in Chapter 1.

The ABS data are reporting past employment trends in selected occupations for each sector. Some stakeholders raised concerns about these ABS data. Specific concerns are noted in the 'feedback from validation stage' section.

3.8 Printing and Graphic Arts

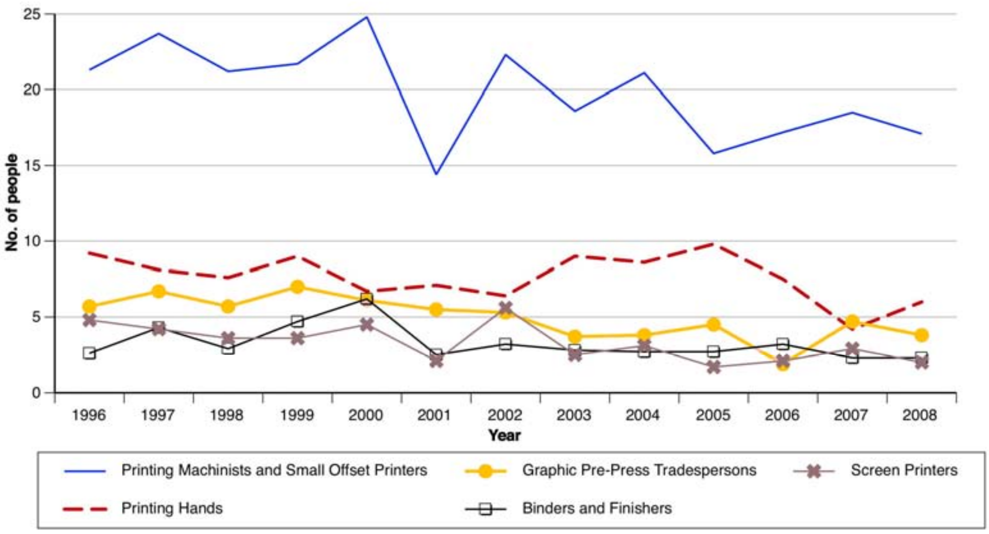
The survey asked respondents to nominate the main IBSA industry that they identify with; 43 respondents identified with printing. Printing comprised the following sub sectors:

- printing
- printing support services
- reproduction of recorded material
- newspaper, periodical, book and directory publishing
- corrugated paperboard and paperboard container manufacturing.

Figure 3.17 is a summary of employment patterns for selected occupations in this sector since 1996. The total number employed includes both full-time and part-time employees; figures are for the August quarter of each year.

Figure 3.17

PRINTING – EMPLOYMENT IN SELECTED OCCUPATIONS



Source: ABS, Cat no. 6291.0.55.003

Employment intentions – survey results

Box 3.8 ranks the occupations from printing and graphic arts for which those surveyed considered growth likely (weighted for response) over around 5 years.

Box 3.9 ranks the occupations from printing and graphic arts for which those surveyed considered decline likely (weighted for response) over around 5 years.

In considering these results, note that the number of survey responses for printing and graphic arts job roles was modest and the degree of growth and decline for respective job roles was generally within a narrower range compared to most other sectors. An exception to this observation was the job role of multimedia specialist and web developer, which recorded 121 responses, and an expected increase in employment of over 50 percent over five years.

Box 3.8

PRINTING AND GRAPHIC ARTS: GROWTH CONSIDERED LIKELY OVER AROUND FIVE YEARS

- Multimedia Specialist and Web Developer
- Graphic Designer

Source: Escan 2009 survey

Box 3.9

PRINTING AND GRAPHIC ARTS: DECLINE CONSIDERED LIKELY OVER AROUND FIVE YEARS

- Printing Machining and Production
- Graphic Pre-press Trades Worker including Pre-press Designer
- Printer's Assistant
- Binder and Finisher

Source: Escan 2009 survey

For each of the survey results showing a decline in printing occupations / job roles, the decline was relatively insignificant. However, this does indicate relatively static employment expectations in those job roles. It is notable that employment growth is expected in technology-based positions.

Printing and Graphic Arts attitudes

The economy

The printing sector was relatively weaker in its view that the current financial situation would require a change in people's skills (2 percent below average), or that it would increase the need for training (4 percent below average).

The printing sector has the widest and sharpest concerns of all the IBSA sectors. Its concerns are above average in each area posited by the survey. It has relatively strong concerns about:

- the speed of technological change (10 percent above average)
- industrial relations (7 percent above average).

It is also concerned about:

- international market factors (5 percent above average)
- business taxes (3.5 percent above average)
- the economy (3 percent above average)
- interest rates (3 percent above average)
- maintaining profitability (1 percent above average).

Labour force

On average, businesses in the printing sector found it slightly less easy to retain staff (3 percent below average on ease of staff retention). They also did not find it easy to achieve productivity improvements with current staff (2 percent below average). Respondents in this sector were however above average in their ability to move quickly to adjust staff numbers and skills (2.5 percent above average).

Training

The printing sector favours formal training. It is the most likely to train staff through a whole, formal, qualification (16 percent above average). Businesses in this sector are also likely to train staff through formal units of competency (7 percent above average). It is thus the least likely to train staff through informal or off the job training (15 percent below average). It is also below average in training all staff (7 percent below average).

The sector favours using government funded training to train existing workers (9 percent above average). The sector is most likely to use training if it is majority funded by government (24 percent above average). It is less likely to use training if it is not government funded (13 percent below average), or if government funding is less than 50 percent (7 percent below average).

The printing sector was above average in finding it easy to allocate time to plan training (4.5 percent above average) and up-skill new staff (3 percent above average).

The sector is most likely to carry out a lot of training in general employability skills (9 percent above average). Responses indicate it is also above average in once-off product or process training (4.5 percent above average). It is however less likely to carry out training to upgrade technical skills (7 percent below average).

Printing and graphic arts – validation stage feedback

Stakeholders advised that they have found there to be a shortage of binder and finisher roles. However, the survey results indicated a slight decline in the employment intention for this role over five years. Stakeholders also advised that it was difficult to recruit in some areas including printers' assistants.

As the survey asked for the number of employees expected at a future point, respondents may have taken into account their ability to recruit people for those positions. In printing this could be a consideration, given that stakeholders advised that it is difficult to attract people into the industry. The ageing of the current workforce is a significant issue.

Stakeholders advised that the digital sector in print should be viewed differently as it is growing. For this part of the industry new skill sets are required along with new approaches to training. This sector is not craftsmen based as printing historically has been, but is based more on client service provision.

While survey results indicated that the industry is more likely to use formal training, stakeholders advised that many in the industry are not aware of the training package and there is a lack of RTOs that deliver training under this package. In the NT for example, the limited VET courses available are sometimes only available through one RTO (CHARTTES 2009).

The Printing Industry Association of Australia (PIAA) advised that reporting of total employment in the printing industry varies depending on whether the most recent ANZSIC classifications are used. The updated ANZSIC reports employment of approximately 74,117, while the previous version reported approximately 126,061, as shown in Table 3.5. The discrepancy arises because the previous version included categories related to newspaper, book and recorded media printing and publishing.

Table 3.5

PRINTING INDUSTRY EMPLOYMENT

Old ANZSIC	Employment	New ANZSIC	Employment
233 Paper and paper product manufacturing	19,297	151 Pulp, paper and converted paper product manufacturing	23,801
2411 Paper stationery	4,986	1611 Printing	45,281
2412 Printing	47,570	1612 Printing support services	2,786
2413 Services to printing	4,989	162 Reproduction of recorded media	2,249
2421 Newspaper printing or publishing	27,216		
2422 Other periodical publishing	8,080		
2423 Book and other publishing	10,133		
243 Recorded media manufacturing and publishing	3,790		
Total	**126,061**	**Total**	**74,117**

Source: PIAA

Findings: Printing and Graphic Arts

- *The survey results suggest relatively static employment growth is expected in several job roles, but increasing employment is expected in more digital technology based roles.*
- *Survey results regarding attitudes of businesses in the printing sector, indicate that they are more concerned about external factors than others, particularly in relation to technological change and industrial relations.*
- *The results also indicate that the printing industry is more likely to use formal training, less likely to use informal training and is considerably more likely to access training if it is majority funded by government.*

3.9 State and territory comparison

Economy

Responses to questions relating to the current financial situation and the economy more widely were broadly similar across jurisdictions. Among those areas where there were noticeable variations in responses:

- respondents in the ACT and Tasmania agreed to a lesser extent that the current financial situation would increase the need for formal VET training (8 percent below average)
- respondents in South Australia and the ACT agreed to a lesser extent that the current financial situation would lead to a different mix of occupations (6 percent and 5 percent below average respectively)
- respondents in Tasmania and the NT were less concerned about maintaining profitability (9 percent below average)
- respondents in Queensland and Western Australia were more concerned about international market factors (3.5 percent and 4.5 percent above average).

However, greater variation is evident in comparisons of survey responses by respondent region (either capital city, regional centre, country town, or rural). As Table 3.6 shows, those respondents located in capital cities and, to a lesser extent, regional centres, expected that the current financial situation will have a lesser impact on skill needs, occupational mix and training budgets than those in country towns and rural areas.

Table 3.6

RESPONSE TO THE CURRENT FINANCIAL SITUATION, BY REGION

The current financial situation will:	Capital city	Regional centre	Country town	Rural
Require a change in people's skills	-2.0 percent	-0.5 percent	2.5 percent	2.0 percent
Lead to a different mix of occupations	-2.5 percent	-0.5 percent	1.5 percent	2.5 percent
Increase the need for TAFE/training organisation skills	-4.5 percent	-0.5 percent	3.0 percent	4.5 percent
Result in cuts to your formal training budget	-2.0 percent	-0.5 percent	2.0 percent	2.0 percent

Source: Escan 2009 survey.
Note: figures denote percent variation from the mean level of agreement to each proposition.

Similar variations were apparent in responses to questions about concerns with the general economy. Particular differences included:

- respondents in capital cities were less concerned about maintaining profitability than those in country towns and rural areas (3 percent below average)
- respondents in capital cities were less concerned about industrial relations than those in all other areas (2 percent below average)
- respondents in regional centres, country towns and rural areas tended to be more concerned at the speed of technological change (between 2–4 percent above average)
- respondents in capital cities were more concerned at international market factors than those respondents in other areas (4 percent above average).

Labour force

Responses to the labour force survey questions were broadly similar across jurisdictions. Survey responses were also consistent between regions. However, respondents in regional centres and rural areas tended to find it somewhat easier than those in capital cities and country towns to:

- find applicants with the right mix and level of skills
- retain staff
- achieve productivity improvements with current staff skills
- move quickly to adjust staff numbers and skills to suit business changes.

Training

Across jurisdictions, respondents in New South Wales, Queensland and Tasmania tended to find it somewhat easier to:

- get access to relevant training
- train new starters
- upskill existing staff
- provide on-the-job training
- allocate time to plan training
- give staff 'time-off' to attend formal training
- evaluate training effort and return on training investment.

Respondents in Victoria and South Australia tended to find these aspects of training somewhat more difficult than average.

In responses to questions relating to training practices, respondents in South Australia, Tasmania and Western Australia tended to carry out a greater level of company, industry or induction training than the average of all jurisdictions (between 3–5 percent above average). However, respondents in South Australia, Tasmania and the ACT undertook less training than average in general employability skills.

By region, those respondents in country towns and rural areas tended to find it somewhat more difficult to access relevant training; provide on-the-job training; and allocate time to plan training, than those in capital cities and regional centres. However, the size of these variations was limited (between 1–5 percent). Those respondents in capital cities were less likely to provide training in general employability skills than respondents in other areas (7 percent below average).

Findings: comparison of states and territories

- *Survey responses indicate that there is a broadly similar view between jurisdictions regarding the impact of the financial situation and the economy.*
- *Survey responses suggest that businesses located in capital cities and, to a lesser extent, regional centres, expect that the current financial situation will have a lesser impact on skill needs, occupational mix and training budgets compared with those in country towns and rural areas.*
- *Responses to the labour force survey questions were broadly similar across jurisdictions.*
- *Respondents in South Australia, Tasmania and Western Australia tended to carry out a greater level of company, industry or induction training than the average of all jurisdictions.*

Approaches of states and territories

In the course of consultation, several states and territories referred to existing lists of priority skill areas or occupations. This section is a brief summary of the approach adopted by some jurisdictions.

As an overall observation, while all jurisdictions have reported skill shortages, the policy responses have varied. Some jurisdictions have developed lists of occupations and skills in shortage, to develop specific VET based responses, while others have sought to intervene through strategies based on ensuring the overall VET system is well designed and responsive.

NSW

The NSW Skills Development Priorities 2007-08 for the Strategic Skills Program (Department of Education and Training 2008) is based around a series of objectives, including addressing skill shortages. In addition to identifying skill needs, the priorities identify how VET can address the skill need. RTOs are able to tender for funding to provide training in SSP areas. Across the categories established by NSW (of which addressing skill shortage is one), several skill areas are listed which fall within the IBSA sectors, these include:

- ICT
  - Knowledge management
  - Business Processes
  - Networking (E-security and vendor)
  - Business Intelligence
  - Project Management and System Integration
  - Business and Personal Management Skills
- Financial and Business Services
  - Accountants

  - Mercantile Agents and Credit Managers
  - Clerks / Bookkeepers
- Arts and Culture
  - Visual special effects, animation, digital post production
  - Games development
  - Broadcast engineers
  - Wardrobe Designers
  - Audio and Lighting
- Printing and Graphic Arts
  - Advanced interface with computer technology
  - Environmental awareness
  - Label printing
  - Print binding finishing
  - Print machining
  - Prepress proofing.

NSW has undertaken a detailed process of mapping areas of skill need to ensuring an adequate supply of VET, through specific funding.

Victoria

Results of the Victorian Skills Survey (VECCI 2007) emphasised the significant impact of skill shortages on Victorian businesses in 2006, when the survey was conducted:

- more than half of the surveyed businesses reported difficulty in filling skilled vacant positions in the preceding 6 months
- the majority of businesses surveyed stated that skill shortages were having an adverse impact on productivity.

Other key findings were:

- regional areas are more affected by skill and labour
- many businesses (about one quarter) have had difficulty recruiting an Australian apprentice
- most businesses have not considered how the ageing of the workforce will impact on them.

Queensland

The Queensland Skills Plan (2006) formed the basis for major reform of VET in Queensland. The plan identified that Queensland has experienced skill shortage across many industries and that a new approach was required to respond. The plan has since been subject to updating in 2008 (Department of Education, Training and the Arts). Boosting participating in VET is a key goal of the plan.

