

# **From Preserving to Renovating Australian Apprenticeships: Insights from recent international experiences**

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## List of Abbreviations

<b>ABS</b>	Australian Bureau of Statistics
<b>ACIRRT</b>	Australian Centre for Industrial Relations Research and Training
<b>AMS</b>	Apprentice Matching Scheme (UK)
<b>BIBB</b>	Bundesinstitut für Berufsbildung (Federal Institute for Vocational Education and Training – Germany)
<b>COAG</b>	Council of Australian Governments
<b>COWS</b>	Centre on Wisconsin Strategy (USA)
<b>DOL</b>	Department of Labour (USA)
<b>DOLNZ</b>	Department of Labour (New Zealand)
<b>EGFSN</b>	Expert Group on Future Skills Needs (Ireland)
<b>ESB</b>	Electricity Supply Board (Ireland)
<b>FAS</b>	Foras Aiseanna Solthair (Irish National Training and Employment Authority – Ireland)
<b>RTO</b>	Registered Training Organisation
<b>SKOPE</b>	(Centre for) Skills Knowledge and Organisational Performance
<b>TAFE</b>	Technical and Further Education
<b>TUC</b>	Trade Union Congress (UK)
<b>VET</b>	Vocational Education and Training

## Executive Summary

In June 2009, the Workplace Research Centre at the University of Sydney (formerly known as ACIRRT) was commissioned to provide a report to COAG's Apprenticeship Taskforce on how other industrialised countries are supporting their apprenticeship system during the current downturn.

The project involved scrutiny of readily available publications and interviews/correspondence with 15 of the world leading experts in skills, labour markets and workforce development in the USA, UK, New Zealand, Ireland, Germany and Denmark.

Two questions guided the project:

- (a) How are apprenticeship systems as currently structured responding to the downturn?
- (b) How can apprenticeship systems be structured to respond more effectively to downturns like this now and in the future?

## Nature of the problem

To date there have been relatively few retrenchments of apprentices. Most experts agree, however, that there is likely to be a profound drop in numbers of apprentices, especially as intake levels decrease over the next six months.

## Initiatives for the short term

Of the countries examined, few appear to have introduced significant substantial measures to increase numbers of apprentices. Ireland appears to be one of the few countries with a comprehensive, substantive strategy for mitigating the impact of its very deep recession on apprentices. The key features are:

### *Schemes to redeploy apprentices*

*Employer Based Redundant Apprentice Retention Scheme.* Block release is a central feature of Irish apprenticeships. Under this arrangement employers take on redundant apprentices where existing apprentices are away on off-the-job training. Employers receive generous wage subsidies for taking on such apprentices.

*Coordinated work placement program for retrenched electrical apprentices.* This is a special arrangement to help 400 retrenched apprentices continue some of their on-the-job learning with the Irish Electricity Supply Board.

*Finding redundant apprentices work in the EU.* Already 40 apprentices have been placed in companies in Germany and Finland as part of this scheme.

### ***Training and further education***

Where apprentices cannot be redeployed to another employer specialised training and education programs have been devised to help deepen displaced apprentices education levels. The Irish Training Authority has set aside 500,000 euros for displaced construction apprentices to take part in such courses.

### ***Central register of redundant apprentices***

Approximately one third of Irish employers are still hiring apprentices. They are being encouraged to do so from a central register of displaced apprentices.

### **Short time work**

Countries such as Germany, Switzerland, Austria, Belgium and some USA states have long standing arrangements involving compensation for short time work. Under these arrangements employers maintain jobs in the face of falling demand by cutting the average hours of workers. Workers can access income support for the time not worked.

Currently over 2 percent of the German workforce is on short-time work. Germany is endeavouring to encourage companies to use the enforced down time for training purposes. Difficulties in synchronising training provision with 'quiet time' are limiting the ability to use the downturn for deepening workforce skills. The recent New Zealand 'nine day fortnight initiative' has had, to date, only a limited impact with less than 1,000 workers involved and there are few links with training. Well designed short time work initiatives have the potential to preserve increasing apprenticeships by redistributing employment based training expenditure.

### **Green jobs**

The *American Recovery and Reinvestment Act* has allocated billions of US dollars for building, modernising and retrofitting green houses, public buildings, schools, parks and water infrastructure. The program aims to prepare workers for employment in the emerging green industries involved with the built environment, renewable power, drive train vehicles, biofuels, deconstruction and manufacturing of sustainable products. Many of the industries that the green jobs initiatives are targeting are those that traditionally use apprentices.

### **Five challenges**

Our research identified important insights into how apprenticeship systems evolve over time. We summarise these in the form of five challenges policy makers and stakeholders need to manage in the medium term.

***Challenge 1: The need to rebalance the blend of employment and institution based learning***

*Implications:*

- Is it time to rethink the role of on and off the job training over a tradespersons life course, and especially during their apprenticeship?
- How can quality employment based learning be preserved in a situation of stagnant or declining labour demand?

***Challenge 2: Employers are the greatest and weakest asset in the apprenticeship system***

*Implications:*

- Is greater care required in who is listened to in the employer community and what sentiments among employers are supported?
- Should more support be given to those committed to a longer term perspective and the offering of decent work in preference to those seeking short run solutions to training 'problems'?

***Challenge 3: On-the-job training is a public good – not just something of benefit to the worker and employer concerned***

*Implications:*

- Is it time to give more support and finance to nurture better systems of on-the-job training and structured work placements?
- Should more attention be devoted to seeking out and supporting employers with good on-the-job training arrangements and exercising greater discretion in supporting employers – especially marginal ones with limited capacity to provide quality on the job training?

***Challenge 4: Apprenticeship systems which give excessive priority to responsiveness in the short run appear to impair longer term adaptability***

*Implications:*

- Is it time to establish and nurture structures of support around more coherent, though loosely formulated, vocational streams?

***Challenge 5: Stakeholder cohesion is a prerequisite for establishing and maintaining quality apprenticeship systems***

*Implications:*

- Is there a role for the Taskforce in not merely making recommendations but in taking responsibility for improving stakeholder dialogue and cohesion – the

prerequisite for not just holding the apprenticeship system together but revitalising it in tough times?

## **Recommendations**

1. Promote Irish style intervention along with compensated short time work and green skill initiatives as a first step to achieving a joint stakeholder led revitalisation of apprenticeships which are actively supported by the Government.
2. Provide clear direction on where apprenticeships sit within both the education system and the labour market.

## Introduction

In June 2009, the Workplace Research Centre was approached by representatives of the Council of Australian Governments (COAG) Apprenticeship Taskforce to examine how apprenticeship systems in other industrialised countries are responding to the current downturn. The purpose of the research is to provide evidence based suggestions on how apprenticeship numbers can be maintained in a situation of volatile and declining labour demand.

