

Researching the pedagogies of the new vocationalism

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Introduction

Broadly speaking, many current theoretical analyses converge on the changed demands being placed on workers in the new economy. Moreover these analyses place greater significance on ‘the self’ and ‘identity’ in understanding contemporary social forms such as education and training for work.

This paper discusses these matters, which form the foundation for a new 3-year research project, *Changing Work, Changing Workers, Changing Selves* funded by the Australia Research Council (ARC). The project is concerned with contemporary forms of Vocational Education and Training (VET) across a range of sites in relation to learners, to broader social changes, and to productive work and education practices.

It develops out of three diverse but interrelated sets of theorizations of change that have significant implications for Australia. These include the rise of new economy discourses and the emergence of *new vocationalism* in education and training; new forms of identity and new interests in the construction of *self*; and the contemporary re-conceptualization of *knowledge* that is now occurring both inside and outside of educational institutions. These three areas of research, theory and public debate have significant implications for contemporary educational policies and practices. Yet no previous research has embarked

on a broad and comparative study of the new work-related pedagogies that have developed in their wake. Moreover the theorizing of new forms of knowledge has been weakened by a lack of empirical, grounded research that investigates new forms of 'working knowledge'.

The research project sets out to examine the processes and production of new working identities in a range of educational sites: taking industries with different histories (Hospitality and IT), and taking case-studies across different institutional forms: schools, Technical and Further Education (TAFE) colleges, industry-based and university.

A striking feature of research in this area to date has been the extent to which research and theorization of new vocational learning has been so separated by sector (Gee, 2000). This is despite new forms of collaborations between education and work and the growing irrelevance and permeability of sectoral boundaries. (eg Senge 1991, Marsick & Watkins, 1990, Garrick 1997, Stevenson 1994; Boud & Solomon 2001; Billett 2000, Young, 1998).

Where cross-sectoral reference does occur, it typically takes the form of assuming that a good idea in one sector (eg TAFE colleges) should be taken up in another (eg schools). There is little appreciation of the conditions as well as the traditions of theorizing that have shaped different sectors that today are involved in the new vocationalism or indeed how these conditions influence the construction of learners.

In this paper we detail three sets of theorizations, which have been used to ground this research project and then go on to describe the research project in more detail.

Changing education and training - the new vocationalism

The emergence of new knowledge-based, post-industrial forms of work caused by the globalizing tendencies of capitalism and the impact of new technological innovations, particularly in information and communication technologies, has been central to new economy discourses. (Thurow 1996, Castells 1997, Marginson 2000, Symes C 2000). Governments have responded to these discourses in a variety of ways with reform of education and training systems being given a high priority by many countries of the OECD. (OECD 1991, Papadopolous 1996, Marginson 2000) A study conducted by the Ministry of Education, Skills and Training (MEST), Province of British Columbia, Canada for example reported that:

Major reforms of education and training systems have occurred over the last ten years in almost every nation of the Organisation for Economic Cooperation and Development (OECD). (MEST 1995:4)

This report also nominated a number of common reform themes. These included: the need for education and training systems to contribute to national economic competitiveness in a rapidly globalizing economic environment, the development of

closer links between education and the economy and the encouragement of greater efficiencies in national education and training systems.

The primacy given to the economic value of education by these reforms is justified by discourses that suggest the economies of these countries are entering new and uncertain times. This period is characterized by the increasing globalization of national economies, rapidly changing markets, increased international competition for goods and labour, new technological innovations and the movement from mass production to flexible specialisation in the productive process (Castells 1993:15-18).

Given the urgency of adapting to these new economic conditions, educational systems must be reformed to ensure that they fully contribute to the economic adaptations required of modern societies. Societies that are variously referred to in contemporary economic discourses as post-capitalist societies (Drucker 1992), post-industrial societies (Block 1990), post-Fordist societies (Mathews 1989), or, as Thurow (1996:3) puts it, new societies where capitalism plays a '*new economic game with new rules requiring new strategies to win*'. These discourses also commonly characterize new economic times as generating new work and new work organisation that require new workers with new knowledge, skills and dispositions to meet the challenges of the 'new economic order'. (Gee, Hull & Lankshear 1996).