The plan reports that employment growth in Queensland has been exceptionally strong, particularly for managers and administrators (6.3 percent) and associate professionals (5.2 percent).

The plan also identified that the proportion of Queenslanders aged between 25 and 64 years with a post school qualification is below the national average.

The plan sets out a number of actions to address skill shortages and position Queensland's VET system for emerging challenges.

ACT

The ACT Skills Commission has reported (2008) that:

- the ACT needs more people; and more people with high level skills
- virtually every part of the ACT labour market currently has shortages of workers
- in response, there is a need to:
  - extend the workforce involvement of workers at all ages
  - increase net interstate and international migration
  - upskill the existing workforce, through retraining and reskilling
  - retain workers, to slow the flow of talent from the ACT
  - increase participation rates
- these solutions are the responsibility of the public and private sectors – including government, educational institutions, business and individuals.

NT

The *NT Jobs Plan 3 – Jobs for the Future* (2008) is the latest tranche in the NT government's response to the tight labour market conditions facing the territory, reflected by high levels of economic growth and low unemployment. The plan includes a number of strategies to develop the NT workforce. There is a strong emphasis on training to ensure an adequate supply of suitably skilled workers, including traineeships and apprenticeships in addition to the development of partnerships between government and industry.

The NT has also developed a list of qualifications that relate to occupations known to be in shortage in the NT. For IBSA sectors, the qualifications listed are:

- Printing – Cert. III Printing and Graphic Arts (Print Finishing)
- Printing – Cert. III Printing and Graphic Arts (Printing)
- Business – Cert. III Business (Legal Administration)
- Business – Cert. IV Business (Legal Services)
- Business – Cert. IV Business (Human Resources)
- IT – Certificate IV Information Technology (General)
- IT – Certificate IV Information Technology (Support)

- IT – Certificate IV Information Technology (Networking).

Findings: approach of states and territories

While all jurisdictions have reported skill shortages, the policy responses have varied. Some jurisdictions have developed lists of occupations and skills in shortage, to develop specific VET based responses, while others have sought to intervene through strategies based ensuring the overall VET system is well designed and responsive.

3.10 Size of business comparison

This section compares the views expressed in the IBSA Escan survey by large businesses with other, small and medium-sized enterprises (SMEs). Stakeholder views on the reliability of the survey findings have been included where appropriate. Large businesses are defined as those with more than 100 employees and/or turnover exceeding $5 million per year.

Economy

Responses to questions about the current financial situation were broadly similar for businesses of different sizes. One exception was expectations about cuts to formal training budgets as a response to the financial situation. Large businesses agreed more strongly — by an average of around 5 percent — that the current financial situation would result in cuts to their formal training budgets.

As Table 3.7 shows, compared to SMEs, large businesses were more concerned about:

- industrial relations (8–10 percent above average)
- the speed of technological change (4–7 percent above average)
- international market factors (3–7 percent above average)
- interest rates (4 percent above average).

Compared with large businesses, SMEs expressed greater concern about:

- business taxes (8–11 percent above average)
- maintaining profitability (1–4 percent above average).

Table 3.7

CONCERNS ABOUT THE GENERAL ECONOMY COMPARED TO SURVEY AVERAGE

I have concerns about:	Businesses with more than 100 employees	Businesses with turnover exceeding $5 million
The economy	0.5 percent	3.0 percent
Industrial relations	10.0 percent	8.0 percent
Interest rates	3.5 percent	4.0 percent
The speed of technological change	7.0 percent	4.0 percent
International market factors	3.5 percent	7 percent
Maintaining profitability/fee levels	-4.0 percent	-1.5 percent
Business taxes	-10.5 percent	-8.0 percent

Source: Escan 2009 survey.
Note: figures denote percent variation from the average level of agreement to each proposition.

Several stakeholders also expressed that the availability of credit was emerging as a constraint for many businesses, particularly SMEs.

Labour force

There were no major variations in responses to labour force questions based on business size, with variations between 0–2 percent across all responses.

Training

In response to questions about training practices, large businesses found it easier than SMEs to: access relevant training (4 percent above average); and train new starters (4 percent above average). SMEs found it easier than large businesses to: allocate time to plan training (around 4 percent above average); give staff time off to attend formal training (2–4 percent above average); and evaluate training effort and return on investment (7 percent below average).

The survey also asked questions about businesses' level and nature of training activity. As Table 3.8 shows, large businesses consistently agreed more strongly than SMEs — compared to average — with propositions about the level of different types of training undertaken (training in general employability skills is one exception, for businesses with turnover exceeding $5 million).

Stakeholders from larger businesses expressed concerns about the level of flexibility available to integrate nationally recognised training with training developed to meet a specific business need. This is particularly an issue for enterprise RTOs and is discussed in Chapter 4. The process involves translating VET units of competency into a terminology that others within the business understand. This imposes administrative costs and requires a person who is knowledgeable in VET to fulfil this role. Larger and smaller businesses suggested that training expenditure above two percent of total payroll could be subject to a full or partial tax deduction to encourage investment in training.

Stakeholders from SMEs advised that:

- small business needs accessibility and flexibility in training options

- there is a role for IBSA to communicate training options and the potential benefits of training to small business
- IBSA may be better placed communicating to small business through established industry body networks, rather than trying to engage directly (small business owners.

Table 3.8

TRAINING ACTIVITY COMPARED TO SURVEY AVERAGE

We carry out a lot of:	Businesses with more than 100 employees	Businesses with turnover exceeding $5 million
Once-off product/process training	5.0 percent	4.5 percent
Company / industry orientation / induction training	8.0 percent	7.0 percent
General employability skills training	3.5 percent	-2.0 percent
Upgrading technical skills	4.5 percent	3.0 percent
Other	5.0 percent	2.0 percent

Source: Escan 2009 survey.
Note: figures denote percent variation from the mean level of agreement to each proposition.

The survey finding that these training activities were more frequently undertaken by larger businesses was consistent with many stakeholders' expectations. Stakeholders considered that SMEs were more likely to provide on-the-job and informal training, given that it is generally lower cost and can be directly tailored to the businesses needs.

Findings: size of business comparison

- *Survey results indicate that larger businesses are more likely on average to expect the current deterioration in external economic conditions to result in cuts to training budgets.*
- *Survey results also suggest that larger businesses are generally more concerned than smaller businesses across the issues surveyed.*
- *Survey results indicate that larger businesses are more likely than smaller businesses, on average, to carry out each type of training. This was particularly the case for businesses with more than 100 employees.*
- *Larger businesses also found it easier on average to access relevant training and train new starters.*
- *Small and large businesses share in common a desire for flexibility and ease of access to training. Large businesses are more likely to have a strategic approach to workforce development, which may or may not be integrated with the VET system. As small businesses are less likely to have this capability, the brokering role to facilitate access to the training system, which could potentially be filled by IBSA, is particularly critical for small business.*

Chapter 4

IBSA training packages addressing workforce needs

This chapter provides an overview of employer engagement with the formal training system and outcomes for VET graduates. The IBSA sectors are then examined in further detail. Firstly, by consideration of the overall attitudes expressed by organisations from the IBSA sectors through the survey. Secondly, through a high level description of issues relating to IBSA training packages.

Much of the data presented in this chapter is sourced from NCVER data sets. NCVER is contracted to manage the Australian VET statistical collections. As with all data collections, there are limitations associated with NCVER data. Of particular relevance to this report is the lack of data concerning training conducted by private RTOs. Omission of this data is significant for participants in a number of IBSA sectors such as financial services, where private RTOs including enterprise RTOs train significant numbers of people. There is also some concern regarding the quality of some data provided to NCVER by RTOs.

Within these constraints, this chapter presents information regarding both module completions and award completions. During consultations conducted as part of the Escan, many stakeholders indicated that employers were more interested in their employees completing specific units of competency leading to skill sets, than in completion of qualifications (award completions). Individuals, however, see personal benefit in the completion of qualifications. Stakeholders stressed that many students enrol in VET programs with the intention of completing skill sets and not the entire qualification. Government policy has focused strongly on completion of full qualifications and many data sets report completion of qualifications and not completion of skill sets.

4.11 General Industry engagement with VET

VET employment outcomes

Table 4.9

EMPLOYMENT OF VET GRADUATES

Year	Module completers employed	VET graduates employed
2008	76.9%	80.7%
2007	74.3%	81.1%
2006	74.6%	79.6%

Source: NCVER 2008, 2007, 2006

Table 4.10

RELEVANCE OF VET TO EMPLOYMENT

Year	Module completers rating VET highly or somewhat relevant to current job	Graduates rating VET highly or somewhat relevant to current job
2008	61.6%	75.5%
2007	61.3%	75.2%
2006	61.3%	73.9%

Source: NCVER 2008, 2007, 2006

Table 4.9 and Table 4.10 indicate that VET graduates have improved outcomes in employment and employment relevance, than module completers. Overall, this suggests that VET participants benefit significantly from completing full qualifications. However, in some instances completing only a module will be appropriate, particularly for those who are presently employed and seeking to upgrade their existing skills.

In relation to the relevance of employment compared to the area of training, in 2008:

- 30.3 percent of graduates were employed in the same occupation group as their training course
- 33.8 percent were employed in other occupations but found their training relevant.

Table 4.11

HIGHEST AND LOWEST EMPLOYMENT RATES FOR GRADUATES

Highest	Lowest
Education (91.8%)	'Mixed-field' programs (54%)
Engineering and Related Technologies (89.8%)	Creative Arts (61.7%)
Architecture and Building (89.8%)	

Source: NCVER 2008

Table 4.12

HIGHEST AND LOWEST EMPLOYMENT RATES FOR MODULE COMPLETERS

Highest	Lowest
Health (95.4 %)	Creative Arts (67.7%)
Architecture and Building (86.3%)	Information Technology (67.7%)

Source: NCVER 2008

It is noteworthy that the highest employment rate for VET graduates is in education, while the lowest is in creative arts. For module completers, those in information technology had relatively low employment outcomes.

The rate of employment improves with the level of the qualification undertaken. Certificate III, Certificate IV and diploma and above qualifications all approximately 85 percent, compared to 61 percent and 73 percent for Certificate I and Certificate II respectively.

Findings: VET employment outcomes

- *Individuals who complete VET qualifications have better employment outcomes than those who only complete part of a qualification*
- *Employment outcomes improve as the level of VET qualification undertaken increases. Certificate III and above qualifications have considerably better employment outcomes than lower qualifications.*
- *The value and importance of skill sets and of undertaking individual VET modules is significant. The objectives of increasing VET participation and encouraging completions are complementary.*

VET employment outcomes in IBSA sectors

Table 4.13 shows employment outcomes, with an emphasis on occupations that relate to IBSA sectors. The table shows the proportion of VET graduates employed in: the same occupation group as they trained in; an occupation which is related to their training; or an occupation which has little relevance to their training. It also shows total employed and not employed.

Table 4.13

VET EMPLOYMENT OUTCOMES (SELECTED OCCUPATIONS)

Intended occupation of training activity	Same occupation group (as training course) %	Different occupation, training highly or somewhat relevant to current job %	In different occupation, training has little relevance to current job %	Occupation after training not known %	Total Employed %	Total Not Employed %
Managers	**10.7**	**54.4**	**15.6**	**1.6**	**82.2**	**17.8**
Specialist Managers	5.2	58.0	13.8	1.5	78.5	21.5
Hospitality, Retail and Service Managers	9.9	52.3	25.6	**	88.9	11.1
Professionals	**20.7**	**40.4**	**21.4**	**0.6**	**83.1**	**16.9**
Arts and Media Professionals	3.1	16.0	41.6	**	61.2	38.8
Business, Human Resource and Marketing Professionals	17.8	37.5	23.1	**	78.5	21.5
Design, Engineering, Science and Transport Professionals	18.7	38.7	20.1	0.0	77.5	22.5
Education Professionals	29.5	51.6	13.2	0.7	95.1	4.9
Health Professionals	43.7	52.6	**	0.0	100.0	0.0
ICT Professionals	**	21.1	36.9	**	65.6	34.4
Legal, Social and Welfare Professionals	30.4	44.7	23.7	**	99.1	**
Technicians and Trades Workers	**54.2**	**21.7**	**11.2**	**1.1**	**88.1**	**11.9**
Engineering, ICT and Science Technicians	15.7	40.7	17.1	1.9	75.4	24.6
Electro-technology and Telecommunications Trades Workers	77.0	13.0	3.3	**	93.7	6.3
Other Technicians and Trades Workers	42.0	16.8	22.4	1.0	82.3	17.7
Clerical and Administrative Workers	**13.5**	**41.4**	**17.0**	**1.3**	**73.4**	**26.6**
Office Managers and Program Administrators	7.9	67.3	11.6	1.6	88.6	11.4
General Clerical Workers	10.3	38.2	18.8	1.7	69.3	30.7
Inquiry Clerks and Receptionists	21.7	39.6	18.4	**	79.7	20.3
Numerical Clerks	28.5	28.0	12.6	**	69.7	30.3
Clerical and Office Support Workers	0.0	24.1	19.2	0.0	43.3	56.7
Other Clerical and Administrative Workers	17.3	46.2	18.9	**	82.6	17.4
Sales Workers	**36.3**	**33.1**	**13.9**	**1.0**	**84.5**	**15.5**
Sales Representatives and Agents	30.7	33.3	22.3	**	89.4	10.6
Sales Assistants and Salespersons	36.8	33.5	12.4	0.7	83.6	16.4
Sales Support Workers	65.6	**	**	0.0	91.9	**
Machinery Operators and Drivers	**22.7**	**51.9**	**18.0**	**1.8**	**94.4**	**5.6**
Machine and Stationary Plant Operators	16.6	63.9	14.5	**	96.2	3.8
All graduates	**30.3**	**33.8**	**16.8**	**1.1**	**82.1**	**17.9**

Source: NCVER (2008b).

As Table 4.13 shows, the proportion of graduates employed in their 'intended occupation', was the highest for technicians and tradespersons workers (54.2 percent). At the other end of the scale, only 13.5 percent of clerical and administrative workers were employed in their intended occupation.

Table 4.14 shows industry engagement with VET, both for IBSA sectors and other sectors, for comparative purposes.

