



Education, Work and Economic Renewal:
An issues paper prepared for the
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Status of this paper

This paper has been commissioned by the Australian Education Union (AEU) to broaden debate on the future of vocational education and training (VET) and the role of the public sector in shaping it in the future. Beyond this very broad specification of matters of interest, the research team has enjoyed complete freedom in defining the questions asked, sources consulted and data processed. The paper does not seek to be a definitive piece, rather, it seeks to open up new lines of inquiry. If there is sufficient interest the aim is to explore the issues identified in this paper in greater depth throughout 2009 and early 2010. Comments are welcome and should be directed, in the first instance, to:

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Executive Summary

Although education and work arrangements did not cause the economic down turn we are currently experiencing, policy in these areas will be pivotal in the recovery plan.

Initiatives directed at economic renewal can simultaneously address deep seated education and labour problems. Prime among these are deteriorating job quality, imbalances represented by both ‘under education’ and ‘wasted skills’, as well as retarded productivity growth.

Central to any improvements will be overcoming deep-seated fragmentation in flows of learning and labour:

- (a) Fragmented flows of learning arise from the often arbitrary distinction between school, university and vocational education and training (VET). Much of this occurs because insufficient recognition has been given to *the depth and complexity of vocational knowledge*. The narrow approach to ‘competence’ in VET limits the ability for the sector to provide a quality general education which is transferable across a range of industries. In particular, it limits students’ access to forms of knowledge that facilitate autonomous reasoning – at work and beyond.
- (b) Improved flows of labour will only be achieved if fragmented systems of workforce development are improved. When considering labour demand the key dynamic of interest is the balance between the development and deployment of labour on the job. This balance is determined by the *skill eco-system* in which work and skill formation is embedded. In a healthy (ie sustainable) skill ecosystem the development and deployment of labour are in balance. In an unsustainable skills ecosystem, pre-occupation with deploying labour, which often leads to work overload, limits the opportunity for orderly skill development. Alternatively, underutilisation of skill on the job results in ‘wasted skills’.
- (c) In analysing labour flows it is important to move beyond the categories traditionally used to make sense of different jobs. For example, industries defined by goods and services produced, and occupations defined by competency standards or tightly specified occupational coverage rules. In their place, clusters of competence, often cohering in various *vocational streams* appear to be more important for making sense of how people deepen their skills over time.

The legacy of fragmented flows of learning and labour were evident even at the peak of the economic cycle. Many employer reported persistent skill mismatches and workers reported insufficient ‘decent jobs’. A major contributor to this has been the absence of a vital public good: coherent vocational pathways. We argue that it is time to put the ‘vocational’ back into VET. This does not mean restructuring work around narrowly defined occupational categories. It does mean, however, identifying how clusters of competence coalesce as coherent ensembles of skill. This is more than ‘skill sets’ based on ad hoc clusters of highly fragmented units of competence. *Just how such vocational pathways are defined and nurtured is, we argue, the central*

issue for getting beyond the sterile and unhelpful debates that have dominated VET for the last decade and a half.

These findings point to five questions which need to be answered if we are to ensure that improved flows of learning and labour contribute to achieving economic renewal.

- (a) **is there a need to ensure a concern with human capability defines the policy mix?** For too long education in general, and VET in particular, has accommodated other policy priorities such as the development of a contestable market in VET as an end in itself. Clearly this has not worked – for the economy at large or for workforce development. Making the improvement of *human capability* central to the policy mix would have major benefits for sustainability and fairness, as well as economic performance, forming the pivot for improvements in both productivity *and* quality of work and job satisfaction.
- (b) **is it time to move beyond a fragmented education system in which VET is based on competencies, to one in which learning flows are organised on the basis of deepening human capability?** The problems of organic learning flows between VET and academic/professional education are commonly assumed to be primarily administrative in nature or arise from institutional intransigence. Our analysis demonstrates it is a legacy of system design. The systems are organised around very different notions of the human subject of interest, the learning process and approaches to credentialing. At one level it may be possible to solve the problem by a vision of ‘new competencies’. Some European countries, such as Germany and The Netherlands, have successfully integrated a concern with competence, encompassing more holistic notions of skill, into their VET systems, where the definition of competence is fundamentally tied to preparation for an occupation, not narrow performance outcomes. We suspect, however, that it is probably time to build tertiary education around a vision of human capability. If this is to happen then change in academic/professional education will also be needed. In particular, the vocational elements within higher education need greater recognition. Movement in both roles would help ensure a single coherent tertiary system takes the best out of current arrangements and avoids a university takeover of VET, especially TAFE.
- (c) **is there a need to redefine sectors and occupations by devoting greater care to defining and nurturing a modern notion of vocation(s)?** Making vocations effective public goods will require considerable debate, experimentation and negotiation. Such an investment is worthwhile given the potential gains in terms of the long run adaptability of both workers and workplaces.
- (d) **is there a need to rethink the role of the public sector in vocational education?** Much VET policy today is pre-occupied with second order issues like ‘contestability’ and ‘market design’. Our analysis reveals that there are real challenges and opportunities associated with flows of learning and labour. These will not be overcome or realised by market or quasi-market mechanisms. Only an innovative and responsive public sector can recognise,

nurture and support public goods such as occupational labour market and modern notions of vocation. A key challenge is ensure the public sector builds its capability to help establish such social infrastructure.

- (e) **are uncertain times an asset not a liability for moving forward?** Even at the peak of the trade cycle inadequacies in our workforce systems were manifest. These were initially defined as skill shortages and blamed on VET institutions – especially TAFE. There is now growing recognition that many of the problems arose from the structure and flow of jobs. As we head into a period of mass unemployment we need a better framework for managing those displaced. A clearer framework of vocations would guide interventions both in education and the labour market. Such an approach would ensure that in managing the impending jobs famine we build a solid platform for the jobs feast that will eventually follow. Without such a framework we will be condemned to repeat the prospects for jobless growth in recovery and ‘skill shortages’ as the peak of the next cycle.

The Australian economy is likely to experience dramatic upheavals in the labour market in coming years. We have a choice. We can have a re-run of increased unemployment followed by an extended phase of jobless growth which will then be followed by employer complaints of ‘skills shortages’ when the economy peaks again. Or we can engage with the modern realities and do something about improving the flows of learning and labour to achieve a better outcome. This paper offers a new way of defining the issues and offers leads on where to go next. We look forward to your response.

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Introduction

The current economic situation is best understood as one of profound paradoxes. On the one hand the world economy is deteriorating rapidly and jobs growth disappearing. On the other, we are richer now than ever before. Adjusted for inflation and population growth, Australia produces over 50 percent more goods and services than it did just 15 years ago (ABS cat. no. 5220).

The outlook for the future is equally paradoxical. Reflecting on Treasury forecasts released with the Budget Papers in May 2009, Nixon Apple, research officer with the Australian Manufacturing Workers Union, perceptively noted:

... the next two years ... will be tough ... there will be around 100,000 fewer jobs in 2011 than there are today. But then in the following two years more than 500,000 jobs will be created. The issue is how to cope with a jobs famine and then be ready to benefit from a jobs feast. (Apple, 2009)

This paper is about how we can get beyond these paradoxes. Job scarcity and insecurity in the midst of extraordinary abundance is a legacy of social institutions and policy priorities – not an eternal feature of human existence. Our key concern is:

How can new approaches to education and work contribute to economic and social renewal?

In considering this question we are not assuming that developments in education and work drove (or even played a major part in generating) the global financial crisis (GFC) which has now precipitated what the IMF calls ‘the great recession’. We do argue, however, that although initiatives in these domains are not the answer, there cannot be an effective response to the current situation without a new approach to education and work. The paper offers leads on how we can use a period of ‘job famine’ to provide a platform for making the best of the ‘job feast’ when it materialises. Because no one knows exactly when and in what form this recovery will come we also offer suggestions how best to navigate a highly uncertain and volatile short run outlook.

Our approach is straight forward. In Section One we outline the paradoxical challenges that currently face us. We then consider (Section Two) how education and work are both generating and potentially transforming those challenges. We find that the fragmented nature flows of learning and labour, which are often highly unequal in the opportunities and outcomes that they bequeath, are structuring scarcity and abundance simultaneously. In Section Three, we consider how flows in and between education and work can contribute to renewal. This highlights the need to move a concern with the development of human capability from the margins of the policy agenda to the centre, expanding a concern with ‘competence’ to one of human capability, and redefining what we mean by sector and occupation.

Our central argument is this. There is a need to nurture a new, more expansive notion of vocation within both the labour market and the education system, and consider how market mechanisms, private actors and the public sector can most effectively

cooperate. This is the missing ingredient in debates on how best to integrate the different educational sectors. It is also the key factor compromising the quality and sustainability of employment growth. A concern with vocation also broadens the debate on renewal more generally. The issue is not whether we rely on ‘market’ or ‘state’ led strategies for growth. Rather, the key issue is whether market mechanisms and the public sector can combine to foster a more sustainable, fairer trajectory of development; one that is more broadly and deeply grounded across the economy.

1. Immediate challenges: deep structural problems and the ‘great recession’

Australia, along with the rest of the world, finds itself in the midst of the greatest economic turmoil since the 1930s. While the immediate challenges of achieving macro-economic stabilisation and restoring growth are rightly receiving priority attention, it is vital that we do not neglect longer term problems. Prime among these are global warming, social exclusion, and underdevelopment of common infrastructure and human capability. How is this best achieved?

In one sense, the answer to this question is already provided by the Federal Government. Three rounds of large scale stimulatory packages have been announced. Global warming is now officially recognised as a problem. A new Social Inclusion Advisory Board has been established. Funding of new transport, water and schools infrastructure has been undertaken. And the Government is committed to unleashing an ‘education revolution’. But how do these elements of the policy mix connect? In particular, how central are concerns with education and work to it?

