

# Theory into practice

TAFE NSW VET Teaching and Learning Project

## Part B

Annotated bibliography

The greatly increased diversity of teaching and learning methods utilised within VET programs has developed in response to immediate pressures but has not been accompanied by any theoretical or conceptual underpinning. There is a need for a clearly developed rationale for, and explication of, a contemporary pedagogy of VET (Chappell & Hawke 2003).

### **Acknowledgements**

The TAFE NSW VET Teaching and Learning Project follows on from the TAFE NSW VET Pedagogy Project. The VET Pedagogy Project produced three reports that were made available electronically via related websites. The literature review and annotated bibliography from the project were prepared and written by Robyn Dryen of Kaye Schofield and Associates, Sydney. The case studies report was prepared and written by Jock Grady and Donna Hensley of TAFE NSW – Hunter Institute and Dr Maggie Haertsch, Teaching and Learning Fellow.

As the first step in the VET Teaching and Learning Project, these reports have been edited and collated into a single publication for print and web distribution.

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## Foreword

Over the last ten years, the vocational education and training (VET) sector has experienced major and ongoing structural and institutional reforms, leading to a national system for training, led by industry, and framed within agreed standards for qualifications and delivery.

Many of us have taken part in the rich and vigorous debates that have been driving this process of reform. These debates and ideas have helped create the competency standards, training packages, and requirements for becoming registered as a provider of accredited training that we now work within.

In 2003, in a speech to the TAFE Directors Australia Conference, Robin Shreeve, Deputy Director-General TAFE NSW, argued for the need to turn our thinking to the practice of teaching and learning in VET. The time had come to uncover what is unique in how vocational skills and knowledge are imparted by one person to another, and to develop the theories that can expand our understanding of VET practice and are essential to quality in its delivery.

The Australian National Training Authority had also acknowledged the importance of teaching and learning through its funding of the Blue Skies Project. This project was designed to refresh VET sector thinking about learners and learning, and teaching and training. The 'think pieces' produced through this project were taken up by TAFE NSW in a series of seminars for teachers and educational managers, where these ideas and the implications of them for practice were discussed and shared.

Recognition of the need for a VET pedagogy led TAFE NSW to initiate a major project in this area, the VET Pedagogy Project. This three-part project, commissioned by the TAFE NSW Educational Strategy Committee and conducted throughout 2003, produced a review of current literature on vocational training, an annotated bibliography of major writings in this area, and a series of cases studies of innovative and excellent practice.

A follow up project, the TAFE NSW VET Teaching and Learning Project, has been established in 2004 to build on the momentum of interest generated by the earlier work. This publication marks the first step in this new project.

The focus of the TAFE NSW VET Teaching and Learning Project will be on expanding the bibliography of VET research and debate contained here, to develop a comprehensive, up to date and accessible repository of theories and ideas. It will also provide professional development opportunities, which draw on this bibliography, for VET practitioners from areas such as teaching, curriculum development and educational policy, to broaden their understanding of the teaching and learning theories that can enhance their practice.

I would like to acknowledge the work of staff in TAFE and Community Education Policy and Support and from TAFE NSW – Hunter Institute, the case studies practitioners from across Australia, and Kaye Schofield and Associates. Their generous input and efforts on behalf of these projects have produced a resource with which we can expand our thinking about teaching and learning in VET. I look forward to the diversity of views and ideas that we will share through this process and the contribution this will make to our work, as we continue to turn theory into practice.

John Allsopp  
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August 2004

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# Acronyms

<b>ANTA</b>	Australian National Training Authority
<b>ACER</b>	Australian Council for Educational Research
<b>AERC</b>	Adult Education Research Conference
<b>AVETRA</b>	Australian VET Research Association
<b>BVET</b>	Board of Vocational Education and Training
<b>CEET</b>	Centre for Economics of Education and Training, Monash University
<b>DeSeCo</b>	Definition and Selection of Competencies
<b>EdNA</b>	Education Network Australia
<b>ERIC</b>	Educational Resources Information Centre
<b>ERICACVE</b>	ERIC Clearinghouse on Adult, Career and Vocational Education
<b>HERDSA</b>	Higher Education Research and Development Society of Australasia
<b>NCSALL</b>	National Center for the Study of Adult Learning and Literacy, Harvard University
<b>NCVER</b>	National Centre for Vocational Education Research
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>UTS</b>	University of Technology, Sydney
<b>VOCED</b>	the UNESCO/NCVER research database for technical and vocational education and training

# Introduction

Over the last decade, vocational education and training (VET) has experienced major and continuing reform both in Australia and overseas. In Australia, this reform has been characterised by the creation of a national system of VET and a policy shift to industry leadership of that system. The focus of the reform has been on developing a qualifications framework, competency standards and training packages, the registration of training organisations and a contestable market.

As these reforms stabilise, the focus has begun to shift from these structural matters to the teaching and learning occurring both in institutions and in workplaces. For teachers, this decade of change has meant developing a new range of skills to meet the needs of a more diverse student population, increased accountability requirements, a greater focus on learning outcomes, demands for greater efficiencies in teaching practice, and the ability to harness the new technologies for greater flexibility.

Throughout this period of great change, the professional development of VET teachers focused firstly on understanding the new requirements of competency based training and training packages and more recently on change management and online learning. What has been missing is a comprehensive appraisal of what makes for best practice in VET teaching.

In this context, the TAFE NSW Educational Strategy Group conducted a research project, the TAFE NSW VET Pedagogy Project, during 2003 in order to contribute to the development of a theory (or theories) of teaching and learning in VET.

This research project comprised three parts:

- a comprehensive literature review providing an analysis and synthesis of literature relevant to the development of VET teaching and learning theory, an annotated list of key literature and ideas for sourcing relevant emerging literature in the future
- case study field work and analysis of practices, projects, exploration, ideas and investigations in TAFE NSW Institutes and other sites that will provide a current picture of developments in teaching and learning and capture the views of practitioners who are leading the field in innovative teaching and learning
- the development of a pedagogy or pedagogies for VET, or a pedagogical framework, which can be further developed on an ongoing basis as theory and practice emerge.