Table 4.14

INDUSTRY ENGAGEMENT WITH VET

Industry	% of employers in industry engaged with VET system	Expenditure on training per employee ($)	% of workforce with no post-school qual.	% workforce with diploma and above	Number employed
Agriculture, forestry and fishing	28.5	n.a.	62.5	15.8	344 000
Mining	82.7	1 643	36.7	30.4	135 600
Manufacturing (includes printing)*	**59.1**	**434**	**48.8**	**19.9**	**1 086 700**
Electricity, gas and water supply	34.7	1 279	29.2	34.1	89 900
Construction	77.6	208	45.5	11.3	937 300
Wholesale trade	42.0	422	55.1	20.3	465 600
Retail trade	43.9	127	65.6	13.0	1 485 400
Accommodation, cafes and restaurants	48.9	147	59.8	18.3	534 500
Transport and storage	47.9	426	54.2	20.5	488 900
Communication services*	**39.5**	**1 279**	**51.0**	**29.1**	**199 200**
Finance and insurance*	**67.6**	**1 323**	**38.4**	**48.8**	**405 500**
Property and business services*	**50.5**	**537**	**35.1**	**47.5**	**1 253 800**
Government administration and defence	88.8	719	35.0	48.0	486 000
Education*	**63.6**	**479**	**18.1**	**72.5**	**747 600**
Health and community services	58.6	383	27.3	53.9	1 097 700
Cultural and recreational services*	**45.0**	**225**	**50.2**	**34.5**	**294 800**
Personal and other services	70.7	859	44.4	26.6	398 800
All industries	**54.0**	**458**	**45.3**	**31.7**	**10 451 200**

* Industry sectors of most relevance to IBSA industry sectors are represented in bold
Source: NCVER 2008

The sectors of most relevance to IBSA are highlighted in bold. As shown in Table 4.14, industries with the highest VET engagement and investment are mining, finance and insurance and education.

Of those industries most relevant to IBSA's sectors:

- *Finance* and *Education* have the highest percentage of employers engaged in the formal training system, while *Communication Services* and *Cultural and Recreation Services* has the lowest.

- *Finance* also has the highest expenditure per employee, followed by *Communication*. *Cultural and Recreation* has the lowest.
- *Education* has the highest proportion with post-school qualifications, while *Communication* and *Cultural and Recreation* are the lowest. *Education* is also most likely to have a diploma or above.

Findings: VET employment outcomes in IBSA sectors

There are significant differences in employment outcomes across IBSA's industry sectors and related occupations in relation to:

- *the relevance of training*
- *engagement with VET.*

4.12 Attitudes to training across IBSA sectors

As referred to in Chapter 2, the IBSA's coverage is significant and the IBSA training packages consequently have an important role across Australian industry.

Chapter 3 reported on the findings of the Escan 2009 survey, including the attitude to training among IBSA industries. The overall findings in relation to training are reported here in more detail. This provides insight into the likely engagement of IBSA sectors with the formal training system, in addition to attitudes to government funding of training and the skill areas where training is important. Appendix C provides survey results regarding the adequacy of formal training for specific occupations and job roles.

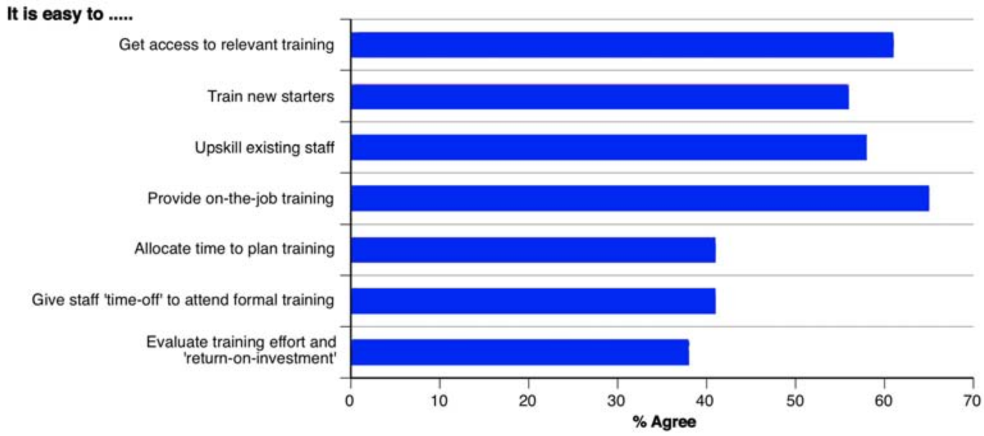
As shown in Figure 4.18, Escan 2009 survey respondents generally find it easy to get access to relevant training, with approximately 60 percent of those surveyed agreeing with this statement. This covers all forms of training, including formal VET training and informal training.

The responses suggest that businesses strongly agree that it is easy to provide on the job training, with close to two thirds of those surveyed in agreement.

Businesses tend to find it difficult to evaluate the return on investment from training. Less than 40 percent of those surveyed agreed that it is easy to evaluate training effort and return on investment.

Figure 4.18

IBSA SECTORS - TRAINING



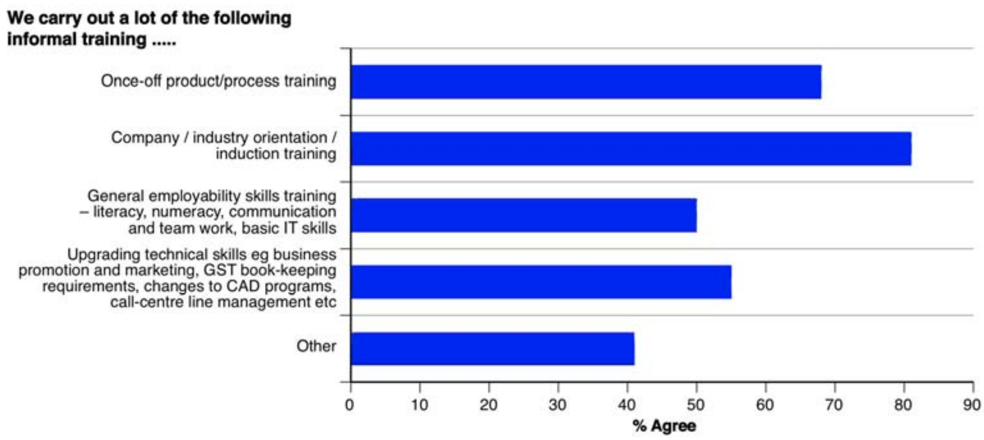
Source: Escan 2009 survey

While Figure 4.18 emphasises the ease of organising informal training, Figure 4.19 explores in further detail the type of informal training carried out. Over 80 percent of businesses carry out considerable amounts of orientation or induction type training and approximately two thirds conduct considerable once-off training about products or processes. About half of the respondents do considerable amounts of informal general employability training.

Taken together, Figures 4.2 and 4.3 tell us that businesses find it easier to provide on the job training than other types and that they are more likely to carry out a lot of this type of training. This in turn has potential implications for formal VET training, if informal training is viewed as a substitute, or if VET training is viewed as being inaccessible by comparison.

Figure 4.19

IBSA SECTORS – INFORMAL TRAINING



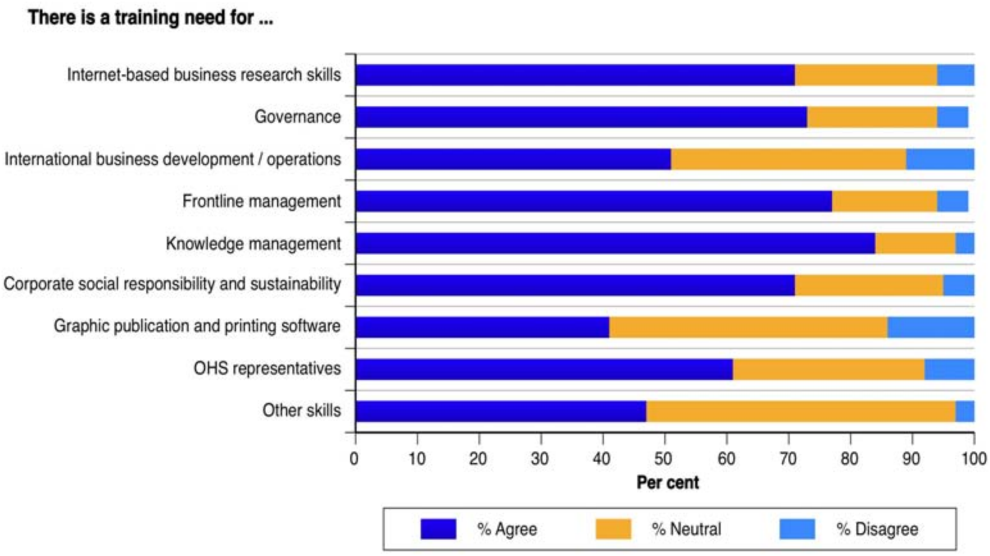
Source: Escan 2009 survey

Figure 4.20 shows the level of agreement in relation to a training need being present in specific areas. Of the areas listed, the highest agreement (over 80 percent) was recorded for knowledge management as a need for which training is needed. Frontline management was the next highest, with approximately 75 percent agreement. Conversely, graphic publication and printing software was an area where fewest respondents believed there is a training need, with 40 percent agreeing.

Stakeholder feedback during the validation stage strongly supported these results. Project management was another skill need area consistently identified by stakeholders. Although this was not included as a choice in the survey, stakeholders advised that many of the skills listed in Figure 4.20 are required for effective project management. Stakeholders also identified that asset management will be a skill in increasing demand, particularly in the context of asset revaluation caused by the widespread de-leveraging of corporate balance sheets. Stakeholders also identified small business management skills as an important cross-sectoral area of skill demand.

Figure 4.20

IBSA SECTORS – TRAINING NEEDS

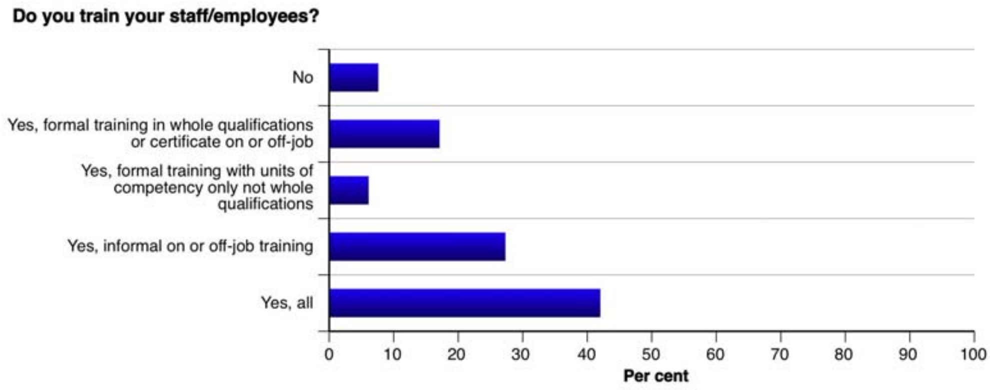


Source: Escan 2009 survey

Figure 4.21 is the overall response regarding the training of staff. Just over 40 percent of businesses train all staff. The most common form of training is informal or on the job training, which is in accordance with the findings of figures Figure 4.18 and Figure 4.19. 10 percent of respondents advised that they do not train staff.

Figure 4.21

USE OF TRAINING

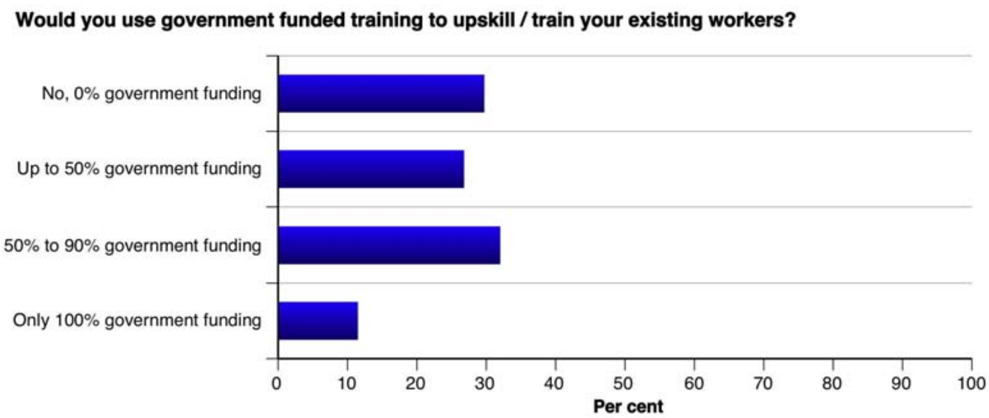


Source: Escan 2009 survey

Figure 4.22 reports on the preference for government funding of training. Although responses are relatively evenly spread, the highest share indicated they would be most inclined towards government funding of 50 – 90 percent. 11 percent would expect full government funding. Approximately 30 percent would not expect any government funding. Overall, the survey results suggest that a majority of businesses are willing to fund at least 50 percent of training, which suggests they are generally willing to fund training provided it meets a defined business need.