One of the great benefits of research is that insights additional to those originally envisaged often emerge from the data. This project has been no exception. How the Australian system could use this time of crisis as an opportunity for renewal involved examining how other systems function and evolve. Making sense of the complex and often rapidly changing apprenticeship arrangements led to a re-assessment of the original question. In reflecting on this material it became apparent how intimately apprenticeship systems are enmeshed in the dynamism and volatility of market economies. They are profoundly shaped by evolving cycles of growth and recession. Over half a century ago, Schumpeter (1952) characterised this process as involving 'creative destruction'. He argued periodic economic upheavals often transform economic arrangements – including those involving workforce development. Given this, the project ended up answering two questions:

- (a) How are apprenticeship systems in other industrialised countries as currently structured responding to the current downturn?
- (b) How can apprenticeship systems be structured to respond more effectively to economic downturns now and in the future?

Three distinct topics emerged: the nature of current and impending falls in apprenticeship numbers; short run initiatives that can be taken to mitigate the scale of the downturn; and five longer term challenges that need to be addressed if this and future economic upheavals are to be better managed. We conclude by providing recommendations for action.

From a comparative perspective the major finding is that the prerequisite for effective apprenticeship systems is strong, enduring partnerships between employers and unions guiding their evolution. Such leadership needs to be actively supported by government and education providers. Systems without such joint leadership are typically fragmented, pre-occupied with short run 'fixes' and appear to foster lower skilled occupations supported by lower quality training. In moving forward we suggest that serious consideration must be given to embracing a set of sensible short term initiatives, many drawn from recent Irish experience, German and Danish experiences with compensated short time work and US initiatives concerning 'green' jobs and skills. Such initiatives

could provide an agenda for building on the best of current Australian arrangements to deliver a revitalised system for developing and using intermediate level skills now and in the future.

## Research Methodology

In times of economic downturn it is important for policies supporting workers and citizens to be implemented as quickly as possible. The COAG taskforce on Australian Apprentices is required to report on the retention and systematic support of apprenticeships by Christmas 2009. The research methodology was designed with this requirement in mind. It involved interviews with leading international experts and analysis of policy and academic documents.

Apprenticeship systems are complex and varied. Making sense of them – especially their current operations – is difficult. For this project we have built on previous analyses arising from large scale research programs and the insights of the world's leading English-speaking experts on the topic.

Researchers at the Workplace Research Centre have been studying the evolution of work, skill and systems of workforce development for over two decades. In doing this we have built on work done by overseas and Australian researchers. The prime material of relevance to this project has been from:

- The 'societal systems' research program which compared how skills, industrial relations and organisational design impacted on productive performance in Germany and France in the 1970s and 1980s (see for example Maurice et al 1984, 1986, Altman et al 1992 and Meiksins and Smith 1996)
- The 'Skills and Productivity' studies by the UK National Institute of Economic Research in the 1970s and 1980s (see for example Prais 1995)
- The comparative political economy of skills work completed in more recent times (see for example Crouch et al 1999 and all the recent work by the Centre for Skills, Knowledge and Organisational Performance – SKOPE)
- Recent Australian work which summarises and builds on this work (eg Briggs and Kitay 2000, Buchanan et al 2001 and Keating 2008).

Lags in publication mean that details on the most recent (and for this project most relevant) material can only be obtained by dealing directly with relevant experts. For this project, experts in England, Wales, Ireland, Denmark, Germany, New Zealand, and the US provided oral or written responses to questions related to apprenticeship systems and recent initiatives associated with maintaining apprentice numbers in the current economic downturn. Appendix A provides a list of international experts involved and the country in which they are located.

The strength in talking to a range of academics and government employees is that the research benefits from not only a wide understanding of apprenticeship systems but also conflicting understandings. These differences between experts often pointed to sources of tension in apprenticeship systems and allowed the research to uncover difficulties that

exist within them. Experts offered differences in opinion on what the strengths of the various training systems were, as well as the weaknesses. This helped clarify differing philosophical visions informing different stakeholders involved in apprenticeship systems. Reflections on the significance of these differences helped identify the challenges that need to be addressed if Australia's apprenticeship system is to be better able to weather the current and future economic downturns.

Appendix B contains the questions asked of the experts. The questions helped elicit information about immediate responses to the current situation as well as the context in which they are being implemented (the nature of each national apprenticeship system).

Some experts who were contacted were unable to be involved in a phone discussion, and instead provided written responses to the questions. These responses were useful and provided further leads for the researchers. Some experts involved in the phone discussions also provided the researchers with policy documents and academic articles relating to their apprenticeship systems.

The literature reviewed was wide ranging, and a list of the key documents assessed for each country is provided in the bibliography. The literature examined ranges from traditional analytical literature found in academic journals through to policy documentation, media releases from governmental agencies, excerpts of federal legislation, conference papers and analyses undertaken by non-government organisations.

## **Key Finding 1: Limited retrenchment of apprentices to date but looming decline in apprenticeship intakes**

Nearly all scholars and experts interviewed agreed on one thing: it is too soon to say how the current economic downturn is affecting apprentices. To date few statistics have been released about recent trends in apprenticeship numbers. Many of the interviewees reported that declining apprenticeship numbers is one part of the current situation. Equally important are qualitative dimensions of current changes. This concerned things like the industries they are located within, associated contractual arrangements and length of training.

It is possible for statistics to be analysed in the lead into the recession, with enterprises in some countries experiencing anticipatory contractions in training expenditure and labour hire. Germany experienced a decline in apprenticeship contracts of 1.5 per cent in 2008 (BIBB, 2009). This could, however, reflect structural not cyclical change. Apprenticeship placements have been declining in Germany since the 1990s, due in part to the impact and ongoing cost of the re-unification process in 1989 and the decline in training expenditure by employers. It is anticipated that the decline in apprenticeship placements will increase in 2009 (Friedrich et al, 2009). The decline in apprenticeship numbers in Germany has been most significant in manufacturing (BIBB, 2009).

For many countries, as for Australia, the industry most dependent on apprenticeships is construction. This sector is often greatly affected by recessions. In Ireland 4,000 apprentices have already been laid off by contractors in the construction sector (Shanahan, 2009). This must be understood within the historical context of Irish economic development. A 2003 report noted that apprenticeships numbers had risen rapidly in most craft sectors in anticipation of future economic growth and a decline in skilled workers as the trades workforce retired. It warned:

*“the number of apprentices recruited by employers in these trades in recent years is higher than the numbers required to replenish existing stock. Thus, a situation of zero or negative growth in the construction industry would inevitably result in excess stock... Consequently, these apprentices would be vulnerable in a situation where the economy experienced a significant deterioration in economic conditions.” (EGFSN, 2003, p. 5).*

Although there are no official statistics to support the anecdotal evidence that apprentices in construction are particularly affected in Britain, given the number of support programs for displaced construction apprentices the situation appears to be particularly problematic. The UK Federation of Master Builders (2009) reports that the Apprentice Matching Scheme (AMS) has 2,000 ‘at-risk’ apprentices it is trying to match with employers in construction. However the definition of ‘at-risk’ is ambiguous and may not necessarily be indicative of apprentices who have been made redundant in recent times.

