



Skilling the Existing Workforce

Background Research Report
An Australian Industry Group Project

AUSTRALIAN INDUSTRY GROUP

SKILLING THE EXISTING
WORKFORCE

BACKGROUND RESEARCH REPORT

APRIL 2007



AUSTRALIAN INDUSTRY
GROUP

Peter Noonan was commissioned by the Australian Industry Group to prepare this Skilling the Existing Workforce Background Research Report.

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The Skilling the Existing Workforce Project is a Commonwealth-State Skills Shortage Initiative funded through the Strategic National Initiatives component of the 2005-08 Commonwealth-State Agreement for Skilling Australia's Workforce. The views expressed herein do not necessarily represent the views or opinions of the Commonwealth Department of Education, Science and Training.

1 The Purpose of the Project

The Ai Group has for some time been increasingly aware about the issue of skilling the existing workforce. This is because many in the existing workforce have low levels of post-school education or training attainment and employers have indicated that the nature and complexity of skills required in the workforce are rapidly changing.

The Australian Industry Group's major report *World Class Skills for World Class Industries* highlighted the importance of workforce skills to the competitiveness and responsiveness of Australian enterprises and to the productivity of their employees and the Australian workforce.¹

Based on interviews and case studies of over 500 firms, the report revealed that many of those firms saw skills and workforce development as amongst their most important strategies to remain competitive. The report also concluded that enterprises would require skills at higher levels, that individuals would require broader skills and that they would need to be updated more often.

The report also demonstrated that Australian firms were increasingly looking to their existing workforce as a significant source of new skills.

As the population ages, and the size of the traditional workforce shrinks, the more innovative options now being used by some firms will be increasingly on the agenda across the country. Although many firms recognise that aging has significant implications for them for them, their planning for how to deal with the challenges that it poses are not yet highly developed.²

This finding reinforces a growing emphasis in international and national education and training policies, and in research literature, on the importance of skilling the workforce to increase participation in, and the productivity of, the workforce.

The *Skilling the Existing Workforce Project* aims to address this issue. The Ai Group has now commenced a project funded by the Commonwealth Department of Education, Science and Training to identify and address the skills needs of existing workers.

As an initial step the Ai Group has commissioned background research to:

- consider recent key national and international policy developments concerning the skilling of the workforce;
- consider the nature and forms of workforce skills;
- examine the patterns of and influence on participation in workforce skills;
- consider how existing workers learn and acquire skills; and

¹ Australian Industry Group 2006 *Report of the Allen Consulting Group World-Class Skills for Work Class Industries: Employers Perspectives on Skill in Australia* Ai Group Sydney.

² Australian Industry Group, 2006.

- determine the strategies required for skilling the existing workforce.

The next stage of the project is to conduct a series of consultations with key stakeholders and enterprises. The consultations have a number of main purposes:

- to consider the analysis and findings of the research report;
- to consider the policy implications of the research findings;
- to gather from enterprises their experiences of skilling existing workers; and
- to gather information from companies to assist in the development of trials within enterprises about skilling the workforce.

The consultations will take the form of a series of national forums, meetings with key stakeholders and through responses to questions on the Ai Group website.

After the collation of this information from the consultations the Ai Group will report this on their website and use the information to support a number of trial approaches within enterprises. Five different workforce skill development approaches will be trialled in different enterprises across the country to assist in the development of a range of models considered to be effective in skilling the existing workforce.

Finally, at the conclusion of the enterprise trials, an evaluation will document the outcomes of the project. It is anticipated that the evaluation will produce a range of models that could be applied in different industry settings to assist them in the skilling of their workforces and provide advice to inform the development of Ai Group policy to take forward the reform process flowing out of the *World Class Skills* report. This project will also assist in shaping national policy directions in this area.

This research report will be available on the Ai Group website <http://www.aigroup.asn.au> and on the Department of Education, Science and Training website at http://www.dest.gov.au/sectors/training_skills/

2 Executive Summary of Research Report

The Ai Group's report *World Class Skills for World Class Industries* highlighted the importance of workforce skills to the competitiveness of Australian enterprises. Based on extensive interviews and case studies with 500 companies, the report shows that firms are adopting a range of strategies to upskill and retrain their workforces.

The findings in the *World Class Skills* report are consistent with those in a number of major recent reports on the impact of demographic change on the Australian workforce, in particular the Australian Government Department of the Treasury's Intergenerational Report and complementary work by the Productivity Commission. These reports have also highlighted the importance of raising adult educational attainment and skills levels to improve workforce participation in Australia.

International studies, in particular by the Organisation for Economic Cooperation and Development (OECD), have reached similar conclusions. A particular priority in all of these reports has been to address the needs of adults with low educational attainment and skills levels.

The principle of lifelong learning has been advocated over the past decade but has had little practical effect on public policy in Australia. However the more recent reports, which have looked at the issues of educational attainment and skills in terms of their relationship with workforce participation, have strongly influenced policies and priorities at the national and state levels; in particular the Prime Minister's 2006 *Skills for the Future* Statement, decisions by the Council of Australian Governments (COAG) to raise levels of Human Capital in Australia through a range of strategies, and state and national priorities for Vocational Education and Training (VET).

Further consideration of reskilling the existing workforce requires an analysis and understanding of:

- how existing workers acquire new skills;
- the patterns of participation in skills development;
- influences on participation;
- the changing nature of skills requirements;
- the importance of building broad competence in the workforce; and
- the growing importance of work-based learning.

2.1 Forms of learning

Adults acquire new skills and knowledge through formal, non-formal and informal means. As people age, participation in formal learning declines and non-formal and informal learning becomes increasingly important. Research highlights the importance of informal and non-formal learning in workplaces through employer-

sponsored training to existing workers, but the role and importance of this contribution is not sufficiently recognised in current policy.

2.2 Participation

Participation in all forms of learning and skills development is also strongly influenced by prior levels of educational attainment and occupational roles. More highly educated and better paid workers, those in full time employment, in larger firms and in the public sector have the greatest levels of participation in all forms of skills development.

Participation is also influenced by the attitudes of individuals and managers. Investment in skills development in enterprises is strongest when it is central to overall business strategies.

2.3 Changing Skills Requirements

There has also been consistent evidence in recent years, reflected in the *World Class Skills* report, of increasing skills requirements in many jobs including major areas of occupational growth. The concept of knowledge work has also evolved. The *World Class Skills* report and many other studies also highlight the growing importance of broader generic or employability skills as well as higher levels of technical skills. This shift to higher and more complex skills is referred to as 'skills deepening'.

The OECD has defined the kinds of skill and knowledge required in the modern economy as 'Know-what, Know-how, Know-why and Know-who'.

Skills and knowledge are comprised of both codified knowledge -- that is knowledge represented in standards, curriculum and written procedures and texts - - and tacit knowledge, that is knowledge gained through experience, through working with others and through the application of codified knowledge particularly in the workplace. Codified knowledge is more commonly associated with formal and structured learning and tacit knowledge with informal and non-formal learning 'Know how' and 'know who' is mainly represented through tacit knowledge. Learning by doing and applied learning lies at the heart of models such as apprenticeship and project and problem based learning.

Informal learning becomes more important as people age and is a common and powerful means by which tacit knowledge is acquired, applied and disseminated.

However, informal and non formal learning and the importance of tacit knowledge is not fully recognised in current policies affecting skills development.

Many firms are also increasing their involvement in formal learning through nationally recognised training.

2.4 Broad Competence

Competency-based training seeks to integrate codified and tacit knowledge through applied learning, but it is essential that competence is defined in terms of the future skills requirements rather than just specific work roles and current and past work

practices. Competency outcomes should be based on world best practice and help individuals and groups to continually build broad skills and capabilities through all forms of learning and skills development.