Figure 4.22

PREFERENCE FOR GOVERNMENT FUNDED TRAINING



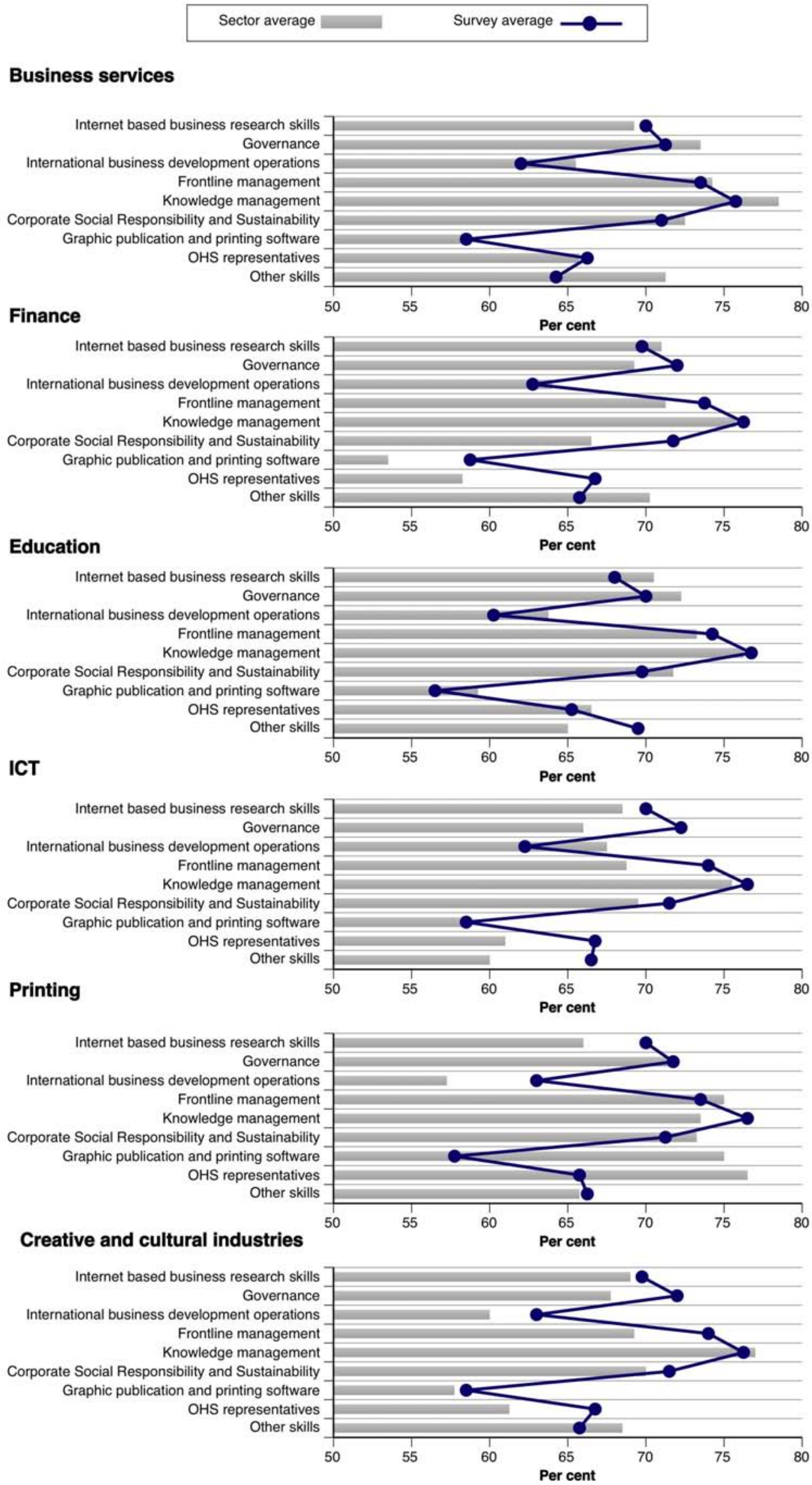
Source: Escan 2009 survey

Figure 4.7 provides an overview of the views of each sector regarding emerging skills. Respondents were asked to rate whether they agree there is a training need for the skills listed on a five point scale from strongly disagree to strongly agree.

The closer the average score is to 100, the higher the level of agreement. Misalignment between emerging skills with an associated training need and the availability of training for that skill has implications for the content of IBSA's training packages. The blue dots represent the average response regarding the need for training in each area. The grey bar represents the response of each sector.

Figure 4.23

EMERGING SKILLS – IBSA SECTOR VIEWS



Source: Escan 2009 survey

Findings: attitudes to training across IBSA sectors

- *On the job training is the easiest for business to access and is the most frequently used type of training.*
- *While attitudes vary somewhat between sectors, businesses are generally willing to pay for most or all of the cost of training, provided the training meets a defined business need and they are satisfied with the value of training.*
- *A relatively small proportion of businesses do not train staff at all, although less than half train all staff.*
- *There is a general need for more training to assist business meet the challenges of staff retention and flexibility.*
- *VET needs to make clear to business the benefits it offers in enabling them to achieve improved profitably and performance.*

4.13 IBSA training packages

This section provides a brief overview of the status and coverage of each IBSA training package. As stated above, Appendix C provides a detailed report on survey responses regarding training adequacy for specific job roles and occupations.

Competencies set out in training packages provide skills for many forms of job roles and the relationship between a qualification and a particular occupation is not always straightforward. The tables related to employment outcomes presented earlier in this chapter confirm this, with a relatively high proportion of people who complete qualifications finding employment in roles that are not directly relevant to their area of training.

Table 4.15 is a summary of VET participation and qualifications completed in IBSA training packages from 2005 – 2007. The table is presented showing VET participation and qualifications completed in IBSA training packages from 2005 – 2007, for two levels of qualification: Certificate III and below and Certificate IV and above.

As NCVER has noted in *A well skilled future - program 6* (Richardson and Teese 2008), which synthesised the results of a major research program examining the relationship between Australia's future skill needs and VET, that:

> Higher-level skills are increasingly required by industry, so VET must re-focus on middle-level and advanced training.

Rates of employment across VET clearly increase as the level of qualification attained rises (NCVER):

- Certificate I is 61.0 percent and Certificate II is 73.1 percent
- Certificate III, Certificate IV and diploma and above qualifications: 84.7 to 86.0 percent.

The data in the table is referred to in the section following, which provides an overview of each training package.

When interpreting data concerning the number of VET participants and the number of award completions it is important to take into account the time taken to complete a qualification, making direct comparison of participant enrolments to award completions in any one year somewhat misleading.

Notes to Table 4.15:

- numbers of VET participants are aggregated up from subject, module or unit enrolments
- dividing VET participants by qualifications completed will not necessarily give a reliable 'pass rate'
- only publicly funded training activity is included: stakeholders advised that in qualifications such as frontline management, finance / insurance, ICT / telecommunications and project management, this training effort would be doubled by enterprise funded training.

Table 4.15

VET PARTICIPATION AND QUALIFICATION COMPLETIONS IN IBSA TRAINING PACKAGES 2005-2007

Number of participants, by state/territory, 2005-07	VET participants			Qualifications completed		
	2005	2006	2007	2005	2006	2007
TAA - Training and Assessment (includes BSZ)						
Cert III and below	0	0	0	0	0	0
Cert IV and above	25 481	19 765	26 811	15 115	8 565	10 353
Total	25 481	19 765	26 811	15 115	8 565	10 353
BSB - Business Services (includes BSA)						
Cert III and below	68 472	72 183	74 187	19 239	18 539	19 212
Cert IV and above	56 267	60 409	62 763	18 591	21 088	18 912
Total	124 739	132 592	136 950	378 30	39 627	38 124
FNS - Financial Services (includes FNB)						
Cert III and below	11 247	9 922	10 859	3 392	3 001	2 722
Cert IV and above	22 349	23 805	24 025	5 326	5 423	4 962
Total	33 596	33 727	34 884	8 718	8 424	7 684
CUF - Film, TV, Radio and Multimedia						
Cert III and below	3 722	4 145	4 689	1 057	1 178	1 005
Cert IV and above	3 403	3 787	3 691	1 262	1 320	965
Total	7 125	7 932	8 380	2 319	2 498	1 970
ALL CUE - Entertainment						
Cert III and below	536	2 372	2 478	271	138	1 035
Cert IV and above	357	512	436	179	170	81
Total	893	2 884	2 914	450	308	1 116
ALL CUS - Music						
Cert III and below	2 456	2 619	2 501	828	756	656
Cert IV and above	2 393	2 348	2 443	997	980	754
Total	4 849	4 967	4 944	1 825	1 736	1 410
ALL CUV - Visual Arts, Craft and Design						
Cert III and below	3 719	5 913	6 834	448	882	922
Cert IV and above	1 353	3 389	4 116	343	777	827
Total	5 072	9 302	10 950	791	1 659	1 749
ALL CUL - Museum and Library/Information Services						
Cert III and below	939	868	892	423	387	373
Cert IV and above	2 228	2 352	2 426	391	394	310
Total	3 167	3 220	3 318	814	781	683
ALL ICP - Printing and Graphic Arts						
Cert III and below	2 612	2 570	2 362	882	674	493
Cert IV and above	258	364	351	130	114	77
Total	2 870	2 934	2 713	1 012	788	570
ALL ICA - Information and Communications Technology						
Cert III and below	36 688	40 778	37 316	8 004	7 715	9 100
Cert IV and above	15 415	14 077	12 711	4 811	4 007	2 880
Total	52 103	54 855	50 027	12 815	11 722	11 980
ALL ICT - Telecommunications						
Cert III and below	8 481	8 425	9 142	3 639	2 610	2 559
Cert IV and above	1 494	1 462	1 552	753	411	539
Total	9 975	9 887	10 694	4 392	3 021	3 098

Source: NCVER data provided to IBSA for Escan 2009

Printing and Graphic Arts

Current Status

The Printing and Graphic Arts Training Package (ICP05 v2.0) has 355 competency standards and 34 qualifications (IBSA 2007). This training package addresses the need for the development of a skilled workforce to cope with new and emerging technologies, such as digital production (IBSA 20007). Qualifications range from a Certificate II to Advanced Diploma in specialist areas including: printing and graphic arts; graphic media; printing; converting, bind and finishing.

In the 2005 – 2007 period, publicly funded training in printing and graphic arts experienced:

- slight decline in enrolments at the Certificate III and below level and a significant decline in completions at this level
- growth in enrolments at the Certificate IV and above level
- decline in completions at the Certificate IV and above level.

Issues Identified in relation to IBSA training packages

At a general level, stakeholders expressed frustration regarding the duration of formal training package reviews. While there are often external factors that contribute to delays and the complexity in reviewing training packages is acknowledged, the corrosive effects of excessively long review processes are significant. Firstly, long review processes undermine confidence in the process itself. Secondly, there is a concern that a training package will be out of date by the time it is operationalised. This is particularly a risk in highly technical areas such as ICT, even with a competency-based approach. The training package continuous improvement process that commenced in 2008 is expected to assist in improving timeliness.

In a relatively high level scan such as this it is often difficult to distinguish between problems that reside with training packages, compared with problems that relate to the implementation of training packages. The TAA04 package was frequently raised for discussion during consultation. This high level of interest and awareness reflects that this is the package with which a high proportion of IBSA stakeholders are most familiar or interested. Some comments were complimentary in relation to the TAA package, particularly with regard to the flexibility the package offers. Other comments raised concerns about quality, although these often appeared to relate to the delivery of the package rather than inherent issues with the package itself.

The cultural and related industries raised specific issues about the music package. Creative Industries Skills Council (CISC) Queensland has advised that for music, new units need to be written or imported to cover the trends in the music industry outlined in Chapter 2. CISC states that the several aspects of the music industry are not covered in the existing CUF01 Music Training Package, or in the draft of the proposed CUS09 package. As this package is presently subject to review, the review is best placed to consider the CISC proposals.

The above analysis of enrolments and completions by training package at the two levels specified (Certificate I – III and Certificate IV and above), suggests a declining rate of completion in a number of packages. This could reflect module completers undertaking parts of a qualification to upgrade their skills, or a high number of participants are not fulfilling the requirements of their qualification as intended. If the latter is the case, this is a potential concern.

As stated earlier in this chapter the evidence shows that employment outcomes improve based on the following:

- completion of full VET qualifications
- the level of qualification completed – the higher the level, the better the employment outcome.

This indicates that there is a significant potential benefit in monitoring enrolment and completion in training packages and qualifications that comprise those packages. While decline in enrolment and completions may be due to various factors, including the delivery of qualifications and the awareness among prospective participants about the employment opportunities offered by specific packages and qualifications, it may also indicate issues with the training package itself. Conversely, increasing enrolment and completion in a given training package may indicate that the training package is working well, in providing the framework for the delivery of qualifications contained in that package.

Findings: IBSA Training Packages

- *While the complexity associated with training package reviews is acknowledged, stakeholders consider the review processes to be excessively long. Very long reviews undermine confidence in the process and may detract from the currency of packages once they are implemented.*
- *In receiving feedback on training packages, it may be difficult to distinguish between issues relating to the training package itself and those relating to the delivery of the package by RTOs.*
- *Given that improved employment outcomes are clearly correlated to the completion of VET qualifications and the level of qualification completed, it is important to monitor enrolment and completions of qualifications and training packages, as this is an indicator of the effectiveness of each package.*
- *There are concerns about a number of aspects of VET data and employment data across IBSA sectors, and this is a matter requiring more detailed consideration to identify the needs of each sector and how IBSA might contribute to addressing legitimate concerns.*

Chapter 5

Priority workforce skill development issues for IBSA's industry sectors in 2009

This chapter summarises the issues and findings identified in the Escan and provides advice on issues that should be considered going forward.

5.14 The external environment

Issues

The macro environment is one of economic deceleration and the likely prospect of a global recession in 2009. The impact on Australia will become clearer during 2009.

For the Australian labour market the global environment foreshadows increased complexity. There will be areas of skill surplus, resulting in unemployment, co-existing with continuing skill shortages in other sectors or regions.

The policy focus on post school education, including VET, is likely to sharpen in 2009, as implementation of policy initiatives of the Australian Government gain momentum. A major policy issue is expected to be greater integration of the VET and higher education systems.

There is likely to be an increase in the demand for VET and public spending on VET in 2009 and beyond. VET will be critical as a facilitator of the structural adjustment that should result from changes in the external economic environment.

Business is responding to the changing economic circumstances and this process will continue. This response may be different to that of previous downturns. Employers are likely to view redundancies as a last resort given that shortages are likely to remain a longer term issue in Australia given population ageing and the large looming shortfall of people with adequate levels of post school training.

The significant increase in the participation of women in the workforce combined with an ageing workforce seeking different employment arrangements will drive the development of significantly more flexible workplaces over time. Employers who respond with greater flexibility will find benefits in employee attraction and retention. The ageing population provides a significant opportunity for VET to attract more participants aged over 45 years.

The increasingly complex environment calls for greater innovation, which depends on developing human capital. Innovation depends on skills that fall within IBSA's responsibilities.

The IBSA Sector Environment

During 2008, skill shortages continued to be a primary concern of employers in IBSA's sectors. While this will ease to an extent in 2009, in many areas it appears likely that business will continue to find it difficult to find certain skills. Some changes in labour market behaviour will also ameliorate the sense of skill shortage. Employees will be inclined to consolidate their existing employment and employers will be advertising for fewer positions as recruitment is scaled back.

As alluded to above, IBSA has a particularly important role to ensure that training packages are attuned to business needs relating to these innovation skills.

For specific skill areas, Escan survey results indicated highest agreement for knowledge management as an area of training need, followed by frontline management. In addition to the skill needs surveyed Table 4.11, other skills in demand identified consistently by stakeholders included project management, small business management and 'green skills', which are skills related to environmental sustainability.

Escan 2009 has made the following findings n relation to each IBSA sector:

- Despite expected deterioration in the *business services* industry during 2009, business services skills are likely to remain in demand, as they are useful to employment in many job roles across the economy. However, VET graduates in this sector may find themselves increasingly competing with university graduates.
- There are dynamics in the *cultural and related industries* that challenge VET and IBSA. It must both meet the demands of participants for specialisation and excellence, while also seamlessly integrating those components from other training packages that are of increasing relevance to the cultural industries. This includes integration with other areas of IBSA responsibility, such as ICT and business services.
- For *education* to attract, maintain and develop a well skilled workforce into the future, it will need to ensure that this is viewed as an attractive career. This is likely to involve the development of highly flexible working arrangements (this is already occurring but is likely to proceed further) and increased remuneration, which is industry competitive. Innovative partnership based delivery arrangements will become more important, as the traditional classroom model will not be as suited to either teachers or participants. There may be opportunities for VET training to play an expanded role across the wider education sector.
- For *financial services*, the sudden change in the external environment is having a significant impact on the sector. There is considerable uncertainty about how severe this will be or what this will mean for VET. So far, the skills provided for through VET generally remain in high demand in the sector. Some enterprises have adopted innovative approaches to workforce development in this sector, in order to meet their specific business needs.