The domination of economic discourses in the educational policy formulation of governments has been labelled the new vocationalism (Grubb 1996, Ball 1994). New vocationalism emphasises the need for all educational institutions to contribute to

national economic imperatives and, for the most part, these discourses are embedded within human capital theories of economic performance. They promote the idea that economic performance is intimately connected to the level of skill and ability of the workforce and are a common feature of the educational discourses of many OECD governments (Papadopolous 1996).

Writing in 1996 Maglen defined the new Australian Vocational Education and Training (VET) system as including:

all educational and instructional experiences be they formal or informal, pre-employment or employment related, off-the-job or on-the-job that are designed to directly enhance the skills, knowledge, competencies and capabilities of individuals, required in undertaking gainful employment, and irrespective of whether these experiences are designed and provided by schools, TAFE or higher education institutions, by private training providers or by employers in industry and commerce. (1996:3)

This re-definition of Australian VET greatly expanded its institutional reach and was the product of more than fifteen years of effort by Australian governments to integrate all forms of work related learning (public and private, formal and informal, structured and unstructured) into an industry-led, coherent and unified VET system.

Competency standards developed by industry became the cornerstone of the reforms. Competency based training, recognition of prior learning, the extension of public accreditation and other regulatory processes to industry, enterprises and non-government providers, the development of a national Australian Qualifications Framework (AQF) quickly followed. All these measures were designed to facilitate the integration of work and learning. Moreover these developments were not simply based on a renewed national recognition of the importance of VET but reflected an increased international focus on the economic importance of education and training provision. (MEST 1995).

One of the outcomes of all this activity has been the emergence of an Australian VET system that is much more diverse and complex. Technical and Further Education (TAFE), once the publicly funded near monopoly provider of Vocational Education and Training is now one player in a competitive VET market that straddles the public, private and non-government sectors. VET policies and practices are now cross-sectoral influencing:

- educational institutions including schools, TAFE, Adult and Community Education (ACE) and universities.
- public, private and non-government providers of education and training industry, in-house and organization specific training
- small business and private training consultants.

Today any and all of these players can apply for accreditation as a provider of VET and compete for government funding to deliver accredited vocational programs. Learners who successfully complete these programs gain nationally recognized vocational qualifications irrespective of the particular site or learning pathway taken.

This diversity of provision has in many ways been a hallmark of the Australian reforms. Competency standards developed by industry are seen as the benchmarks and quality assurance mechanisms that guarantee parity of outcomes for learners irrespective of the learning site and choice of provider.

Today all providers base their vocational programs on 'training packages'. These training packages are sets of nationally endorsed competency standards and qualifications for recognizing and assessing people's skills. They are developed by industry to meet the identified training needs of specific industries or industry sectors. A training package describes the skills and knowledge required to perform effectively in the workplace but does not prescribe how an individual should be trained.

In contemporary Australian VET teachers and workplace trainers are expected to develop appropriate pedagogical strategies in response to learners' needs, abilities and circumstances. The new Australian VET system therefore focuses on outcomes rather than learning processes and in many ways the journey to vocational competence is now regarded by many as less significant than the arrival, with the quality of the journey largely left to the professional competence of the teacher or trainer.

Based on these training packages vocational programs that lead to particular qualifications in specific occupations or vocational areas such as Information Technology and Hospitality can be undertaken in a variety of institutions including schools, TAFE colleges, universities and private colleges. They can also be provided in-house by industry providers. Moreover these qualifications can be gained wholly in the workplace or in educational institutions or through a combination of both.

This diversity of provision raises a number of significant issues in the context of this research project. Firstly, providers that now deliver vocational programs have traditionally constructed themselves as different from each other in a variety of ways including having different purposes, values, outcomes, organizational norms and cultures, client groups, accountabilities etc. (Seddon 2000, Chappell 2001). How these differences play themselves out in terms of pedagogical practice and what impact this has in terms of constructing the learner-worker is a major interest of this research.