2.5 Workforce Skills Development

A *workforce skills development* approach has been adopted for this project as a strategy covering all forms of learning and skills acquisition using informal, non-formal and formal learning and a blending of these approaches where appropriate rather than the sole reliance on the traditional and formal definition of VET.

If workforce skills development approaches are to be adopted and implemented in Australia, priorities must be set, roles and responsibilities clarified and new and innovative policies and strategies at the system-level and specific strategies at the enterprise level must be developed and adopted to build upon innovative practice that is occurring in this arena.

3 Workforce Participation and Skills Policy

3.1 Recent policy influences

Since 2002 a number of major reports have identified the imperative to boost Australia's levels of workforce participation to address the issue of population aging and to boost the supply of skilled labour.

This imperative has been increased by high levels of economic growth, a tight labour market and intensifying skills requirements. International benchmarking based on OECD data suggested that, while Australian workforce participation levels were just above the OECD average, they lagged behind other OECD 'benchmark' countries, although this conclusion has been challenged by more recent research.³

In 2002 the Ministerial Council on Education, Employment, and Training and Youth Affairs released a Declaration on Adult and Community Education. The Declaration said that:

---many adults did not acquire the learning essentials when they were young, or they learned in languages other than English. Now they may not value and even fear learning. Over 50 per cent of the adult populations do not hold post-school qualifications. Thirty eight per cent of adults aged 45–54 and 49 per cent of adults aged 55–64 did not complete the highest level of schooling. Women who did not complete a full secondary education are far less likely to participate in the labour force than more highly educated women and most men.

The Declaration went on to highlight the danger of a growing knowledge gap between adult Australians with high levels of skills and qualifications and those without, including "people who are poor, have disabilities, have low levels of literacy and numeracy, are from non-English speaking backgrounds, are geographically and socially isolated, and Indigenous Australians".⁴

However, this Declaration, limited as it was to the adult community education sector, had little practical outcome or public recognition at the time.

Rather, it was the 2003 Department of the Treasury Intergenerational Report that placed the issue of demographic change and workforce aging squarely on the public policy agenda.⁵

³A 2007 Productivity Commission staff working paper concludes that earlier international comparisons, when adjusted for variations in statistical practices, indicates that Australia's position looks better, though there remained significant differences in the participation rate for key age groups. The report still concludes that this implies scope to lift Australia's participation rates and economic growth.

⁴ Ministerial Council on Education, Employment, Training and Youth Affairs 2002. *MCEETYA Declaration on Adult and Community Education* Melbourne.

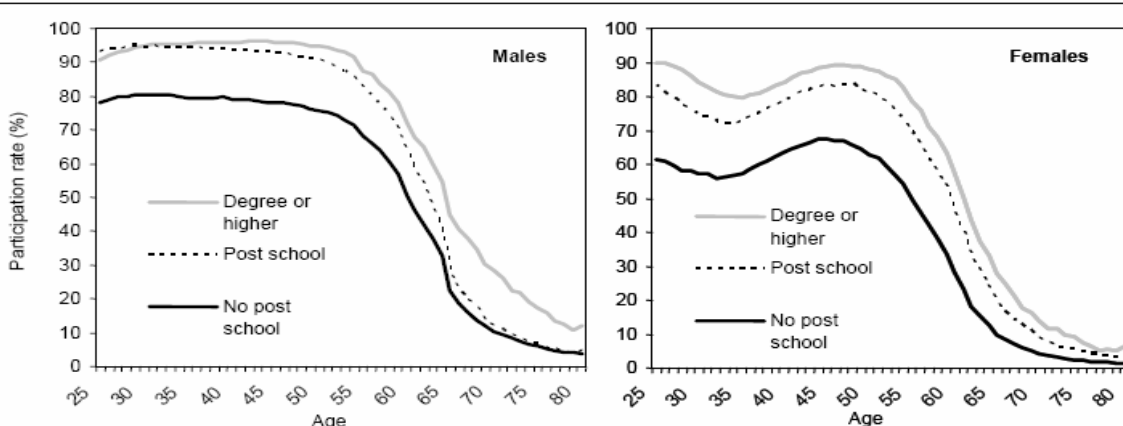
⁵ The 2003 Intergenerational Report by the Department of the Treasury was the major stimulus to public policy discussion on the consequences of population aging in Australia and the need to boost

A subsequent report by the Productivity Commission for the Council of Australian Governments (COAG) illustrated the important relationship between levels of educational attainment and workforce participation. The report highlighted that younger people have higher levels of educational attainment than older people and that those with higher levels of attainment were more likely to participate in the labour market and for longer, and that this effect is particularly marked for women⁶. The Commission illustrated this point with the following graph.

Figure One

Labour force participation by age and highest educational attainment

Percentage rates, 2001



Data source: ABS 2001 Population Census data provided by the Australian Government Department of the Treasury.

The OECD in its Economic Survey of Australia 2004 came to similar conclusions to the Treasury and the Productivity Commission when it found that “international comparisons of structural unemployment, overall employment ratios and participation rates suggest that there is ample room for raising labour inputs in Australia”. The OECD concluded that:

Training and up-skilling persons already in work should be given higher policy priority, and recent moves towards a coordinated strategy to adult learning⁷ represent a welcome step forward. Policy initiatives should be closely tailored to the needs of adult workers so

workforce participation levels, particularly amongst older males. The report also highlighted the relationship with skills and labour force participation and argued that a primary policy focus should be on the prime working age population, as gains in participation would be greatest due to the proportion of the population in these age cohorts.

⁶ The report also makes the point that, as educational levels in the population increase, the qualification profile of the workforce will also increase over time. Productivity Commission Research Report 2005 *Economic implications of an Aging Australia*, Canberra.

<http://www.pc.gov.au/study/ageing/finalreport/ageing1.pdf>

⁷ It is however not clear what *coordinated strategy for adult learning in Australia* the OECD was referring to as none existed at the time.

*that lifelong learning outcomes meet the underlying costs of tuition and production losses from being out of work.*⁸

At a state level, the Victorian government, through the Department for Victorian Communities and for Victoria's Workforce Participation Taskforce, commissioned a report by the Allen Consulting Group on barriers to and options for increased workforce participation in Victoria. That report also highlighted the need to increase levels of adult skills and levels of educational attainment as a key policy strategy amongst all adult population groups⁹. The South Australian Government released a report following an enquiry into the future of skills development in that state which contained a new focus on skills through the concept of workforce development¹⁰. Issues related to demographic change and analysis of future workforce skills needs were also highly influential in major reviews of VET in Queensland, Victoria and New South Wales.

Against the background of these reports, it is however important to note that, as Cully points out, the year on year effects on population aging are slight and will not begin to be felt until the end of the decade or later¹¹. The focus on workforce skilling is probably being driven by a range of factors including high rates of economic and employment growth, delayed and complex patterns of labour market entry by young people, intensifying skills requirements relative to the capabilities of the current workforce and skills shortages in some occupations and in some geographic areas as much as by the future challenge of demographic change.

3.2 Lifelong Learning as a policy driver

The policy focus outlined above is not new. For over a decade, the concept of lifelong learning has highlighted the importance of adults continuing to learn over the course of their adult lives, but the concept of lifelong learning has gained little public policy traction. This is because arguably the benefits, costs, priorities and outcomes of lifelong learning were not well defined for individuals, government and enterprises and, as the analysis of literature in this report suggests, the prospect of lifetime learning had little appeal to those with the lowest levels of skills and educational attainment, or to the many adults who saw little benefit from further

⁸ OECD 2004 Economic Survey of Australia 2004: Policies to lower unemployment and raise labour force participation.

http://www.oecd.org/document/62/0,2340,en_2649_201185_34333374_1_1_1_1,00.html

⁹ The Allen Consulting Group, 2005, *Barriers to and Options for increased workforce participation in Victoria* Melbourne.