- *ICT* has acute skill needs – at a time when the importance of ICT to the wider economy is growing rapidly. Addressing this problem will require a concerted and coordinated response from industry and government to promote careers in ICT and ensure that the pathways into ICT are open to as many participants as possible.
- While *printing* is relatively static in terms of output and employment growth, the sector offers many opportunities as a consequence of technology and innovation. Printing and graphic arts skills are needed in numerous areas of the economy, and the nature of these opportunities is not necessarily widely known to school leavers. Printing is becoming more service based and traditional career paths and training structures are being challenged. While apprenticeships have been common in the past, the way people are trained for printing careers could evolve further but this is being restrained somewhat by a lack of RTOs who deliver printing qualifications.

5.15 Current and emerging workforce needs

Overall survey findings

- Organisations in IBSA sectors are continuing to have some difficulty developing an appropriately skilled and flexible workforce and in retaining staff.
- Retaining staff is expected to become less of an issue as employees increasingly seek to consolidate their existing positions.
- Training can assist businesses in meeting these challenges. This includes training of current and prospective employees.
- The challenge is to ensure that training that meets business needs is available and that employers are aware of the training and of its benefits.

Survey results by IBSA sector

Business Services survey findings

- Occupations / job roles in the business services sector had a high level of response. Survey results indicate growth is expected in customer contact, service and sales type roles. Survey results indicate that decline is expected in manager, finance related and clerical type roles.
- Survey results regarding attitudes of business services businesses suggest they are more concerned than other sectors about business taxes, they find it more difficult on average to adjust staff numbers, they are above average in finding it easy to access training and in their willingness to fund their own training.

Cultural and related Industries survey findings

- The demand for skills in this sector will be heavily influenced by government policy decisions related to supporting infrastructure and content associated with expansion of digital broadcasting (including television and radio).
- Survey results regarding attitudes of organisations in the cultural and related industries suggest that there is concern about the current economic situation causing cuts to training budgets.

- The sector is more likely than others to use on the job training and less likely than others to provide formal training. The sector is generally finding it difficult to access training. These responses may reflect the structural features of the sector – with a relatively high level of contract and casual based employment.

Education survey findings

- The survey results indicate growth in a range of roles in education.
- Survey results regarding the attitudes of organisations in the education sector suggest that training is more likely to occur for all staff and is more likely to be formal training than compared with other sectors.

Financial Services survey findings

- The employment situation in financial services is difficult to predict. The deterioration in the external environment is such that a short-term impact on employment appears inevitable.
- Survey results regarding the attitudes of businesses in the financial services sector indicate they are generally more satisfied than other sectors about their ability to find and retain employees, the performance of employees and flexibility in managing their workforce.
- Financial services businesses are the most likely of the IBSA sectors to fund training fully and the training is most likely to be specifically in relation to a product, process or technical skill.

ICT survey findings

- ICT continues to face significant skill shortages, which are a legacy of various factors impacting on the ICT labour market. While some of these shortages may ease due to changing economic conditions, they can generally be expected to continue or worsen. The survey results, which generally show an intention to increase employment across a number of job roles would appear to support this.
- Survey results regarding the attitudes of businesses in the ICT sector suggest they are the most likely to undertake training related to specific IT products or services. The sector is more likely than others to expect the external economic situation to result in cuts in training budgets.

Printing and Graphic Arts survey findings

- The survey results suggest relatively static employment growth is expected in several job roles, but increasing employment is expected in more digital technology based roles.
- Survey results regarding attitudes of businesses in the printing sector, indicate that they are more concerned about external factors than others, particularly in relation to technological change and industrial relations.
- The results also indicate that the printing industry is more likely to use formal training, less likely to use informal training and is considerably more likely to access training if it is majority funded by government.

State and territory comparison findings

- Survey responses indicate that there is a broadly similar view between jurisdictions regarding the impact of the financial situation and the economy.
- Survey responses suggest that organisations located in capital cities and, to a lesser extent, regional centres, expect that the current financial situation will have a lesser impact on skill needs, occupational mix and training budgets compared with those in country towns and rural areas.
- Responses to the labour force survey questions were broadly similar across jurisdictions.
- Respondents in South Australia, Tasmania and Western Australia tended to carry out a greater level of company, industry or induction training than the average of all jurisdictions.
- While all jurisdictions have reported skill shortages, the policy responses have varied. Some jurisdictions have developed lists of occupations and skills in shortage, to develop specific VET based responses, while others have sought to intervene through strategies based ensuring the overall VET system is well designed and responsive.

Size of business comparison findings

- Survey results indicate that larger businesses are more likely on average to expect the current deterioration in external economic conditions to result in cuts to training budgets.
- Survey results also suggest that larger businesses are generally more concerned than smaller businesses across the concerns surveyed.
- Survey results indicate that larger businesses are more likely than smaller businesses, on average, to carry out each type of training. And this was particularly the case for businesses with more than 100 employees.
- Larger businesses also found it easier on average to access relevant training and train new starters.
- Small and large businesses share in common a desire for flexibility and ease of access to training. Large businesses are more likely to have a strategic approach to workforce development, which may or may not be integrated with the VET system. As small businesses are less likely to have this capability, the brokering role to facilitate access to the training system, which could potentially be filled by IBSA, is particularly critical for small business.

5.16 Considerations for IBSA Training Packages

Overall VET employment outcomes

- Individuals who complete VET qualifications have better employment outcomes than those who only complete part of a qualification.
- Employment outcomes improve as the level of VET qualification undertaken increases. Certificate III and above qualifications have considerably better employment outcomes than lower qualifications.

- The value and importance of skill sets and of undertaking individual VET modules is significant. The objectives of increasing VET participation and encouraging completions are complementary.

VET employment outcomes in IBSA sectors

- There are significant differences both in:
  - the relevance of training to employment across a range of IBSA related occupations
  - engagement with VET by IBSA industry sectors.

Attitudes to training across IBSA sectors

- On the job training is the easiest for business to access and is the most frequently used type of training.
- While attitudes vary somewhat between sectors, businesses are generally willing to pay for most or all of the cost of training, provided the training meets a defined business need and they are satisfied with the value of training.
- A relatively small proportion of businesses do not train staff at all, although less than half train all staff.
- There is a general need for more training, to assist business meet the challenges of staff retention and flexibility.
- VET consequently needs to present to business the benefits it offers, in terms of enabling them to achieve improved profitably and performance.

Training package focus

- While the complexity associated with training package reviews is acknowledged, stakeholders consider the review processes to be excessively long. Very long reviews undermine confidence in the process and may detract from the currency of packages once they are implemented. The training package continuous improvement process that commenced in 2008 is expected to assist in improving timeliness.
- In receiving feedback on training packages, it may be difficult to distinguish between issues relating to the training package itself and those relating to the delivery of the package by RTOs.
- Given that improved employment outcomes are clearly correlated to the completion of VET qualifications and the level of qualification completed, it is important to monitor enrolment and completions of qualifications and training packages, as this is an indicator of the effectiveness of each package.
- There are concerns about a number of aspects of VET data and employment data across IBSA sectors, and this is a matter requiring more detailed consideration to identify the needs of each sector and how IBSA might contribute to addressing legitimate concerns.

5.17 Escan 2009 implications for IBSA

Escan 2009 is both an input to IBSA's strategic planning and positioning and an advice document provided from IBSA to DEEWR. The below findings regarding the implications of the Escan for IBSA are at a high level, which reflects the Escan's scope and objectives. Some of these findings confirm IBSA's existing corporate strategy. In such instances, the Escan should be viewed has having confirmed that IBSA's priorities are appropriate at a strategic level. At a more detailed level, IBSA may choose to review its approach to implementing these priorities in light of the detailed Escan analysis contained throughout the Escan report.

Areas of work for IBSA findings

In conducting Escan 2009 IBSA has identified the following priority areas of work to be progressed on behalf of IBSA industry sector stakeholders.

- IBSA will position itself to respond to the significant changes in the external environment, as these changes will substantially affect the position of IBSA as well as IBSA's industry sectors, offering both threats and opportunities.
- Effective partnerships between IBSA and business are central to improved skill and employment outcomes. IBSA will ensure that our engagement with industry provides both effective and ongoing input from each sector and importantly, from other industry sectors that use skills developed through IBSA's training packages.
- IBSA will seek to influence and manage training packages reviews so these are undertaken within a timeframe that is acceptable to stakeholders.
- IBSA will consider the Escan survey data relating to emerging workforce needs and skills as an input to our ongoing planning, advisory and product development role. Feedback from the IBSA Sector Advisory Committees in response to issues raised by the survey will contribute to a sound basis for IBSA priority setting.
- Given the significant changes occurring in the economy and labour market supply and demand for skills will be even more difficult to predict. As there is a strong correlation between both the completion and the level of VET qualifications and employment outcomes, strategies are to be developed to improve performance against each of these indicators across all IBSA training packages.
- IBSA will work through appropriate channels with the relevant agencies, to provide advice on the development of improved employment and VET data, in response to industry concerns.

5.18 Comparison with Escan 2008 findings

Escan 2009 built on Escan 2008 in the development of the survey instrument. The job roles / occupations in demand identified in Escan 2008 provided the basis for those listed in the Escan 2009 survey. In that respect, the survey results provide a direct point of comparison with the preceding Escan.

At a high level, Escan 2009 has identified similar issues of consideration for IBSA as Escan 2008. Escan 2009 has benefited from the opportunity to learn from the first Escan and consequently has provided additional description and analysis of the impact of the external environment on IBSA's sectors. While the issues are similar, the environment is significantly changed for reasons previously explained.

5.19 Significance for policy makers

The rapid change in the external economic environment during 2008 underscores the difficulty in reliably predicting growth and decline in specific occupations and job roles.

The Escan provides the views of the IBSA sectors (in the form of survey results) regarding expected demand for a number of occupations and job roles over the next 1 – 2 years, and over around 5 years.

The custodians of the VET system have the following objectives in understanding the external environment, including employment intentions. Firstly, to gain an insight into what these intentions and trends may mean for VET and secondly, to determine appropriate responses.

Broadly speaking, responses can include:

- changing the mix of fully funded places – to make certain qualifications more attractive to participants
- changing training packages – to ensure they provide a framework which provides for competencies and qualifications that match labour market demand
- partnering (with other education authorities or industries) to promote certain qualifications or career pathways – to address current or potential mismatches between the supply and demand of certain skills.

And at a broader reform level:

- encouraging market forces and competition as a basis for innovation
- implementing participant driven system reforms – which include enabling ease of movement between the VET and higher education system, recognition of prior learning and flexible delivery arrangements.

In considering appropriate responses based on the draft Escan, a paradox in VET planning is apparent. There are many established mechanisms for representatives of employers, employees, government and RTOs to provide input to decisions that relate to those parts of the system that guide content and quality. However, the missing link in these information gathering mechanisms is arguably the most important stakeholder group — customers and potential customers. That is, individuals who are deciding whether to purchase a VET product. The significance of this regarding the Escan, and the apparent paradox, is that even if planning is well informed and timely, this can be undone if participation in particular skills and qualifications does not respond as anticipated.

It is partly for this reason that there are clear benefits in focussing attention on middle-level and advanced training generally (defined as Certificate III and above), and on completion rates. Employers increasingly need higher level skills and participants who complete these qualifications have better employment outcomes. Similarly, completion of full qualifications provides better employment outcomes than partial qualifications. This focus should not be at the expense of objectives related to equity and participation generally, or flexibility particularly given the value of skill sets to employers and VET participants.

5.20 Implementation challenges

IBSA coverage

There is an ongoing challenge of engagement and intelligence gathering, particularly as the IBSA sectors comprise enabling skills, which are relevant to a wide range of industries. IBSA's coverage is effectively economy wide, but there are of course practical limitations on the extent of intelligence gathering that IBSA can undertake.

The economic environment

The Escan has been conducted during a period in which prevailing economic circumstances have changed significantly. This has increased uncertainty and labour market complexity. As described in Chapter 2, this represents a significant challenge for IBSA as a training package planner and developer and adviser to government.

Structural factors

While IBSA and other ISCs are responsible for training packages, they are not responsible for the implementation of those packages, or for the quality assurance of training. These responsibilities reside with RTOs and state/territory registration bodies respectively. Therefore, while stakeholders may express concerns about the way competencies within a training package are delivered, this does not necessarily mean the training package is the root cause. There is a need to clearly delineate the strengths and weaknesses of training packages from issues that arise in training delivery.

Employment and VET data

Stakeholders from each of the IBSA sectors raised issues and concerns relating to the availability of quality data. Generally, there is a desire for more comprehensive sector specific employment data and VET data (including non-publicly funded VET). These are issues for the Australian Government and states and territories to consider further. In this regard, IBSA has a role in providing advice to government on behalf of industry. In addition, enhancing the quality of data collected by IBSA from industry is part of IBSA's approach to industry engagement.