Secondly, the diversity of site may offer significantly different learning opportunities and experiences. These sites may have different relationships with industry and business. They may have different levels of resources. They may have different groups of learners. They may mandate different types and level of qualifications for staff involved in delivering these vocational programs. How these factors impact on the pedagogical practices adopted and what this means for learners is a second area of research interest.

Finally these sites may have quite different understandings of changing workplaces and changing workers. They may have quite different views concerning contemporary vocational knowledge and skills. They may well have quite different orientations to pedagogical practices that are designed to deliver the knowledge and skills needed at work. All of these factors are also the subject of interest in this research project.

Changing identities

In the human and social sciences theories of the 'self', the 'subject' and 'subjectivity', have recently been the focus of unprecedented critique. (Giddens,1991, Rose,1990 Young, 1998; du Gay; 1996, Bernstein 1996). A new interest in identity and 'technology of the self' as a key issue in understanding social and economic formations has also emerged. The tendency to represent the 'self' as a unified, originary and integral construct, at the centre of the self-sustaining individual, has been problematised as have notions of the 'self' that constitute it as the product of social relations. Increasingly, discourses to do with ideas of the 'self' use terms such as 'contingency', 'multiplicity' and 'fragmentation' and the term 'identity', in particular, has come to the fore in the contemporary discourses that speak of subjectivity.

In psychology too the rise of 'critical psychology' (Henriques et al, 1984; Walkerdine, 1996) is a related recognition of the socially shaped demands on contemporary psychology, on how individuals experience themselves and their interests. Other commentators have focused on identity and subjectivity in relation to education and

training from a specific interest in difference and forms of social exclusions and disadvantage (Walkerdine et al, 2000; Yates, 1999, 2000; Hansen, 2000).

The reasons for these theoretical shifts involve, among other things, the assertion that concepts of the 'self' should not be seen as neutral representations of the subject-person but rather as discursive interventions that do important political and cultural work in constructing, maintaining and transforming both individuals and their social world.

Contemporary feminist, post-colonial and cultural studies commentators, for example, point to the way in which conceptions of identity that are based on notions of gender, class, race and national or cultural allegiance, work to obliterate difference through the discursive construction of sameness (Pateman 1989, Butler 1993, hooks 1990,).

Others highlight the fragility and constructed nature of the 'self' arguing that it has no enduring meaning but is subject to continuing cultural and historical re-formation (Hall & du Gay, 1996). Commentators such as Rosaldo (1993) point to the immanent connection between identity and cultural formation and this, in turn, has led to renewed interest in the relationship between the workplace as both a site of cultural formation and a site where identity is constructed (du Gay 1996).

All of these commentaries in different ways have influenced the focus and direction of this research. The term 'identity', for example, is used in this study to distance it from conceptions of the self that posit a unified and essential core at the centre of subjectivity. It signals that this research understands the formation of identity to be a contingent and constructed concept, one that is subject to continuing social and historical transformation.

The study also rejects a conception of identity based on the recognition of some naturally occurring set of similarities, common characteristics or shared understandings that characterise particular individuals or social grouping at particular historical moments.

Rather, it sees identity more as a process of identification, that is, a construction of sameness that is never complete and always contingent. Furthermore, because identification is a process that imposes itself across difference, it is also a process that requires discursive work to be done in order to construct the symbolic boundaries that are used to differentiate one particular identification from that which surrounds it. In other words, without discursive work the process of identification across difference is impossible.

This discursive approach to identity formation has a number of implications. Firstly, it suggests that identities are never unified but consist of multiple processes of identification that are constructed by different, often intersecting and antagonistic discursive practices that make particular identifications possible. This leads to the idea that the formation of identity cannot be justified on the grounds that it merely reflects pre-existing patterns of sameness, but rather owes its existence to particular discursive interventions. This in turn suggests that identity formation is both a strategic and positional process. Identities are constructed through the deployment of specific enunciative strategies and are produced in specific institutional sites at particular historical moments.