[http://www.dvc.vic.gov.au/Web14/dvc/rwpgslib.nsf/GraphicFiles/BarriersToOptionsNov05.pdf/\\$file/BarriersToOptionsNov05.pdf](http://www.dvc.vic.gov.au/Web14/dvc/rwpgslib.nsf/GraphicFiles/BarriersToOptionsNov05.pdf/$file/BarriersToOptionsNov05.pdf)

¹⁰ Lomax-Smith the Hon. Jane, 2003, *Skills for the Future Final Report of the Ministerial Inquiry* South Australia Government of South Australia, Adelaide.

¹¹ Cully M, 2004, *Older Workers. In Equity in Vocational Education and Training Research Readings* Bowman (edit) NCVET, Adelaide.

participation in formal education and training.¹² Advocacy of lifelong learning was also confined mainly to the education and training sectors and focussed on individual learners and communities.

Despite the rhetoric around lifelong learning within the education and training sectors, little was done on a systematic and comprehensive basis to address the issue, although national and state VET priorities have given increasing priority to the needs of existing, and particularly older, workers. It is also important to recognise that, as the VET system expanded, participation amongst older adults grew by 25 percent between 1997 and 2001.

Notwithstanding this, through the 1990s and the first part of this decade, government policy and program priorities continued to be directed to addressing issues related to the immediate years of post compulsory schooling to raise school retention rates and improve post school pathways to the labour market together with reforms to, and expansion of, the apprenticeship system.

3.3 Shifting policy focus

The eventual outcome of the growing policy focus on the connection between adult skills and educational attainment levels across economic development, industry, finance and education and training portfolios and major industry groups can be seen in the 2006 COAG decisions on Human Capital and the Prime Minister's *Skills for the Future* Statement of the same year. In his Statement the Prime Minister said:

One of the biggest skills challenges we face as a nation is to improve the basic skills of our workforce. Almost a third of Australians aged between 25 and 64 are without Year 12 or equivalent qualifications.

Many adults fall short of functional levels of literacy and numeracy which are now essential for just about all jobs, and certainly all jobs that involve the operation of computers and digital technology.

This problem largely reflects lower education participation by young Australians two and three decades ago and previous migration programmes which placed much less emphasis on skills.

Because many Australians left school or arrived in Australia without the levels of English literacy and numeracy necessary to gain qualifications, they miss out on the opportunity to move into more skilled jobs. This leaves them vulnerable to economic change and Australia misses out on their full potential.¹³

The focus in the Prime Minister's Statement is also reflected in the COAG Human Capital Agenda which includes amongst its key objectives to:

¹² For an interesting discussion of the issues and tensions surrounding the application of the concept of lifelong learning, see Buchanan J *Whatever Happened to Lifelong Learning? Lessons from Recent Australian Vocational Education and Training Reforms*, CEDA, Melbourne 2005.

¹³ Howard Rt. Hon J Prime Minister 2006 *Ministerial Statement on Skills for the Future* <http://www.pm.gov.au/media/speech/2006/speech2175.cfm>

- *increase the proportion of adults who have the skills and qualifications needed to enjoy active and productive working lives; and*
- *improve overall workforce participation, with a particular focus on target groups, in a manner consistent with the long-term interests of the individual and the economy, giving due regard to productivity.*

COAG also asked the Ministerial Council for Vocational and Technical Education to undertake a series of reforms to VET including a strong emphasis on Recognition of Prior Learning for adult learners and a number of projects are now underway in the VET sector flowing from the COAG decision.

The focus on the needs of adults with low skills levels is fully consistent with the findings and recommendations of the OECD reports on adult learning. It is also consistent with strategies adopted in countries such as the United Kingdom which has set a goal of ensuring that all adults attain Certificate Level II qualifications¹⁴, a similar objective to the Australian Skills Vouchers Programme announced in the Prime Minister's Statement.

The *World Class Skills* report found that strategies to retrain the existing workforce and to retain mature workers were amongst the most common responses to address skills shortages amongst companies surveyed. The report goes on to advocate the development of a modern adult learning system.

The analysis outlined above suggests that there is now at the highest levels of government and in industry a growing appreciation of the imperative to boost levels of skills and knowledge in the Australian workforce and the Australian adult population more generally.

What is less clear is the extent to which current policy settings and institutional arrangements are sufficient to meet the challenge of workforce skilling and boosting educational attainment levels amongst adults, particularly in areas of skills and knowledge essential for increased workforce participation and productivity. Similarly, it is unclear how and where government and industry should invest to maximise the return on training.

To fully understand and analyse these issues it is important to look at the full scope and context of workforce skills and to then look in detail at several important issues:

- Patterns of participation;
- Influences on participation;
- The changing nature of skills;
- Broad competence; and
- The importance of workplaces as learning sites.

¹⁴ See Department of Education and Skills *Getting on in Business Getting on at Work – White Paper*
<http://www.dfes.gov.uk/publications/skillsgettingon/fore.shtml>

4 Workforce Skills – Scope and Context

4.1 Overview

A starting point for any consideration of workforce skilling is to identify how adults acquire skills and knowledge and to identify what forms of skills and knowledge are most important – that is, the scope of workforce skills development and the context within which it occurs.

In the literature, terms such as adult education, workforce reskilling, training and human capital development are often used indiscriminately and interchangeably.

Strategies to improve workforce skills amongst the existing workforce are more complex for adults than for younger entry-level learners as adults acquire skills in many different ways. However, the traditional focus of public policy has been largely limited to the formal education and training sector, which plays only a partial role in workforce skills development and one which declines with workforce age.

Richardson makes the point that:

*Vocational education and training (VET) encompasses employment-related training provided through the technical and further education (TAFE) sector and private training providers. But vocational education is broader than this. It includes the development of job-related skills and attributes which increase a person's productivity in the workplace. Economists refer to this as human capital. These skills can be learned through the formal education system (schools and higher education); through the vocational education system (TAFE and private providers); and through formal and informal learning on the job.*¹⁵

4.2 Forms of learning

The OECD, in its work on the Knowledge Economy, distinguished between formal learning (structured and accredited), non-formal learning (structured but not accredited) and informal learning (non-structured and non-accredited)¹⁶ and emphasises that non-formal and informal learning are particularly important for adults.

¹⁵ See Richardson 2004 *Employers Contribution to Training* NCVER for an overview of the contribution of informal employer sponsored training.

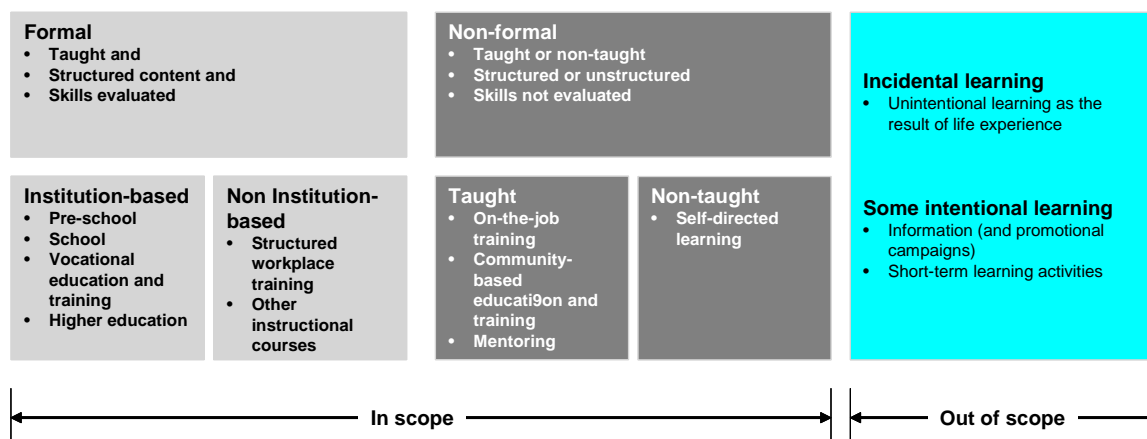
<http://www.ncver.edu.au/research/proj/nr1005.pdf>

The role of community based learning for adults could be added to the scope of Richardson's definition.