In 2004, a follow up project, the TAFE NSW VET Teaching and Learning Project, has been established to build on the work of the earlier project.

The TAFE NSW VET Teaching and Learning Project will help practitioners in NSW and nationally to inform their practice with a greater understanding of the theories of teaching and learning that are directly relevant to their work. Greater understanding of these theories will enable practitioners to more effectively select and use innovative teaching and learning strategies.

The TAFE NSW VET Teaching and Learning Project will make resources available on line and provide moderated on-line discussions, links to other resources and FAQs, to develop a professional learning community of VET practitioners.

The VET Teaching and Learning Project will establish and support an editorial group that will expand the current collection of annotated writings on VET teaching and learning, as these become available. This group of NSW VET practitioners will evaluate case studies,

research papers, books and articles and policy frameworks from Australia and overseas, and prepare annotations of recommended texts for inclusion in the bibliography.

Publication of the outcomes of the first two parts of the earlier project is the first step in the VET Teaching and Learning Project. These outcomes have been edited and collated into a single document, suitable for both print and web publication.

This publication is in three parts:

- Part A contains the review of VET teaching and learning literature produced from 2000 to 2003 and the analysis of the most recent trends in ideas and debates in this field. The 80 books, articles and conference papers referenced in this analysis are listed in the bibliography at the end of this section. Part A also contains an overview of useful websites and links for sourcing further information and reading.
- Part B sets out an annotated bibliography surveying the most recent Australian and international publications (mainly from 2000 to 2003). The publications annotated here are the basis for the analysis of writing on VET teaching and learning contained in Part A.
- Part C presents case studies of innovative and excellent practices and ideas in VET. Twenty-four case studies from a wide range of industry areas were selected from across Australia for inclusion.

The debates, ideas and findings contained in this publication, and the new knowledge about VET practice that will emerge through further work in the TAFE NSW VET Teaching and Learning project, hopefully will contribute to the ongoing development of excellence in vocational education and training.

# PART B

## ANNOTATED BIBLIOGRAPHY OF THE LITERATURE 2000 TO 2003

### Introduction

This annotated bibliography surveys the most recent Australian and international publications (primarily 2000 to 2003) relevant to considering a pedagogy for VET.

All web-based citations in this literature review were accessed during April and June 2003.

### 1 Contextual studies and reports

VET teaching and learning does not occur in a vacuum but within a context that is bound by time and impacted upon by politics, economic factors, developments in science and technology, and by social movements of the day. This section includes reports and papers that give a context for considering teaching and learning in VET.

Australian National Training Authority 2002, *Knowledge builders: fresh thinking about learners and their teachers*, ANTA. <[http://www.flexiblelearning.net.au/leaders/knowledge\\_tree/edition01/pages/02\\_critique/\\_download/Knowledge\\_Builders.pdf](http://www.flexiblelearning.net.au/leaders/knowledge_tree/edition01/pages/02_critique/_download/Knowledge_Builders.pdf)>

This is a collection of seven commissioned articles – called ‘think pieces’ – intended as a resource to inspire fresh thinking and renewed conversation about teaching and learning in the VET sector. The topics for these think pieces came after detailed conversations with leading educators and vocational education and training sector personnel and highlight most of the issues that emerge in the literature relevant to VET pedagogy. The chapters are: 1 Who are the learners?; 2 Implicit knowledge; 3 Emotions, memory and learning; 4 Ageing minds; 5 The learning environment; 6 The real world of work; 7 Assessment: have we forgotten something?

Australian National Training Authority 2002, *Environmental scan for the national strategy for vocational education and training 2004-2010*, ANTA. <[http://www.anta.gov.au/images/publications/National\\_strategy-environmental\\_scan.pdf](http://www.anta.gov.au/images/publications/National_strategy-environmental_scan.pdf)>

This environmental scan was prepared by ANTA to inform the development of the national strategy for vocational education and training for 2004 to 2010. It is based on a literature review of recent international and national research about sociocultural, economic, employment, governance and education and training issues and relies heavily on research undertaken by ANTA’s key research centres, the Research Centre for Vocational Education and Training and the Centre for the Economics of Education and Training, as well as recent International Labour Office research presented in the 2002 publication *Learning and training for work in the knowledge economy*. Its section include sociocultural issues, economic and employment issues, policy and governance issues and innovation in education and training.

For each section, it outlines possible implications for vocational education and training.

Buchanan, J et al. 2001, *Beyond flexibility: skills and work in the future*, BVET. <<http://www.bvet.nsw.gov.au/tenders/beyondflex.pdf>>

The final report of the 2000 to 2001 BVET research project, *The Changing Nature of Work*, looks at the way in which work and skills are linked, how this linkage is likely to change and the options available for policy makers to shape the linkage between work and skills in the future. A three stage research strategy was adopted. Stage 1 reviewed relevant literatures, statistics, history and key informants' ideas about skills and the future of work. Stage 2 involved undertaking six industry case studies to examine the changing nexus between work and skill. Stage 3 involved interviewing 12 individuals who worked in the industries examined. Provides a comprehensive and very readable analysis of skill formation, explores the concept of skill ecosystems and makes recommendations for shifts in public policy thinking about work and skill.

Chappell, C & Hawke, G 2003, 'An industry-led system: Issues for policy, practice and practitioners. Report 7 integrating report', *Oval Research Working Paper 03-07*. <<http://www.uts.edu.au/fac/edu/rcvet/working%20papers/RP127%20Report%207%20CC%20GH%20WP03-0.pdf>>

This is one of six reports produced by OVAL Research at UTS as a result of the ANTA funded project, *An Industry-Led VET System: Issues for Policy, Practice and Practitioners*. The project involved eight practitioner-researchers working in four TAFE institutes as project partners and focused on three industry sectors: information technology, tourism and hospitality and manufacturing.

