

THE IMPACT OF GLOBALISATION AND THE CHANGING NATURE OF WORK ON VOCATIONAL EDUCATION AND TRAINING

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Abstract: The world is changing fast these days. Globalisation of economies and rapid technological change critically affects all countries. The education and training systems in all countries have had difficulties in keeping up with the pace of change, yet it is vital that they do so. Some of the key technical skills we will need in 20 years time do not yet exist. This poses tremendous problems and challenges for the provision of education and training (VET).

Several new research studies released by the Australian National Centre for Vocational Education Research have examined the implications of the globalisation and the changing nature of work on vocational education and training. A key finding is that policies to further promote lifelong learning will be fundamental if nation's are to respond to the challenges from globalisation to develop the new skills needed to maximise economic potential.

INTRODUCTION

More has been written about globalisation in the past decade than most other topics in international literature of the subject of the development of nations. Hobart (1999) provides an extensive review of that literature with respect to the impact of globalisation on vocational education and training (VET). In doing so Hobart (1999, p 12) draws up a broader concept of globalisation from Laxar (1995) that encompasses global economic changes including a global shift from goods to services; global ideological changes that emphasises investment liberalisation, deregulation, trade liberalisation and increased private enterprise; new information and communication technologies that "shrink" the globe and global cultural changes involving a shift towards a universal world culture and the erosion of the nation state.

Some commentators such as Hall et al (2000) and Bryan and Rafferty (1999) have emphasised the importance of understanding the impact of global economy and other aspects of globalisation within a nation's borders, rather than thinking of globalisation as a demise of the nation state or as something that happens beyond a country's borders.

This paper examines these issues in terms of the impact on these changes of vocational education and training.

THE CHANGING NATURE OF WORK AND THE EMERGENCE OF NEW SKILLS SETS

Most attention in the research literature on the impact of globalisation on vocational education and training has been given to the impact of globalisation on changing the nature of work itself.

Two key themes in international research literature emerge to set the context for how the nature of work itself is now changing so rapidly. These are—

- ◆ the transformation of multinational organisations into *global economic corporate structures* with a consequential reduction in the importance of nation states and their domestic economies (e.g. OECD 1992, Ohmae 1995)
- ◆ the rise of the *information or knowledge-based economy*. There has been a significant amount of international literature on the subject of globalisation, structured and technological change and the emergence of the information or knowledge-based economy (e.g. Ahier & Esland 1999, Aronowitz & DiFazio 1999, Brown & Lauder 1999 Boisot 1998, OECD 1996, and Carnoy et al 1993).

In particular the impact of the emergence of the knowledge based economy and its impact on changing the nature of work is a recurring theme in the literature.

Drucker (1993, p 38) argued that

Knowledge is the only meaningful resource today. The traditional factors of production — land, labour and capital — have not disappeared, but they have become secondary. They can be obtained and obtained easily, providing there is knowledge.

The impact of these developments is perhaps best described by Reich (1989) who examined the transformation of economies that is taking place from the *old economy* to the *new economy*. He argued that the ‘old economy’ was characterised by high-volume, standardised production with large numbers of identical items being produced over long production runs. In this ‘old economy’ most education and training is geared to implementation of instructions and specialised training in job tasks. Reich (1989) argued that in the ‘new economy’, a workforce capable of rapid learning and innovation is critical. Continuous retraining for more complex work and the transfer of high level skills gained in the workplace context needs to be underpinned by attitudes and learning skills gained long before in the education system prior to entry to the workforce. Reich argued that skills such as working effectively in groups, being able to analyse problems and develop solutions are paramount in the ‘new economy’.

Investigation of these issues has also been the subject of increasing interest in Australia in recent years (e.g. Bryan and Rafferty 1999, Martin and Schumann 1997). In particular, Maglen (1994) and Maglen and Shah (1999) have examined changes in the nature of work in Australia arising from globalisation and rapid technological change. They argued that these changes are so profound that a restructuring of how jobs are classified is now required to better reflect the new nature of work. The three broad categories they proposed based on those put forward by Reich (1991), were—

- ◆ *symbolic analytical services* which are focussed on problem solving and strategic forms of work. This is a growing and most highly skilled area of work. Moreover these services are the most globally traded
- ◆ *in-person services* which include all those occupations which are in direct contact with the ultimate beneficiaries of their work. These services are also growing strongly but are rarely traded globally
- ◆ *routine production services* which entail work that is repetitive this being the type of work that is in decline in the economy. These are the services which are transferred from high labour cost to lower labour cost economies, and are then the most precarious of the three groups.