¹⁶ OECD 1996 *The Knowledge Based Economy* <http://www.oecd.org/dataoecd/51/8/1913021.pdf>

The Australian Bureau of Statistics (ABS), in a paper *Measuring Learning in Australia*¹⁷ – a framework for educational statistics, has developed a model which illustrates this point, and which also shows what may be in and out of scope in measuring learning in Australia.¹⁸

Figure 2: ABS Framework for Measuring Learning in Australia.



The ABS framework is relevant, as Richardson argues, that traditional measures of investment in training in Australia significantly underestimate employer contributions to firm specific skills development.

As a range of sources suggest, experience gained through time spent in the workforce and informal, unstructured learning is often more important in successful workforce participation and progression than formal training and qualifications¹⁹.

This finding is in keeping with the findings of the Ai Group *World Class Skills* report which indicates that both formal and informal learning approaches are important strategies for Australian enterprises.

¹⁷ ABS 2003 *Measuring Learning in Australia - a framework for educational statistics* [http://www.ausstats.abs.gov.au/ausstats/free.nsf/0/223D40E6FAF99324CA256CBC0078E114/\\$File/42130_2003.pdf](http://www.ausstats.abs.gov.au/ausstats/free.nsf/0/223D40E6FAF99324CA256CBC0078E114/$File/42130_2003.pdf)

¹⁸ The ABS had also developed an even more ambitious framework to measure the extent to which Australia was progressing towards a 'Knowledge Economy'.

¹⁹ See Mawer and Jackson 2004 *Training of Existing Workers Issues Incentives and Models* NCVER. This report is particularly valuable as it is based on a range of interviews and case studies and found a strong attachment to informal workplace training across all companies surveyed particularly for existing workers below AQF level 3 and long-term, casual staff. The report found that, with the exception of mandatory training such as for occupational health and safety courses, accredited training was not highly valued in the majority of companies who saw far greater relevance in the employer's experience and skill in job performance. Interestingly, the report found, on the whole, employees shared similar perceptions of accredited training to their employers, mainly identifying the value of accredited qualifications in terms of applications for subsequent jobs.

<http://www.ncver.edu.au/research/proj/nr3017.pdf>

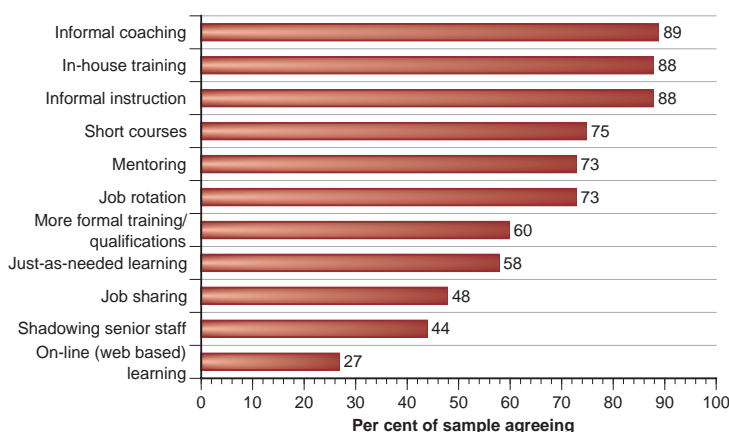
The report indicates that ‘*training and learning opportunities may be provided informally in the workplace for a number of reasons:*

- *learning needs may be ad hoc, and not justify the expense of entering formal training arrangements;*
- *formal training that adequately matches workplace needs may not exist; and*
- *employers and/or employees may not see a benefit in obtaining a formal qualification.*²⁰

The report illustrates the range of approaches to learning employed across the companies surveyed.

Table One: Types of learning opportunities, Australian companies, 2005

DOES THE LEARNING EXPERIENCE IN YOUR COMPANY INCLUDE THE FOLLOWING APPROACHES?



The implication of this analysis is that we cannot limit consideration of workforce reskilling (or to adult learning more generally), to the formal education and training system and particularly to what is often termed institution based learning.

As Richardson concludes:

*The main implication drawn is that what is happening informally in the workplace is very important for determining the future quantity, quality and character of the skills of the workplace. There is a large public interest in what happens in the domain of on-the-job learning.*²¹

It must be emphasised that a broader and holistic approach to workforce skills does not devalue formal learning and nationally recognised qualifications; on the contrary, informal and non-formal learning may well result in an increased uptake of formal learning and increases in workforce qualification profiles.

²⁰ Ai Group, p. 35.

²¹ Richardson, 2004, p. 34.

For example, the *World Class Skills* report highlights the intention of employers to increase the proportion of formal learning over the next three years. Reasons cited by employers for increasing the proportion of formal learning leading to qualifications include 'to reinstate training that had previously been wound down, because formal training more easily meets safety requirements and because employees appreciate the recognition they receive from formal qualifications'.²²

Formal qualifications are also essential for entry to many (but not all) skilled jobs, particularly in licensed trades and occupations and for progression within occupations, particularly where career paths, progression and wages are linked to qualification levels. Qualifications are also a broad signal to an employer of essential competence, although specific hiring decisions are likely to take into account other factors. Qualifications, particularly where they are linked to national competency standards, should (but do not always) signify consistency and quality of outcomes.

Acquiring qualifications may also be an important motivation and incentive for learners to participate in formal learning, an issue which is being explored by the OECD in its work on linkages between National Qualifications Systems and Lifelong Learning.²³

4.3 Integration of formal and other forms of learning

There is also evidence of increasing integration of nationally recognised training with firm level human resource development and training strategies. This integration is driven by policy changes including the creation of a private training market, the expansion of the apprenticeship and traineeship system, the ability of enterprises to become Registered Training Organisations and the introduction of national training packages with their workplace orientation and their availability in new areas. The development of increasing numbers of training staff familiar with and able to use the national training system also appears to be a contributing factor.²⁴

Australia also has a relatively flexible approach which allows learners to undertake individual units or modules rather than full qualifications, although arrangements to allow individuals to accumulate credits to build qualifications on a more flexible basis could be improved. This is an important issue because evidence suggests that adults with low skills levels, particularly those not in or marginally attached to the workforce, gain little labour market benefit from module only completions.

Similarly, Recognition of Prior Learning or Current Competence has the potential to enable learners to receive recognition for skills and knowledge required through informal and non-formal learning processes.

²² Ai Group, p. 36.

²³ For an overview of this project see <http://www.oecd.org/dataoecd/15/11/15520534.pdf>

²⁴ Smith A, *The Development of Employer Training in Australia*, Charles Sturt University (reference source to be added) p.13-14.