In the discourses of new vocationalism the learner-worker is being asked to acquire and internalise sets of general behaviours or dispositions seen as essential in the new work order (Gee, Hull and Lankshear, 1996). New vocational outcomes focus as much on the characteristics, subjectivity and orientations of the person as on vocational skills and knowledge as more traditionally understood. New economy workplaces are said to require **new kinds of people** with new knowledge, skills and dispositions or as Champy (1995) puts it:

(New workers in post-industrial organisations)- must be in the know able to display the imagination, the resourcefulness, the steady willingness, and the sensitivity to the marketplace needed in today's changing environment.

These discourses therefore imply that workers in the new economy need to change. They need to 'do things differently' in their everyday work practices. That is, they have to have different understandings of their role at work, to construct different relationships with colleagues, managers and the organization. They need to conceptualize their knowledge and skills differently, to change their understanding of who they are at work. In short, to change their identity. 'Changing selves' has therefore become an *aim* of new vocationalism and in the context of this research we look to the ways in which different pedagogical practices deployed at different sites make up the learners of new vocationalism and the workers of the new economy.

Changing knowledge

The vocational education and training system in Australia has often been characterised as a site where learners are provided with opportunities to access existing knowledge and to apply this knowledge in vocational contexts. VET has therefore been traditionally constructed as a system for ‘knowledge users’ rather than ‘knowledge producers’ (Kinsman 1992).

However, recent talk of the ‘new economy’ has highlighted the importance of knowledge and knowledge production in the contemporary economic environment. Indeed, for many, a distinguishing feature of the ‘new economy’ is its reliance on the creation and application of new knowledge in workplaces. (Castells 1993, Johnston 2000. OECD, 2000)

Increasingly ‘knowledge work’ within industries and organisations is seen as the critical ingredient to economic success and the ‘knowledge worker’ has in some senses become the star of the ‘new economy’ (Cairney 2000).

This emphasis on ‘knowledge production’ and the ‘knowledge worker’ in the new economy has resulted in a number of commentators questioning the adequacy and utility of the content, organisation, production and transmission of knowledge that traditionally takes place in education and training institutions including VET. (Senge 1994)

This position proposes that the knowledge of the new economy is different from that which has occupied traditional education and training programs. Today, thinking about knowledge has moved to emphasise knowledge constructed as practical, interdisciplinary, informal, applied and contextual over knowledge constructed as theoretical, disciplinary, formal, foundational and generalisable. As Gibbons (1994) puts it, there has been a significant shift in emphasis away from 'culturally concentrated' (academic) knowledge to 'socially distributed' knowledge.

In some ways, this take on knowledge can be seen as supporting the traditional position that VET is about the application of relevant knowledge required in vocational contexts, however this is not quite so straightforward.

As Tennant (2001) points out, today:

relevance no longer equates with the 'application' of knowledge to the workplace, rather the workplace itself is seen as a site of learning, knowledge and knowledge production.

Workers within the new economy are now expected to contribute to new knowledge production within the workplace rather than merely applying existing knowledge to workplace activities.

Moreover this 'new knowledge' is significantly different from more traditional conceptions.

The **production** of new knowledge within organisations and enterprises is different from the knowledge outlined in traditional subjects or disciplines, which are common in education and training programs.

This new knowledge is high in use value for the enterprise or organisation. Its deployment has immediate value for the enterprise. Moreover, this knowledge is context specific and its value may well be short-lived within the enterprise or organisation.

This new knowledge is not foundational and cannot be ‘codified’ into written texts such as competency standard descriptions, procedural manuals or textbooks but is constructed within the context and environment of the immediate workplace.

This knowledge is therefore rarely the product of individuals but is constructed through collaborations and networks that exist within specific sites and particular contexts.