Appendix A

Occupations and qualifications in demand

A.2 Occupations and qualifications in demand

Table A.1

IBSA ESCAN 2009 OCCUPATIONS AND QUALIFICATIONS IN DEMAND

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
Business Services				
541112 / 611312 / 639311	Call or Contact Centre Operator	BSB20207 BSB30207 BSB40307 BSB50307	Certificate II in Customer Contact Certificate III in Customer Contact Certificate IV in Customer Contact Diploma of Customer Contact	IBSA Escan 2009 survey, consultations and validation
542111 / 542113 / 542114	Receptionist	BSB30407 BSB41107 BSB50807	Cert III in Business Administration Cert IV in Business Administration Dip of Business Administration	“
541111	Call or Contact Centre Team Leader	BSB31207 BSB40807 BSB40307 BSB50307	Certificate III in Frontline Management Certificate IV in Frontline Management Certificate IV in Customer Contact Diploma of Customer Contact	“
639311	Telemarketer	BSB20207 / ICT20102	Certificate II in Customer Contac	“
149211	Customer Contact Manager	BSB40307 BSB40807 BSB50307 BSB60307 BSB51107	Certificate IV in Customer Contact Certificate IV in Frontline Management Diploma of Customer Contact Advanced Diploma of Customer Contact Diploma of Management	“
131112	Sales and Marketing / Business Development Manager	BSB41307 BSB51207 BSB50107	Certificate IV in Marketing Diploma of Marketing Diploma of Advertising	“
611312	Sales Representative	BSB20207 / ICT20102 BSB40607 BSB30207 BSB40307 BSB50307	Certificate II in Customer Contact Certificate IV in Business Sales Certificate III in Customer Contact Certificate IV in Customer Contact Diploma of Customer Contact	“
132311	Human Resource Administrator / Manager	BSB50607 BSB60907 BSB70108	Diploma of Human Resources Management Advanced Diploma of Management (Human Resources) Vocational Graduate Certificate in Management (Learning)	“
531111	General Administrative Officer	BSB30407 BSB41107 BSB50807	Cert III in Business Administration Cert IV in Business Administration Diploma of Business Administration	“
132411	Business Policy and Planning Manager	BSB30407 BSB40507	Cert III in Business Administration	“

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
	(including international)	BSB50107	Certificate IV in Business Administration Diploma of Advertising	
132311	OHS Manager	BSB41407 BSB51307 BSB60607	Certificate IV in Occupational Health and Safety Diploma of Occupational Health and Safety Advanced Diploma of Occupational Health and Safety	“
511111 / 511112	Contract Program and Project Manager / Administrator	BSB41507 BSB51407 BSB60707	Certificate IV Project Management Diploma of Project Management Advanced Diploma of Project Management	“
225112	Market Research Analyst	BSB41307 BSB51207	Certificate IV in Marketing Diploma of Marketing	“
251312	OH&S Officer / Advisor	BSB30707 BSB41407 BSB51307	Certificate III in Occupational Health and Safety Certificate IV in Occupational Health and Safety Diploma of Occupational Health and Safety	“
221111	Accountant	FNS40207 FNS40604 FNS50204 FNS60204	Certificate IV in Financial Services – Bookkeeping Certificate IV in Financial Services – Accounting Diploma of Accounting Advanced Diploma of Accounting	“
132111 / 111211	Corporate Services Manager	BSB50407 BSB60407	Diploma of Business Administration Advanced Diploma of Management	“
521111	Personal Assistant and/or Secretary	BSB30407 BSB41107 BSB50807	Cert III in Business Administration Cert IV in Business Administration Diploma of Business Administration	“
512299 / 599112	Para-legal Professional	BSB41207 BSB51007	Certificate IV in Legal Services Diploma of Legal Services	“
599411 / 223111	HR Clerk / HR Officer	BSB41007	Certificate IV in Human Resources	“
551211	Bookkeeper	FNS30104 FNS30404 FNS40207	Cert III in Financial Services Cert III in Financial Services (Accounts Clerk) Cert IV in Financial Services (Bookkeeping)	“
132111 / 132411	Corporate Social Responsibility Manager *	BSB51107 BSB60407	Diploma of Management, including Business Continuity and Sustainability units Advanced Diploma of Management, including Business Continuity and Sustainability units	“
Cultural and Related Industries				
232414	Web designer	ICA30105 CUF40207 ICA40305	Certificate III in Information Technology Certificate IV in Interactive Digital Media Certificate IV in Information Technology (Websites)	“
261212	Multimedia Specialist and Web Developer	ICA40305 ICA50605	Certificate IV in Information Technology (Websites) Diploma of Information Technology (Website Development)	“
232411	Graphic Designer	CUV30303 ICP30305	Certificate III in Design Fundamentals Certificate III in Printing and Graphic Arts (Multimedia) Certificate IV in Interactive Digital Media	“

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
		CUF40207 ICA40805 CUF50207	Certificate IV in Information Technology (Multimedia) Diploma of Interactive Digital Media	
232413	Multi / New Media Designer	ICP30305 CUF40207 ICA40805 CUF50207 BSB30307 BSB40407 BSB51107	Certificate III in Printing and Graphic Arts (Multimedia) Certificate IV in Interactive Digital Media Certificate IV in Information Technology (Multimedia) Diploma of Interactive Digital Media Certificate III Micro Business Operations [customised for innovation competencies] Certificate IV in Small Business Management [customised for innovation competencies] Dip of Small Business Management [customised for innovation competencies]	"
212318	Video Producer	CUF40207	Certificate IV in Interactive Digital Media	"
212312 / 212111	Artistic Director	CUF50107 CUF60107	Diploma of Screen and Media Advanced Diploma of Screen and Media	"
272611	Community Cultural Development Officer	CUV40503 CUV60103	Certificate IV in Arts Administration Diploma of Arts Administration	"
599912	Post-production Media Technician	CUF20107 CUF30107 CUF40107 CUF40207 CUF50107	Certificate II in Creative Industries (Media) Certificate III in Media Certificate IV in Screen and Media Certificate IV in Interactive Digital Media Diploma of Screen and Media	"
139911	Arts Administrator / Manager	CUV40503 CUV60103	Certificate IV in Arts Administration Diploma of Arts Administration	"
211311	Photographer	CUV50407	Diploma of Photoimaging	"
212312	Director (film, television, radio or stage)	CUE30203 CUE40303 CUE50303 CUE60203 CUF40107 CUF50107	Certificate III in Live Production, Theatre and Events (Technical Operations) Certificate IV in Live Production, Theatre and Events (Technical Operations) Diploma of Live Production, Theatre and Events (Technical Operations) Advanced Diploma of Live Production, Theatre and Events (Technical Operations) Certificate IV in Screen and Media Diploma of Screen and Media	"
249299	Private Teacher / tutor (art, dance, drama, music)	TAA40104	Certificate IV in Training and Assessment	"
149912	Cinema Theatre / Facilities Manager	CUE50403 CUE60403	Diploma of Venues and Events Advanced Diploma of Venues Events	"
399512	Camera Operator (film, television or video)	CUF40307	Certificate IV in Broadcast Technology	"
399312	Library Technician	CUL30104 CUL40104	Certificate III in Library/Information Services Certificate IV in Library/Information Services	"

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
		CUL40204	Certificate IV in Museum Practice	
211213	Musician (Instrumental)	CUS50101 CUS60101	Diploma of Music Advanced Diploma of Music	“
	Knowledge Manager *	CUL30104 CUL40104 CUL40204	Certificate III in Library/Information Services Certificate IV in Library/Information Services Certificate IV in Museum Practice	“
Education				
223311	Training and Development Professional	TAA40104 TAA50104	Certificate IV in Training and Assessment Diploma of Training and Assessment	“
	Workplace / VET Trainer / Assessor	TAA40104 TAA50104	Certificate IV in Training and Assessment Diploma of Training and Assessment	“
422116	Education/Teachers' Aide		(No IBSA TP qualification available)	“
132311 / 223311	Training Centre Manager	BSB51107 TAA40104 TAA50104	Diploma of Management Certificate IV in Training and Assessment Diploma of Training and Assessment	“
242211	Vocational Education Teacher	TAA40104 TAA50104	Certificate IV in Training and Assessment Diploma of Training and Assessment	“
272111	Career Counsellor/Adviser		(No IBSA TP qualification available)	“
249111	Curriculum Advisory Teacher E-learning		(No IBSA TP qualification available)	“
2491	Education Adviser and Reviewer		(No IBSA TP qualification available)	“
2493	Teacher of English to Speakers of Other Languages		(No IBSA TP qualification available)	“
242211	Trade Trainer	TAA40104 TAA50104	Certificate IV in Training and Assessment Diploma of Training and Assessment	“
422112	Integration Aide		(No IBSA TP qualification available)	“
Financial Services				
222311	Financial Planner	FNS40704 FNS450804	Certificate IV in Financial Services (Financial Practice Support) Diploma of Financial Services (Financial Planning)	“
222312	Superannuation Funds Manager	FNS40904 FNS50904	Certificate IV in Financial Services (Superannuation) Diploma of Financial Services (Financial Markets)	“
552211	Managers Credit / Audit Compliance	FNS40304	Certificate IV in Financial Services (Credit Management)	“
132211 / 149914 / 222312	Financial Services Manager	FNS30304 FNS40704 FNS50204 FNS50504	Certificate III in Financial Services – Accounts Clerical Certificate IV in Financial Services (Financial Practice Support) Diploma of Accounting Diploma of Financial Services (Finance / Mortgage Broking Management)	“

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
		FNS50704	Diploma of Financial Services (Personal Trustees)	
		FNS50804	Diploma of Financial Services (Financial Planning)	
		FNS51004	Diploma of Financial Services (Financial Markets)	
		FNS51204	Diploma of Financial Services (Banking)	
		FNS51304	Diploma of Financial Services (Consumer Education)	
221111	Insolvency Officers *	FNS51104	Diploma of Financial Risk Management	"
Information and Communications Technologies				
261212	Multimedia Specialist and Web Developer	ICP30305	Certificate III in Printing and Graphic Arts (Multimedia)	"
		CUF40207	Certificate IV in Interactive Digital Media	
		ICA40805	Certificate IV in Information Technology (Multimedia)	
		CUF50207	Diploma of Interactive Digital Media	
263112	ICT Helpdesk Officer	ICA30105	Certificate III in Information Technology	"
		ICA40405	Certificate IV in Information Technology (Networking)	
263312 / 263111	Computer Network Professionals	ICA30105	Certificate III in Information Technology	"
		ICA40305	Certificate IV in Information Technology (General)	
		ICA10105	Diploma in Information Technology (General)	
		ICA40405	Certificate IV in Information Technology (Networking)	
		ICA50405	Diploma of Information Technology (Networking)	
		ICA60205	Advanced Diploma of Information Technology (Network Security)	
261111 / 261313	Software and Applications Programmer	ICA40505	Certificate IV in Information Technology (Programming)	"
		ICA50705	Diploma of Information Technology (Software Development)	
262111 / 262112	Database and Systems Administrator or ICT Security Specialist	ICA60205	Advanced Diploma of Information Technology (Network Security)	"
313199	ICT Support Technician	ICA30105	Certificate III in Information Technology	"
		ICA40305	Certificate IV in Information Technology (General)	
		ICA10105	Diploma in Information Technology (General)	
212415	Technical Writers	ICA40305	Certificate IV in Information Technology (Websites)	"
		ICA50605	Diploma of Information Technology (Website Development)	
135111 / 135199	Chief Information Officer	ICA50205	Diploma of Information Technology (Project Management)	"
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)	
		ICA60205	Advanced Diploma of Information Technology (Network Security)	

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
263299	ICT Support and Test Engineers	ICA30105	Certificate III in Information Technology	“
		ICT40508	Certificate IV in Telecommunications Networks	
		ICA40305	Certificate IV in Information Technology (General)	
		ICA10105	Diploma in Information Technology (General)	
261111 / 261112	ICT Business and Systems Analyst	ICA40505	Certificate IV in Information Technology (Programming)	“
		ICA50405	Diploma of Information Technology (Networking)	
		ICA50605	Diploma of Information Technology (Website Development)	
		ICA60205	Advanced Diploma of Information Technology (Network Security)	
135199	ICT Managers	ICA50205	Diploma of Information Technology (Project Management)	“
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)	
		ICA60205	Advanced Diploma of Information Technology (Network Security)	
135112	ICT Project Manager	ICA50205	Diploma of Information Technology (Project Management)	“
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)	
262111 / 263212 / 263299 / 263311 / 263312	ICT Professional	ICA10105	Diploma in Information Technology (General)	“
		ICA50805	Diploma in Information Technology (Systems Analysis and Design)	
		ICA50705	Diploma of Information Technology (Software Development)	
		ICA50405	Diploma of Information Technology (Networking)	
		ICA60205	Advanced Diploma of Information Technology (Network Security)	
		ICA50405	Diploma of Information Technology (Websites)	
313214 / 342414	Broadband Technician *	ICT20208 / ICT20202	Certificate II in Telecommunications	“
		ICT30208 / ICT30202	Certificate III in Telecommunications	
		ICT40208	Certificate IV in Telecommunications Engineering	
312412	Digital Communication Technician *	ICT20508	Certificate II in Telecommunications Digital Reception Technology	“
		ICT30508	Certificate III in Telecommunications Digital Reception Technology	
		ICT40208	Certificate IV in Telecommunications Engineering	
Printing and Graphic Arts				
232411	Graphic Designer	CUV30303	Certificate III in Design Fundamentals	“
		CUF40207	Certificate IV in Interactive Digital Media	
		CUV60307	Associate Diploma of Creative Product Development	
		ICP30105	Certificate III in Printing and Graphic Arts (Graphic Design Production)	
			Certificate III in Printing and Graphic Arts	

ANZSCO	Occupation / Job Role	Training Package Qualification		Comment
		ICP30305	(Multimedia)	
899511 / 899512	Printing Table Worker / Printer's Assistant *	ICP20405 ICP30605	Certificate II in Printing and Graphic Arts (Print Production Support) Certificate III in Printing and Graphic Arts (Print Production Support)	“
392111	Binder and Finisher *	ICP20605 ICP30705	Certificate II in Printing and Graphic Arts (Converting, Binding and Finishing) Certificate III in Printing and Graphic Arts (Print Finishing)	“

Source: Escan 2009 survey and stakeholder input provided during validation stage

* Denotes that this finding was provided based on stakeholder feedback during validation stage

Appendix B

Report of continuous improvement in IBSA Training Packages

B.3 2008 Modifications of IBSA Training Packages

Table B.2

BSB07 BUSINESS SERVICES TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
2.0	January 2009	Intellectual Property Addition of 8 new units on intellectual property: • BSBIPR301A Comply with organisational requirements for protection and use of intellectual property • BSBIPR401A Use and respect copyright • BSBIPR402A Protect and use new inventions and innovations • BSBIPR403A Protect and use brands and business identity • BSBIPR404A Protect and use innovative designs • BSBIPR405A Protect and use intangible assets in small business • BSBIPR501A Manage intellectual property to protect and grow business • BSBIPR601A Develop and implement strategies for intellectual property management Revisions to 11 qualifications to include intellectual property units as electives: • BSB30107 Certificate III in Business • BSB30407 Certificate III in Business Administration • BSB30307 Certificate III in Micro Business Operations • BSB40207 Certificate IV in Business • BSB40707 Certificate IV in Franchising • BSB40407 Certificate IV in Small Business Management • BSB50207 Diploma of Business • BSB50507 Diploma of Franchising • BSB51107 Diploma of Management • BSB60207 Advanced Diploma of Business • BSB60407 Advanced Diploma of Management Addition of 6 Skill Sets on intellectual property: • Intellectual Property Strategic Management Skill Set	Revisions to 3 qualifications to include business continuity unit as electives • BSB40207 Certificate IV in Business • BSB50207 Diploma of Business • BSB60207 Advanced Diploma of Business