As such, informal and non-formal learning should not be seen as alternatives to formal learning, but rather as different learning mechanisms which can be flexibly applied according to individual and enterprise needs and circumstances within a broad workforce development strategy.²⁵

4.4 Workforce Skills Development – a preferred approach

The need for a more holistic and integrated approach to how workforce skills are acquired and used has led several commentators to suggest that Australia should adopt a comprehensive workforce development approach to training²⁶, which would include but also go beyond, conventional approaches such as VET or the formal education and training system. The concept of workforce development was given formal expression in the South Australian Skills Enquiry where Schofield argued that workforce development should be used as a preferred term and policy construct than VET as it would encompass:

*Those activities that increase the capacity of individuals to participate effectively in the workforce throughout their whole working life and which increase the capacity of firms to adopt high-performance work practices that support their employees to develop the full range of their potential skills and value.*²⁷

The South Australian Enquiry Report noted:

*The existing language of 'education and training', 'VET' and even 'skills formation' does not capture adequately the dynamics of skill in the contemporary world of work where the content of skill is changing and where skills are developed formally and informally in multiple contexts through multiple pathways, physical and virtual throughout a working life. Nor, as noted earlier, does it reflect the multiple contexts in which skills which are acquired are actually used.*²⁸

Workforce development can also encompass a broad range of factors to influence how skills are acquired and used including employee health and well being, enterprise culture, management practices, work roles, career and remuneration systems. While these factors can influence and are influenced by skills for the

²⁵ A useful overview of factors influencing decisions by enterprises to provide nationally recognised training is contained in Smith, Pickersgill Smith and Rushbrook, 2005, *Enterprises commitment to nationally recognised training for existing workers* NCVER.

<http://www.ncver.edu.au/publications/1550.html>

²⁶ See Buchanan J *Whatever Happened to Lifelong Learning? Lessons from Recent Australian Vocational Education and Training Reforms* and Noonan P *The Workforce Participation Challenge: the Case for a National Workforce Development Strategy*, CEDA, 2005.

²⁷ Lomax-Smith the Hon. Jane, 2003, *Skills for the Future Final Report of the Ministerial Inquiry*, South Australia Government of South Australia, Adelaide.

²⁸ Lomax-Smith the Hon. Jane, 2003, *Skills for the Future Final Report of the Ministerial Inquiry*, South Australia Government of South Australia, Adelaide.

purposes of this report the term *workforce skills development* is used to focus analysis and discussion on issues related to skills.

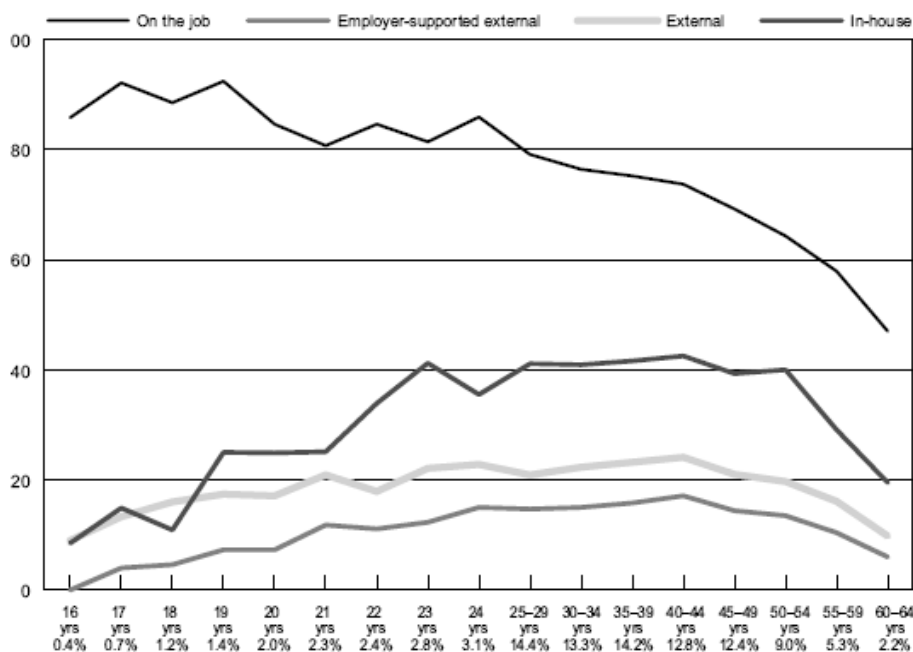
5 Issues in Workforce Skills Development

5.1 Patterns of participation in workforce skills development

5.1.1 The important factor of age

Participation in all forms of learning for those in the workforce declines with age as the following figure shows.

Figure 3: Training by age²⁹



This figure illustrates the relationship between age and all forms of training and also highlights the relatively low percentage of workers participating in any form of external training.³⁰ This is further illustrated by Richardson in looking at the percentage of the workforce participating in formal learning, which declines significantly after age 24.³¹

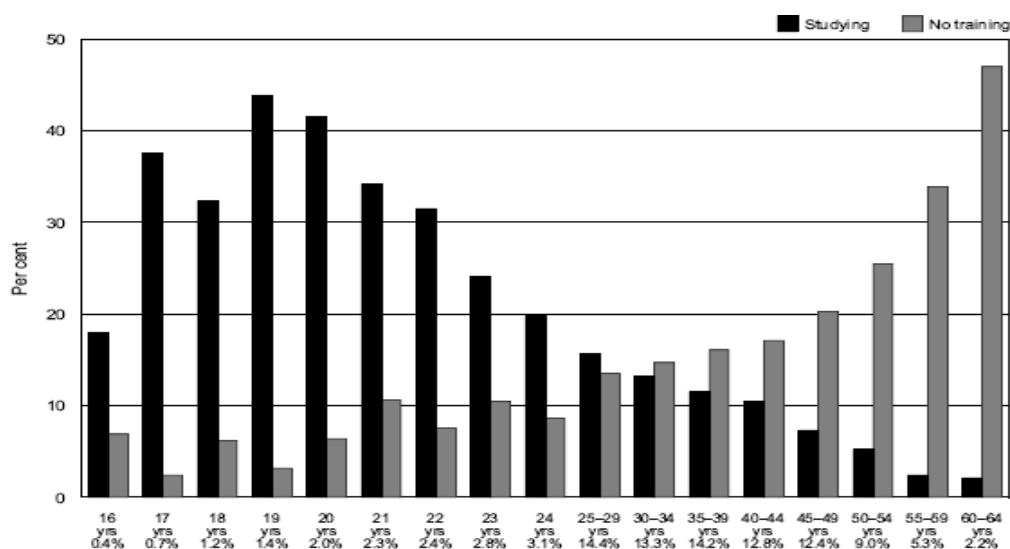
²⁹ Richardson S., p. 14.

³⁰ That is structured learning or training outside of the workplace.

³¹ See also Department Of Education Science and Training (undated) *DEST Input to House of Representatives Inquiry into Increasing Participation in Paid Employment* (submission number 93).

<http://www.aph.gov.au/house/committee/ewrwp/paidwork/subs/sub93.pdf>

Figure 4: Formal Learning by Age



These findings for Australia are fully consistent with analysis by the OECD through its country reviews and thematic reports on adult learning.³²

5.1.2 Entrenching inequality

Of particular importance is the consistent finding that current patterns of investment and participation in both formal and work-based learning entrench rather than alleviate differences in skills levels; that is, those with the highest levels of skills receive more skills training than those with low skills levels. This is even more the case for workers whose primary language is other than English, people with low literacy and numeracy levels, the unemployed and those in casual and part time employment.

The OECD concluded that:

Participation in adult education tends to follow closely the patterns of success in initial education, with the alarming result that inequalities among young people grow even wider. The same holds true for participation in job-related training. Employers devote on average significantly more resources for training high-skilled, well-educated employees than others, reinforcing skill differences. The International Adult Literacy Survey also found after controlling for other factors – hours worked, company size, professional grade – that those making greatest use of their skills at work are six to eight times more likely to receive company training than the low-skilled.³³

³² OECD, 2003, Beyond Rhetoric: Adult Learning Policies and Practices (Highlights).

<http://www.oecd.org/dataoecd/18/57/18466358.pdf>

³³ OECD, 2003.

Over time, gaps in educational attainment levels and in skills levels may be reduced as a consequence of higher levels of educational participation and attainment amongst young people over the past decade; but there is a long-term legacy as a consequence of historic differential patterns of participation and attainment.