Key findings were: the promotion of an industry-led VET system has produced significant gains for Australian VET; increasingly, local and regional relationships based on partnership and collaboration are central elements in VET program planning and delivery; and social policy objectives remain important elements in VET provision.

The report concludes that the greatly increased diversity of teaching and learning methods used within VET programs has developed in response to immediate pressures but has not been accompanied by any theoretical or conceptual underpinning, and that a contemporary pedagogy of VET needs to be developed.

Cully, M 2003, *Pathways to knowledge work*, NCVER. <<http://www.ncver.edu.au/research/proj/nr0022.pdf>>

This study looks at how the occupational structure of the Australian labour market has evolved over recent years, and how individuals have fared in the process. It takes a statistical approach with an examination of changes in the occupational composition of the labour market between 1986 and 2001, and a retrospective investigation into the factors that enabled some individuals to find themselves working in 1997 in jobs that might be categorised as knowledge work. It is included here because of the current focus in VET on developing the skills for knowledge workers.

Hargreaves, DH 2000, 'The production, mediation and use of professional knowledge among teachers and doctors: a comparative analysis', in OECD 2000, *Knowledge management in the learning society*, pp. 219-33.

This paper is a comparative analysis of the knowledge base and associated processes of the medical and teaching professions. It examines the similarities and differences between the two professions and proposes a generic model of a professional knowledge base. It suggests that while the knowledge base of doctors is rooted in the biomedical sciences, teachers have

no obvious equivalent, and the attempt to find one in the social sciences has so far largely failed. It is included here because of its original perspective on developing teacher professionalism.

Organisation for Economic Co-operation 2003, *Beyond rhetoric: adult learning policies and practices*. <<http://www1.oecd.org/publications/e-book/9103011E.pdf>> Executive summary at <<http://www.oecd.org/pdf/M00038000/M00038730.pdf>>

The purpose of this study was to document the adult learning policies and practices in Canada, Denmark, Finland, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Findings include: participation is highly unequal among specific population subgroups; those with higher education levels are aware of the benefits and need for upgrading and reskilling, and are perhaps more motivated because of the potential returns. Makes a number of recommendations including measures to make learning more attractive to adults, measures to stimulate employment-related training for workers and the unemployed. In particular, recommends the use of pedagogical methods suited to adults rather than to the young.

Selby Smith, C 2002, 'Lifelong learning and the world of work: CEET's survey for the OECD', paper prepared for the NCVER Researchers' Conference, Brisbane. <<http://www.ncver.edu.au/research/papers/downloads/trconf11/SelbySmith.rtf>>

Outlines the framework and discusses the findings of CEET's survey for the OECD of Australia's position regarding lifelong learning and the world of work. Finds that Australian arrangements do not provide a fully systemic view of learning; the Australian system does seek to cater for a diversity of learner needs; there has been a substantial shift of emphasis from the supply side of learning to the demand side, particularly in VET; there has been some increased emphasis on self-paced and self-directed learning, although there is more which could be done in this area (for example, for students with a disability); and policy and practice have recognised the multiple objectives of education in VET, in higher education and in adult and community education despite the increasing emphasis on an industry-led system.

## 2 Literature on adult learning

In the 1970s and 1980s, Malcolm Knowles popularised the notion that adults learn differently from children and adopted the term 'andragogy' to describe adult learning and to differentiate it from pedagogy. For three decades, this work has served to stimulate serious consideration and debate about adult development and student-centred learning. The following selection of references is a cross-section of recent writings on adult learning and the many theories which are developing.

### 2.1 General and introductory resources

The Educational Resources Information Center Clearinghouse on Adult, Career and Vocational Education (ERICACVE), <<http://ericacve.org>>, produces two series which are good starting points for identifying key issues in debates about VET teaching and learning:

- *Trends and Issues Alerts* – resource lists that provide a brief description of an emerging trend and related issues, with an annotated list of information sources, including organisations and websites
- *Myths and Realities* – an exploration of myths associated with topics in adult, career, and vocational education, examining commonly held assumptions that are taken for granted but are not accurate.

The following three publications from ERICACVE are useful for this topic.

Imel, S 2001, 'Adult development', *Trends and Issues Alert*, no. 22, ERICACVE. <<http://ericacve.org/docs/tia00090.pdf>>

This Alert reviews some of the trends related to changing conceptions of adult development, highlighting connections to adult education. Theories about adult development have been grouped into four models: biological, psychological, sociocultural, and integrative. Contains descriptions of 22 articles from 1998 to 2001.

Imel, S 2003, 'Effect of emotions on learning in adult, career, and career-technical education', *Trends and Issues Alert*, no. 43, ERICAVE. <<http://ericacve.org/docs/tia00111.pdf>>

This alert examines recent research conducted by neurologists and educators showing a strong link between emotion and reason, feelings and thoughts, thereby disproving the adage that emotion is the enemy of reason. Contains descriptions of 22 articles from 1995 to 2002.

Kerka, S 2002, 'Teaching adults: is it different', *Myths and Realities*, no. 21, ERICACVE. <<http://ericacve.org/docgen.asp?tbl=mr&ID=111>>

This publication takes a look at the assumptions, opinions and research in the debate on whether teaching adults is different from teaching children. Its two main sections deal with adults and children as learners, and learner centred or teacher directed teaching. The author concludes that the debate is ongoing and that different individuals will require different teaching. A comprehensive survey of the debate from 1993 to 2002.

*New Directions for Adult and Continuing Education* is a quarterly publication that explores issues of common interest to teachers, administrators, and policy makers in a broad range of adult and continuing education settings. The following issue is particularly relevant to this topic:

Merriam, SB (ed.) 2001, 'The new update on adult learning theory', *New Directions for Adult and Continuing Education*, no. 89, Spring.