This paper argues that while matters concerning education and work did not cause the deep problems confronting Australian society, initiatives in these domains are central to their solution. If we wish to achieve more than a return to where we were prior to the down turn we need to address five key issues:

- (a) *the employment intensity of growth.* The term ‘jobless recovery’ emerged during the upswings in the mid 1980s and 1990s. What is (and can be) done now to avoid history repeating itself this time around?
- (b) *the quality of jobs created.* Most of the problems associated with modern Australian working life date from the recovery of the early 1980s recession. Prime amongst these have been the casualisation of employment, extended hours of work for full timers, insufficient hours for many part-timers and deepening wage inequality. Is now the time to do something about overcoming the deep-seated fragmentation of the Australian labour market?
- (c) *Imbalances in the education system.* The Rudd government has made significant steps in the area of early childhood as part of its ‘Education Revolution’, but leaves much work to be done in the higher education sector, and has languished in coordinating these developments with changes in vocational education and training (VET). While Australia’s literacy and numeracy levels are ranked highly against OECD countries, accessibility to learning for those who are disaffected by academic

curricula still represents an impoverished option with unclear pathways, with the existence of an underclass initiated by low participation rates in early childhood education, and later characterised by low literacy rates and high drop out rates at the secondary level (Marginson, 2008). Contributing to these inequitable outcomes is the current segmentation of the tertiary education sector which inhibits both educational and occupational progression. This structural inequality and segregation of learning and employment outcomes is underpinned by a core difference in access to vocational knowledge in the VET versus higher education sectors, and is reinforced by existing labour market structures.

Harmony between the demand and supply of skills also bears far greater consideration. While the level of academic attainment, as measured by the number of Australians with formal qualifications, has been rising for many years, studies point to an estimated 15 percent of workers with underutilised skills (Watson, 2008). Moreover, during the recent peak of the trade cycle, the contrary skills mismatch occurred – reports of skills shortages amongst employers, for example, in the mining sector were widespread (NCVER, 2005). Surely, we can build better connections between the different parts of the system and between it and work?

- (d) *a new approach to productivity.* Australian society is now more prosperous than it has ever been. We produce over 50 percent more goods and services per capita than we did in the early 1990s. But are we a better society? Is our trajectory of economic development sustainable – economically and socially as well as ecologically? Should we have more time for friends, family, community, hobbies and contemplation? There are a number of ways in which societies nurture innovation and growth. Can we get a better balance in how we generate and share improvements in productivity?
- (e) *Human capability and the importance of education.* Levels of educational attainment in Australia continue to rise. For many people, however, formal education results in experiences of humiliation and failure leading to disengagement and alienation from education. While initiatives have been made to increase choices for people, especially the young, much remains to be done. How can the vision of lifelong learning become a reality in the midst of economic turmoil? How can the potential for work as a site of learning be realised in a world of seemingly chronic work intensification? How can vocational curricula reengage these students so that they are willing to engage with, and experience success in, learning for meaningful work and lifelong learning as the basis for their participation in society? Our interest in education is not just motivated by a desire to help boost productivity. In a very basic sense it is central to nurturing citizens' capability to flourish in all spheres of life. As a society, can we do better in improving levels of human capability amongst our citizens?

2. Understanding learning and work: Fragmented flows of learning and labour

By 2010, the Australian Treasury predicts that unemployment will rise by around 3 percentage points to 8.5 percent (Commonwealth of Australia, 2009). This will be one million workers. To date, most controversy has turned on the accuracy of this prediction. In many ways, however, this is a second order issue. Regardless of whether the unemployment rate is 8, 10 or 15 percent, this radically under-estimates the proportion of the workforce likely to be affected by the downturn. This is because indicators such as the unemployment rate only concern the situation as a single point in time. The unemployment rate reports the numbers and proportions of people unemployed in the month of March 2009. Of equal, if not greater importance, is understanding the total number of people affected over a longer period of time. We can get a feel for this from data collected by the ABS during the last recession – the Survey of Employment and Unemployment Patterns (SEUP). This tracked the same workers over a three year period. These data allows us to understand unemployment dynamically. Examples of the types of insight possible from this survey are provided in Table 1.

Table 1: Static and Dynamic Indicators of Labour Market Performance, Australia, 1997

Static Account		Dynamic Account	
CATEGORY	%	CATEGORY	%
Unemployment Rate	9	Looking for work during the year	23
Incidence of Long Term unemployment	33	Job Search Periods lasting more than a year	46
Casualisation Rate	25	Working in non-permanent jobs	39

Source: Table reproduced from Watson et al (2001). Static data from ABS Labour Force Surveys (except for marginally attached which comes from ABS Survey of Training and Education 1993). Dynamic data from ABS (1997c) Australians' Employment and Unemployment Patterns 1994-1996, (cat. No 6286, p4).

Table 1 reveals that in 1994, the last time unemployment was at 9 percent, the proportion of people reporting that they had a spell of unemployment in the 12 months prior to the survey was 23 percent. Clearly unemployment is something that directly affects a far greater proportion of the population than the usual figures convey. The SEUP also highlights the importance of focusing on the quality and not just the quantity of jobs created; for example, it uses the term 'stable employment'. Another indicator of job quality is casualisation. As Table 1 shows, while at one time only 25 percent of people reported they were employed as casuals, just under two in five reported they had worked in jobs that were not permanent in the previous 12 months. Once again the dynamic as opposed to the static indicators of the labour market gives a richer feel for how the labour market was evolving at that time.¹

¹ The ILO has recently produced forecasts for the world's labour market in their Global Employment Trends 2009 report, which underlined the importance of considering the issue of

Clearly the key challenge is not just to reduce the unemployment rate, but to engage with structural and cyclical flows such as these.

How are we to make sense of such flows? In recent years there have been considerable advances in the analysis of both work and education that help us make sense of social and economic life as a series of highly differentiated and variable flows. We draw on key insights from this work to help make sense of how education and work are currently linked to economic development. These insights provide the foundation for identifying how such flows can be improved in the future.

(a) Working life flows – transitional labour markets

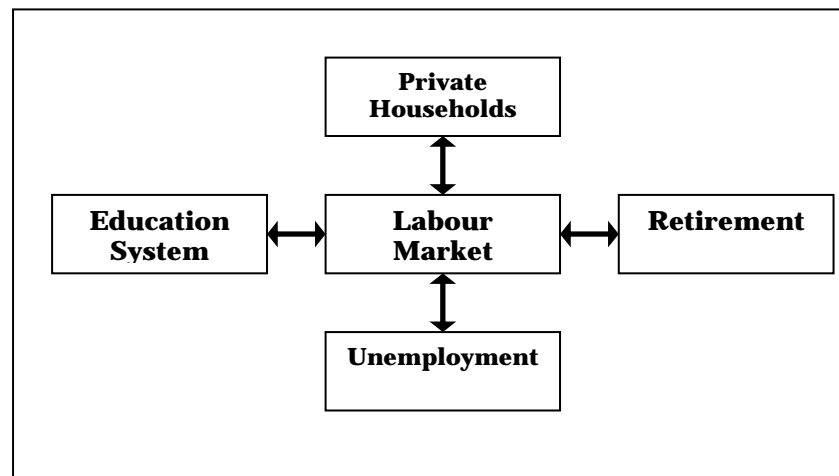
For much of the twentieth century Australian policy and practice was structured around the variant of the traditional notion of breadwinning: the vision of ‘Harvester Man’ (Watson et al 2003: especially Chapter 1). In 1907, when setting the basic wage, Justice Higgins asserted he was setting a rate appropriate for a full time, blue collar male worker supporting a household with a dependent wife and three children entitled to live in ‘frugal comfort’. Harvester Man was assumed to be in stable employment for a working life of around 40 – 50 years. His wife was assumed to be a full time carer for him, his children and other dependents. Flows through the life course were assumed to be linear. This vision of working life never captured all the realities or aspirations of workers. The imperfections of the model have been highlighted by studies of female workers and their growing participation in the workforce. However, the notion of breadwinning proved to be an enduring intellectual legacy that shaped tax, social security and education policy for decades.

The ascendancy of the Harvester Man vision steadily broke down over the later part of last century – especially under the force of women’s growing emancipation at work and beyond. The only fully fledged narrative to emerge to underpin a ‘new’ vision of working life was that of the entrepreneurial worker. Margaret Thatcher presided over a new policy regime that held ‘There Is No Alternative’ (TINA) to a free market order. This vision of the TINA person came to achieve ever greater influence on public policy in Australia over the last three decades - reaching its zenith with the *Work Choices* revolution of 2006 – 2009. But even more so than Harvester Man, the vision of the TINA person captures primarily a policy aspiration rather than any deep-seated recasting of the labour market.

Researchers in Europe have made some simple, but very important insights, about how best to make sense of working life today. Gunter Schmid (1997) and colleagues, for example, do not start their analyses with a model of bread-winners and carers or with a notion of free contracting agents. Instead they have argued that working life is best understood as comprising a series of key transitions involving education, family formation, spells outside of paid employment and retirement. A diagrammatic presentation of their model is provided in Figure 1.

job quality. While the unemployment rate is projected to rise to between 6.5% and 7.1% globally in 2009 from a base of 5.7% in 2007, the proportion classified as the ‘working poor’ – unable to earn more than \$US2 per person, per day - is projected to increase from around 41% in 2007 to between 42.1% to 45.4% in 2009.

Figure 1: Schmid et al notion of Transitional Labour Markets.



Source: Schmid (1997)

The defining assumption of this model is that not only does the nature of work continually change, but so too do workers' preferences and working life choices. Schmid frames these choices with the concept of 'transitional labour markets', and argues that there are five common transitions people move through:

- education, training and employment;
- domestic work or private activities and gainful employment;
- short-time work and full-time work;
- unemployment and employment; and
- full-time work and retirement.

Increasing numbers no longer want, nor have the option to pursue, 'standard' jobs at every stage of their life, and now move between these stages in non-linear ways. Movements in transitional labour markets critically drive the supply of labour. The nature of these transitions have been studied at length (eg Watson 2003). Our key finding is that making these transitions is very difficult. The connection between education and work often involves either taking on sub-standard work (especially of a casual nature) or a severe compromising of discretionary time. The connection between work and family often involves working as a casual as this is the only way people can get the hours they desire, or a high time squeeze occurs as the demands of work and households for quality time collide. Spells of unemployment more often than not are linked to job churn through casual, low paid work. At the end of working life many 'retirees' return to supplement their incomes, often only as contractors or casuals. Clearly the flows are not of the Harvester Man model. Equally they are not uniquely structured as assumed by TINA person vision. The flows are fragmented, and more often not marked by deep inequalities.