This issue cannot be seen only in terms of conventional equality of opportunity and fairness arguments. As outlined earlier, static workforce participation levels and under utilisation of the skills base of the workforce may create inefficiencies, be a drag on productivity and may result in higher outlays for social security such as health, crime prevention, criminal justice and social welfare systems. The overall effect could reduce the available levels of social capital.

It was for these reasons that in 2005, the then Governor of the Reserve Bank of Australia, concluded that 'equity of access to human capital formation' was one of the fundamental institutional settings for ongoing economic growth and social prosperity in Australia.³⁴

5.1.3 Existing workers not homogenous

It is important therefore not to treat existing and particularly older workers as a homogeneous group; older workers comprise both the most advantaged and some of the disadvantaged individuals in the workforce (or not in the workforce in terms of the disadvantaged).³⁵

Indiscriminate investment in adult skills development may serve to entrench rather than reduce disadvantage. Moreover, evidence suggests that employers are reluctant to invest in lower level skills development because of perceived or actual low rates of return and because they are more likely to invest in employees with talent and who are likely to be the most productive. Accordingly, the greatest scope for public intervention and public investment is in lower levels of skill development area.

It is also important to note, however, that Australia has relatively high levels of adult participation in post-school education, although that participation is not equitably based and due to high non-completion or module only completions, does not appear to result in increases in workforce qualification levels consistent with those participation levels.

5.2 Influences on participation

From an analysis of the literature, a range of factors appear to influence both the general level of participation in training and the pattern of participation in formal, as opposed to non-formal and informal, learning.

³⁴ Macfarlane J 25 August *Geography Resources or Institutions* Reserve Bank of Australia http://www.rba.gov.au/Speeches/2004/sp_gov_250804.html

³⁵ Cully, 2004.

- Participation is of course strongly influenced by skills levels required for particular occupations and the way job roles are organised in companies – it is axiomatic that the higher and broader skill requirements, the more likely it is that people will receive both formal and non-formal training.
- The nature of the industry is also important – there are differences in participation levels between industries reflecting differing skills requirements.
- Firm size is important - larger enterprises are far more likely to invest in training and skills development than small enterprises.
- Public sector organisations are also more likely to invest in skills development than private sector organisations.
- Unionised workplaces are more likely to have high levels of investment in skills development, although it is not clear if this is also influenced by the fact that unions have a high level of membership in public sector and larger organisations, where investment is higher.
- Casual and part-time workers are less likely to participate compared to full-time workers.
- People from non-English-speaking backgrounds and people with language and the literacy deficits are also less likely to participate in all forms of skills training.³⁶

Specific issues affecting participation in workforce skills development include the attitudes and values of both managers and employees. For example, managers are unlikely to invest in training except where they perceive a clear and immediate return or are required to do so for employees to meet occupational health and safety, regulatory or quality assurance requirements. There is also evidence of resistance to participation in structured training by employees where they feel they have the skills and ability to do the job in which they are involved, because of competing pressures from work and from family obligations or where potential learners do not see a likely return on their investment in time, course fees or lost wages if they receive little or no employer support.³⁷

The market segmentation work undertaken by Quay Connection³⁸ for the former Australian National Training Authority identified several market segments of individual learners who were either not motivated or perceived barriers or lack of rewards from further learning. The groups least likely to learn – the ‘done with it’ and ‘forget it’ segments – were about the same size as the ‘passionate learners’ group

³⁶ This summary is informed by CEET 2002, Richardson 2004, Cully 2004.

³⁷ See Mawer and Jackson 2004, Smith, Pickersgill Smith and Rushbrook 2005.

³⁸ Australian National Training Authority, 2000, A National Training Strategy for VET – Meeting Client Needs.

and, overall, the segments who were less likely to participate in or value learning outweigh the groups committed to and involved in learning.

The Quay Connections market research also identified a significant segment of employers who were not interested in training, particularly amongst small businesses, and that these employers were also more likely to use informal learning and training methods as a means of skills development.

However, experience with a range of marketing strategies in the VET sector suggests that public exhortations for firms and individuals to participate in training and skills development are largely ineffective. Decisions to invest and participate in training by both individuals and enterprises are more likely to be driven by need, relevance, cost, quality and convenience.

For enterprises, Smith suggests that strong linkages between business and training strategies are the most powerful influence on the implementation of training arrangements.

Where enterprises made a strong link between their training and their business strategies, the result was a substantial increase in all forms of training and greater embedding of training into the management of the enterprise through the creation of training departments, use of formal training planning process and use of workplace trainers. The qualitative research suggested that many more enterprises were conscious of the importance of linking training to business strategy in order to capitalise more effectively on their training investments.³⁹

5.3 The changing nature of skills

The Ai Group *World Class Skills* report highlights the challenges facing Australian enterprises in increasingly competitive and global markets and, through case studies, highlights increased demand for skills at higher levels and changing skills requirements. These demands are intensified by skills shortages in some key occupations and skills deficits in the current workforce in terms of current and emerging occupational demands.

World Class Skills, through its interviews and case studies, concluded that many firms are experiencing difficulty in recruiting people with middle and higher level skills, as a consequence of strong economic growth. It also identified higher skills demands, and that firms are experiencing difficulties in recruiting people with the right kinds of employability skills.⁴⁰

These findings confirm other research which suggests that skills shortages have both a quantitative dimension – the supply of labour relative to demand – and a qualitative dimension. Even if supply and demand are in equilibrium do current

³⁹ Smith A, p. 8.

⁴⁰ Ai Group, p. xii.

and potential workers possess the broader skills and capabilities required in contemporary workplaces? ⁴¹

As highlighted earlier in this report, qualitative aspects of skills development are equally, if not more, important than the availability of labour with the required technical skills for particular occupations.

In its important work on the Knowledge Economy, the OECD looked in detail at the kind of skills and knowledge that are important in the modern labour market and in terms of current and emerging needs of enterprises.

The OECD has defined knowledge required in a modern economy as:

- *Know-what* which refers to knowledge about facts;
- *Know-why* which refers to scientific knowledge of the principles and laws of nature;
- *Know-how* which refers to skills or the capability to do something; and
- *Know-who* which involves information about who knows what and who knows how to do what. ⁴²

These distinctions are important because formal qualifications often reflect *codified* knowledge – that is, ‘know what and know why’ forms of knowledge reflecting accredited standards and curriculum, whereas *tacit* knowledge is more commonly acquired through experience, through the application of codified knowledge, from observation and working with others and is more about ‘know how’ and ‘know who’. ⁴³

Tacit knowledge is critical because, as the OECD says:

Tacit knowledge in the form of skills needed to handle codified knowledge is more important than ever in labour markets. Codified knowledge might be considered as the material to be transformed, and tacit knowledge, particularly know-how, as the tool for handling this material. Capabilities for selecting relevant and disregarding irrelevant information, recognising patterns in information, interpreting and decoding

⁴¹ Richardson refers to this as a 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’. Richardson S 2007 What is a Skills Shortage NCVER <http://www.ncver.edu.au/research/proj/nr4022.pdf>

⁴² See OECD 1996 The Knowledge Based Economy for a full discussion of knowledge requirements and the role of codified and tacit knowledge.
<http://www.oecd.org/dataoecd/51/8/1913021.pdf>

⁴³ Noonan P, 2005, *The case for a national workforce development strategy in Lifelong Learning* CEDA Melbourne drawing on the OECD’s work.

information as well as learning new and forgetting old skills are in increasing demand.

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However, many technical and professional qualifications are based on an integration of tacit and codified knowledge to meet qualification or occupational licensing requirements, and the integration of theory and practice has long been recognised as a valuable, if not essential, learning process – it underpins the apprenticeship model and work practices in most vocations and professions.