Manufacturing is the other sector which employs a large proportion of apprentices. The long term decline of manufacturing in western countries has an impact on declining numbers of apprentices both in the long term, and in the recent crisis. This was highlighted as a particular issue by experts in Germany and in the United States.

The speed and scale of declining apprenticeship numbers is profoundly determined by their contractual arrangements. In countries with strong contractual agreements between employers and apprentices it is less likely that there will be as many apprentice dismissals as seen in Ireland. Strong contractual agreements between apprentices and employers are often associated with a strong union presence. Apprentices in both Germany and Denmark are overwhelmingly employed on collectively bargained agreements. Under German labour law it is difficult to break an agreement with an apprentice unless the enterprise becomes insolvent (Tremblay & Le Bot, 2003). Danish apprenticeship contracts have penalties for both employers and for apprentices who break them (Albaek, 2009). Such arrangements ensure apprentices in Denmark and Germany are less likely to be retrenched than those in Ireland and Britain.

Built into the German and Danish apprenticeship systems is government support for both employers who take on apprentices, and apprentices themselves. In Denmark employers are provided with a subsidy to lower the cost of employing apprentices. Detailed economic modelling into the impact of these subsidies finds that in periods of economic downturn the subsidies provided to employers not only maintain numbers of apprentice places, but also assist with continued uptake of apprentices (Westergaard-Nielsen & Rasmussen, 1999). Both the Danish and German governments also pay for the cost of institutionally-based training of apprentices, easing the financial burden on both apprentice and employer.

While countries which have strong contractual arrangements between apprentices and employers may be able to protect current apprentices from redundancy, it is highly likely that there will be less of an uptake by employers of young people seeking apprenticeships. Again, this was widely agreed upon by the experts interviewed. A British specialist suggested that the impact of the recession on apprentices will not be made clear until the forthcoming northern Autumn, when large numbers of students will leave the school system and may be unable to find apprenticeship places.

Another factor likely to be impacting negatively on the hiring of apprentices is the long term nature of the contracts involved. It is commonly known that in times of economic crisis employers rein in spending on training. The nature of apprenticeships, and the long term commitment that employers must make to their apprentices was a reason cited by experts in the US, UK, and Denmark for the likelihood reduced intakes in the short term. This is combated in Denmark by the use of apprentice wage subsidies to employers, making apprentices a cheap and effective source of labour.

### *Summary*

While there is little concrete evidence that the current global economic downturn is having a direct effect on apprenticeships, all anecdotal evidence indicates it is. The industries in which apprenticeships are often located are those which suffer most during crises such as this one. In countries where the contractual arrangements between apprentices and employers are strengthened due to strong union presence and labour laws it is unlikely that apprentices will be made redundant. In other countries, where contractual arrangements do not provide much protection for apprentices, it is likely that they will be the first retrenched. More significantly, most countries are likely to experience a shortage of employment placements for apprentices seeking to enter the system in the near future.

## **Key Finding 2: Initiatives for the short run**

Although most international governments were quick to introduce stimulus measures in response to the economic crisis, very few devised substantive measures to support apprenticeship systems. Of the countries examined in this project, Ireland stands out in the comprehensiveness of initiatives directly aimed at apprentices. In other countries, a range of measures have been supported to either stabilise job losses or nurture new employment growth in general. The most promising of these types of initiatives are the short time work schemes in Germany and to a lesser extent New Zealand and the Green Jobs initiative in the USA. This section of the report also notes the other more ad hoc initiatives directly aimed at supporting the apprenticeship system in the downturn.

### **Lessons from Ireland**

The economic downturn was quick to reach the Irish labour market and the apprenticeship system. As noted in the previous section, it is estimated that more than 4,000 apprentices in the construction industry alone have been made redundant (Shanahan, 2009). There has also been a decline of 63 per cent (year on year) in the number of new apprenticeship registrations (FAS, 2009a p. 12). The construction industry has been worst affected with a decline of 73 per cent of new apprentice starts (Ibid). As skill development is seen as an integral part of Irish nation building, the Irish government was quick to implement a wide range of measures. These measures are aimed specifically at assisting redundant apprentices to progress and complete their apprenticeships (Shanahan, 2009).

In order to understand the nature of the Irish interventions, it is necessary to briefly highlight the way in which the apprenticeship system operates. Completion of an apprenticeship generally takes four years and is comprised of seven phases of training. Four of the phases involve on-the-job training with an employer, whilst the other three involve off-the-job training. The three phases of off-the-job block training usually do not exceed 40 weeks in total and are provided either by the statutory National Training Authority, Foras Aiseanna Solthair (FAS), an Institute of Technology, or another approved training provider.

#### ***Alternative Sources of Employment***

To date, three separate schemes have been introduced aimed specifically at finding redundant apprentices alternative forms of employment so that they can complete the on-the-job component of their training.

In January 2009 the Irish government implemented the *Employer Based Redundant Apprentice Rotation Scheme*. The scheme is directed at apprentices who have been made redundant in construction trade occupations such as bricklaying, electrical fitting, plumbing and plastering. The scheme aims to give “the redundant apprentice the opportunity to complete the on-the-job phase of their apprenticeship in order to gain the required knowledge, skill and competence to successfully progress to the next off-the-job

phase or to complete their apprenticeship” (FAS, 2009b). Under the scheme, the Irish National Training Authority invites employers to take on a redundant apprentice while an existing apprentice is away on the off-the-job phase of training. The employer is responsible for training and assessment and is required to pay the apprentice the agreed industry rate. The Training Authority in turn contributes towards employment costs (340 euros per week). The scheme is expected to place 500 redundant employees with matching employers at the cost of 4 million euros (FAS, 2009b).

In addition to the Rotation Scheme the National Training Authority has developed a *co-ordinated work placement programme* aimed specifically at *apprentice electricians* who were made redundant before completing their training. As of March 2009, it was estimated that 800 electricians had been made redundant since the start of the downturn (FAS 2009c). In order to ensure that many of the redundant electricians can complete their training, the National Training Authority entered into an agreement with the Electricity Supply Board (ESB) to provide training to a total of 400 redundant apprentices. Apprentices will be employed on special fixed term contracts with the ESB. Discussions and negotiations are underway to expand the placement programme into construction projects run by the Office of Public Works and Local Authorities (Shanahan, 2009).

The third initiative developed by the Irish Training Authority is aimed at *finding redundant apprentices work in the European Union*. Under this initiative FAS has secured the assistance of the European Commission for placing Irish apprentices in alternative work in EU member countries (FAS, 2009d). Already 40 apprentices have been placed in companies in Germany and Finland and the number is expected to increase over the next few years (Shanahan, 2009). Specific procedures have been put in place so that Irish apprentices who are placed abroad can receive recognition for the on- the-job component they undertake overseas (FAS, 2009d).