Version	Release Date	NQC Endorsed	ISC Upgrade
		• Copyright Skill Set • Trade Mark Skill Set • Patent Skill Set • Design Protection Skill Set • Small Business Intellectual Property Skill Set • Business Continuity Addition of 3 new units on business continuity: • BSBCON401A Work effectively in a business continuity context • BSBCON601A Develop and maintain business continuity plans • BSBCON701A Establish and review the business continuity management framework and strategies	
1.1	Sept. 2008		Change in code and title of BSB70107 Vocational Graduate Certificate in Organisational Learning and Capability Development to • BSB70108 Vocational Graduate Certificate in Management (Learning) Correction of mapping for qualifications: • Titles and codes for BSB70107 and BSB80107 • BSB60407 Advanced Diploma of Management • BSB60907 Advanced Diploma of Management (Human Resources) Correction of mapping for units: • BSBOHS509A Ensure a safe workplace • BSBADM101A Use business equipment and resources • BSBADM409A Coordinate business resources • BSBCCO305A Process credit applications • BSBCCO602A Manage customer contact information • BSBCCO606A Forecast and plan using customer contact traffic information analysis • BSBCCO609A Integrate customer contact operations within the organisation • BSBFIM501A Manage budgets and financial plans • BSBHRM501A Manage human resources services • BSBHRM502A Manage human resources management information systems • BSBHRM602A Manage human resources strategic planning • BSBINM501A Manage an information or knowledge management system

Version	Release Date	NQC Endorsed	ISC Upgrade
			• BSBINN601A Manage organisational change • BSBITB501A Establish and maintain a workgroup computer network • BSBITU202A Create and use spreadsheets • BSBMED301B Interpret and apply medical terminology appropriately • BSBMGT405A Provide personal leadership • BSBMGT615A Contribute to organisation development • BSBMGT618A Develop a contact centre business plan • BSBMKG514A Implement and monitor marketing activities • BSBMKG610A Develop, implement and monitor a marketing campaign • BSBOHS201A Participate in OHS processes • BSBOHS509A Ensure a safe workplace • BSBPMG401A Apply project scope management techniques • BSBPMG408A Apply contract and procurement procedures • BSBPMG601A Direct the integration of projects • BSBPMG602A Direct the scope of a project program • BSBPMG603A Direct time management of a project program • BSBPMG604A Direct cost management of a project program • BSBPMG605A Direct quality management of a project program • BSBPMG606A Direct human resources management of a project program • BSBPMG607A Direct communications management of a project program • BSBPMG608A Direct risk management of a project program • BSBPMG609A Direct procurement and contracting for a project program • BSBREL401A Establish networks • BSBREL402A Build client relationships and business networks • BSBWOR401A Establish effective workplace relationships • BSBWRK402A Empower workers • BSBWRK404A Promote equality of opportunity and fair treatment for all workers • BSBWRK405A Promote union values, principles and policies • BSBWRK509A Manage industrial relations

Version	Release Date	NQC Endorsed	ISC Upgrade
			Correction of titles in deleted unit list: • BSBMED402A Control stocks and supplies • BSBEBUS302A Use and maintain electronic mail system • BSBMED202A Follow OHS policies and procedures in a medical office • BSBCMN109A Follow environmental work practices
1.0	Dec. 2007	Preliminary release	

Table B.3

CUE03 ENTERTAINMENT TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
3.0	January 2008	Addition of six new units of competency: • CUECOS302A Dress Performers • CUECOS303A Modify, repair and maintain costumes • CUECOS405A Coordinate costume manufacture • CUEPRP501A Conceive, develop and realise props designs • CUESET302A Make sets • CUESET501A Conceive, develop and realise set designs Replacement of CUE10103 Certificate I in Live Production, Theatre and Events with CUF10107 Certificate I in Creative Industries Updating of construction and manufacturing qualifications arising from review of CUF01 Film TV Radio and Multimedia Training Package as detailed: • Replacement of CUE30103 Certificate III in Live Production, Theatre and Events (Construction and Manufacturing) with CUF30307 Certificate III in Scenery and Set Construction • Replacement of CUF40203 Certificate IV in Make-up with CUF40407 Certificate IV in Make-up • Replacement of CUE40203 Certificate IV in Costume for Performance with CUF40507 Certificate IV in Costume for Performance • Replacement of CUE40103 Certificate IV in Live Production, Theatre and Events (Construction and Manufacturing) with CUF40607 Certificate IV in Scenery and Set Construction • Replacement of CUE50203 Diploma of Costume Performance with CUF50507 Diploma of Costume for Performance • CUF50203 Diploma of Make-up with CUF50507 Diploma of Specialist Make-up Services • Replacement of CUE50103 Diploma of Live Production, Theatre and Events (Construction and Manufacturing) with CUF50607 Diploma of Scenery and Set Construction Deletion of THT50203 Diploma of Event Management	Incorporation of Employability Skills in units of competency and within qualifications Unit codes changed to reflect mandatory ES changes Imported units updated (where amendments have been made through parent Training Package reviews)

Table B.4

CUF07 SCREEN AND MEDIA TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
1.0	January 2008	No modifications undertaken during the period	

Table B.5

CUV03 VISUAL ARTS, CRAFT AND DESIGN TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
3.0	January 2008	Addition of 17 new units: • CUVPHI501A Research role and use of the photoimage in visual communication • CUVPHI502A Research and exploit photoimaging trends • CUVPHI503A Explore the descriptive and emotive nature of photo lighting • CUVPHI504A Investigate and exploit innovative imaging options • CUVPHI505A Produce an innovative presentation of professional work • CUVPHI506A Produce commercial photoimages • CUVPHI507A Provide domestic portrait services • CUVPHI508A Produce media photoimages • CUVPHI509A Make wedding photoimaging products • CUVPHI510A Plan, capture and exploit art photoimages • CUVPHI511A Produce technical photoimages • CUVPHI512A Make illustrative images for publication and display • CUVPHI513A Plan, capture and exploit stock photoimages • CUVPHI514A Employ colour management in a digital imaging workplace • CUVPHI515A Prepare digital images for pre-press printing • CUVDES601A Design innovative products • CUVIND501A Maintain and apply creative arts industry knowledge Addition of two new qualifications: • CUV50407 Diploma of Photoimaging • CUV60307 Advanced Diploma of Creative Product Development	• Addition of Technical/Scientific Field-Based Photoimaging Skill Set • Incorporation of Employability Skills in units of competency and within qualifications • Imported units updated where amendments have been made through parent Training Package Continuous Improvement activities

Table B.6

CUS01 MUSIC

Version	Release Date	NQC Endorsed	ISC Upgrade
1.0	January 2001	No modifications undertaken during the period CUS01 Music Training Package currently being reviewed – anticipated endorsement May 2009	

Table B.7

CUL04 MUSEUM AND LIBRARY / INFORMATION SERVICES

Version	Release Date	NQC Endorsed	ISC Upgrade
1.0	July 2004	No modifications undertaken during the period	

Table B.8

TAA04 TRAINING AND ASSESSMENT TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
2.1	February 2008	Not applicable	Addition of contextual information regarding evidence to the Assessment Guidelines. Addition of three Skill Sets: • Enterprise Trainer • Enterprise Trainer and Assessor • Assessor. Replacement of units of competency to include requirements for RPL: • TAAASS401B with TAAASS401C Plan and organise assessment, an enhancement adding requirements for RPL. • TAAASS402B with TAAASS402C Assess competence, an enhancement adding requirements for RPL. • TAADEL301B with TAADEL301C Provide training through instruction and demonstration of work skills an enhancement adding requirements for coaching skills. Addition of BSBCMM401A Make a presentation to the elective list of units in TAA40101 Certificate IV in Training and Assessment Imported units updated where amendments have been made through parent Training Package Continuous Improvement activities.

Table B.9

FNS04 FINANCIAL SERVICES TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
2.0	May 2007	No modifications undertaken during the period. FNS04 Financial Services Training Package currently being reviewed – phase 1 due for completion March 2009.	

Table B.10

ICA05 INFORMATION AND COMMUNICATIONS TECHNOLOGY TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
3.0	Pending release	Addition of 2 new qualifications: • ICA60208 Advanced Diploma of Information Technology (Network Security) • ICA60308 Advanced Diploma of Information Technology (E-security) Addition of new 11 units of competency for RFID and E-security: Analysis and Design • ICAA5245A Evaluate RFID systems • ICAA5246A Design an RFID implementation Build • ICAB4247A Link an RFID system to a database • ICAI4244A Install and maintain an RFID system • ICAI4249A Implement and evaluate data security • ICAI4251A Implement and evaluate network and telecommunication security • ICAI5250A Develop, implement and evaluate system and application security • ICAI5252A Develop, Implement and evaluate an Incident response plan • ICAI5253A Implement and evaluate systems for regulatory and standards compliance Support • ICAS2248A Protect and secure information assets • ICAS6254A Manage IT security	Inclusion of RFID and E-security units of competency as electives in: • ICA20105 Certificate II in Information Technology • ICA40105 Certificate IV in Information Technology (General) • ICA40405 Certificate IV in Information Technology (Networking) • ICA50105 Diploma of Information Technology (General) • ICA50405 Diploma of Information Technology (Networking) • ICA60105 Advanced Diploma of Information Technology Minor change to packaging of electives in ICA40805 Certificate IV in Information Technology (Multimedia) Minor adjustments to a number of units and their titles. Removal of non mandated co-requisites to meet Training Package Development Handbook requirements Updating of ICA05 units for next generation networks and wireless broadband Replacement of heading “Prerequisites” in Individual Qualifications Summary for qualifications at Certificate III and above with the more appropriate title of “Entry requirements”. Imported competencies have been updated to the new version where there is a direct equivalent

Table B.11

ICT02 TELECOMMUNICATIONS TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
3.0	November 2008	Addition of 8 new qualifications: • ICT20508 Certificate II in Telecommunications Digital Reception Technology • ICT30408 Certificate III in Telecommunications Access and Associated Services • ICT30508 Certificate III in Telecommunications Digital Reception Technology • ICT40508 Certificate in Telecommunications Networks • ICT40608 Certificate IV in Telecommunications Computer Telephony Integration • ICT40708 Certificate IV in Telecommunications Radio Communications • ICT50508 Diploma of Telecommunications Networks • CT60408 Advanced Diploma of Telecommunications Networks Addition of 3 imported qualifications from CUF07 Screen and Media Training Package • CUF30207 Certificate III in Broadcast Technology • CUF40307 Certificate IV in Broadcast Technology • CUF50307 Diploma of Broadcast Technology Update of 6 existing qualification: • ICT20208 Certificate II in Telecommunications • ICT20308 Certificate. II in Telecommunications Cabling • ICT20408 Certificate II in Telecommunications Access Network Cabling • ICT30208 Certificate III in Telecommunications • ICT 40208 Certificate IV in Telecommunications Engineering • ICT40408 Certificate IV in Telecommunications Network Planning Addition of 17 new units: • ICTTC155A Construct and operate a simple radio communications device • ICTTC156A Install digital reception equipment • ICTTC157A Locate and rectify digital reception equipment faults • ICTTC160A Set up and operate a contractor business	Minor changes made to 7 existing qualifications: • ICT30302 Certificate III in Telecommunications Cabling and Customer Premises Equipment • ICT 40302 Certificate IV in Telecommunications Computer Systems • ICT 50202 Diploma of Telecommunications Engineering • ICT 50302 Diploma of Telecommunications Computer Systems • ICT 50402 Diploma of Telecommunications Photonics • ICT 60202 Advanced Diploma of Telecommunications Engineering • ICT 60302 Advanced Diploma of Telecommunications Computer Systems Deletion of 2 elective units: • ICTTC071C Install Pay TV set top box • ICTTC106C Locate and rectify Pay TV set top unit faults Incorporation of Employability Skills in units of competency and within qualifications Customer Contact Stream deleted: 5 qualifications: • ICT20102 Certificate II in Customer Contact • ICT30102 Certificate III in Customer Contact • ICT40102 Certificate IV in Customer Contact • ICT50102 Diploma of Customer Contact Leadership • ICT60102 Advanced Diploma of Customer Contact Management 51 units of competency: • ICTCC100A Follow Occupational Health and Safety policy and ICTCC101A Communicate effectively in a customer contact centre • ICTCC110A Work effectively in a contact centre environment • ICTCC111A Respond to inbound customer contact • ICTCC112A Conduct outbound contact operations • ICTCC120A Use basic computer technology • ICTCC121A Use an enterprise information system • ICTCC130A Provide quality customer

Version	Release Date	NQC Endorsed	ISC Upgrade
		• ICTTC161A Operate a contractor business with employees • ICTTC162A Install a cable lead in • ICTTC163A Install a satellite antenna • ICTTC164A Install a terrestrial antenna • ICTTC165AInstall a complex digital reception system • ICTTC166AIntegrate customer digital reception equipment • ICTTC167A Integrate data delivery modes • ICTTC168A Design and implement an enterprise VoIP and unified communications network • ICTTC169A Produce and evaluate architecture designs for convergent cellular mobile networks • ICTTC170A Follow OHS and environmental policy and procedures • ICTTC171A Produce and evaluate architecture designs for WiMAX networks • ICTTC172A Install and configure MPLS network with VPN tunnelling • ICTTC173 Plan, organise and undertake work activities	service • ICTCC231A Fulfil customer requests • ICTCC241A Process sales • ICTCC251A Receive and action customers fault reports • ICTCC252A Resolve customer complaints • ICTCC260A Process low risk credit applications • ICTCC261A Process basic customer account enquiries • ICTCC270A Conduct data collection • ICTCC300A Organise work priorities and development • ICTCC301A Manage workplace relationships in a contact centre • ICTCC320A Use multiple information systems • ICTCC330A Manage customer relationships • ICTCC331A Deploy customer service field staff • ICTCC340A Conduct a telemarketing campaign • ICTCC341A Provide sales solutions to customer s • ICTCC351A Negotiate with customers on major faults • ICTCC352A Resolve complex customer complaints • ICTCC360A Process high risk credit applications • ICTCC361A Process complex accounts, service severance and defaults • ICTCC410A Lead operations in a contact centre • ICTCC411A Monitor safety in a contact centre • ICTCC412A Implement continuous improvement in a contact centre • ICTCC413A Lead innovation and change in a customer contact centre • ICTCC420A Administer customer contact telecommunications technology • ICTCC431A Implement customer service strategies in a contact centre • ICTCC470A Implement information systems in a contact centre • ICTCC471A Acquire product or service knowledge • ICTCC472A Gather, collate and record information • ICTCC473A Analyse information

Version	Release Date	NQC Endorsed	ISC Upgrade
			• ICTCC480A Provide leadership in a contact centre • ICTCC481A Lead teams in a contact centre • ICTCC482A Develop teams and individuals in a contact centre • ICTCC610A Optimise customer contact operations • ICTCC611A Manage customer contact information systems • ICTCC620A Configure and optimise customer contact technology • ICTCC640A Develop and maintain a customer contact marketing strategy • ICTCC670A Forecast and plan using call traffic information analysis • ICTCC680A Manage customer contact centre staffing • ICTCC681A Manage customer contact operational costs • ICTCC682A Develop a contact centre business plan • ICTCC621A Design and launch new customer contact facilities • ICTCC630A Develop and maintain a service level strategy • ICTCC641A Campaign design and fulfilment • ICTCC683A Strategic integration of customer contact operations • ICTCC684A Conduct a contact centre audit

Table B.12

ICP05 PRINTING AND GRAPHIC ARTS TRAINING PACKAGE

Version	Release Date	NQC Endorsed	ISC Upgrade
1.0	September 2005	No modifications undertaken during the period. Continuous improvement project currently underway.	