As highlighted earlier in its report, the *World Class Skills* report emphasises the importance of technical skills and broad individual employability skills. This finding is consistent with other national and international studies and with the development of the employability skills framework.⁴⁵

The NSW Board of Vocational Education and Training (BVET) in its current strategic plan states that:

*It is recognised that workplaces now require more emphasis on innovation and seek adaptable, responsible, ethical workers with higher level interpersonal skills such as group and social problem solving and conflict resolution. These “new” generic competencies will need to be integrated into the future delivery of vocational education and training programs where appropriate, to complement the technical skills required by employers.*⁴⁶

Another dimension to knowledge and skills requirements in advanced workplaces is the role of ‘knowledge work’; that is, occupations which are underpinned by the management, application, generation and dissemination of new knowledge and of innovation. In their literature review of the High Level Review of National Training Packages, OVAL research concluded that:

*This working knowledge is also rarely codified in text books, formal training programs, competency standards, or procedural manuals and text books. Instead, it is developed within the context and environment of the immediate workplace from the base of relevant skills and knowledge, including technical knowledge, held by workers.*⁴⁷

⁴⁴ OECD 1996, p. 13.

⁴⁵ See Australian Chamber of Commerce and Industry 2004, *ACCI Employability Skills – an employer perspective* http://www.acci.asn.au/text_files/issues_papers/Employ_Educ/ee21.pdf

⁴⁶ NSW Board of Vocational Education and Training Strategic Plan for Vocational Education and Training 2005 – 2008.

<http://www.bvet.nsw.gov.au/pdf/stratdoc0508.pdf>

⁴⁷ See ANTA 2003 High Level Review of Training Packages Phase 1 Report undertaken by OVAL Research University of Technology Sydney *An analysis of the current and future context in which Training Packages will need to operate.*

This report contains a comprehensive overview of changing skills, knowledge and pedagogical requirements with a particular focus on the importance of work-based learning and changes in pedagogy needed to address the needs of older workers.

http://www.dest.gov.au/sectors/training_skills/policy_issues_reviews/key_issues/nts/

Together with other factors, including changes in pedagogy, the review also highlights that workplaces are themselves becoming more important as sites of learning.

The review recognises that the extent to which knowledge work is a reality in Australian workplaces is highly contested and that it may be a description of the future rather than of current realities. However, they conclude with at least one view of the future of the workplace:

This perspective leads to the idea that all workers irrespective of the industry in which they work, now require higher levels of cognitive and intellectual abilities than were previously expected.

The importance of knowledge work leading to increases in skills requirements was advanced by the OECD in 1996 in its work on the Knowledge Economy and is now supported by considerable evidence of growth in higher skills occupations. The most comprehensive modelling of 'skills deepening' is contained in work undertaken by Burke and Shah for the National Training Reform Taskforce.

Skills deepening refers to the growth in qualifications over and above that generated by employment growth. Based on projections of increased qualification levels between 2001-2005, Burke and Shah conclude that:

---the proportion of employed people with qualifications in 2016 is estimated to be 71.2 per cent compared with 58 per cent in 2005, with increasing numbers achieving qualifications at higher levels. Among the additional VET qualifications needed, they conclude that 49.3 per cent will need to be at certificate III/IV, 35.7 per cent at diploma/advanced diploma and 15 per cent at certificate I/II. ⁴⁸

Similar modelling was also undertaken to support government policy directions for VET in Queensland and Victoria. ⁴⁹

Intensifying skills requirements are driven partly by technology, but more it seems by the context within which skills are being applied, and driven by factors such as globalisation, changes in technology, the growing sophistication of consumers,

⁴⁸ Burke and Shah (CEET 2006) Qualifications and the Future Labour Market in Australia Paper Prepared for the National Training Reform Taskforce p. ix.

<http://www.eduweb.vic.gov.au/edulibrary/public/voced/research-CEET-quals-labour-market.pdf>

⁴⁹ The 2006 Queensland Skills Plan identified the need to address emerging gaps and shortages in the associate professional workforce based on detailed analysis of the Queensland labour market.

http://www.trainandemploy.qld.gov.au/resources/corporate/pdf/pol_qldskillsplan_0306.pdf

Similar conclusions are reached in the Leitch Review of Skills in the United Kingdom which places significant emphasis on the need to improve overall qualification levels in the UK workforce although this report uses international benchmarking of qualification profiles to support its conclusions rather than a detailed analysis of trends and projections in the UK workforce.

niche markets and product differentiation, and increased regulatory, health and safety and environmental considerations.⁵⁰

The *World Class Skills* report details a range of the major external drivers impacting on firms including internationalisation and globalisation of both markets and supply chains, technological change, the environment and resource sustainability and demographic change. The report also details the sophisticated business strategies companies are employing in response to these drivers and the kinds of skills that are needed to implement those strategies. The skills include:

- *the importance of thinking and acting strategically;*
- *the importance of innovation, both inside and outside the firm;*
- *the importance of relationships, both inside and outside the firm; and*
- *the importance of using judgement and being comfortable with ambiguity.*⁵¹

With these changing and intensifying skills requirements how workforce skills are acquired becomes increasingly important. Can these skills be taught or can they only be acquired through experience or through the integration of different forms of knowledge skills and learning modes outlined above?

5.4 Broader notions of competence

Since the introduction of competency-based training in Australia there has been an ongoing debate about the merits or otherwise of competency approaches. However, in the light of the analysis above, the strengths of competency-based approaches which emphasise the application and outcomes of learning and provide ample scope for the integration of codified and tacit knowledge, are evident.

It is important that the way in which we define and develop competence will prepare the Australian workforce for the 21st century in which productivity and competitiveness will be strongly influenced by workforce skills and capabilities and in a context where all advanced industrial and many developing countries are seeking to increase their workforce skills levels.

As such, it is essential that competence is defined broadly and in a way which builds up both individual and collective skills and capabilities and not just tasks and job roles derived from current work practices.

The discussion paper for the new European Union Meta Qualifications Framework defined competence in the following terms:

⁵⁰ For a summary analysis of how a range of external drivers are resulting in both higher and broader skills demands, see DEST 2006 Overview of National Industry Skills Reports.

<http://www.dest.gov.au/NR/rdonlyres/9364A212-6183-4A66-8145-9165CB98C9F7/10627/NationalIndustrySkillsReportMay2006.pdf>

⁵¹ Ai Group, p.18.

1. *Cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially;*
2. *Functional competence (skills or know-how), those things that a person should be able to do when they are functioning in a given area of work, learning or social activity;*
3. *Personal competence involving knowing how to conduct oneself in a specific situation; and*
4. *Ethical competence involving the possession of certain personal and professional values.*⁵²

A primary focus in the strengths and emphasis on competence should be to broaden the emphasis from just the capacity of individual workers to undertake particular roles and tasks to the development of highly capable and broadly skilled workers as individuals. This would enable them to effectively engage in the workforce and in further learning over the course of their working lives. The concept of collective and organisational competence also becomes highly relevant as modern workplaces increasingly rely on communication, teamwork and collaboration, often across multiple sites, across supply chains and information channels and increasingly in a global environment.

A second, and possibly even more challenging consideration, is to ensure that learners are able to access and be involved in workplace learning in order to acquire full and effective competence, in particular in those areas where tacit knowledge is important and can only be acquired in workplace contexts.

A key consideration emerging from this analysis is that formal learning programs, in which participants are not able to apply skills and knowledge, build tacit knowledge and experience, develop networks and understanding of work practices and workplace cultures, may be of limited benefit to participants. Participants, who have not been engaged in, or not effectively engaged in the workplace for some time, will be at a particular disadvantage as they are less likely to be able to develop these skills and capabilities than people in work.