The implications for VET of these new ideas concerning knowledge remain unclear. As Cairney (2000) points out, the emergence of the ‘knowledge economy’ is highly contested, with some commentators arguing that its proponents are more in the business of mapping the future than describing the present. However, he suggests that all industries — be they predominantly high, middle or low skilled — have become more knowledge intensive. Competitive pressures have resulted in firms moving to flatter structures. This has resulted in increased work expectations for all employees. At the

same time, knowledge is seen as the vehicle through which productivity gains can be achieved within organisations. Moreover, this ‘productive knowledge’ is generated within specific contexts.

This perspective leads to the idea that all workers irrespective of the industry in which they work, now require higher levels of cognitive and intellectual abilities than those once expected. This scenario suggests therefore that the VET system has a major role to play in terms of developing ‘productive workers’ albeit a different one than that which it has traditionally undertaken.

The new workers of the new economy require general cognitive abilities and behavioural dispositions rather than technical expertise in order to contribute to new knowledge production. Much greater emphasis needs to be placed on the workplace rather than the educational institution as the most authentic and useful site for new knowledge production and workplace teams and networks rather than individuals are the main source and generators of new knowledge within new economy workplaces.

Project design and methodology

This research uses these contemporary theorizations to undertake a new comparative and qualitative *empirical* study of pedagogies deployed across a range of Australian sites involved in the new vocationalism.

Our preliminary investigations have shown that much of the insightful theoretical literature in this area to date has been macro (analysis of broad cultural trends) in orientation, or confined to one particular site. This literature draws attention to demands for a new working ‘self’ that is flexible, autonomous, self-regulating and orientated to life long learning in a context of change and uncertainty at work. It also foregrounds capabilities such as an orientation to problem solving, teamwork, adaptability, information analysis, self-reflection etc.

The focus of our research is on how pedagogical practices are deployed to shape this new self, with an interest in detail and local specificity. We wish to document a range of characteristics for each site including:

- learner identities (eg. the basis on which they enter);
- institutional histories and traditions;
- the relationship of the learner to the provider (eg employee, student, compulsory/non-compulsory, guaranteed job outcome or not, etc);
- physical setting (including geography)
- level of award.

In terms of new vocational skills and transformations of self, we want to analyze whether capabilities such as ‘communication’, or ‘enterprising self’ or ‘flexibility’ are being enacted in programs today, and how they are or are not affected by local specificities. Finally understanding the repertoires and complexities of ‘working knowledge’ and what

this means in terms of the construction of new learner-workers is another focus of both the empirical investigation and the theory-building intent of this project.

Our focus is on the way in which and extent to which the learner participates in the knowledge-producing process. For example, with respect to ‘team-work’: How is teamwork being constructed by different pedagogies? How is it being framed and interpreted? What techniques are used and with what effects? How does the relationship between the learner and program influence the teamwork pedagogies?

Our reasons for undertaking this research is to document, analyze, theorize and facilitate better policy and practice in an area (changing work and changing education) which is wide-ranging and complex. This is different from a tightly focussed testing of a particular problem. Rather our interest is in emerging questions and complex relationships, and the conditions of possibility that are created by these changing times. The fields to which our work relates: education studies, policy studies, cultural studies have long recognized the need for a range of procedures, methods and cross-disciplinary collaborations. Our textual orientation draws on our understanding of the way all knowledge is constructed through and by language, discourses and texts at work within a culture.

We will draw on concepts such as governance, identity, self-reflexivity, distributed knowledge, performativity, working knowledge, derived from poststructural analyses when designing our approach to interviews, text analysis and observations. Our orientation is that we are approaching the questions of pedagogy, self, knowledge, work

and learning as offering possibilities of reconceptualising existing concepts and thinking about better practices.

In terms of interviews, for example, our questions will take into account how an interviewee will position themselves in this type of interview. Analyses of documents, interviews and observations will be analyzed as texts, which do certain kinds of work in relation to the new learner-worker. Thus the question posed is not ‘what truth is revealed by the text?’ but ‘what is achieved by the text?’ But in all this too we will be challenging each other as to how texts should be read and whether everything is to be read as text.

The overall focus of our empirical work will be framed by some broad research questions:

- how are new work requirements being understood and acted upon by the vocational programs and teachers?
- how is the learner understood and acted upon through those pedagogical techniques?
- how is the learner positioned with respect to the generation of knowledge and what is seen as the source(s) of knowledge?