(b) How flows are structured

A key issue in negotiating the life course is time spent in developing intellectual capacities. This occurs in many ways. Two of the most significant – and the ones of greatest interest to this paper – are arrangements associated with the education system and those associated with paid employment. Both are sites of considerable complexity and dynamism. Both are subject to ongoing change and considerable contestation between employers, educators, workers and government. And both are in need of dramatic improvement if we are to overcome the challenges identified earlier.

(i) Education structures and flows

Australia has an extremely good quality education system. Internationally comparative data reveals that we are in the top ten countries in the world for levels of literacy and numeracy (OECD, 2007). We are also in the top ten in terms of proportion of the population enrolled in tertiary education, although we have been regressing towards the OECD average for some time (Marginson, 2008). In 2008 over one in ten (11.5 percent) of Australians were enrolled in either a higher education or VET course (ABS, 2008). The split between these elements of tertiary education was roughly even: around 55 percent of students attended universities, 45 percent vocational, adult and community education institutes. VET extends far beyond the traditional skilled, blue collar, male dominated trades. In 2007, almost 40 percent of all students were undertaking training in services including business services, hospitality, information technology, community services and retail (Table 2). The public sector remains the primary provider this education. In 2007, the overwhelming bulk of VET enrolments (around four in five) were in colleges of Technical and Further Education (TAFE) (NCVER, 2008a).

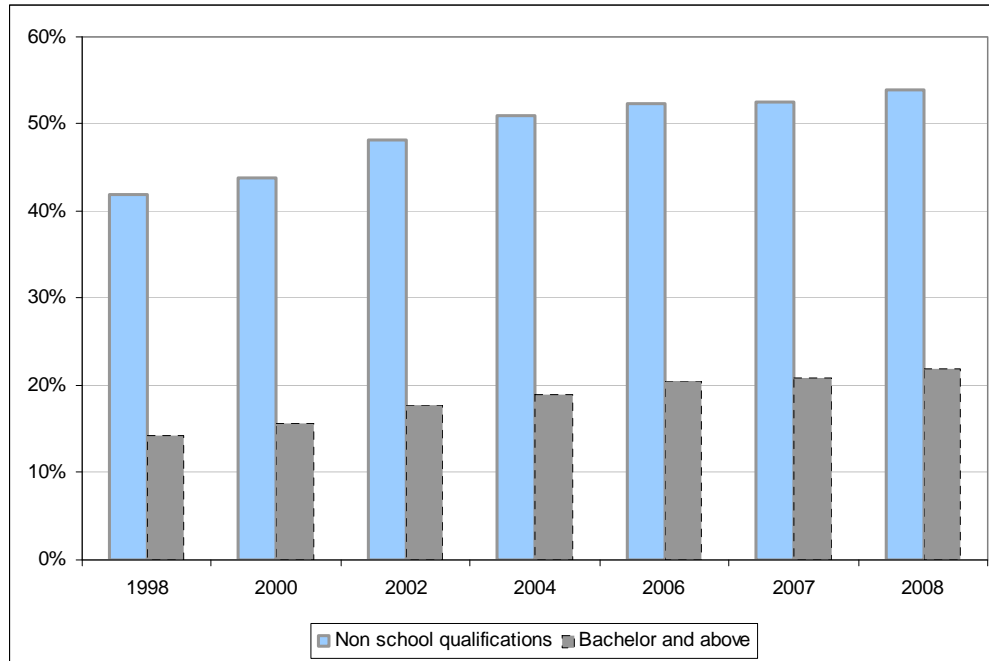
Table 2. Students by parent training package (grouped by ISC), Australia, 2007

Top 10 Parent Training Package	Students in 2007 (’000)	Proportion of all students %
Business Services	137.0	13.9%
Hospitality	105.5	10.7%
Community Services	97.3	9.9%
Metal and Engineering	50.6	5.1%
Information Technology	50.0	5.1%
Retail	43.8	4.4%
General Construction	42.5	4.3%
Automotive Retail, Service and Repair	39.3	4.0%
Electrotechnology	35.8	3.6%
Financial Services	34.9	3.5%
Total in top 10 training packages	636.8	64.6%
Total Number of Students	985.7	

Source: NCVER, Students and Courses, 2008

In line with global trends, Australia’s levels of educational attainment continue to rise, as shown in Figure 2. Over 53 percent of Australians possess non-school qualifications in 2008, compared to 42 percent in 1998; 22 percent of Australians have attained a bachelor degree or higher, compared with 14 percent in 1998 (ABS, 2008)

Figure 2. Attainment of qualifications over time, Australia, 1998 to 2008



Source: ABS, Education and Work 2008 (cat. no. 6227)

How do current education arrangements structure flows of learning in contemporary Australia? In answering this question it is important to distinguish the incumbent, inhibitive and institutionalised differences, and the reality of the continuum between higher education and VET. Both are summarised in Table 3. At the most abstract the differences are assumed to be based in universities’ interest in ‘higher learning’ while VET is assumed to be interested in developing practical skills solely for work. The problem is that much of what occurs in higher education is highly vocational in nature, often with elements of work-based learning integrated into the curriculum and assessment procedures; further, both the VET and school/university sectors have a strong general education dimension. Arguably the starkest difference between the two sectors today is embodied in their learning process. Structuring VET increasingly around highly disaggregated units of competence magnifies and entrenches difference, and undermines nascent, spontaneous tendencies towards convergence between these sectors.

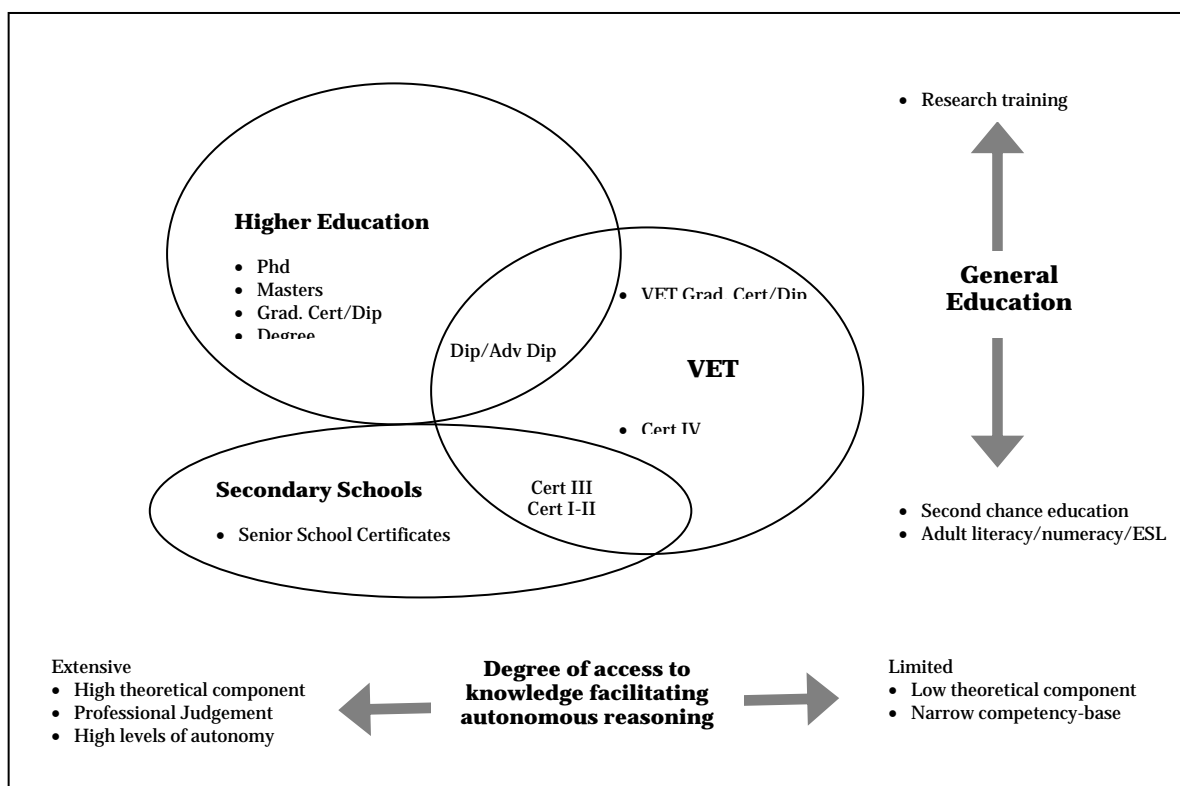
Table 3. Key stereotypes and realities concerning Vocational Education and Training (VET) and Higher Education in Australia

Feature of the system	Stereotypical differences	Reality of continuum and convergence
Nature of the human subject of interest	HE: Autonomous individuals and co-producers of their own learning	All sectors are actually interested in reflective, adaptable individuals. There is more general education in VET than commonly acknowledged. There is more vocationalism in Higher Education than commonly acknowledged.
	VET: Directed workers	
Learning process and credentialing	HE: Primarily classroom based, Integrated qualifications	For many professional courses (eg medicine, social work, education) practice in the field is integral to achieving formal qualifications.
	VET: Competency based training underpinning both on and off the job learning	The delivery of qualifications through training packages limits students' ability to understand and grow within the system of meaning which underpins their field of practice, because it is focused on the acquisition of narrowly defined skills
Labour market reference points	HE: Managerial, Professional	Increasing competition in many job areas for graduates from both systems. Employment growth in the highest and lowest skill occupations threatens to create challenges for graduates of both sectors pursuing the remaining opportunities and can lead to skills mismatches.
	VET: Para-Professional, Technican, Trade, Advanced Service work, Intermediate and Elementary Service Work	
Qualifications	HE: Degrees, Graduate Diplomas,	VET institutions now overlap with both the school and university system in terms of the qualifications they can issue, yet articulation paths between VET and HE remain limited and unclear
	VET: Certificates, Diplomas, Graduate Diplomas	

Figure 3 summarises how coverage between the different sectors is both distinct but also overlaps. The axes around which the educational spaces are organised concern:

- (a) the nature of general education provided (this continuum ranges from the peaks of research and the generation of new learning on the one hand, through to second chance learning and adult literacy on the other), and
- (b) the degree of access to knowledge that facilitates autonomous reasoning (this is a continuum ranging from abstract principles that can help with the exercise of professional autonomy and judgement through to highly routinised and procedural information which requires little exercise of discretion or judgement).