Workplace learning and experience per se will not necessarily promote the deeper and broader skills and knowledge outlined above; that will be driven by the quality of work-based learning and workplace experiences.

The diverse means by which adults acquire skills and knowledge, together with deepening and intensifying skills requirements, highlight the importance of good adult learning and workplace pedagogy -- teaching and learning strategies which are relevant, effective and of high quality. These considerations do not only apply to formal learning; the quality of informal and non-formal learning is essential for effective workforce skills development.

⁵² Commission of the European Union 2005 Towards a European Qualifications Framework for Lifelong Learning http://ec.europa.eu/education/policies/2010/doc/consultation_eqf_en.pdf

5.5 The importance of workplaces as learning sites

As highlighted above, workplaces are themselves becoming increasingly important as sites of learning, either using their own resources or more commonly through their own resources and by working in partnership with education training providers, workplace trainers, facilitators and through change management and continuous improvement processes.

As the *World Class Skills* report found, enterprises are employing a wide range of techniques to develop skills and capability of the workforce, with learning and skills development central to strategies to increase competitiveness and to attract and retain employees.

The OVAL Research report for the High Level Review of National Training Packages argues that:

Indeed, if learning has become an integral part of working, arguably formal education and training systems would need to consider what new role they might play in the development of the workforce. One specific implication is that formal education and training is no longer a stand-alone intervention in economic productivity – to have full effect, it must be more systematically linked to wider strategic human resource management strategies encompassing new approaches to job design and work organisation.

The Report goes onto argue that -

This form of learning is different from that involved in formal award courses in that it:

- *does not rely on the intervention of institutionally based teachers or organisationally based workplace trainers*
- *is not structured around pre-determined vocational outcomes*
- *is not determined by qualifications frameworks and endorsed Training Packages*
- *is not guided by pre-specified content*
- *is not organised around the enabling disciplines.*

Instead the main characteristics of this learning are that it:

- *is context bound, driven by specific and immediate work requirements*
- *emphasises learning over teaching or training as a defining characteristic*
- *depends on the responsibility for learning being spread between a number of people within the workplace*
- *is consistent with new learning concepts such as learning networks, learning organisations (Senge 1994), and communities of practice (Wenger 2000).⁵³*

⁵³ Oval Research Chappell, Hawke, Rhodes and Solomon (undated) Major Research Program for Older Workers Stage One the Conceptual Framework.

In another publication the OVAL Research report undertook a review of the international literature on optimum work-based learning and workforce skills approaches. They conclude that with work-based and adult learning approaches many different types of learning should be utilised rather than relying on normative and value laden debates which give primacy to one approach over the other. They cite UK research into learning at work which suggests that:

*learning by doing, workers organising and checking their own work, and, crucially, advice, understanding, coaching and counselling from line managers emerge as keys to the development of effective and productive staff.*⁵⁴

The need for pedagogical approaches to be driven by learner and enterprise needs reinforces the importance of developing demand driven and highly flexible workforce skills development systems, for a better understanding of what approaches work for particular groups, the need for proper assessment and diagnosis of enterprise and individual skills needs and for better information to match suppliers and providers of skills and training with enterprises.

5.6 Priorities for Workforce Skills Development

The implications of this analysis for government, industry and for the VET system are significant and suggest that some critical priorities for workforce skills development should be considered. These include:

1. To improve the level of participation for those with low skills levels in workforce skills development;
2. To increase the proportion of workers with high skills levels through workforce skills development;
3. To more effectively link formal, non-formal and informal learning through workforce skills development;
4. To improve information flows about and understandings of workforce skills development;
5. To build world class skills outcomes for individuals and enterprises through high quality workforce skills development.

It will also be important to clarify the respective roles of government, enterprises and individuals in pursuing these and other priorities.

The quality and effectiveness of workforce skills development in enterprises also becomes even more crucial building on the substantial innovation that is already occurring.

⁵⁴ Oval Research Chappell, Hawke, Rhodes and Solomon (undated) Major Research Program for Older Workers Stage One the Conceptual Framework.

<http://www.oval.uts.edu.au/papersdl/olderworkers.pdf>

6 Conclusions

1. Recent policy developments confirm that skilling the existing workforce is increasingly important for a range of reasons including:
 - the consequences of the trend of the ageing of the population and the resultant need to retain existing workers;
 - the lack of post-school skills and qualifications acquisition by many existing workers;
 - the rapidly changing nature of skills required in the modern workforce; and
 - the need for a highly skilled and flexible workforce to help ensure that enterprises become and remain competitive in an increasingly competitive global market.
2. Forms of learning for existing workers are varied and include training provided as a part of the national vocational education and training system, but also include learning acquired through non-formal and informal experiences.
3. Informal and non-formal approaches to learning are increasingly important as learners age but these forms of learning are not well recognised in current policy settings.
4. Skilling the existing workforce requires a broad approach that can be referred to as a *workforce skills development* approach. This approach should incorporate all forms of skill acquisition through formal, non-formal and informal learning experiences.
5. There are many factors which influence participation in and patterns of workforce skills development. It is important to be aware that participation declines with age and that there are inequalities in the access of existing workers to workforce skills development opportunities. Decisions to invest in training are driven by the needs of enterprises and the linkage between business and training strategies.
6. Workforce skills development approaches need to be aware of the influences on and patterns of participation, embrace both codified and tacit knowledge, recognise that the workplace is an increasingly important learning site, adopt broader notions of competence that are directed towards capability rather than task completion and utilise a workplace learning pedagogy that reflects these requirements.

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www.aigroup.asn.au

AI65865

SYDNEY

51 Walker Street
North Sydney
NSW 2060
PO Box 289
North Sydney
NSW 2059
Tel: 02 9466 5566
Fax: 02 9466 5599

MELBOURNE

20 Queens Road
Melbourne VIC 3004
PO Box 7622
Melbourne VIC 8004
Tel: 03 9867 0111
Fax: 03 9867 0199

BRISBANE

202 Boundary Street
Spring Hill QLD 4004
PO Box 128
Spring Hill QLD 4004
Tel: 07 3244 1777
Fax: 07 3244 1799

CANBERRA

44 Sydney Avenue
Forrest ACT 2603
PO Box 4986
Kingston ACT 2604
Tel: 02 6233 0700
Fax: 02 6233 0799

ALBURY/WODONGA

560 David Street
Albury NSW 2640
PO Box 1183
Albury NSW 2640
Tel: 02 6021 5722
Fax: 02 6021 5117

BALLARAT

15 Dawson Street Sth.
Ballarat VIC 3350
PO Box 640
Ballarat VIC 3353
Tel: 03 5331 7688
Fax: 03 5332 3858

BENDIGO

92 Wills Street
Bendigo VIC 3550
Tel: 03 5443 4810
Fax: 03 5443 9785

GEELONG

'La Cabine'
1 Yarra Street
Geelong VIC 3220
PO Box 638
Geelong VIC 3220
Tel: 03 5222 3144
Fax: 03 5221 2914

NEWCASTLE

16A Bolton Street
Newcastle NSW 2300
PO Box 811
Newcastle NSW 2300
Tel: 02 4929 7899
Fax: 02 4929 3429

WOLLONGONG

Level 1
166 Keira Street
Wollongong NSW 2500
PO Box 891
Wollongong East
NSW 2520
Tel: 02 4228 7266
Fax: 02 4228 1898

AFFILIATE

ADELAIDE

Engineering Employers
Association South Australia
136 Greenhill Road
Unley SA 5061
Tel: 08 8300 0133
Fax: 08 8300 0134

AFFILIATE

PERTH

Chamber of Commerce &
Industry Western Australia
190 Hay Street
East Perth WA 6004
PO Box 6209
East Perth WA 6892
Tel: 08 9365 7555
Fax: 08 9365 7550