More specifically we wish to generate:

- a mapping of the work-related educational practices directed at shaping the self towards certain ends across a range of different sites;

- an analysis of what is asked of learners in different contexts, drawing attention to issues of inclusion and exclusion, privilege and marginalisation;
- an analysis of what types of worker and learner selves are being produced in different sites;
- a comparative analysis of pedagogical strategies and approaches in the new vocationalism, with attention to generic knowledges and local specificities;
- a new, empirically-grounded theorisation of directions for education practices in relation to working knowledge.

In order to investigate the impact of diversity the empirical research will be centred on a number of different vocational learning sites including schools, TAFE, universities, and industry-based providers. It will focus on vocational programs delivered at these various sites in the areas of Information Technology and Hospitality. The decision to focus on two industries offers a chance to compare programs in a particular industry sector as they are developed in different educational sites; and also to compare programs at a particular education level across two industry sectors. We chose hospitality and IT as the focus because these are important areas of contemporary work opportunity, with each having programs available at each of the levels we wish to study. We also chose them because they have significant differences in ‘work-skills’ and history.

Hospitality, for example, is widely seen as explicitly concerned with ‘people skills’, while IT is often seen as a sector concerned with technical rather than ‘people’ skills. IT is a new industry without a long tradition of training; whereas ‘hospitality’ has remnants of long-standing training approaches. With both industry sectors we aim to include at

least one program directed towards management level workers, as well as programs directed at operational-level workers. Our industry sector comparison offers a way of looking at the extent to which common changes to pedagogy are taking place, as well as examining and analyzing local specificities.

Overall our research strategy is to examine the ways in which the different pedagogies of new vocationalism are implicated in changing work, changing workers, changing selves.

References

- Ball S J (1994) *Education Reform A critical and post-structural approach*, Open University Press, Buckingham.
- Bernstein, Basil (1996) *Pedagogy, symbolic control, and identity. Theory, research , and critique*, Taylor & Francis, London.
- Billett S (2000) Co-participation at work: knowing and working knowledge, *Proceedings of the Working knowledge productive learning at work conference* , University of Technology Sydney.
- Block F (1990) *Postindustrial Possibilities* , Berkeley and Los Angeles, University of California Press.
- Butler, J. (1993) *Bodies that Matter*, London, Routledge.
- Boud, D. & Solomon, N. (2001) Editors *Work-Based Learning: A New Higher Education* Open University Press, Milton Keynes.
- Cairney T (2000) *The Knowledge Based Economy; A Review of the Literature*, Board of Vocational Education and Training, Sydney.
- Castells M (1993) The Informational Economy and the New International Division of Labour, in Carno M., Castells M., Cohen, S. and Cardoso F.M *The New Global Economy in The Information Age; Reflections on our Changing World*, University Park PA , Pennsylvania State University Press.
- Castells, M 1997, *The Rise of the Network Society*, Blackwell, Mass.
- Champy J (1995) *Reengineering Management: the mandate for new leadership* New York Harper Business.
- Chappell C (2001) Issues of teacher identity in a restructuring VET system, *Australian and New Zealand Journal of Vocational Education Research* 9,1.
- Drucker P. (1992) *Post-capitalist Society*, New York Harper
- du Gay (1996) *Consumption and Identity at Work*, London, Sage publications
- Garrick J (1997) The Dialectic of informal Learning: a study of the discursive effects on the workplace learning of trainers situated within post-industrial corporate agendas unpublished PhD thesis University of Technology, Sydney.
- Gee J P (2000) The New capitalism: what's new?, *Conference Proceedings Working Knowledge; productive learning at work*, University of Technology Sydney, NEW South Wales, Australia.
- Gee J P Hull G & Lankshear C (1996) *The New Work Order Behind the Language of the New Capitalism*, Allen & Unwin Sydney.

Gibbons M, Lingoes C, Nowotny H, et al (1994) *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, London, Sage.