This is an update of a 1993 publication and examines the latest developments, significant research and continuing scholarship in andragogy and self-directed learning. Articles explore a variety of frameworks, including context-based learning, informal and incidental learning, somatic learning, narrative learning and transformational learning. This edition also includes contributions on the new understandings of the brain's relationship to mind and consciousness and the role of emotions, feelings and the imagination in the learning process.

The following two articles both adopt the concept of viewing adult development and adult learning theories through 'lenses' as a way of synthesising the diverse theoretical approaches.

Baumgartner, LM 2001, 'Four adult development theories and their implications for practice', *Focus on basics*, vol. 5, issue B. <<http://www.gse.harvard.edu/~ncsall/fob/2001/baumgartner.html>>

By way of reviewing the theoretical literature, this paper presents four 'lenses' for viewing adult development: behavioural/mechanistic, cognitive/psychological, contextual/sociocultural and integrative. It describes how these various lenses impact on practice and suggests that these different perspectives can each contribute to better meeting adult students' learning needs.

Fenwick, T 2003, 'Rethinking processes of adult learning', draft chapter in G Foley (ed.), *Understanding adult education and training*, 3rd ed., forthcoming. <<http://www.ualberta.ca/~tfenwick/ext/pubs/adultlearning.htm>>

Groups the various theories of adult learning into four perspectives: the learning as acquisition lens, the learning as reflection lens, the practice-based community lens, and the lens of learning as embodied co-emergent process. An extremely accessible overview of recent theorising about adult learning which concludes that a single unified theory of adult learning is neither desirable nor possible and that any consideration of the learner must necessarily involve an understanding of the role of the teacher.

## 2.2 Discussions of the andragogical model

Brookfield, S 2000, 'Adult cognition as a dimension of lifelong learning', *Working papers of the Global Colloquium on Supporting Lifelong Learning*, Milton Keynes, Open University, UK in J Field & M Leicester (eds), *Lifelong learning: education across the lifespan*, RKP  
<[http://www.open.ac.uk/lifelong-learning/papers/393CD0DF-000B-67DB-0000015700000157\\_StephenBrookfieldpaper.doc](http://www.open.ac.uk/lifelong-learning/papers/393CD0DF-000B-67DB-0000015700000157_StephenBrookfieldpaper.doc)>

Argues that the shift to a focus on lifelong learning undercuts the argument that there is a distinct model of adult learning. Examines four strands of empirical research into adult learning in terms of capacities that seem to be observable chiefly in adult learners: the capacity to think dialectically, the capacity to employ practical logic, the capacity to know how we know what we know, and the capacity for critical reflection. Concludes that the research is often only reporting the positive aspects of adult learning and that adult students' accounts of their learning experiences, particularly those focused on critical reflection, have an equally strong negative impact.

Brookfield, S 2002, 'Overcoming alienation as the practice of adult education: the contribution of Erich Fromm to a critical theory of adult learning and education', *Adult Education Quarterly*, 52 (2), February, pp. 96-111. <<http://proquest.umi.com/>>

In this paper, Brookfield argues that the andragogical paradigm with its focus on individualism reigns supreme in contemporary adult education and that there is little attention to the political underpinnings of adult education practice and to the way political economy makes self-actualisation a luxury for a certain social class. He draws attention to the paradox that, while educators attempt to provide self-directed learning experiences, much adult learning is mandatory or required by employers and ceases to become the adult learner's intellectual project. Based on Fromm's critical theory, he explores the dilemma that arises when the majority opinion in an adult classroom may stand firmly against anything that disturbs the familiarity of teacher authority, didactic transmission of information and curriculum being decided by omniscient strangers in far-off places.

Choy, S & Delahaye, B 2002, 'Andragogy in vocational education and training: learners' perspective', *Innovation, internationalisation, new technologies and VET*, 5th annual conference of the Australian VET Research Association. <<http://www.avetra.org.au/2002%20conference%20pages/choy%20and%20delahaye.pdf>>

This paper investigates learners' perspectives on the practice of andragogy. Surveys were conducted of 266 youths aged 17 to 24 years enrolled in vocational education and training programs. The results showed that youth preferred a mix of pedagogical and andragogical practices. They liked the 'feel good' aspects of andragogy, such as being treated as adults, but were not willing to assume the learner responsibilities associated with andragogy. The authors conclude that it would be inappropriate to assume that young learners have the characteristics of adult learners that form the basis of andragogy.

Jerram, C 2002, 'Applying adult education principles to university teaching', *Quality conversations*, annual international conference of the Higher Education Research and

Development Society of Australasia. <<http://www.ecu.edu.au/conferences/herdsa/main/papers/ref/pdf/Jerram.pdf>>

Explores the trial application of andragogical practices with a university undergraduate class in computer mediated communications. The author found that the students' results were significantly improved and that motivation was very high, but that in a tertiary setting the cost of many of the activities would necessitate some compromises if the practice were to be expanded to other programs.

Holmes, G & Abington-Cooper, M 2000, 'Pedagogy vs. andragogy: a false dichotomy?', *Journal of Technology Studies*, vol. 26 (2), Summer-Fall. <<http://scholar.lib.vt.edu/ejournals/JTS/Summer-Fall-2000/holmes.html>>

A very readable history of the development of theories of pedagogy and andragogy and the current debates between the various proponents. Argues that it is critical for educators to be aware of their personal philosophies for working with adult learners to avoid potential problems, such as the educator adopting a democratic approach while the learners demand direction.

Monts, B 2000, 'Andragogy or pedagogy: a discussion of instructional methodology for adult learners', April. <<http://www.coe.ilstu.edu/scienceed/jinks/ci538/papers/monts.htm>>

This paper explores the validity of the andragogical model. Examines five studies dealing with attendance patterns, evaluation of teachers who utilised andragogical instruction, perceptions of non-traditional students, teaching and learning by both faculty and students, differences in teaching behaviour related to adult learners and pre-adult learners, and the learning preferences of adult learners in both traditional and non-traditional baccalaureate programs. Concludes that the research poses more questions than answers and that far more research would need to be done before opting exclusively for andragogical or pedagogical approaches.