Figure 3. Qualification coverage and overlaps in the Australian education system



In theory our education system should facilitate flows along these continuums as individuals develop their knowledge, skills and capacities. In reality, however, current arrangements interrupt potentially useful connections and in so doing reproduce social differentiation and inequality. This is clearly evident when assessing approaches to general education in VET.

General education provides the foundation for all higher levels of education and learning. It entails the acquisition of common knowledge, promotes skills transferability, and importantly enables workers to engage their intellectual capacities to adapt to work-process, organisational, technological and social changes. While it is typically framed under areas such as numeracy, literacy, communication and problem solving skills, it is the universality of personal development, of the capacity to learn

and acquire knowledge, that underscores the importance of continuing general education to lifelong learning.

The risk with general education in the Australian VET sector is that it is focused on second-chance education, for example, adult literacy, numeracy and other similar programs, as being a *minimum* of education, rather than being a standard that all active citizens are entitled to (Green 1998), and one that becomes of greater importance at higher and higher levels of learning. Having defined a minimum as the basic standard, the minimum then becomes the maximum that government is prepared to fund, in a context in which the purpose and mission of VET has been narrowed to 'producing skills' needed for work. General and further education are reduced to enabling work performance and second chance education, which is then redefined as enabling individuals to undertake VET and thereby make them 'employable', usually in low-skilled occupations with little prospects for career advancement. This process of subordinating further and general education to preparation for work is not, however, confined to enabling work performance and second-chance education. More broadly, the knowledge that we all need to actively participate in society is redefined as generic skills for work. This process reduces all aspects of vocational education through the narrow prism of 'employability skills'. Students are denied access to education that will allow them to handle abstract knowledge and truly develop analytical capacity and other transferable skills. In contrast, in systems such as the German dual-system, students dedicate a third of their vocational education to general education subjects such as social studies, economics and languages (Misko, 2006). Students in the Australian system are limited in their access to a more holistic, high-quality general education.

Wheelahan (2007) explains that students need access to the knowledge that allows them to participate in debates and controversies within their occupational field of practice and within society more broadly. This means that students need access to theoretical knowledge and she distinguishes this from 'everyday' knowledge. She states that 'theoretical knowledge is general, principled knowledge... in which the integration of knowledge occurs through the integration of meanings and not through relevance to specific contexts' (Bernstein, 2000 as cited by Wheelahan 2007). In contrast, everyday knowledge is 'particularised knowledge, because its selection and usefulness is determined by the extent to which it is relevant to a particular context' (Gamble, 2006 as cited by Wheelahan 2007). The intention of both higher education and VET is to induct students into occupational fields of practice, and consequently VET curriculum needs to provide students with access to knowledge in the same way that education does for the professions. VET pedagogy needs to 'recontextualise' both the applied disciplinary knowledge that underpins occupational practice, and the context-dependent, tacit, and uncodifiable knowledge of the workplace itself (Barnett, 2006).

The VET sector is well placed to engage with those (especially young people) who are alienated from academic curricula, yet may wish to acquire practically orientated education/training. Concerns with social justice enter quickly onto the agenda here. A socially inclusive system should not only provide equal educational opportunities and validate both academic and work-based skills and knowledge, but also provide pathways for those who are initially, or finally, disaffected from academic streams (Avis, 2004). This is no trivial balancing act, as each degree of differentiation in the

education system is likely to reproduce patterns of inequality. The importance of clearly defined, self-directed and flexible pathways, supported by a unified qualifications framework, is of clear importance. Such an approach does not subordinate vocational knowledge to ‘academic’ knowledge. Rather, it is to recognise that both vocational and academic pathways need to provide the basis for autonomous, self-directed agency at work and occupational progression, as well as provide the basis for students to participate in society’s debates, controversies and conversations. However, this can only happen if vocational knowledge is revalorised and the depth and complexity of vocational knowledge is restored as central to vocational curriculum.

Current pathways for secondary qualifications include senior secondary school certificates and VET-in-school qualifications (generally Certificates I-II, and less frequently, Certificate III), attained mostly within schools, and less often at TAFE. TAFE and other VET providers facilitate the acquisition of VET qualifications ranging from Certificate I to diploma, advanced diploma and VET graduate certificates and diplomas. TAFE represents the major public provider, with over three quarters of VET students undertaking study at TAFE institutes. Students can access tertiary qualifications via the higher education sector, or the VET sector, ranging from diplomas to advanced diplomas and graduate certificates/diplomas. There is a clear overlap of vocational content and a need for coherent qualifications frameworks. Yet the highly contextualised knowledge gained through competency based training in VET, which is based on the weak classification and framing of knowledge (Wheelahan, 2009a, forthcoming), combine to underscore the inequalities present in the Australian flows of education – namely, inequality in access to knowledge that could facilitate autonomous reasoning.

For example, Wheelahan (forthcoming) compares a unit of competency (“*Develop and update legal knowledge required for business compliance*”) in a VET advanced diploma to a subject (“*Business Law*”) in a university degree to illustrate VET’s barriers to knowledge. In her example, Wheelahan compares the curricula for the two courses, both taken from Victoria University (one of five dual sector universities). She finds that the knowledge requirements in the VET diploma are specified without adequate reference to a basis of legal reasoning/principles, nor legal research methods. The focus in the VET course is on procedural tasks, with limited exposure to the broader system of meaning that these procedural tasks are ultimately embedded in. The level and type of knowledge required to evaluate and assess outcomes is weakly classified in VET when compared to the university subject, which better equips its students to participate and contribute to their field of practice by aiming, for example, to develop students’ understanding of basic principles and legal reasoning. Access to knowledge is critical in facilitating worker autonomy, the exercise of skill and contribution to a field of practice.

(ii) Work Structures and flows

In making sense of how matters of work and education are connected our analysis needs to be grounded in clear understanding of three issues and their contexts: the nature of labour as a factor of production, the nature of labour demand as the setting that profoundly shapes the development and deployment of skill, and the nature of labour supply (ie people) as agents who move through the labour market accumulating different capabilities at various rates. These issues are importantly bound by structural and institutional constraints present in the economic, social and political make-up of the nation.

First we consider these core issues of the nature of labour as a resource, the nature of labour demand, and the nature of labour supply. Second, we outline the role of competition in product markets and their supporting institutional frameworks as constraints on labour market and education outcomes. Finally, we consider the economic flows in which the development of, connections between, and outcomes of work and education are ultimately embedded.

The nature of labour as a factor of production: the open-ended nature of the labour contract

Any rigorous analysis of work and education must commence with the distinctive nature of labour as a factor of production. Central to this is the notion that labour is not a standard commodity or, more accurately, not a commodity at all. When considered as an economic input the human element is determined by two things:

- (i) it is the underlying capability which sets the limits to a person's potential to perform (this is acquired on and off the job, formally and informally). This is referred to as the '*development*' aspect of labour productivity.
- (ii) the application of this potential in the workplace (ie the performance of work on the job). This is referred to as the '*deployment*' aspect of labour productivity.

The nature of labour demand: skill eco-systems.

When considering skills matters the key dynamic of interest is the balance between the development and deployment of labour on the job. This balance is determined by the skill eco-system in which work and skill formation is embedded. A skill eco-system is comprised of:

- . business settings (ie relevant product and capital markets)
- . institutional and policy frameworks
- . pre-dominant mode of engaging labour (eg 'casual' employment)
- . the structure of jobs, including job design and work organisation
- . the level and type of skill formation (eg apprenticeships).

In a healthy (ie sustainable) skill eco-system the development and deployment of labour are in balance. An unsustainable one is usually characterised by a pre-occupation with deploying labour (eg work overload) squeezing out the space for the orderly, systematic rounding out of skills on the job. Alternatively underutilisation of skill on the job results in ‘under-employment’ or ‘wasted skills’.

The nature of labour supply: human capability, transitions and vocational streams

The flow of people through the labour market is the other key dynamic shaping their development as productive agents. As noted earlier, Schmid and others have argued cogently that in making sense of modern working life it is essential that consideration is given to the key transitions between work on the one hand and education, family formation, unemployment and retirement on the other. Allied to this is way they have, potentially, the opportunity to deepen and broaden their skills as they move between jobs.

The nature of the work people perform is in perpetual transition. The precise form of this change is not ‘natural’ or ‘inevitable’. Historically this has been (and remains) a matter of considerable controversy and contestation. Harry Braverman (1974), in his seminal work on the topic, argued that one of the key dynamics within capitalist societies was what he called ‘the degradation of work’ by ‘deskilling’ jobs for workers who historically had enjoyed considerable autonomy in how they conducted their work. Extensive debates have raged since the publication of his *Labour and Monopoly Capital*, but his underlying thesis, that what people do within their jobs – its skill content – is constantly changing is an undeniable reality. This is evident in the ABS’s increasingly frequent revisions of categorical systems used for classifying occupations. The key issue of policy concern is: how do we want to shape these occupational changes in the future? In recent times policy debate on this question has been characterised by an unhelpful dichotomy. Against the alleged spectre of inflexible, rigidly defined occupationally based job classifications considerable effort has been devoted to documenting all the possible competencies required in a particular realm of practice. These have been codified as ‘competency standards’, and then bundled together in various industry ‘training packages’. We noted earlier the limiting impact of these on the VET curriculum. But competency standards have also been prepared as a resource for workplaces to define job requirements. The assumptions underpinning this system about the nature of work are limited. At best they provide an incomplete basis for engaging with the changing nature of work. At worst they inhibit our understanding how work is evolving. Few, if any people, today want to define jobs in narrow, occupational terms. But dismembering work into thousands of units of competence misses the point. Instead, it is the cluster or ensembles of capability that give people the capacity to do things – not an aggregation of discrete skills. When it comes to being competent the whole is definitely more than the sum of the parts – or in particular, units of competence.

The nature and number of jobs created is shaped by a vast array of forces. In making sense of work in contemporary Australia it is important to understand two key dynamics. The first is how the forces of market competition and institutions shape industry and inter-industry wages and employment structures (ie the dynamics of labour market segmentation). The second involves the aggregate flows of production, consumption and finance which determine the total labour demand and the functional distribution of income, that is, macro-economic flows.

The role of competition and institutional arrangements

The nature of work does not change in a consistent or uniform way across the economy. A combination of market and institutional forces associated with the production of particular goods and services play a critical role in shaping the quality and distribution of jobs within and between industries.