Giddens, A (1991), *Modernity and Self-Identity: self and society in the late modern age*, Polity Press, Cambridge.

Grubb W N (1996) The new vocationalism in the United States;returning to John Dewey, *Educational Philosophy and Theory* 28 1:1-23.

Hansen L (2000) Semi-skilled mature men in Adult Education-Motivation and Barriers, *Proceedings of theWorking knowledge productive learning at work conference* , University of Technology Sydney.

Henriques, J., Hollway, W., Urwin, C., Venn, C. & Walkderdine, V. (1984) *Changing the subject: psychology, social regulation and subjectivity*, Methuen, London.

hooks b. (1990) *Yearning: Race, Gender and Cultural Politics*, Boston, South End Press.

Johnston D (2000) *The New Economy*, OECD Paris

Kinsman M. (1992) Competency Based Education in TAFE in *Higher Education and The Competency Movement*, Canberra: University of Canberra

Maglen L. (1996) VET and the University, Inaugural Professorial Lecture, Department of Vocational Education and Training, University of Melbourne.

Marginson S 2000, *The changing nature and organisation of work and the implications for vocational education and training in Australia*, Adelaide NCVER.

Marsick V J & Watkins K E (1990) *Informal and Incidental Learning in the Workplace*, London Routledge.

Mathews J. (1989) *Tools of Change: New Technologies and the Democratisation of Work* , Sydney, Pluto Press.

Ministry of Education and Training (MEST) (1995) *Major Reforms in Training Systems in Five Countries* Education Skills & Training, Province of British Columbia Canada.

Organisation for Economic Cooperation and Development (OECD) (1991) *Technology in a Changing World* Paris OECD.

Organisation for Economic Cooperation and Development (2000) *Is there a new economy?* First report of the OECD Growth project, OECD, Paris.

Papadopoulos G (1996) *Education 1960-1990 The OECD Perspective*, Paris OECD.

Pateman, C. (1989) *The Disorder of Women*, Cambridge, Polity Press.

- Rose N (1990) *Governing the soul: The Shaping of the Private Self*, London, Routledge.
- Seddon T (2000) Working knowledge for new educational landscapes, *Proceedings of Working knowledge productive learning at work conference*, University of Technology Sydney.
- Senge P. 1991 *The Fifth Discipline: the art and practice of the learning organisation*, New York, Doubleday.
- Stevenson J C (1994) *Cognition at Work; The Development of Vocational Expertise* Adelaide NCVER.
- Symes C (ed) (2000) Working Knowledge productive learning at work *Proceedings of the International Conference Working Knowledge productive learning at work* December 2000 University of Technology Sydney.
- Symes C.& McIntyre J (eds) (2000) Working Knowledge: Higher education and the new vocationalism Buckinghame, SRHE & Open University Press.
- Tennant M (2001) *Doctoring the Knowledge Worker*, Working Paper 01-15, www.rcvet.uts.edu.au
- Thurrow L (1996) *The Future of Capitalism* Allen & Unwin Sydney.
- Usher & Solomon (1999) experiential Learning and the Shaping of subjectivity in the workplace, *Studies in the Education of Adults* 31:2:155-63.
- Walkerdine, V (1996) Subjectivity and social class: new directions for feminist psychology, *Feminism and Psychology* vol.6, no.3, pp.355-360.
- Walkerdine, Valerie, Helen Lucey, and June Melody (2000) *Growing Up Girl: psychosocial explorations of gender and class*, Routledge, London.
- Yates, Lyn (1999) How should we tell stories about gender and class in schooling today?, in A-K Broch-Due & A. Nilsen G.E.Birkelund ed, *Ansvar og Protest: Kjønn, klasse og utdanning i senmoderniteten*, University of Bergen Press, Bergen.
- Yates, Lyn (2000) Representing 'class' in qualitative research, in Julie McLeod and Karen Malone ed, *Researching Youth*, Clearinghouse on Youth Studies, Hobart.
- Young, M.F.D.(1998) *The Curriculum of the Future*, Falmer Press, London.