Hampton, C 2001, *Empowering learners in VET*, August. <<http://www.etcaustralia.com/fll/docs/empower.doc>>

Argues that in VET there is still a focus on imparting knowledge and an underlying teacher centred pedagogy characterised by rigid structure, schemas, controlled progress through over-use of conditional release, step by step processing of information, poor integration of theory and practice, and testing or assessment with little or no relevance to competency standards.

The following two papers propose a theory of 'heutagogy', where the learner truly determines what and how learning should take place.

Hase, S & Kenyon, C 2000, 'From andragogy to heutagogy', *UltiBASE*, December. <<http://ultibase.rmit.edu.au/Articles/dec00/hase1.pdf>>

This paper suggests there is benefit in moving from andragogy towards truly self-determined learning, called 'heutagogy'. Argues that much of what is currently offered as flexible learning is flexible delivery that is teacher-centred not learner-centred, and that competency based curricula and training emphasises single-loop learning as opposed to developing people who will be able to manage their own learning.

Kenyon, C & Hase, S 2001, 'Moving from andragogy to heutagogy in vocational education', *Research to reality: putting VET research to work*, AVETRA Conference, Adelaide, South Australia.

<<http://www.avetra.org.au/2001%20conference%20pages/PAPERS%202001/kenyon%20hase.pdf>>

Covers very much the same ground as the previous paper but includes a description of the application of the heutagogical approach to a Royal Australian Air Force management program.

### **2.3 Other literature on adult learning**

Baptiste, I, Lalley, K, Milacci, F & Mushi, H 2001, 'Anatomy of adults' learning experiences: a phenomenological inquiry', *AERC proceedings*, East Lansing, Michigan USA. <<http://www.edst.educ.ubc.ca/aerc/2001/2001baptiste.htm>>

This study examined what experiences adults associate with the term 'learning'. It argues that adult education literature is long on propositions about what adult learning is or should be, but short on information about the meanings adults confer upon their lived experiences as learners. It is based on a small sample of four interviews analysed by four researchers. It concludes that a learning experience only occurs when there is a change in a person's view of and relationship to him or herself. The authors differentiate the consequences of learning into constituent effects ('con-fects') and by-products and argue that con-fects are purely individual or private operations

Wilson, AL and Kiely, RC 2002, 'Towards a critical theory of adult learning/education: transformational theory and beyond', paper delivered to the 43rd annual Adult Education Research Conference, Raleigh, North Carolina USA. <<http://www.ncsu.edu/ced/acce/aerc/papers/wilson.pdf>>

Surveys the literature and argues that there is no empirical basis for the belief that individual transformational learning will lead to social change. Argues for the need for a practical theory of critical learning if adult education is to maintain its relevance.

Yorks, L & Kasl, E 2002, 'Toward a theory and practice for whole-person learning: reconceptualizing experience and the role of affect', *Adult Education Quarterly*, 52 (3), May, pp. 176-92. <<http://proquest.umi.com/>>

Argues that in adult education in the United States there is a cultural bias favouring reflective discourse and a theoretical neglect of the role of affect. Describes a theory of personhood developed by John Heron to understand the affective dimension of learning and suggests how adult learning strategies can be linked to 'learning-within-relationship'. Argues that there is a direct relationship between the degree of diversity among learners and the need to create whole-person learning strategies that fully engage learners affectively.

Zukas, M & Malcolm, J 2001, 'Pedagogy, positionality and adult education: missing links?', *AERC proceedings*, East Lansing, Michigan USA. <<http://www.edst.educ.ubc.ca/aerc/2001/2001zukas.htm>>

A very interesting paper that contrasts the requirements for adult educators working within higher education institutions who are covered by the Institute for Learning and Teaching, and those working in the diverse further education sector covered by the Further Education National Training Organisation. By examining the differing professional requirements, this paper outlines two distinctive philosophies of adult learning.

The following paper takes a distinctly learner centred approach and looks to how this may play out in the future.

Lambert, M 2002, '21st century learners – and their approaches to learning', *UltiBASE*, August. <<http://ultibase.rmit.edu.au/Articles/sept02/lambert1.pdf>>

This paper postulates four models of the higher education learner of the future:

- the collaborator: for whom networks of knowledge, skills and ideas are the source of learning
- the free agent: utilising flexible, continuous, open-ended and lifelong styles and systems of learning to the full
- the wise analyser: able to gather, scrutinise and use evidence of effective activity and apply conclusions to new problems
- the creative synthesiser: able to connect across themes and disciplines, cross-fertilise ideas, integrate disparate concepts and create new vision and practice.

Concludes that learners of the future are likely to embody aspects of several, perhaps even all, models in their approaches to learning.

## 2.4 Cognitive neuroscience

Advances in non-invasive brain scanning and imaging technologies has meant that much has been learned about the functioning of the brain and its capacity to develop, learn and change throughout the lifecycle. These developments have major implications for learning theories and education policy.

Organisation for Economic Co-operation and Development 2002, *Understanding the brain: towards a new learning science*, September. <<http://www1.oecd.org/publications/e-book/9102021E.pdf>>

This is currently the major work on cognitive neuroscience and education. It explains in lay terms how the brain functions and the educational implications of the findings. It details three major international fora held in 2000 and 2001 and synthesises the leading research findings. Chapter 4 includes sections on learning seen from the neuroscientific approach: knowledge and learning; literacy and numeracy; language learning; reading skills; mathematical skills; emotions and learning; the lifelong learning brain; plasticity and lifelong learning.

Bech, NI 2003, 'Neuroscience speaks for practice-oriented learning', *Learning Lab Denmark Quarterly*, no. 3, March. <[http://www.ild.dk/upload/S.16\\_pdf\\_DK+\\_UK.pdf](http://www.ild.dk/upload/S.16_pdf_DK+_UK.pdf)>

A brief plain English guide (translated from Danish) to the findings of research in neuroscience and their implications for teaching.