Maglen and Shah (1999) concluded that these developments have profound implications for the university and vocational education and training sectors if the acquisition of the new skills required in Australia are to be world’s best practice.

Similarly Hobart (1999), in reviewing the impact of globalisation of vocational education and training in Australia, concluded that

The new competitive framework requires a broader set of skills; 'hard' (technical) and 'soft' (interpersonal and communication). (Hobart 1999, p 42)

Sheldrake (1997) recently made some similar observations. He argued we are facing two massive changes in the global economic system – these being the increasing dominance of the free market capitalist system around the world and an extraordinary increase in the rate at which new products and services are coming onto the market. He likens the current 'knowledge revolution' arising from rapid technological change in the late 20th century to being as profound for the way economies and work are organised as was the industrial revolution in its day. Sheldrake (1997, p 6) suggested the skills need to meet our future skill requirements might include—

- ◆ considerably enhanced *people skills*, especially in team leadership, communication, enabling, consulting with others and coaching
- ◆ *strategic skills* in developing businesses that take account of the increasing importance of knowledge as a factor (the factor) in competitive success
- ◆ *conceptual skills*, particularly those that enhance the ability to see issues from a variety of viewpoints, manage ambiguity and understand the complexities of other culture's values and priorities
- ◆ the ability to *empower others*, to be able to manage through dialogue and inter-personal negotiation rather than through power and control
- ◆ the capacity to recognise that *learning is an on-going process*, and to continuously re-think and re-examine approaches to work and other fundamental issues.

Research literature on the topic of the changing nature and patterns of work and its implications for vocational education and training was recently undertaken by Waterhouse et al (1999). The study is detailed and covers a lot of material. In summary they concluded that there have been fundamental changes to patterns of working that critically affect learning, yet education and training systems have not managed to keep pace with them. They stress the need for diversity, flexible and greater customisation of education and training as the key responses. Waterhouse et al (1999) identified the three key areas which will require much more emphasis in the future as being—

- ◆ the need to develop *learning communities*, rather than just focussing on the education and training of individuals
- ◆ the need to develop *collective learning* stressing group competencies, skills and knowledge, rather than persisting solely with the conventional focus of education and training systems on the individual
- ◆ the need to develop more *strategic and effective approaches to workplace learning*.

A study by Marginson (2000) also examined the changing nature of and organisation of work and the possible implications for the education and training systems in Australia. He identified six key elements that are driving the changing work environment as—

- ◆ *globalisation* which is creating a more international economy and culture
- ◆ *increased international competition* is driving an accelerated rate of technological change, particularly in information and communications technology, which are now the key sources of productivity increases

- ◆ *rapid technological change* which is leading to declines in ‘blue collar work’ and increases in skilled ‘white collar work’, with little or no increases in jobs overall
- ◆ *immense but uneven organisation change* in workplaces, where workplaces based on higher worker participation in teams and integrated multi-skilled jobs are tending to make the greatest gains in productivity
- ◆ *sharp increases in non-standard forms of work* such as in part-time, casual, outsourced or home-based work
- ◆ *a growing polarisation in incomes and in access to work, job security and technology* leading to more two income families on the one hand, and more ‘no income families’ (i.e. apart from welfare and the most marginal employment income) on the other.

Marginson (2000) argued that these developments have some fundamental implications for the way we need to think about education and training policies. This includes the need—

- ◆ to become *totally engaged with the global environment* or face obsolescence
- ◆ for workers to develop *higher levels of cognitive and interactive skills*
- ◆ for skills formation aimed at the closer integration of work practices into ‘the innovation cycle’, with much more emphasis on the *skills needed for continuous innovation*
- ◆ for education and training practitioners to become *more global, better networked and closer to the technological edge* in every industry
- ◆ for education and training policy and interventions by governments, to reflect *the emerging polarisation of access to employment* and the skills formation that goes with it.

This discussion serves to emphasise that the nature of work is changing so rapidly that the education and training approaches needed to prepare people for work of previous generations – that served us well for most of the 20th century – will not continue to meet our needs in the 21st century without further reform. Globalisation has clearly had a major influence on shaping new work forms and on new skill sets that are needed for that work.