### ***Training and Further Education***

The Irish National Training Authority has developed specialised training and education programs for those redundant apprentices who have not secured alternative employment. These training schemes aim to improve the prospects of re-entry into the labour market. One program offers apprentices re-training in skills which are in short supply and in specialised green skills such as sustainable energy, insulation techniques and building energy rating. Another scheme focuses on higher level education through universities and institutes of technology. FAS has set aside 500,000 euros to fund initiatives aimed at the acquisition of new skills for construction-based displaced apprentices (Shanahan, 2009).

### ***Special Register of Redundant Apprentices***

Despite the downturn, it is estimated that approximately one third of employers are still hiring apprentices (Shanahan, 2009). In order to facilitate the hiring of redundant apprentices, a register of redundant apprentices has been established. Employers are being urged to use the register when recruiting apprentices.

## Other Initiatives

All of the countries examined in this project have implemented some basic measures to support their apprenticeship system during the economic downturn. A brief overview of some of the other less substantive measures directed at supporting apprentices in the downturn is provided below.

In April this year, the Scottish government held its first ever Apprenticeship Summit to address how employment opportunities could be safeguarded during the current economic downturn (Scotland Executive, 2009). During the Summit, a number of short and long term measures were suggested by the attending delegates (mostly employers). The suggestions put forward include the introduction of a bonus for employers who take on apprentices and improved marketing of the information available to apprentices. To date, the measures are yet to be introduced.

As a result of the growing shortage of apprenticeship places in Germany, in mid 2008 the government introduced temporary subsidies for employers that take on out of work apprentices. Employers can receive a bonus in the range of 4,000 to 6,000 euros (depending on the earnings of the employee) when an employer agrees to take on an apprentice for a three year period. The bonus only applies however, to people who have been looking for an apprenticeship for over 12 months (BIBB, 2009b). In light of the economic downturn, the German Ministry of Economics has pledged further commitment to the apprentice bonus scheme until 2010 (Federal Ministry of Economics and Technology, 2009).

The British government has taken steps in the construction industry to match apprentices at risk of redundancy with new employers and has pledged that all apprentices will be funded to continue the learning component of their apprenticeship for up to six months while waiting to secure new employment (Trade Union Congress 2009, p. 47). As of July 2009, it was estimated that the scheme “has helped 31 per cent (688) of the 2,194 construction apprentices ‘displaced’ over the last 10 months get back into training” (Construction Skills, 2009). The Trade Union Congress is urging the government to develop this approach in other sectors so that all apprentices are guaranteed to be matched with another employer in order to complete their training (Trade Union Congress, 2009).

Due to the Danish government’s long term engagement and support for the apprenticeship system, which includes consistent employer subsidisation, so far it has not been deemed necessary to adopt new policies for apprentices in response to the downturn. Instead, initiatives that existed prior to the downturn are relied upon more heavily. For example, those apprentices who cannot find work are offered free ‘out-of-firm’ ‘train-at-school’ places (Westergard-Nielsen, 2009).

The apprenticeship stream of vocational education and training in the USA is the smallest component of the vocational training system (there are approximately only 500,000 registered apprentices in the US). Most training at intermediate level takes place in Community Colleges or Sectoral Schemes. Given that the apprenticeship system is such a small component of vocational training, it has attracted very little direct governmental support. Under the US\$787 billion *American Reinvestment and Recovery Act* (2009) a maximum of three million dollars in funding was provided for “on-the-job pre-apprenticeship and apprenticeship training programs registered with the Department of Labor, for the construction, repair, and alteration of Federal buildings”.

### **Summary**

All countries examined in this project have initiated ‘something’ for their apprenticeship systems during this downturn. The nature and depth of these measures is contingent on the very nature of apprenticeship systems, and the support mechanisms that existed prior to the downturn.

### **Short Time Work**

With few initiatives targeting apprentices directly, it is necessary expand the analysis by looking at broader labour market strategies. These could be adjusted to fit an Australian context with a focus on maintaining the on-the-job component of apprenticeships, and avoiding the redundancies that have been seen in Britain and Ireland.

In light of the current global jobs crisis, both the OECD and the ILO are recommending short time work subsidies as a viable tool to preserve jobs in the current economic climate (Messenger, 2009 and Bosch, 2009). A number of countries including Germany, New Zealand, Switzerland, Austria, Belgium and some states in the US have already implemented short time work schemes as a labour market policy to manage the downturn. There is significant variation in the content and structure of short time work schemes in different countries. Given the time constraints of this research project, the focus is on schemes operating in Germany and New Zealand.

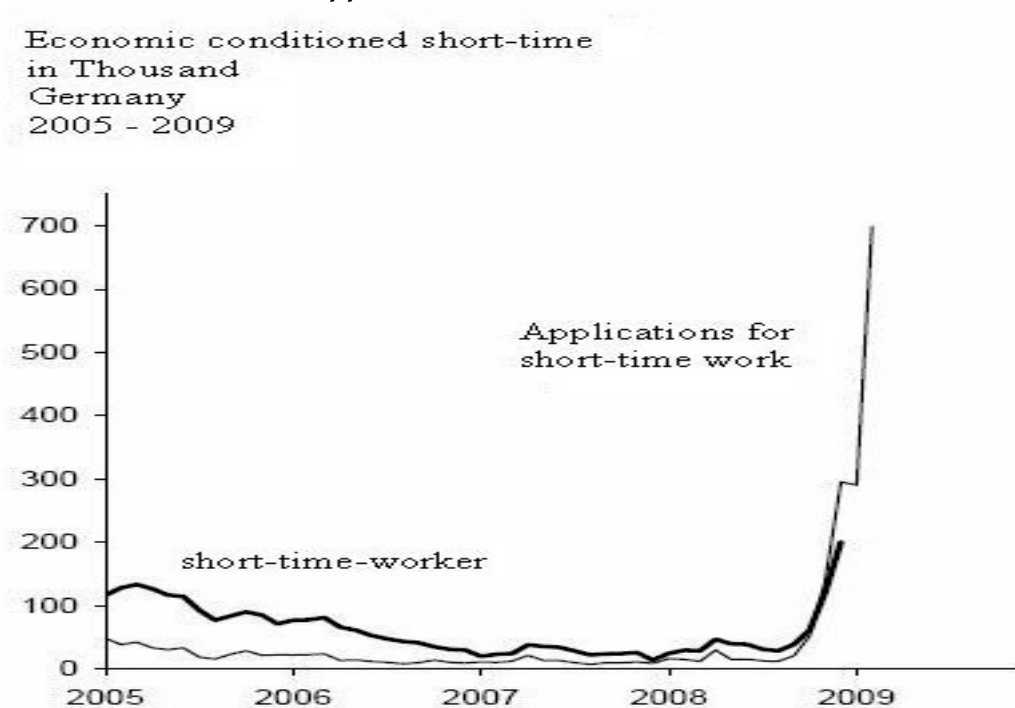
### **Germany**

Internal flexibility programs such as partial unemployment and short time work policies have long existed in Germany and were in fact widely deployed in the economic turmoil that ensued after unification (Bosch, 2009). Long before the current economic crisis German enterprises could access short time work subsidies from the German Federal Employment Agency (Bundesamt BA) “when faced with temporary, unavoidable loss of employment due to economic factors” (Wießner et al 2009 cited in Messner 2009, p. 3; see also La Jeunesse, 2009, pp. 205-212).