Howard Botwinick (1993) has provided a very useful formulation of the market and institutional dynamics.² He anchors his analysis in an account of inter-firm (or what he calls inter-capitalist) competition. As a result of ongoing technological change and competition for market share firms constantly struggle to gain competitive advantage, the metric of success being different rates of profit. The upper limit to wage settlements and job quality is set by the prevailing rate of profit in leading firms, the lower bound is set by marginal firms and how they interact with the reserve army of labour. Actual wage and employment outcomes, especially job quality, are set within this space. The key players in setting these are employers, unions and public authorities charged with setting wage standards. Their bargaining power is determined by a vast array of factors. Those noted by Botwinick include:

- workplace size (as an indicator of capital- output ratio),
- the degree to labour and capital mobility
- the capital intensity of production (ie often referred to as the capital-labour ratio),
- market structure (especially the number of firms in a sector),
- the financial resources available to the firm as well as
- the degree of labour scarcity vis-à-vis demand.

These structural factors define the immediate bargaining environment in which employers, unions and public authorities ultimately structure wage and employment outcomes. Developments in the upper reaches of the labour market are set by the engagement of organised labour with leading and ‘average’ firms. Where unions are strong industry settlements at the level sustainable for ‘average’ firms prevail. Where there are weak enterprise bargaining arrangements, increased dispersion in wage outcomes and employment conditions arise. Where unions and minimum labour standards are strong, marginal firms die quickly. Where these are weak, laggards die slowly, nurturing an ever growing low-paid sector. Figures 4a and 4b summarise the key features of Botwinick’s model.

The real power of Botwinick framework is that it allows for the independent influence of both market and political forces. In the short run, market forces set real constraints as to what policies are viable. In the longer term, however, institutions can and do change the market environment, and the evolution of wages and jobs feeds back into dynamics of competition and technical change. This is important because the question of skills is not simply a matter of ‘calibrating policy’ in response to ‘market forces’. Policies themselves can discipline and shape the character of competition in both product and labour markets. Industry policy, for example, can nurture particular sectors (eg manufacturing in Germany). Crouch (2006) argues that employment driven by the manufacturing sector limits the multiplier effect of secondary demand generated by employment, because it is increasingly capital intensive and reliant on

² The following three paragraphs as taken from Buchanan and Considine (2008)

imports. Contrarily, jobs in the services sectors are less vulnerable to international competition, and therefore social policy, especially in relation to the provision of professionalised care services, can both increase direct employment opportunities for women as they are released from unpaid work, and increase the multiplier effect as unpaid work is replaced with purchases of goods and services. (eg childcare, prepared food). When thinking about the links between education and work it is, therefore, important to pay close attention to both markets and institutions. And it is vital to consider the initiatives defining what products or services are being produced as well as how they are produced, as both define the nature and quantum of skills demanded.

Figure 4a. Botwinick's Model linking competitive and institutional factors in wage determination: how competition sets upper and lower bounds for wages and job quality

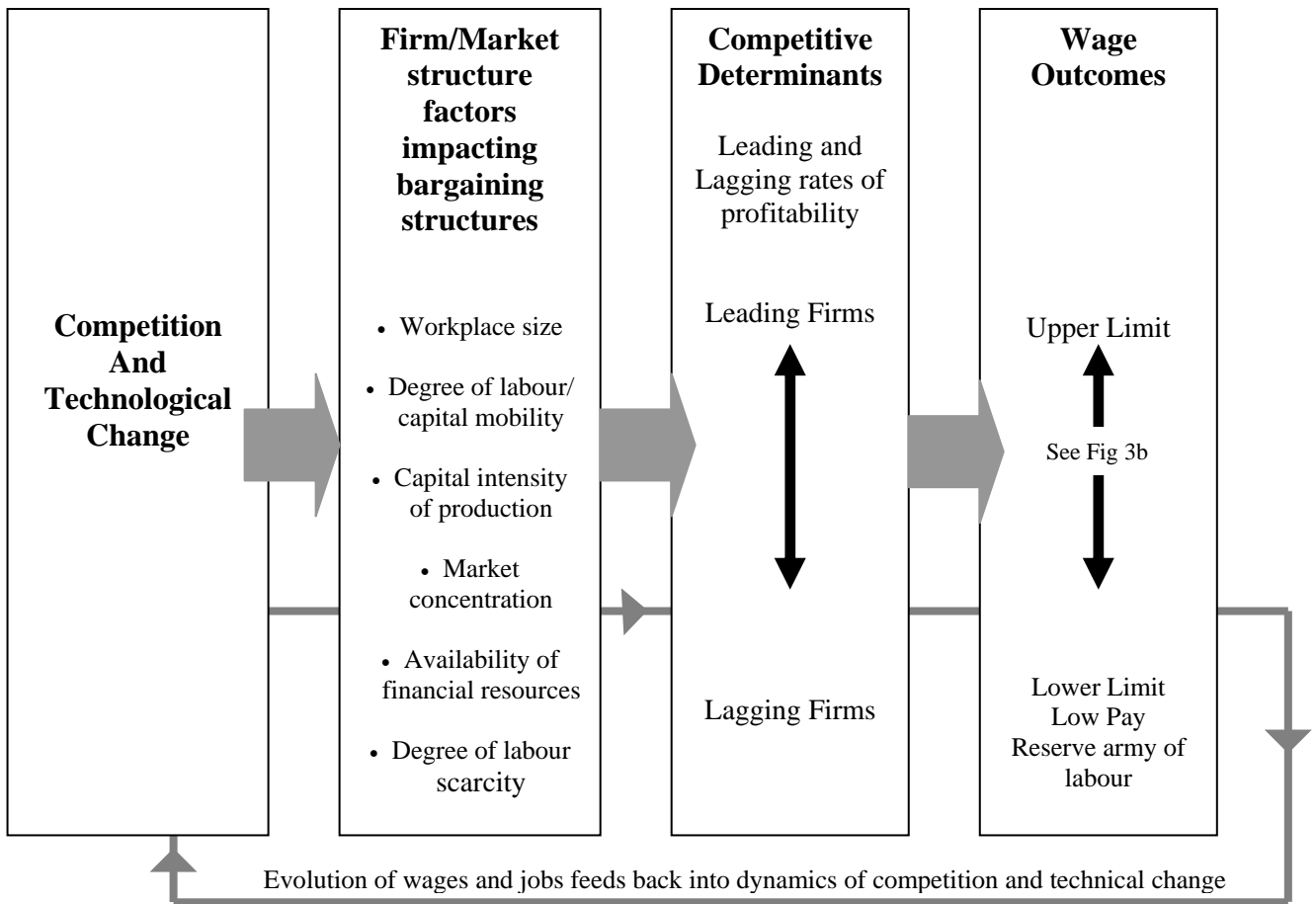
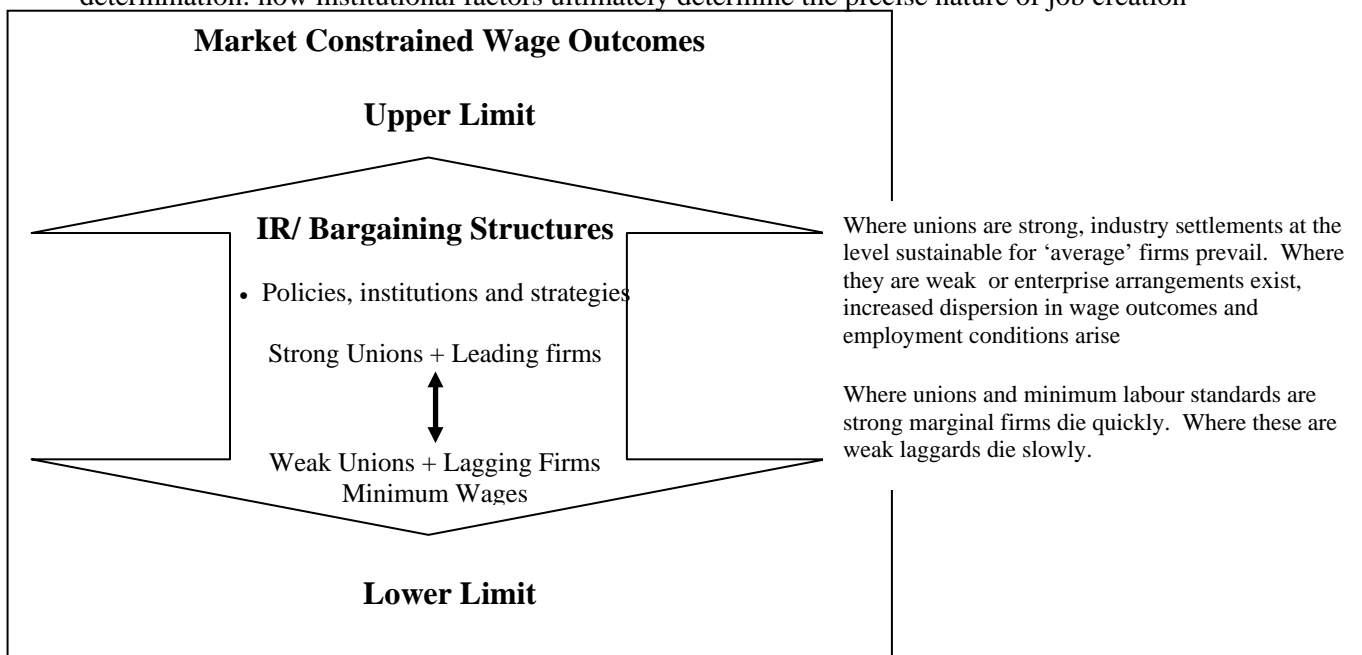


Figure 3b. Botwinick's Model linking competitive and institutional factors in wage determination: how institutional factors ultimately determine the precise nature of job creation



Source: Derived from Howard Botwinick (1993)