Robinson (2000, p 6) concluded that

The world is changing fast these days. Globalisation of economies and rapid technological change critically affect all countries. The education and training systems in all countries have had difficulties in keeping up with the pace of change, yet it is vital that they do so. Some of the key technical skills we will need in 20 years time do not yet exist. This poses tremendous problems and challenges for the provision of education and training.

Robinson (2000, pp 6-7) argued that it is becoming apparent that many more workers in the new millennium will increasingly need—

- ◆ excellent *interpersonal* and *human relations* skills to get the best out of people and work well in team-working situations
- ◆ critical *analytical* and *interpretive* skills in order to handle and make sense of the enormous amount of information now available
- ◆ to be *entrepreneurial* and *enterprising*, irrespective of whether they run a business or work for others as an employee, so that new business opportunities are always being sought.

These skills will be just as important as any technical, para-professional or professional skills people hold. Developing this more diverse range of skills will require new responses from our education and training systems.

THE INFLUENCE OF AN EMERGING GLOBAL CULTURE

Research looking at the impact of globalisation of work and vocational education and training has rarely examined the impact of cultural shifts towards a globalised culture.

A wide variety of issues such as changing cultural and social values, new attitudes to the environment, reactions against global structural change are all important and can be expected to have an impact on the content and provision of vocational education. The information revolution is having a significant impact on globalising a nation's society and culture, as it is on a nation's economic and political sovereignty.

The key issue that is emerging is the global trend towards lower birth rates and smaller families. Changes in the demographic structure of populations towards rapidly aging populations across the world will have just a profound effect on nation's skill development needs and the economic and work factors that are usually associated with globalisation .

Robinson (2000) observed that in Australia, for instance, like most OECD countries, there has been a rapid aging of the population. The proportion of young people in the Australian population has been falling over a long period of time, with reductions in birth rates, increases in longevity and reductions in net immigration.

Robinson (2000) went on to report demographic projections that the number of 15-24 year olds in Australia is likely to remain at around 2.7 million people over the next two decades, even though the total population is likely to grow by nearly 20% overall over the same period. On the other hand, the number of people in Australia aged 45-64 years is forecast to grow over 40% over the next two decades from just over 4 million today to some 5.8 million by the year 2020.

The rapid aging of the population has been given recognition in developed economies in recent years (e.g. European Commission 1997). However, it has rarely received much attention in the world's developing nations. Yet even in large developing countries like Indonesia which currently has well over half the population aged 25 years or less and one third aged less than 15 years, projections are that by the year 2020 two thirds of the population will be over 25 years of age and only 20% will be under 15 years of age (Robinson 1999, p 8).

This dramatic shift in the structure of the populations of most nations means that education and training systems in the future will need to put as much focus on the learning needs of adults as they now do on young people. Post compulsory education and training policy around the world will need to expand the policy focus well beyond entry level education and training towards the learning/ re-skilling needs of adults. Of course entry level education and training will remain just as important in the future as it is today. The point is that skill formation policies of the future will need to properly focuses on learning and skill needs of people of all ages.

THE KEY IMPLICATIONS FOR VET

While not every change and development that effects each nation can or should be attributed to globalisation, it is clear that globalisation is having a profound impact on economic, social and cultural change in all nations. Recent research in Australia by Bryan and Rafferty (1999) and Hall

et al (2000) cautions us against attributing everything to the global economy or of conceptualising as something beyond a nation's borders.

Nevertheless, the analysis in this paper leads to two key conclusions concerning the future direction of education and training provision as a result of global trends.

First, we need to ensure that all post-compulsory education and training becomes highly developed in imparting the generic skills that are becoming so essential across the whole labour force. This is particularly important in the new jobs emerging as a result of the increasing globalisation and the onset of the information age. Proficiency and competency only in the technical, para-professional or profession skills of a job alone will not be sufficient in most jobs.

The second key conclusion is that we need to overhaul the provision of post-compulsory education and training to cater better for the vastly increased amount of adult learning that will need to take place. Strategies to further the development of lifelong learning will be of prime importance. Just as we have developed pathways designed to improve the transition from school to work or from school to further and higher education and training for young people, we now need to turn our attention to the further development of "adult pathways".

The logistics of reinventing VET programs that are more capable of facilitating continuous and rapid learning in the new skills will require a very different and more diverse approach with new learning options and pathways. This will require—

- ◆ education and training programs that change continuously as the new skills required in the workforce change
- ◆ the development of new education and training programs and learning styles that are geared to meeting the particular needs of older learners, many of whom will already be employed and/or who already have qualifications.

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