Since the economic crisis and the subsequent introduction of two “Recovery Packages”, the German government has improved the conditions of the work sharing scheme in order to make it more accessible to employers. Firstly, the maximum period of entitlement to the scheme has been extended from 6 months to 18 months (until Dec 2010) (Bosch, 2009). The Federal Employment Agency is now paying half of the social security contributions for employees undertaking short time work. In addition, if workers undertake training whilst on short time work, the state now pays employers 80 per cent of the cost of training (Ibid).

As most German companies have heavily invested in vocational training in recent years, they are increasingly looking to short time work policies in order to retain their employees and maintain training during the downturn (Bosch, 2009). Germany has thus seen a significant increase in the number of employees on short time work - from 50,000 in October 2008 to 270,000 in December 2008 (Ibid, p. 3). By March 2009 the number of applications increased to 700,000 (Ibid). Unconfirmed reports indicate that this number has now reached 1 million of Germany’s 40 million workforce (Auer, 2009).

### *Growth in Short Time Work Applications 2005- 2009*



Source: Bundesagentur fuer Arbeit cited in Bosch (2009) p. 4

Even though the short time work scheme has become more attractive to companies since the changes made by the two Recovery Packages, the scheme is not without its associated costs and challenges. Many companies find it difficult to align training time with off days and thus measures for the vocational training of employees on short-time work have not been widely adopted (Glassner and Galgóczi, 2009). Employers that cannot arrange vocational training whilst their employees are on short time work are only eligible for a 50 per cent reduction in social security costs rather than the full reduction (Bosch, 2009).

As a result of the problems associated with the scheme and the concern that the crisis will be more prolonged than first expected, German employers and unions are urging legislative changes (Ibid). The first change put forward is an increase in the maximum entitlement to short time work to 24 months and that all social contributions should be reimbursed (Ibid). The second recommended reform is that the additional short time costs for employers contained in collective agreements or enterprise agreements should be temporarily abolished to reduce the burden on employers. The final change suggested is that provision should be made to transfer redundant workers in special transfer agencies which pay short time money and train workers with the expectation of redeployment to the old company (Ibid, 4).

### *New Zealand*

The short time work scheme in New Zealand was implemented at the New Zealand Job Summit in February 2009. The New Zealand short time work programme is referred to either as the 'Nine Day Fortnight Initiative' or the 'Job Support Scheme'. It operates by giving private sector businesses, workers and unions the opportunity to negotiate voluntary agreements to reduce their hours of work to a nine-day fortnight (10 hours per fortnight) (Key, 2009). Under the scheme, the government will pay employers \$12.50 (the adult minimum wage) an hour per worker, for up to five hours a fortnight. Employers with over 50 employees are eligible for the scheme and can sign up to one six month period over until the scheme ends on 31 December 2010 (Key, 2009).

In contrast to Germany, the short time work scheme in New Zealand appears to be having only a marginal impact on the labour market (Ryan, 2009). Some early successes were announced, such as the 117 jobs retained in late March 2009 at Fisher and Paykel's manufacturing arm and Summit Wool (Bennet, 2009). Official figures are yet to be released, but it is estimated that only three hundred jobs in total have been saved by the scheme and that very few firms have used the initiative (Ryan, 2009). Unlike the German short time work scheme, New Zealand's scheme does not include support for training during short-time work.

### *Summary*

Short-time work strategies have the benefit of maintaining the number of people engaged in work. This is particularly important for apprentices, as the employment component of their education is fundamental to their training. In order to avoid redundancies, Australian employers could be encouraged to retain their apprentices, even if the on-the-job training decreased. While not a perfect strategy, the maintenance of the relationship between employer and apprentice is vital to the maintenance of the system as a whole. This would be further strengthened if there was support for the apprentice to take on more

off-the-job training, and even more so if government subsidies were introduced to cover the loss of wages for those apprentices who have moved to 'part-time' work.

## Green Jobs

Another strategy identified during the research that could be adapted to assist with apprentices is the United States' Green Jobs strategy. Like Australia, a large component of the US stimulus package, the *American Recovery and Reinvestment Act*, is devoted to creating a new 'green industry'. An inherent component of developing a new green industry is creating the labour resources to support the upcoming industries. These industries, such as manufacturing and construction, are where most apprenticeship training takes place in the US. Developing an advanced green industry, and using apprenticeships as one source of training new workers may be an effective way of encouraging long term economic growth, as well as maintaining the apprenticeship system.

The most promising initiative emerging from America's response to the downturn is the Green Jobs program. Under the historic \$787 billion dollar stimulus package, billions of dollars have been allocated to programs aimed at building, modernising and retrofitting green homes, public buildings, schools, parks and water infrastructure. In addition to funding for green infrastructure programs, a large amount of financial support has been allocated to green job training and tax incentives for renewable energy programs (Fox et al, 2009).

The Green Jobs program is being administered by the Department of Labor which will allocate the 500 million dollars in funding via the *Workforce Investment Act (WI Act)*. Money is to be allocated on the basis of competitive grants to non-government organisations, individuals and local and state government entities (Ibid).

Training under the Green Jobs initiative is targeted at a broad range of workers including those impacted by national energy and environmental policy, individuals in need of updated training related to energy efficiency and renewable energy industries, the unemployed and 'at risk' youth (Ibid). The program aims to prepare workers for employment in the emerging green industries such as energy-efficient building, construction and retrofitting, renewable electric power, drive train vehicles, biofuels, deconstruction and manufacturing of sustainable products (Ibid). There is currently no direct requirement that the federal funding be put towards apprenticeship training. However, leading think tanks such as the Centre On Wisconsin Strategy (COWS), are urging those organisations and states who are preparing to apply for competitive grants to put their funding towards apprenticeship training. According to White, green jobs are "occupations that by and large require journey or associate level training" (2009, p. 11). COWS and other non-government organisations are therefore currently in the process of

mapping potential skills programs for green jobs including apprenticeship training. Their report is due out later in the year.

As a result of the complex nature of the way that the US stimulus money is being distributed such as through competitive grants as well as through 130 different state programs, it is estimated that less than ten per cent of the funding has been spent so far (Freeman, 2009). It is therefore too early for an assessment to be made on the impact of the initiative. Experts at the Political Economy Research Institute estimate however, that a \$200 billion dollar government investment in green sectors could generate as many as 2 million jobs (Polin et al cited in White, 2009 p. 3).