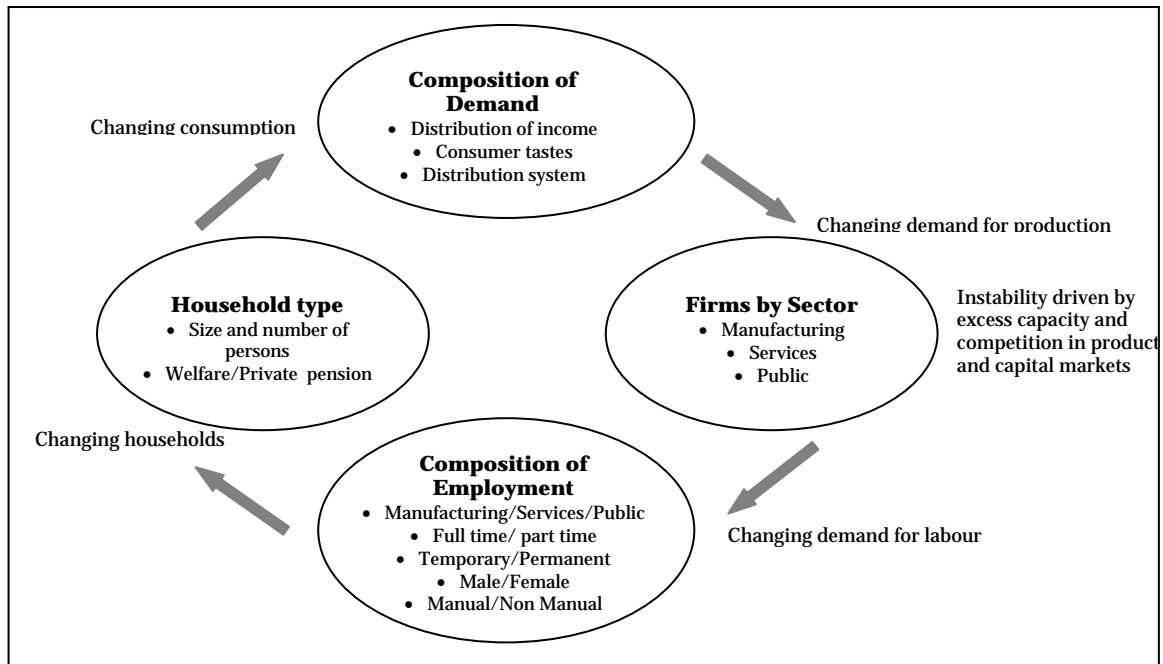
Economic flows- circuits of production, consumption and finance. For the last three decades work has been evolving in the context of economic development based on deepening inequality³. Researchers in the UK have explored the generative mechanisms behind this dynamic by reworking basic Keynesian categories and noting the significance of two distinctive macro-economic flows.

- (a) *The flow between households and firms.* This is based on the types of goods and services which a household can afford to consume, and in turn feeds back into the kind of jobs created. This has been called ‘the cheap goods/cheap job nexus’.
- (b) *The flow between households and investment funds.* The growth in funded savings by households is directed into the share market, and then contributes to the destabilisation of economic production. In the 1980s and 1990s this primarily took the form of almost seemingly endless restructures in the name of ‘maximising shareholder value’. In more recent years it has been more direct: profound economic dislocation as the flow of investment funds has gyrated wildly from a situation of excess liquidity to now a profound credit squeeze.

A diagrammatic summary of the core flows of production and consumption is presented in Figure 5. It is best read by starting on the right hand side of the flow. The roots of instability arising from excess capacity in the ‘real’ economy, and the drive for shareholder maximisation in the realm of finance, puts immense pressure on workplace managers to improve performance. One of the few variables they can control is labour. Firms have endeavoured to reduce these costs and shift as many risks onto this element of production as possible. This is the key demand force behind casualisation and deteriorating hours of work. Changes at work affect households and this in turn affects the level and distribution of consumption demand. This results in further pressures on workplaces, with demand becoming more polarised between increasing numbers of income rich/time poor and income poor/time rich households. In this way increasing inequality in ‘real’ flows of production and consumption compounds the instability arising from increasingly unstable and unsustainable competition in product and capital markets.

³ Further details about this dynamics can be found in Froud et al 1997, 2002 and Watson et al 2003: Chapter 12. An extremely comprehensive history of these dynamics is provided in Robert Brenner, *The Economics of Global Turbulence. The Advanced Capitalist Economies from Long Boom to Long Downturn 1945 – 2005*, Verso, London, 2006

Figure 5. Economic Development based on inequality



Source: Based on Froud et al. (1997)

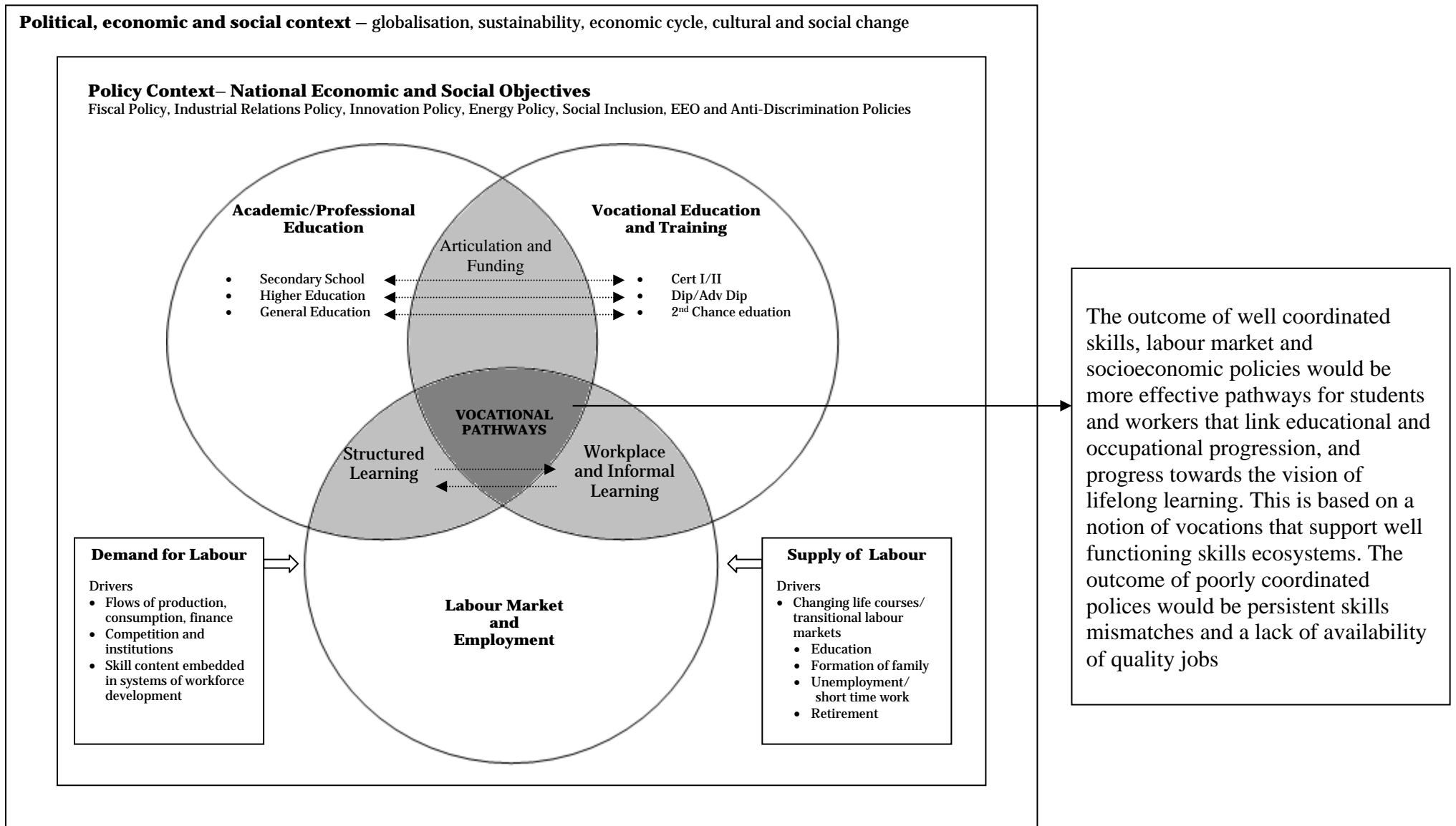
(c) How the flows are connected

How are flows of learning and labour connected? The short answer is that the connection is not simple, symmetrical or necessarily direct. Education is about more than work. And work is about more than education. As currently structured, flows within each involve fragmentation, differentiation and inequality. Clearly education is not the primary driver of labour market inequality. Equally, market dynamics do not necessarily drive inequality either. As we noted above, markets create possibilities and constraints. It is institutions that ultimately determine the outcomes that prevail within the limits they set. Institutions also shape their operating environment.

Equally, however, we know that the flows of labour and learning are connected. As we noted in the earlier analysis of education, much of higher education is enmeshed with labour markets for professionals and managers. And VET is explicitly organised on the basis of providing skills for work. Indeed, these two realms of education are structured around very different notions of the work. The academic model is based on the vision of the autonomous agent exercising considerable discretion on the basis of a deep grasp of disciplinary knowledge. The notion of work in VET, on the other hand, is predicated on a highly contextualised, and atomised vision of skill. There is nothing in the nature labour flows which makes this distinction inevitable. This dichotomy is an artefact of policy and institutional design. It is not a necessary function of ‘the economy’ or ‘the market’.

Figure 6 summarises our earlier findings and provides a framework for reflecting on how flows of labour and learning are connected.

Figure 6. Identifying the issues in Education, VET and the Labour Market – Current system



The key features of this diagram can be summarised as follows:

- The interaction between the three spheres of interest occurs within a political-economic as well as policy context. These contexts are represented by the two boxes setting the limits within which the spheres operate. These constrain both what is possible within these spheres, and also often define the issues that the education and employment systems have to engage with.
- We have simplified the education system space to isolate VET as a discrete element which can be contrasted with what we call 'academic/professional education'. As is evident from Figure 3 earlier, this is a gross simplification. This simplification allows us, however, to highlight critical overlaps. Both VET and the academic/professional education system address issues of higher education, general education and second chance learning –yet the design, quality and delivery of education differs between the sectors. The fact of overlap and difference generates the problem of articulation. This is not a trivial issue. As represented on the Venn diagram the links should be seamless. In fact, getting smooth flows between the sectors based on principles of mutual recognition is often very difficult, and usually limited. Much of this is to do with the constraints arising from incommensurable curricula and funding models. The preoccupation with atomising competence and skill into units of competence in VET, and the institutionalised distinctions in teaching and access to funding, constitute real barriers to coherent flows of learning.
- The introduction of the labour market sphere highlights that the key overlap between this domain, education and VET arises from the workplace being a site of learning. The connection between the spheres is commonly understood as involving pathways that combine formal off-the-job learning and rounding out the acquisition of operational skill through experience on the job. Arguably the most developed pathways are associated with the professions (for example, law, medicine and engineering). These professions are tightly specified in terms of training and qualification requirements, and are criticised as being highly exclusionary. Much 'school to work' policy discourse in the 1980s and 1990s talked of pathways involving VET. These were often formulaic in character and involved desired transitions such as:
 - School → apprenticeship → trade qualified worker
 - School → school based apprenticeship → compressed apprenticeship → trades person
 - School → work → RPL → recognised tradesperson.