## 2.5 Lifelong learning

Illeris, K 2002, 'Lifelong learning – from the perspective of the learners', presentation to the workshop *Motivation and lifelong learning*, Danish EU Presidency Conference. <<http://us.uvm.dk/lifelonglearning/pdf/illeris.pdf>>

Argues that while there are three main purposes of lifelong learning, it is crucial for the competitive capacity of nations, companies and individuals and for economic growth; it is necessary for social integration and thus for the internal balance and coherence of nations and communities; and it is valuable for the quality of life and for individuals to manage their daily lives. The first dominates European policy making in education. Argues that, if the idea of lifelong learning is to be realised, then it must be practised in ways that respect the rationality of learning that is, in its essence, not economic, but human and psychological.

Illeris, K 2001, 'Adult education as mass education', paper for presentation at the ESREA Conference, Lisbon. <[http://www.ulusofona.pt/inst/eventos/esrea/abstracts/knud\\_illeris.pdf](http://www.ulusofona.pt/inst/eventos/esrea/abstracts/knud_illeris.pdf)>

A paper describing the Danish Adult Education Research Project (1997 to 2000) that has been investigating the broad adult education systems which mainly serve adults with brief schooling and unemployed adults. The project has consistently sought to investigate adult education from the perspective of the learners. Empirical activities have comprised observation of teaching sessions and daily life and individual and group interviews of participants. Findings include that most adult learners enter the programs because they are more or less forced to do so as part of labour market programs, and not because of an inner drive or interest. Further, they develop a variety of psychological defence strategies to avoid learning which challenges their usual personal ways of thinking, reacting and behaving.

Medel-Añonuevo, C & Mitchell, G (eds) 2003, *Citizenship, democracy and lifelong learning*, UNESCO Institute for Education. <<http://www.unesco.org/education/uie/pdf/uiestud35.pdf>>

Collection of nine papers from a three-day international seminar on how lifelong learning can help build or revitalise democracy.

### 3 Literature on workplace learning

#### 3.1 General resources

To understand the literature on workplace learning, it is necessary to understand theories about knowledge. The following papers provide accessible overviews of these theories.

Stenmark, D 2002, 'Information vs. knowledge: the role of intranets in knowledge management', *Proceedings of HICSS-35*, IEEE Press, Hawaii. <<http://w3.informatik.gu.se/~dixi/publ/ddoml02.pdf>>

Examines the relationship between information and knowledge and argues that all knowledge is tacit and that what can be articulated and made tangible outside the human mind is merely information. Explores how information and knowledge affect one another.

Stevenson, J 2001, 'Vocational knowledge and its specification', *Journal of vocational education and training*, vol. 53 (4), pp. 647-62. <<http://www.triangle.co.uk/vae/index.htm>>

Considers the codification of knowledge and argues that it serves to reinforce differences in the value afforded various kinds of knowledge, education and learners. Proposes a holistic approach to teaching and learning, which develops plural ways of knowing.

The following paper is concerned with key competencies and provides both an overview of the theories of knowledge and explains how these impact on theories of vocational learning.

Gonczi, A 2002, 'Teaching and learning of the key competencies', paper presented to DeSeCo Symposium, Geneva. <[http://www.statistik.admin.ch/stat\\_ch/ber15/deseco/deseco\\_symposium\\_gonczi\\_120202.pdf](http://www.statistik.admin.ch/stat_ch/ber15/deseco/deseco_symposium_gonczi_120202.pdf)>

Discusses learning and teaching key competencies and argues that the old learning paradigm needs to be replaced by a new one that links learners to the environment in which learning is taking place.

#### 3.2 Writings with a focus on the workplace as a place of learning

Billett, S 2001, 'Participation and continuity at work: A critique of current workplace learning discourses', in *Context, power and perspective: Confronting the challenges to improving attainment*

*in learning at work*, Joint Network/SKOPE/TLRP International workshop, Sunley Management Centre, University College of Northampton.  
<[http://www.infed.org/archives/e-texts/billett\\_workplace\\_learning](http://www.infed.org/archives/e-texts/billett_workplace_learning)>

This paper focuses on learning through participation in social practices and criticises use of the term 'informal learning' in relation to workplace learning.

Billett, S 2002, *Co-participation at work: understanding learning through work*, NCVER.  
<<http://www.ncver.edu.au/research/papers/downloads/trconf11/Billett.rtf>>

This paper proposes that whether learning arises through everyday work activities or through guided learning in workplaces, it is underpinned by workplace participatory practices. Calls for workplace learning to be discussed and evaluated on its own terms, not as a deficit model through comparison with institutional learning. Argues that workplace learning is structured by work practices and that learning outcomes are socially shaped.

Boud, D & Middleton, H 2002, 'Who do we learn from at work? Interlinked communities of practice and informal learning', paper delivered at the 43rd annual Adult Education Research Conference, North Carolina State University, Raleigh, North Carolina USA.  
<<http://www.ncsu.edu/ced/acce/aerc/papers/boud.pdf>>

Part of a broader study focusing on the relational aspects of learning within the theoretical framework of communities of practice. This paper addresses the question of who is involved in learning in workplaces. It draws on semi-structured interviews with workers at four Sydney worksites within a single organisation and presents preliminary findings about how these workers find what they need to learn effectively. Found that each of the workgroups exhibited a unique context and learning experience and that some learning networks exhibit features of communities of practice, but others do not.

Boud, D & Solomon, N 2000, 'Work as the curriculum: pedagogical and identity implications', *Working knowledge: productive learning at work. Working Paper 07*, conference proceedings, University of Technology Sydney, UTS Research Centre Vocational Education and Training. <<http://www.rcvet.uts.edu.au/wkconference/working%20knowledge07.pdf>>

This paper points to some of the features involved in the beginnings of a shift of interest from the relatively well-ordered traditional disciplines towards the unruly domain of professional practice and trans-disciplinary knowledge, where work and workplaces are becoming key sites of and sources for the academic curriculum.