### *Summary*

A number of initiatives have been presented in this section, some relating directly to apprentices, others covering the broader labour market. Ireland's response is the most comprehensive, whilst Germany's long term measure of subsidised short time work, and the US system of 'green jobs' are pre-eminent longer term initiatives. A range of ad hoc measures that were found in each of the countries have been presented. These are targeted at short-term goals – in particular keeping apprentices who have been made redundant engaged in the learning and working process. While these initiatives are of importance, it is necessary to institute measures which take into consideration the longer term goals of the apprenticeship system, employers, and the wider economy. The next section presents five challenges for the Australian apprenticeship system which have become apparent through the research process.

### **Key Finding 3: Issues for the longer term – five challenges**

In the course of undertaking the research much was found in addition to leads concerning what short run responses could be taken to deal with fluctuations in supply of, and demand for, apprentices. Discussion with some of the world's leading English speaking labour market and VET researchers revealed significant insights into how apprenticeship systems evolve. These insights provide important ideas on how the Australian system could use this time of crisis as an opportunity for strengthening and renewal. These are summarised in the form of five challenges policy makers and key stakeholders in apprenticeship systems must engage with.

#### **Rebalancing employment and institution based learning**

##### *Challenge:*

Quality apprenticeship training requires both workplace-based and institutionally-based learning. Ensuring quality within both environments is a key challenge of the apprenticeship system. Perhaps more significantly, ensuring that apprentices receive an effective balance between on-the-job and off-the-job training is both important and difficult, and varies greatly between and within countries.

##### *Issues:*

While employment based training is often regarded as providing a superior learning experience by employers, institutionally-based learning is vital for well rounded skills. In both Germany and Denmark apprentices who are unable to find an employer are offered a place in an institutional setting. The proportion of apprentices falling back into institution-only training increases during downturns. However over-reliance on institutionally-based training has been deemed problematic by some. While this enables students to remain in an educational environment, it deprives them of the necessary workplace experience valued by employers (Westergaard-Nielsen & Rasmussen, 2009).

The way in which apprentices divide their time between institutional and employment-based training has implications for how apprenticeships can be maintained in the downturn. Australia primarily operates on a day-release system, whereby apprentices work for a number of days each week and supplement this with education for one or two days per week. Ireland, on the other hand, has a system consisting of seven phases of training over four years (Shanahan, 2009). This system enables the Irish government to encourage employers to take on apprentices having difficulty finding on-the-job training, while their current apprentices are engaging in off-the-job training.

##### *Implications:*

The implication of altering the balance between employment and institutionally based learning becomes prominent in times of crisis. This downturn provides the opportunity to rethink the balance between on- and off-the-job training to address the need of apprentices

seeking employment. This in turn requires careful thinking about what employers want, what they actually need, and what they are capable of providing for apprentices. This is addressed in the subsequent challenges.

## The 'centrality of employers' paradox

### *Challenge:*

Employers are the greatest asset and, potentially, the greatest weakness in the apprenticeship system. The challenge here arises from the role employer's play and the time frames they are concerned with. The roles of both employers and apprentices must be made clear to elucidate this challenge. Employers have two roles – they are the providers of work and the providers of education. Apprentices, likewise, have two roles – they are contracted for employment and they are contracted as 'learners'. Successful systems of apprenticeship support employers and apprentices in both roles.

### *Issues:*

In the Irish, Danish and German models of apprenticeship both employment and training are financially supported (in varying degrees) by the government. Employers receive subsidies to assist with paying the wages of apprentices. The proportion differs in each system. In Germany and Ireland the subsidies are offered to employers in times of economic upheaval, while in Denmark the subsidy system is ongoing. Financial support for training is also provided by offering partly or full subsidised training fees. While most apprenticeship systems provide funding support for training, it should be noted that it is of limited use if the labour demand for work is not there.

The other potential weakness in having employers as central to apprenticeship system is their potentially biased interest in engaging with apprentices. If employers are focused on short term needs of the enterprise, this results in lower skilled jobs with poorer quality training in order to meet their immediate demands. This is exemplified in the UK and New Zealand. However, if employers are serious about creating quality skills they will pitch work at a higher level (for example certificate III/IV instead of I/II), with a higher quality of training aimed at a wider range of qualifications as in the German and Danish models. This requires employers to actively engage with not only apprenticeship systems, but with workforce development as a whole. As a recent study into apprentices in Australia found:

“...a high quality apprenticeship system can be built up by companies considering carefully how the apprentices can best suit the strategic needs of their companies. While Big Builders [a case study site] could have continued to recruit apprentices only to meet its limited need for tradespeople, it chose to use the system to develop future senior managers.” (Smith, 2007, p. 498)

A recent investigation of what lessons European VET systems offer Australian education highlighted the importance of creating a standard of high quality apprenticeships. The researchers found that developing the tertiary sector will continue to draw talented young people away from vocation training (Harris et al, 2009, p. 21). They conclude that if apprenticeships are to flourish they will need to be increasingly "...viewed as a means of driving innovation and competitiveness, not merely as skills-development processes or mechanisms to promote entry into the labour market" (Harris et al, 2009, p. 39).

There are scattered examples of employers offering higher quality apprenticeships in systems outside of Germany and Denmark. An example encountered during the research is Rolls Royce in the UK. Rolls Royce has developed high level engineering apprenticeships, targeting students that might otherwise enter the university system. This creates a greater respect for the apprenticeships and a greater demand from high calibre students.

### ***Implications:***

It is evident that when thinking of employer engagement careful consideration needs to be given as to what elements of the employer community are supported. Is the sentiment focused more on immediate enterprise outcomes, or is there a preference in developing a future workforce? Apprenticeship systems which focus on both supporting employment and the longer term do better than those which focus on training support for the shorter term.

## **On-the-job training as a public good: lessons from Denmark and Germany**

### ***Challenge:***

Employer provided training benefits more than the immediate firms and workers participating in the training. Too often when thinking of funding for skill formation, debates are couched in terms of 'general' and 'firm' specific training. This allegedly leads to a clear distinction as to whether the individual or the firm should fund the training. However it is clear that many skills required to be employed in a particular occupation can only be acquired in work, or work-like settings. This 'public good' aspect of the apprenticeship system has not received the attention and support it deserves.

### ***Issues:***

In both Germany and Denmark employers work with union groups to define training needs. There is an understanding that both are involved in developing a future workforce. Consequently there is an awareness of the social responsibility of firms and employees. Attention is not focused on the firm's immediate needs in the economic cycle rather the focus is placed on the long-term economic needs of the sector.