The success of this policy discourse was, at best, limited.

However, as noted in Table 3, pathways involving VET and academic/professional education are not always distinct. This is because competition for employment between graduates of both VET and higher education occurs across the skills distribution. Cully (2003) focuses on this issue by analysing the nature of occupational change in Australian census data in 1986 and 2001. He identifies the growing phenomena of an 'hourglass' economy, where employment growth has taken place at the highest, and lowest ends of the skills distribution, with a

‘hollowing out’ in the middle. For example, among the top 25 occupations in terms of employment which had moved up the rankings by 2001 were nine from the highest skill groups (including computing professionals, nurses, primary school teachers and accountants), and seven were from the lowest skill groups (such as waiters, checkout operators and receptionists). Importantly, he emphasises that while employment expansion has taken place at the tails of the skills distribution, it remains the case that the occupations which employ the greatest numbers of people are generally lower skilled. He questions the availability of jobs amidst heightened competition amongst graduates, for the ‘middle skilled’, especially VET graduates.

While the relationship between qualifications and employment is well documented (Cully, 2006), the employment outcomes of VET graduates warrants particular focus as part of any reform agenda. For VET students who were unemployed prior to training, over 50 percent remained outside the labour force or unemployed upon completion of their studies (NCVER, 2008b) In short, while VET qualification can, potentially, provide a bridge to employment they do not necessarily do so – especially for the unemployed.

- The most important space generated by our core flows is where all spheres intersect. Traditionally this space has been characterised as primarily involving general education – both up-front and long life – that helps with both improved cognition and labour market standing. But this space could, potentially, encompass more than this. As we noted in our analysis of education structures and flows, all sectors of education have ‘general education’ and ‘vocational’ elements. Currently, however, the notion of vocation in this unifying sense is all but non-existent.

The power of Figure 6 is that it helps us specify the key issues requiring attention. At its most basic it highlights the importance of context: do these domains primarily play an accommodating role or should they help define the political, economic and policy settings? When considering the academic/professional education and VET connection, the very fact that the domains are defined as distinct spaces generates the ‘articulation’ problem. If VET did not have the constraints imposed on it by the preoccupation with having curriculum organised on the basis of highly atomised notions of competence, and a fragmented funding system between it and other higher education institutions, the possibilities for more coherent learning flows would be vastly increased. And the issue of the workplace as a site of learning shows it is an integral to part of both academic/professional education and VET – it is not unique to or even necessarily predominant in the VET sector. Most importantly, however, the diagram highlights there is a space that links all three domains: an accepted notion of general education and a nascent notion of what we call ‘modern vocations’. This is an important aspect of each of the domains that has been almost totally neglected in recent analytical and policy debates. We do not regard this as ‘gap in the literature’ that needs to be filled. Rather, we believe it is an analytical and policy blind spot that has been systematically neglected to the great detriment of academic/professional education, VET and the labour market. Improvements in each of these domains and most importantly connections between them will, we believe, be best achieved if more attention is devoted to improving the coherence and operation of vocational streams.

But what do we mean by vocational streams? There is no developed answer currently because of its absence in the literature. We have a far broader notion of pathways in mind than what has existed to date. The key issue is not tightly specifying principles of occupational inclusion or exclusion. Neither are we primarily interested in identifying how we can get different elements of the pre-existing education and employment systems to link up. Rather, the key issue is to identify which subject areas form logical bases for people to usefully accrue skills in a coherent, cumulative fashion. A good example of a vocational stream is modern logistics. It often involves production workers using kan ban systems as well as those in ware-houses, trucks/trains and those taking delivery of the ultimate good or service. Other vocational streams appear to operate in the domains of care work, customer service, engineering, business services and IT. We need to get beyond a 'pick-a-box' vision of skill that underpins the current Australian approach to competency standards and the traditional exclusory notion of professions. Between those extremes is a very valuable space that we believe has the potential to improve the operation of VET, academic/professional education more generally and the labour market. We believe further effort needs to be devoted to exploring the potential role of improve vocational streams as 'public goods' capable of providing a useful reference point for improving flows within and between academic/professional education, VET and the labour market. It is the absence of a unifying notion such this which both reflects and buttresses the fragmentation within and between these domains.

(d) Putting the vocational back into VET: leads from a disparate literature

While the issue of vocations and vocational streams is not highly developed in the literature, a number of writers have provided important reflections on this notion. We summarise some of their findings below.

Grubb(1991, cited by Benson 1997), drawing on research from the field of cognitive science, states that "knowledge (especially expert knowledge) is often specific to a particular activity or area of expertise, and that for most people effective learning requires a context that matters to them". Embodying this sentiment, Benson (1997) lays the foundation for an integrated academic/vocational program in the US, where 'the objective is for students to acquire more, not less, academic knowledge....by embodying the pedagogical strengths of vocational education practice into the presentation of theoretical concepts'.

An enriched vocationalism, as proposed by Benson (1997), highlighted the need for collaborative design and assessment of integrated curricula, more transparent structures for integrating sectoral (namely secondary and post-secondary) education, and a better articulated relationship between education and work. This latter relationship between education and work remains a complex vision, embedded as it is in not only the demand and supply of skills within a national economy, but also the global context and the civic virtues it entails. Benson also flags potential barriers, namely cultural and institutional resistance from the academic teaching bodies, the subordination of minority vocational teachers, the establishment of school and industry partnerships, and the level of employer responsibility in establishing workplace training programs.

One of the most strident advocates for a rejuvenation of the notion of occupation is the former head of the ILO's International Institute for Labour Studies, Guy Standing. For

him 'a relatively skilled position is one of trust the centre of the technique is not complexity, but autonomy and freedom'. (Standing, 1999: 25) In order to move beyond a narrow definition of competency-based skill, we first embrace the notion of occupational security, or vocation. Occupational security (Standing, 1999: 345) describes a 'pride of craft', which bundles competencies, learning, refining with the application and extension of knowledge in one's work. It requires complexity in work, autonomy with responsibility, a sense of occupational discipline, and some freedom from routine. Together with citizenship, occupational security most importantly helps create a sense of identity and community. Institutionally, occupational security must be supported by a flexible system of career-learning, as well as frameworks for standards, regulation and forms of income protection.

While this notion of occupational security is distinct from professionalism (defined as the occupational control of work, and identifiable by the institutions and procedures that establish boundaries between one specialisation and all others – Friedson, 2001), it is indeed instructive to consider the 'critical contingencies' necessary for the establishment and support of a profession:

- A body of knowledge and skill which is officially recognised as one based on abstract concepts... and requiring exercise of considerable discretion
- An occupationally controlled division of labour
- An occupationally controlled labour market requiring training credentials for entry and career mobility
- An occupationally controlled training program which produces those credentials
- An ideology serving some transcendent value, and asserting greater devotion to doing good work than economic reward (Friedson, 2001: 180).

In many significant ways, these principles already guide the occupations which circumscribe VET, although loosely. For example, the eleven Industry Skills Councils seek industry voice when determining training programs and credentials, and boundaries certainly exist between specialisations, governed by frameworks of credentials and qualifications. Arguably, the greatest shortcoming is the relatively weak voice of workers (compared to employers) within the occupation themselves, narrow notions of skill, and the relative absence of the body of knowledge (compared to higher education) underpinning practice. Also, the employment outcomes for VET students do not all necessarily lend themselves to common career paths – for example, the business services training package would support many occupational possibilities.

As such, one approach to initial reform is to dramatically broaden the scope of the term 'competency'. As it stands, competency learning outcomes and assessments are based on the performance of work functions. An alternative definition could be: 'Competence is the capability of a person or an organisation to reach specific achievements. Personal competencies comprise:clusters of knowledge structures and also cognitive, interactive, affective... capabilities, and attitudes and values' (Mulder, 2004, cited by Clarke, 2007)

This holistic definition underpins systems like those in Germany, and The Netherlands, and while the institutional framework is vastly different in Germany than in Australia, the system in The Netherlands is superficially the same. It is a system which allows for modularised, competency-based learning under a nationally recognised qualifications

framework. The key difference, however, is the underlying notion of competency, and the method of deriving curricula, assessment and quality control (Clarke, 2007). The German VET system, moreover, is strengthened by its qualifications framework, which is determined collaboratively between industrial social partners, unions and employers. The criterion (curriculum and assessment) of industrial ability is both socially recognised and legally binding under German industrial relations law.

In advocating education along vocational lines, we must also be aware of the fragility of occupational labour markets (Marsden, 1986). Occupational labour markets represent the market for transferable skills, and are characterised by some standardisation in skills/ level of attainment, training, and job descriptions. Transferable skill can be regarded as public goods, characterised (assuming an adequate supply of skilled workers) by open employer access and non-excludability, and therefore underpin the fragility of occupational labour markets. Given the non-excludable nature of access to skilled labour, and the time, money and lost productivity required to train an employee, it is easy to conclude that private investment in skills formation will suffer a negative bias. By the same token, a state-controlled approach has been criticised for being unresponsive to demand and structural change.

Maintaining the volume of training is critical to the prosperity of occupational labour markets (Marsden, 1999). Skills shortages act as a disincentive to train workers, as the incidence of poaching increases. A potential solution is to establish the institutional framework to support greater employer engagement, such that the risk of investing in skills formation is borne by the majority of employers, and the competitive disadvantage neutralised. This framework might involve local employer networks, grounded in sectoral and/or national level industry councils which track skills demand and supply, and steer training practices. Marsden (1999) cites the apprenticeship systems of Germany and Great Britain, characterised by strong and weak institutional bases, respectively, as being exemplary of successful, and declining, occupational labour markets.