Chappell, C, Solomon, N, Tennant, M & Yates, L 2002, 'Researching the pedagogies of the new vocationalism', *Working Paper 02-13*, UTS Research Centre Vocational Education and Training. <<http://www.uts.edu.au/fac/edu/rcvet/working%20papers/WP02%2013Chappell%20doc.pdf>>

This paper outlines the theoretical underpinnings and methodology of a three year research project at UTS. The project is designed to examine the processes and production of new working identities across industries with different histories (hospitality and IT), and across different educational institutions (schools, technical and further education colleges, industry-based providers and university). The paper reviews features of the new vocationalism, changing identities and changing knowledge.

Unwin, L n.d., 'Lifelong learning in workplace settings: the case of the young worker', *Working papers of the global colloquium on supporting lifelong learning*, Milton Keynes, Open University, UK. <[http://www.open.ac.uk/lifelong-learning/papers/39464044-000E-7358-0000015700000157\\_LornaUnwinpaper-noabstract.doc](http://www.open.ac.uk/lifelong-learning/papers/39464044-000E-7358-0000015700000157_LornaUnwinpaper-noabstract.doc)>

This paper explores the changes in the demand for skills across industry and the implications for the lifelong learning prospects of young employees. Focuses on the United Kingdom's Modern Apprenticeship scheme for youth. Considers research on the outcomes of the scheme and concludes it must improve on four dimensions, pedagogical, occupational, locational and social, if young people are to develop their full potential.

Wagner, R & Childs, M 2000, *Workbased learning as critical social pedagogy*, AVETRA. <[http://www.avetra.org.au/papers%202000/wag\\_chi.pdf](http://www.avetra.org.au/papers%202000/wag_chi.pdf)>

This paper reports research conducted by the Workbased Learning Unit at the National Centre for Critical Social Pedagogy (N.C.Crisp). The paper argues that two main forces, economic responsiveness and critical social pedagogy, form an integral, historic part of work based learning. Describes the debates in relation to the structure and delivery of the Graduate Diploma of Social Sciences (Community Services). Details the historic divisions between the academic and the vocational within a theoretical framework.

### 3.3 Writings on formal and informal learning

Bjornavold, J 2001, 'The changing institutional and political role of non-formal learning: European trends' in P Descy & M Tessaring (eds), *Training in Europe - second report on vocational training research in Europe 2000: background report*, Cedefop Reference Series, Luxembourg. <<http://www2.trainingvillage.gr/download/publication/reference/3008EN/3008EN115Bjornavold.pdf>>

This paper provides an overview on some of the main European tendencies in the area of identification, assessment and recognition of non-formal learning. Claims that the focus on non-formal learning is more a question of improving the quality of learning (by broadening the knowledge and competence base) than of increasing the capacity of learning. Explores the need to measure and sort and to introduce new control mechanisms as education and training diversify. Gives particular attention to the implications for assessment methods.

Colley, H, Hodkinson, P & Malcolm, J 2002, *Non-formal learning: mapping the conceptual terrain. A consultation report*, Lifelong Learning Institute, University of Leeds. <[http://www.infed.org/archives/e-texts/colley\\_informal\\_learning.htm](http://www.infed.org/archives/e-texts/colley_informal_learning.htm)>

A discussion paper as part of research commissioned by the Learning and Skills Development Agency in the UK to examine and analyse a wide range of relevant literature about formal, non-formal and informal learning, in order to provide greater conceptual clarification. It surveys the literature and attempts to draw schema for considering informal and formal learning but finds that there are few learning situations where either informal or formal elements are completely absent. They conclude that it is often more helpful to examine dimensions of formality and informality and ways in which they interrelate with each other.

Down, CM 2003, *Situated learning: researching the convergence of formal with informal learning*, NCVET. <<http://www.ncver.edu.au/research/papers/downloads/trconf11/Down.rtf>>

This paper uses a research-based model of learning to explore the issues involved in the convergence of formal and informal learning. It is based on an ongoing literature search and 14 in-depth interviews with practitioners. The data is analysed using a matrix derived from a consideration of learning within the framework of activity theory. Argues that the assumption that participation in formal learning will prepare one for informal learning needs to be challenged and that this has implications for the role of teachers.

### 3.4 Communities of practice

Smith, MK 2003, 'Communities of practice', in *The encyclopaedia of informal education*.  
<[www.infed.org/biblio/communities\\_of\\_practice.htm](http://www.infed.org/biblio/communities_of_practice.htm)>

Outlines the theory and practice of 'communities of practice' based on the situated learning model of Lave and Wenger, and examines some of the issues and questions for informal educators and those concerned with lifelong learning.

Mitchell, J 2003, *Effectively structuring communities of practice in VET*, ANTA.  
<[http://www.reframingthefuture.net/publications/effectively\\_structuring.pdf](http://www.reframingthefuture.net/publications/effectively_structuring.pdf)>

Reports on the evaluation of 48 projects that were funded to form communities of practice in the VET sector in Australia in 2002, as part of the Reframing the Future program. The research was based on participative evaluation methods. The projects were evaluated against the criteria for communities of practice, and critical success factors for their use as professional development for VET practitioners are discussed.

### 3.5 Writings on apprenticeship as a model of learning

Ainley, P & Rainbird, H (eds) 1999, *Apprenticeship – towards a new paradigm of learning*, Kogan Page, London.

A collection of papers that review the history and theoretical underpinnings of apprenticeship as a model for acquiring competence. It examines the reasons for the recent interest in the apprenticeship model of learning and gives some scenarios for the future of apprenticeship.

Daly, R & Mjelde, L 2000, 'Learning at the point of production: new challenges in the social division of knowledge', *Working knowledge: productive learning at work, Working Paper 14*, conference proceedings, UTS Research Centre Vocational Education and Training.  
<<http://www.rcvet.uts.edu.au/wkconference/working%20knowledge14.pdf>>

This paper argues that significant pedagogical lessons remain to be learned from the old tradition of the 'master-apprentice' learning model which might profitably be applied to future vocational learning, as well as to fields of academic based learning. The paper discusses a Norwegian participant observation project in a mechanical engineering plant, in the printing industry and in a cleaning products factory, and includes interview and survey data gathered from vocational school students, apprentices and vocational school teachers over the past two decades. Describes the learning and accessing of knowledge and analyses the observations within a social cognition framework.