In times of economic downturns the government alleviates the pressure placed on firms by supporting them through apprentice wage subsidies. The respective governments also

support apprentices in staying in education. This last issue has been raised in Australian policy debate in recent years, with a common perception that young people who are marginalised from both work and education often have difficulty moving back into either (for a variety of opinions on this matter, see: Access Economics, 2005; te Riele, 2006; and Lemmon, 2008).

Often VET learning is targeted at 'remedial' training for particular groups with special needs (Harris et al, 2009, p. 34). Yet using apprenticeship training as an extension of welfare services is doing a disservice to its role as a central part of the system of workforce development. Similarly, following the UK model of ensuring a steady stream of apprentices to struggling small businesses is doing a disservice to potential apprentices, and the reputation, and quality, of the training system. In Denmark 40 – 50 per cent of school leavers go into apprenticeships. The quality of the training, the quality of the employment, and the quality of the student make this an excellent school-to-work transition.

### ***Implications:***

It is important to support and finance better systems of on-the-job training and work-placements, not just training places, or employers who 'take on an apprentice'. In setting funding priorities consideration should be given to providing support to employers with well established systems of on-the-job training, rather than focusing on marginal employers without coherent systems already established. Similarly, there should be encouragement for all young people to enter apprenticeships, rather than encouragement for marginalised young people.

The on-the-job component of apprenticeship is not just about providing option for those who do not like classroom-based learning. Like interns in medicine, quality on-the-job learning is vital for well rounded skill development. Governments need to think very carefully about how scarce public training dollars are spent. Priority should be given to support provision of a very valuable – and fragile – public good: quality on-the-job-training.

## **Skill formation: flexibility versus occupational coherence**

### ***Challenge:***

Apprenticeship systems which give excessive priority to responsiveness in the short run appear to impair long term adaptability. While there is strength in having a system which meets the more direct needs of employers, this can become a weakness if the system becomes too preoccupied with meeting employers' short term needs.

### ***Issues:***

Those outwardly flexible systems of skill formation (primarily employer-led) appear to be less responsive to the pressures of a downturn. This can be seen in the US, UK and New

Zealand. Employers in such systems, during and after a downturn, are left with apprentices trained 'deeply' in one skill who are unable to transfer their skills to other job roles.

A 'breadth' of skills is required of apprentices. This breadth results in apprentices who have a broad range of skills and learn the trade of a wider occupation. Discussion with experts indicates that this breadth of skill is most likely to occur in systems that are not solely 'employer-led'. Systems based on 'occupational coherence' provide a platform for navigating uncertainties and positioning workers for labour demand beyond the crisis. This is primarily seen in the apprenticeship systems of Ireland, Germany and Denmark.

This is not to say that all Australian apprenticeships are deprived of breadth. Qualitative research into a number of apprenticeship programs by Smith (2007) found evidence of worksites where employers moved apprentices into different job roles in order to provide them with a wide range of skills. However the same research found that traineeships lacked this range of learning experiences. This finding is particularly concerning, considering the drop off in numbers of apprentices during the 1990s, and the increase in numbers of traineeship during the same period (Watson et al, 2003).

### ***Implications:***

It is time to move structures of support away from employer demands for particular skills, and towards more coherent, though loosely formulated, vocational streams (Buchanan et al, 2009). In doing so, apprenticeships will have broad as well as deep levels of knowledge. Apprentices will be able to transfer their skills to a number of areas, rather than be rooted deeply in the one specific work setting. This will develop the reputation of apprenticeships as a whole by incorporating quality learning and redeploy-able workers. Employers will benefit by having workers with a broad range of skills, while the economy as a whole will benefit by having workers able to transfer their skills according to the changing demands of the market.

## **Stakeholder cohesion as a prerequisite for effective change**

### ***Challenge:***

Employer-led, government driven apprenticeship systems have been found to be lacking in the long-term development of apprentices, enterprises, and economies. Australia lacks a recent history of the 'social partnership' which has served countries with strong apprentice systems so well.

### ***Issues:***

Apprenticeship systems with enduring reputations for quality and adaptability are governed by strong partnerships led by employers and unions which are actively supported by government. These systems are seen in Denmark and Germany, and to some extent in Ireland.

The case of the United States provides an example of the difference between fragmented systems and the importance of union involvement. Apprenticeships are not a key component of training in the US, with around the same number of officially sanctioned apprentices as Australia. The number of unsanctioned apprentices (that is, people reporting themselves as apprentices, rather than those registered with the department of labour) is much larger. Research into US apprenticeship systems found that the most innovative were those which are driven by a relationship between unions and employers (Glover & Bilginsoy, 2005). Those systems based solely on the relationship between apprentices and employers were found to have poorer quality training, resulting in the development of less transferable workers. The contracts meant apprentices were more vulnerable, not having the union as a support to help them find other employment if the relationship with the employer faltered.

Those systems of apprenticeships which are government driven and employer led also tend to compromise quality and skill level (as exemplified in both the UK and New Zealand). While those involved in nation building (as in Ireland, Denmark and Germany) and/or the nurturing of highly competent, intermediate skill level jobs are run by active partnerships between multiple stakeholders. These partnerships appear to endure around an encompassing notion of occupational coherence and avoid being seduced to by the allure of 'short run flexibility' or 'quick fixes'. The value of learning from the European models of 'social partnerships' for Australia has recently been noted by Harris et al, 2009.

***Implications:***

There is a major role for the COAG group to not merely make recommendations but take responsibility for providing the stakeholder dialogue and cohesion necessary for renovating and not merely preserving apprenticeships in these challenging times. This is a pre-requisite for not just holding the apprenticeship system together during the current crisis, but actually revitalising it.

## Recommendations

Two recommendations emerge from the research. The first deals with the immediate needs of apprenticeships in the current economic climate, drawing lessons from recent government initiatives in Ireland and the US. The second concerns the need to clarify the role of apprenticeships today, particularly given the role of higher education and VET in shaping the pathways into work and learning.

### **Recommendation 1: Build on the Irish experience as well as emerging initiatives concerning short time work and green skills to meet short run needs**

Analysis of current interventions, as well as long term initiatives in all the apprenticeship systems studied, has led to the conclusion that the immediate response should be to use an Irish style intervention as well as short time work and green skills initiatives as the first step of a new shared joint stakeholder led revitalisation of apprenticeships which is actively supported by the government.

Pointers as to the type of initiatives that could be promoted are provided by the material provided in the 'Key finding 2: Short run initiatives' section of this report.