Appendix C

Adequacy of formal training for occupations – survey findings

C.4 Survey findings regarding formal training adequacy

The survey asked respondents for to provide a view of the formal training adequacy for the list of occupations / job roles submitted in relation to employment intentions.

The respondents could answer on a five point scale: totally inadequate; inadequate; adequate; good; very good. The results have been aggregated and a score out of 100 provided in response to each occupation. In the tables below, those with a score of more than 55 were assessed as more than adequate, those with a score of 50 – 55 were assessed as adequate and those with a score of less than 50 were assessed as less than adequate.

Table C.13

TRAINING ASSESSED BY SURVEY AS 'MORE THAN ADEQUATE'

Occupation / Job Role
Customer / client service officer
Financial dealer
Accountant
General Administrative Officer
Vocational Education Teacher
Workplace / VET Trainer/Assessor
OHS Manager
Library Technician
Training and Development Professional
OH&S Officer / Advisor
Auditors
Insurance Consultant
Financial Services Manager
Photographer
Trade Trainer
Vocational Education Teacher
Finance Manager
ICT Support Technician
Video Producer
Training Centre Manager
Personal Assistant / Secretary
Receptionist
Accounts Clerk
ICT Support and Test Engineers
Teacher of English to non-English speakers
Bookkeeper
Payroll Clerk
Bank Worker (other)
Librarian
Musician (instrumental)
Multimedia Designer
Visual Artist
Software and Applications Programmer
General Manager
Human Resource Administrator / Manager

Occupation / Job Role
Digital Photographic Printer
ICT Business and Systems Analyst
Manager credit audit compliance
Illustrator
Web Designer
Games Developer / Animator
Private art dance drama music teachers / tutor
Computer Network Professionals
Para-legal Professionals
ICT Network and Support Professional
Graphic Designer
New Media Designer
ICT Professional
HR Clerk / HR Officer
Call or Contact Centre Operator
Library Assistant
Database and Systems Administrator or ICT Security Specialist
Insurance Risk Surveyor
Singer / Songwriter
Superannuation Clerk
Office and Practice Manager
Contract Program and Project Manager / Administrator
ICT Project Manager
ICT Help Desk Officer
Post-production Media Technicians

Source: Escan survey 2009

Table C.14

TRAINING ASSESSED BY SURVEY AS 'ADEQUATE'

Occupation / Job Role
Education Adviser and Reviewer
Telecommunications Technical Specialist
ICT Managers
Sales and Marketing / Business Development Manager
Customer Contact Manager
Binders and Finisher
Radio Presenter
Career Counsellor / Adviser
Financial Investment Adviser
Cabler (Data and Telecommunications)
Corporate Services Manager
Multimedia Specialist and Web Developer
Media Producer (excluding Video)
Telecommunications Linesworker
Telecommunications Network Planner
Call or Contact Centre Team Leader
Integration Aide
Credit or Loans Officer
Printing Machining and Production (including digital)
Screen Printer
Financial Planner

Occupation / Job Role
Graphic Pre-press Trades Worker including Pre-press Designer
Telecommunications Cable Joiner
ICT Systems Test Engineer
Director (Film Television Radio or Stage)
Camera Operator (Film Television or Video)
Curriculum Advisory Teacher (other)
Chief Information Officer
Business Policy and Planning Manager
Supply and Distribution Manager
Education/Teachers' Aide
Radiocommunications Technician
Account Manager
Curriculum Advisory Teacher E-learning
Journalist
Special Effects Developer
Superannuation Funds Manager
Telecommunications Technician
Telecommunications Field Engineer
Small Offset Printer
Market Research Analyst

Source: Escan 2009 survey

Table C.15

TRAINING ASSESSED BY SURVEY AS 'LESS THAN ADEQUATE'

Job role / occupation
Lighting Technician
Artistic Director
Sales Representative
Print Journalist
Museum Conservator / Curator
Newspaper or Periodical Editor
Community and Cultural development officer
Mortgage Broker
Telemarketer
Printer's Assistant
Cinema Theatre or Facilities Manager
Technical Writers
Broadcast Transmitter operator / engineer
Printing Table Worker
Arts Administrator or Manager
Stage Manager

Source: Escan 2009 survey

Appendix D

Stakeholder consultation

D.5 Stakeholder consultation

The project included two stages of stakeholder consultation: an initial stage of wide consultation and a subsequent validation stage, during which stakeholders were asked to comment in response to the draft Escan report. Table D.16 includes stakeholders consulted over the course of the project.

In the first stage of consultation, stakeholders were asked to identify the most pressing workforce issues currently facing their industry (or industries). They were also asked how effectively they felt vocational education and training was meeting the needs of their industry and to describe areas where this is being done well and where needs are not being met. Stakeholders were asked to describe the impact that changes in the macro environment were expected to have on workforce issues in the foreseeable future and the implications of such changes on training and development needs and on employee numbers. In particular, stakeholders were asked to identify the job roles that are currently difficult to fill due to a shortage of appropriately skilled applicants. They were also asked to identify the job roles for which there is likely to be a shortage of skilled applicants over the next five years. Following consultations, the job roles identified were aligned with ANZSCO codes to facilitate further analysis.

During the validation stage, stakeholders provided feedback on the draft Escan in these forums: six SAC forums (one for each SAC); advisory body forum; small enterprises forum; and a large enterprises forum.

Table D.16

STAKEHOLDER CONSULTATIONS (STAGE 1)

Name	State/ Territory	Organisation	Date consulted
Anthony Tyrrel	ACT	Enterprise Registered Training Organisation Australia	14/11/08
Jeannie Cotterell	ACT	Department of Education and Training	17/11/08
Suzi Hewlett	ACT	Dept of Education, Employment & Workplace Relations	14/11/08
Sue Beitz	ACT	Skills Australia	14/11/08
Chris Peters	ACT	ACT Chamber of Commerce and Industry	14/11/08
Max Wilson	NSW	Property & Financial Services ITAB	15/11/08
Gail Power	NSW	Arts Training NSW	15/11/08
Margaret Willis	NSW	Dept of Education and Training	10/11/08
Brian Kerwood	NSW	Australian Industry Group	12/11/08
Kevin MacDonald Abbu Duruz	NSW	NSW Business Chamber	11/11/08 15/11/08
Judith Bowler	NSW	Willowgrove Pty Ltd (RTO)	15/11/08
Linda Evans	NSW	National Insurance Brokers Association	19/11/08
Mel Brenton	NT	Service Industries Training Advisory Council	30/10/08
Wendy Moulds	NT	NT Cultural, Recreation & Tourism Training Advisory Council	30/10/08
John Erslie	NT	Chamber of Commerce and Industry	31/10/08
Larnie Montgomery	NT	Dept of Employment and Training	31/10/08
Sam Nicolosi	QLD	Creative Industries Skills Council	7/11/08
Marie Healy	QLD	Department of Education	7/11/08
Peter Costantini	QLD	Australian Chamber of Commerce and Industry	7/11/08
Paul Bidwell	QLD	Commerce Queensland	7/11/08

Name	State/ Territory	Organisation	Date consulted
Felicity Bubb	QLD	Industry Services Alliance	7/11/08
Elizabeth Owens Paul Heck Georgina Downey	SA	Dept of Further Education, Employment, Science and Technology	14/11/08
Graham Oades	SA	Service Skills SA	13/11/08
Elizabeth Lendrum	SA	Business Services Industry Skills Advisory Board	14/11/08
Keith Thompson	TAS	Skills Tasmania	21/11/08
Lesley Richardson	TAS	Tasmanian Chamber of Commerce and Industry	21/11/08
Gary Fitzgerald	WA	Industry and Community Planning	17/11/08
Allan Jones	WA	Finance, Property and Business Skills WA	17/11/08
Mal Gammon	WA	Future Now	17/11/08
Ian Andrews	WA	Community Services, Health and Education ITAB	17/11/08
James Pearson	WA	Chamber of Commerce and Industry	17/11/08
Liz Stafford Sheryl Hansen	VIC	Skills Victoria	3/11/08
Anna Henderson	VIC	Business Skills Victoria	3/11/08
Michelle Bissett	VIC	Australian Council of Trade Unions	7/11/08
Angela Jolic	VIC	Finance Sector Union	13/11/08
Steve Walsh	VIC	Australian Manufacturing Workers Union	12/11/08
Andrew Rimington Jodie Wickham	VIC	Victorian Employers' Chamber of Commerce and Industry	17/11/08
Peter Canavan	VIC	Australian Industry Group	14/11/08
John Maddock Jennifer Oliver Sandra Walls Kerri Ferguson Anthony Baley Andrew Smith	VIC	Box Hill TAFE	25/11/08
John Churchill	VIC	Enterprise Registered Training Organisation Australia	15/11/08

Table D.17

STAKEHOLDER CONSULTATION – VALIDATION STAGE

Name	Organisation	Date consulted
Business Services SAC		
Peter Canavan	Australian Industry Group	13/01/09
Jemma Houghton	Salesforce	13/01/09
Lyn Goodyear	Australian Human Resources Institute	13/01/09
Richard Brooks	Council of Small Business Organisations Australia	13/01/09
Financial Services SAC		
Kerry Curtin	Financial Planning Association	13/01/09
Ewen Wilson	Australia New Zealand Institute of Insurance and Finance	13/01/09
Max Wilson	Property and Financial Services ITAB WA	13/01/09
Belinda Robinson	Association of Superannuation Funds of Australia	13/01/09
Karen Barrett	Australian Financial Markets Association	13/01/09
Kate Frost	NIBA College of Insurance and Risk Professionals	13/01/09
Michael Eichler	Insurance Australia Group	13/01/09
Cultural and Related Industries SAC		
Margaret Birtley		14/01/09
Kath Papas	Ausdance	14/01/09
John Maizels	Foxtel	14/01/09
Lynn Gailey	Media Entertainment and Arts Alliance	14/01/09
Mal Gammon	FutureNow	14/01/09
Terry Noone	Musicians Union of Australia	14/01/09
Sam Nicolosi	Creative Industries Skills Council Queensland	14/01/09
Genevieve Wearne	VERVE	14/01/09
Printing and Graphic Arts SAC		
Alex Frazer	Electro-technology, Printing, ICT Industry Training Board Victoria	14/01/09
Samantha Spice	Electro-technology, Printing, ICT Industry Training Board Victoria	14/01/09
Phillip Andersen	Printing Industries Association of Australia	14/01/09
Peter Canavan	Australian Industry Group	14/01/09
Greg Grace	Heidelberg Australia and New Zealand	14/01/09
John Kirk	Clayton Utz	14/01/09
Bob Snedden	Communications ITAB NSW	14/01/09
Kerim El Gaballi	Prografica Printing	14/01/09
Neal McLary	Printing Industries Association of Australia	14/01/09
Education SAC		
Paul Byrne	IBSA Board	15/01/09
Glen Cowan		15/01/09
Suzy McKenna	Reframing the Future	15/01/09
Julie Zappa	Central TAFE	15/01/09
Dr Anne Jones	Victoria University	15/01/09
Andrew Smith	ACPET	15/01/09
ICT SAC		
Alex Frazer	Electro-technology, Printing, ICT Industry Training Board Victoria	15/01/09
Angela Cacciotti	Optus	15/01/09
Peter Dale	Department of Finance and Administration	15/01/09
Rob Durie	Durie Consulting	15/01/09

Name	Organisation	Date consulted
Henry Louey	CompTIA	15/01/09
Rick Furnell	ACMA	15/01/09
Ian Dennis	ASC / CIIER	15/01/09
Melanie Bretton	Services Industries Training Advisory Council	15/01/09
Michael Hedley	AIIA	15/01/09
Stephanie Ackherst		15/01/09
Small Business Forum		
Richard Brooks	Tyne Solutions	22/01/09
Philippa Taylor	Family Business Australia	22/01/09
Duncan Shave	David Shave Human Resources	22/01/09
AnnaHenderson	Business Skills Victoria	22/01/09
Jane Stott	Connecting Minds	22/01/09
Peter Cilberto	C Direct	22/01/09
Anthony Phillips	RMIT University	22/01/09
Lyndon Shea	Shea Business Consulting	22/01/09
Mariana Brkich	Career Dynamics	22/01/09
Large Business Forum		
Ann Rutler	St George	22/01/09
Ursula Groves	ABC	22/01/09
Helen O'Moore	Sydney Opera House	22/01/09
Michael Eichler	AIG	22/01/09
Chris Butler	Qantas	22/01/09
Karen Lonegran	Qantas	22/01/09
Advisory Body Forum		
Business services		
Anna Henderson	Business Skills Victoria	21/01/09
Max Wilson	Property and Financial Services ITAB	21/01/09
Cultural and creative		
Mal Gammon	Future Now	21/01/09
Gail Power	Arts Training NSW	21/01/09
Elizabeth Lendrum	Business Services Industry Skills Board SA	21/01/09
Education		
Jenny James	NSW Public Sector ITAB	21/01/09
Mel Brenton	Service Industries Training Advisory Council	21/01/09
Finance		
Anna Henderson	Business Skills Victoria	21/01/09
Melanie Brenton	Service Industries Training Advisory Council	21/01/09
ICT		
Alex Frazer	Victorian Electro-Technology, Printing, Information and Communications ITB	21/01/09
Archie Wright	Major Industries Training Advisory Council	21/01/09
Printing		
Alex Frazer	Victorian Electro-Technology, Printing, Information and Communications ITB	21/01/09
Sam Nicolosi	Creative Industries Skill Council	21/01/09