Many existing professions exist because of the support of broad partnerships, engaging educators, workers and employers to form the core of professional organisations. Any expanded notion of vocation, traversing VET, higher education and the labour market, must similarly be supported by social partnerships and underpinned by social institutions, with active input from unions, educational institutions, government and employer organisations. The success of these social partnerships relies on the existence of mutual purpose and goals, strong and well-defined leadership, trust in the system (from design to monitoring and funding) and between partners, the capacity for partnership work, and inclusive governance practices (Seddon, 2008). The level of mutual trust is the key to the stability and success of any such partnership. Any attempt to grow vocational pathways can not exist without it.

3. Achieving economic renewal with better flows: five issues

This paper has covered a wide range of issues relevant to clarifying how improved approaches to education and work can contribute to economic and social renewal. In our view five issues stand out as requiring closer attention if our findings are to be taken further.

- (a) **should the notion of human capability play the central role in shaping public policies for economic and social development?** For too long education in general, and VET in particular, has accommodated other policy priorities such as the development of a contestable market in VET as an end in itself. Clearly this has not worked – for the economy at large or for workforce development. Making the improvement of human capability central to the policy mix would have major benefits for sustainability and fairness, as well as economic performance, forming the pivot for improvements in productivity *and* quality of work and job satisfaction. How this could be best achieved requires consideration of the broader policy mix and our current trajectory of economic development – and not simply more detailed work on issues of work and education. Issues associated with the how to break from a path of economic development based on deepening inequality and how better to manage competitive market and institutional forces to achieve this will require more critical reflection. Such an approach would ensure that matters of business and workforce development were considered simultaneously. This will be important in the recovery phase of the trade cycle. Unless we devote attention now to ensuring the employment content of growth is high we are very likely to find ourselves yet again witnessing the heart-breaking phenomenon for ‘jobless growth’ in coming years.
- (b) **is it time to move beyond a fragmented education system in which VET is based on competencies, to one in which learning flows are organised on the basis of deepening human capability?** Our analysis of education structures and flows has highlighted that when considering the connection between work and education the profoundly different organising principles of VET and academic/professional education make seamless flows of learning (or ‘articulation’ between the sectors) difficult to achieve. The problem is not one of administrative inertia or institutional intransigence – it is a problem of system design. The systems are organised around very different notions of the human subject of interest, the learning process and approaches to credentialing. At one level it may be possible to solve the problem by a vision of ‘new competencies’. Such a vision could build on lessons from other countries. A number of European countries have successfully integrated a training system concerned with competence, where the definition of competence is fundamentally tied to preparation for an occupation, not narrow performance outcomes. We suspect, however, that it is probably time to build tertiary education around a vision of human capability. But any lasting change in VET will not improve learning flows unless there is change within the academic/professional education system as well. The vocational elements within this need greater acknowledgement and development. Movement in both sectors will be necessary to ensure a single coherent tertiary system takes the best out of current arrangements and avoids a university takeover of VET, especially TAFE.
- (c) **is there a need to redefine sectors and occupations by devoting greater care to defining and nurturing a modern notion of vocation(s)?** As a matter of reality, work is naturally categorised on a basis more substantive than disaggregated units of competence. The coverage of Modern Awards and the domains of Industry Skill Councils attest to this reality. The coverage principles of these institutions are, however, more often than not treated as problems of administration. Far more care needs to be devoted to specifying and settling these matters. Making

vocations effective public goods will require considerable debate, experimentation and negotiation. Such an investment is worthwhile given the potential gains in terms of the long run adaptability of both workers and workplaces. The difficulty of this task – analytically and politically - cannot be under-estimated. The structure of the ISC and award coverage will inevitably be questioned. The challenge here is to devise a constructive process. These matters can no longer be regarded as second order administrative matters. If there is to be any chance of success the process must be inclusive, well informed and conducted over an extended period of time. Arguably the key to the success of any new arrangements is to develop an enriched notion of what ‘vocational’ means, in defining the nature and form of vocational streams and the skills ecosystems which nurture them, and providing a coherent institutional framework to support their sustainability. Just how this will be financed and operate will require considerable thought and debate.

(d) **is there a need to rethink the role of the public sector in vocational education?**

As time has passed VET policy has been informed by an increasingly narrow vision of the public sector. The issue of ‘contestability’ in funding has become almost a crusade in some circles. Closely linked to this is a growing fixation with ‘market design’ being regarded as *the* central priority for the public sector. But this paper has highlighted there are major public goods (such as occupational labour markets) which have withered due to policy indifference or received no serious recognition (eg such as modern notion of vocations). The under-developed nature of these public goods is a direct result of current VET policy coordinates: they simply do not acknowledge, let alone give funding recognition for, these important social phenomena. The public sector has a critical role to play in nurturing public goods. And it can do far more than just ‘design markets’ or be a ‘government owned provider’ in the contestable market for ‘education services’. Coherent systems of workforce development need innovative institutional arrangements to respond to a rapidly changing reality. Often markets fail to address realities that cannot turn a profit. Such arrangements can, if nurtured, ensure the economy and society at large benefit. This has long been recognised in the realm of general education. We think it now time for the public sector to take the lead and nurture effective ways of nurturing a modern notion of vocation. A thorough and rigorous debate on these matters can only happen if we break through the intellectual rigidities which have limited how we think about the role of the public sector. In many ways, it is only if this happens that we can mobilise forces within civil society – such as vocational organisations – that could make a major difference in the quality of people’s lives and the quality of our economic performance. Markets, no matter how or who designs them, can not achieve this. Building a public sector capable of playing this role, one which facilitates networking between stakeholders and the brokering of mutually favourable outcomes, is an issue that requires further investigation.

(e) **should uncertain times be regarded as an asset and not a liability for moving forward?**

Even at the peak of the trade cycle inadequacies of our systems of workforce development were manifest. These were initially defined as skill shortages and blamed on VET institutions – especially TAFE. There is now growing recognition that many of the problems arose from the structure and flow of jobs. As we head into a period of mass unemployment we need a better framework for managing those displaced. A clearer framework of vocations could

guide interventions both in education and the labour market. Such an approach would ensure that in managing the impending jobs famine we build a solid platform for the jobs feast that will eventually follow. Without such a framework we will be condemned to witnessing a jobless growth in recovery and ‘skill shortages’ at the peak of the next cycle.

4. Where next?

The questions above are difficult but important to answer. We believe they are best addressed by considering emerging literatures, conducting key informant interviews and, if resources permit, undertaking some original empirical research. We recommend that priority attention be devoted to:

- . ***an assessment of relevant overseas experiences and debates on these matters.*** On a number of occasions in this paper we have referred to relevant developments overseas. There is a growing literature examining how work and education intersect and how both affect economic and social development. Systematic scrutiny of this material and direct engagement with leading overseas research has, potentially, a lot to offer the Australian policy debate.
- . ***a closer look at how vocational education and lifelong learning currently operate in Australia.*** We have provided an overview of issues here, but there is now a wealth of material produced by academic, policy and practitioner researchers to draw upon. In addition, there is much practical wisdom embodied in vocational educators which has not been used as effectively as it could be in deepening analysis of the nexus between work, education and economic development. Their voices need to more systematically inform current debates. Our research has highlighted the need to identify and nurture a more modern notion of vocations. These are less narrowly defined than most professions, more coherent than dismembered competencies and more fundamental than ad hoc skill sets. The key challenge here will be defining what is the form and content of vocational streams, and how a more integrated tertiary sector can support and be supported by their development.
- . ***the changing nature of work, especially in light of the current downturn, needs closer analysis.*** Data and analyses on how the nature of work is evolving and likely to evolve grows by the day. There would be considerable value in critically scrutinising this material, especially given the challenges arising from ‘the great recession’. Analysing issues of occupational and industry change, as well as integrating insights from the growing number of studies of workforce development arrangements would be invaluable for framing ideas on how to move forward. There is a particular need to assess potential trajectories out of a recession. Some countries have had more employment intensive growth than others – it is vital to learn from these experiences now and frame policies in light of the lessons.
- . ***VET funding models.*** Ultimately much of VET and education is driven by public expenditure. A thorough assessment of current funding levels will be vital for specifying how any new arrangements might work more effectively than current arrangements.

- . *larger scale, empirical studies.* Once the above have been completed there would be considerable value in undertaking original empirical work that examines what the nature of vocational streams are currently like in Australia. This could be done through a series of ‘occupational labour market’ and ‘local labour market’ studies.

Process

If this project is to be more than an academic exercise, it will need to involve a collective of organisations. While it is essential one organisation plays a lead role there would be major benefits in having other parties involved. These could be other unions, NGOs like GTA and NESAs, public sector bodies, and employer industry groups. The broader the range of stakeholder involved, the better will be the quality policy research arising from the project.

Conclusion. Vocational pathways as a vital public good in hard times and in booms.

The work covered in this paper points to a key blind spot in our public debate. While the idea of coherent vocations or more loosely specified occupation is likely to have intuitive appeal, the nature of its cross-sector (professional education, VET and labour market) presence has received little attention, and it is certainly no trivial undertaking. The identification of functional vocational streams and their supporting skills ecosystems form one crucial element of needed reforms, but more importantly, it is the nature of education and labour market structures – currently characterised by unequal and fragmented opportunity – which will determine the effectiveness of any proposed reforms. More holistic and coherent notions of general education, skill and vocation need to articulate better within the tertiary sector, and changes to labour market structures need to support these pathways. In recognising the public good nature of skills, education and training, we need to establish the institutional and governance frameworks to support their through-the-cycle investment, in a system which engages all relevant stakeholders – workers, employers and the public sector, and combines elements of market and state mechanisms.

The opportunity to recalibrate the foundations of the Australian vocational education and its relationship to professional education and the labour market is now. A time of crisis and displacement for many Australians creates both the opportunity and need for innovative change. The implications of short term measures that simply extend trends of growing levels of academic attainment and employment growth in low-skill, low wage sectors of the economy, are serious. They will do nothing to help achieve our new priorities of social inclusion and broad-based sustainability. The scope now for circuit-breaking policies, feeding the education, VET and labour market sectors, is immediate. Even more importantly, they provide an opening for creating a more equitable, productive and sustainable future.

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