### **Recommendation 2: Provide clear direction on where apprenticeships sits within both the education system and the labour market**

It is widely accepted that 'apprenticeships are a good thing'. But what people mean by the term and what counts as 'an apprenticeship' today are far from clear. The Taskforce should provide clear guidance on: what do we mean by 'apprenticeships' today? Rather than conceive of apprenticeship in isolation, the answer should be provided with reference to other VET and associated offerings. In particular, where does it sit within the overall spectrum of offerings available to those leaving their general schooling? That is, in comparison to RTOs like TAFEs, options for higher education and things like cadetships? Who are apprentices for – in terms of both worker-learners and employers? What does it deliver (now and potentially) that other routes cannot?<sup>1</sup>

In clarifying what we mean by 'apprenticeship' and its role in our systems of education and work we think special attention needs to be given three key issues:

- a) *How do we live with instability?* It is now very clear that the economic cycle has not disappeared with the 'new economy'. Like the more enduring, quality apprenticeship systems overseas we need to devise support mechanism for both

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<sup>1</sup> We would like to thank Ewart Keep for his initial formulation of the ideas contained in this paragraph.

employers and apprentices that operate during downturns. These need to be integral – not incidental to – the design of the system.

- b) *Which employers deserve support?* During a downturn the temptation is to support any business that indicates it is prepared to take on new workers. This is understandable – but caution is needed. During the peak of the recent boom many, many employers received public support for training that was of questionable relevance to both immediate and long run needs. While there may be a case for supporting new jobs – this should not be confused with apprenticeships. There may be benefits in having wage subsidies, especially to help marginal employers and low productivity workers. But support for apprenticeships should not be confused with such support. Only those employers who provide a minimum platform of learning should be supported to take on apprentices. For too long in Australia we have operated on what has been termed the ‘convoy principle’ – the fleet moves at the pace of the slowest boat (Keep, 2009). It is time that the reference point for support is the higher standard employer. Designing workforce development around their standards will improve quality and move us beyond a system that is often geared to meeting the needs of the lowest common denominator.
- c) *How can the range of stakeholders involved in leadership be effectively increased?* It is very clear that enduring, quality apprenticeship systems give all stakeholders an active role in shaping priorities. Even in the USA construction apprenticeship arrangements which involve unions deliver better support to the apprentices and provided deeper, more transferable skills. There is also a need to rethink the role of training providers – especially public and not-for-profit providers. They too have an active interest in skills. Indeed, they can often be relied upon to think of longer term needs, and can prove a useful voice to counter-act superficially seductive claims for ‘quick fixes’. This is not an argument for restoring TAFE’s monopoly over public VET funds. It is, however, an argument for recognising that the public provider (or NGOs with deep roots in particular occupational labour markets) has a role other than that of simply being ‘another set of players’ in the ‘contestable market’ for ‘education services’. Just what that role is needs to be settled. The Taskforce could, potentially, play an important part in this process. Unless this matter is settled the steady fragmentation of approaches to workforce development will continue, and accelerate during the downturn.

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## Appendix A: Countries and relevant experts contacted

Status	Expert	Country	Institution	Expertise / Notes
<b>Interview completed</b>				
	Ewart Keep	Wales	Cardiff University	Skills and training - SKOPE
	Ken Mayhew	Britain	Oxford University	Skills and training - SKOPE
	Linda Clark	Britain	Westminster University	Apprentices in construction
	Pamela Meil	Germany	ISF, Munich	General knowledge of training systems
	Damian Oliver	Germany	Duisburg University	Labour development through training
	Paul Osterman	USA	MIT	US training systems – sectoral programs
	David Finegold	USA	Rutgers, NY	Skill eco-systems and training initiatives
	Anna Vignoles	Britain	Institute of Education	Suggested as an expert by Ken Mayhew
	Rose Ryan	NZ	Athena Research	Training initiatives in NZ
	Niels Westergard-Nielsen	Denmark	Aarhus	Expert on labour markets in Denmark
	Richard Freeman	USA	Harvard University	Expert on training and work
<b>Received written response</b>				
	Joel Rogers	USA	Wisconsin University	Provided information on apprenticeship systems and responses in the US
	Martin Shanahan	Ireland	Divisional manager Forfas	Provided detailed account of apprenticeship systems in Ireland
	Julia Schmidt	Germany	BIBB, Federal Institute for VET	Provided detailed statistics on apprentices in Germany
	Irmgard Nubler	Switzerland	ILO contact	Provided a number of suggested experts as well as written information
<b>Turned down interview</b>				
	Colin Crouch	UK	University of Warwick	No longer working in area
	Steffen Lerhdorf	Germany	IAT, Gelsenkirchen	No longer working in area
	Vera Glassner	Austria	European Trade Union Institute	Apprentices not field of expertise
	Guenther Schmid	Germany	Formerly of the WZB Berlin	No longer working in area
	Heike Solga	Germany	Suggested as an expert by Guenther Schmid -	Does not think he is the appropriate person
	Werner Eichhorst	Germany	Suggested as an expert by Guenther Schmid	On leave until after research is completed
	Song-Seng Law	Singapore	Former director of the Institute of Technical Education, Singapore	No reply
	Professor Winkelmann	Belgium	Suggested as an expert by ILO contact	No longer working in area

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<b>Did not receive response</b>				
	Sue Schurmer,	USA	Rutgers, NY	Currently researching US apprenticeship systems
	Professor Livingstone	Canada	Expert on learning and work	No reply
	Lorna Unwin	Britain	Institute of Education	Suggested as an expert by Ken Mayhew
	Jobs for the Future	USA	Washington	Creating training initiatives in US
	Tom Bailey	USA	Columbia University	Expert on US labour markets
	Eileen Applebaum	USA	Rutgers, NY	Suggested as an expert by ILO contact
	Howard Gospel	UK	London School of Economics	Expert on training
	Hanne Shapiro	Denmark	Danish Technological Institute	Suggested as an expert by ILO contact
	Dr Mishel	USA		Suggested as an expert by ILO contact
	Stefan Wolter	Belgium		Suggested as an expert by ILO contact
	Dr. Petrikowski	Poland		Suggested as an expert by ILO contact

## Appendix B: Interview protocol

The following questions were developed to lead semi-structured interviews.

“We are currently summarising all readily available scholarly and policy documentation on the recent evolution of apprenticeship and apprenticeship like systems. We would value your views on:

1. What are the key features of the [name of country] apprentice system?
2. Has the economic downturn affected the [name of country] apprentice system, if so how?
3. Are you aware of any recent government initiatives, developed in response to the downturn, aimed at apprenticeship retention or growth?
4. Do you know if there has been any industry support for apprentices? Perhaps trade union, non-government organisations or companies have developed initiatives or campaigns aimed at supporting apprentice retention?
5. Australia has recently seen a growth in pre-apprenticeships.<sup>2</sup> What is the level of pre-apprenticeship provision in [name of country]? Have there been any recent government initiatives relating to pre-apprentices?
6. Are you aware of any important literature or policy documents on apprenticeships, in particular apprenticeships in the current or other economic downturns? If so, what are they?”

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<sup>2</sup> Pre-apprenticeships are courses which provide initial training in a particular industry or occupation. If completed successfully, the courses can assist participants in obtaining an apprenticeship. Pre-apprenticeships are also used as a strategy to augment the supply of potential tradespeople.