Fuller, A & Unwin, L 2001, 'The changing relationship between community and apprenticeship', *International Labour Market Studies*, vol. 11 (3), September, pp. 1-3.  
<<http://www.clms.le.ac.uk/Readings/CLMSnlvol11no3.pdf>>

Fuller, A & Unwin, L 2001, 'Creating a contemporary apprenticeship: can the model work in all sectors?', *International Labour Market Studies*, vol. 11 (4), December, pp. 6-8. <<http://www.clms.le.ac.uk/Readings/CLMSnlvol11no4.pdf>>

These two short articles draw on research for *From cordwainers to customer service: the changing relationship between apprentices, employers and communities in England*, a SKOPE Monograph from the Universities of Oxford and Warwick in 2001. They compare historical models of apprenticeship to the Modern Apprenticeship in the UK. They argue that much of what was good about traditional apprenticeships has been lost in the new arrangements for apprenticeships, but also because of changes in industry and the community. They argue for

significant change to the program to construct a high-quality work-based route for young people.

Gamble, J 2000, 'Modelling the invisible: the pedagogy of craft apprenticeship', *Working knowledge: productive learning at work, Working Paper 24*, conference proceedings, UTS Research Centre Vocational Education and Training. <<http://www.rcvet.uts.edu.au/wkconference/working%20knowledge24.pdf>>

The first part of the paper puts forward a conceptual framework for understanding why tacit knowledge is tacit. The paper then refers to an ethnographic study of apprenticeship in the trade of cabinet making (in South Africa) to illuminate a knowledge structure coded as 'tacit' and therefore amenable to learning through modelling, rather than by explicit verbal instruction.

## 4 Literature on online learning

### 4.1 General resources

Guthrie, H (ed.) 2003, *Research readings: online learning*, NCVER. <[http://www.ncver.edu.au/cgi-bin/gda.pl?id=2358/research/proj/nr1F06\\_1.pdf](http://www.ncver.edu.au/cgi-bin/gda.pl?id=2358/research/proj/nr1F06_1.pdf)> and <[http://www.ncver.edu.au/cgi-bin/gda.pl?id=2359/research/proj/nr1F06\\_2.pdf](http://www.ncver.edu.au/cgi-bin/gda.pl?id=2359/research/proj/nr1F06_2.pdf)>

Presents a collection of readings to provide an overview of nine research projects funded under the Australian Flexible Learning Framework research programs for 2000 and 2001. These readings are complemented by three chapters which were commissioned for this book. Sections are the big picture, teaching practice and learner views, operational issues, e-learning in companies and online learning in regional Australia.

National Centre for Vocational Education Research 2002, *Flexibility through online learning: at a glance*, ANTA. <<http://www.ncver.edu.au/research/proj/nr1F12/nr1F12.pdf>>

This publication consolidates a range of research funded by the Flexible Learning Advisory Group and focuses on issues related to online learning and delivery. In reviewing the research literature, it provides a guide to current thinking and best practice in online learning and includes a section on pedagogy.

### 4.2 Other writing about online learning

Blanco, M 2002, 'Researching VET policy and practice: national and global perspectives', paper presented at the NCVER National Vocational Education and Training Research Conference, Brisbane. <<http://www.ncver.edu.au/research/papers/downloads/trconf11/blanco.rtf>>

This paper looks at policy and practice in VET in the context of flexible learning. It defines flexible learning and policy, highlights key issues for policy review and development in the Australian VET sector that emerged from the Vet Policy Advice project in 2001. The two significant issues were lifelong learning in the global community and provision of ICT that is accessible, affordable and reliable.

Brennan, R, McFadden, M and Law, E 2001, *All that glitters is not gold: online delivery of education and training. Review of research*, NCVER. <<http://www.ncver.edu.au/research/proj/nr9008.pdf>>

This is an extremely comprehensive analysis of research literature on online learning written prior to 2000. From the analysis, the authors describe the preconditions necessary to achieve improved learning outcomes for online learners.

Cashion, J & Palmieri, P 2002, *The secret is the teacher: the learner's view of online learning*, NCVER. <<http://www.ncver.edu.au/research/proj/nr0F03a>> and <<http://www.ncver.edu.au/research/proj/nr0F03b>>

Report of a study on what constitutes quality in online learning from both the learners' and teachers' perspectives. The study used both qualitative (focus groups, case studies and interviews) and quantitative methods (online questionnaires). Found that the most critical factors for the provision of quality online learning were (in order): flexibility; responsive teachers; quality of materials and course design; access to resources; and online assessment and feedback. Interestingly, students rated learning styles as seventh most important.

Kenny, J 2003, 'Student perceptions of the use of online learning technology in their courses', *UltiBASE*. <<http://ultibase.rmit.edu.au/Articles/march03/kenny2.pdf>>

Report of student evaluation of the distributed learning system at RMIT. Six hundred and twenty students responded to an online questionnaire about their use of online learning technology. Among the findings were that courses which contain well structured materials, higher levels of interaction and prompt feedback on queries are more appealing, and that there is a strong relationship between students' confidence and familiarity with online technology and their satisfaction with online courses. Contains a literature review of research about students and online learning.

Kramarae, C 2001, *The third shift: women learning online*, American Association of University Women Educational Foundation. <<http://www.uoregon.edu/~cheris/third%20shift.pdf>>

This report is based on interview and online questionnaire responses from 481 women and 53 men from many occupations and includes a review of published research on distance learning. The interview protocol and online questionnaire included questions about access to resources needed for online learning, learning styles, best and worst educational experiences, and experiences, worries, and successes regarding online education. Recommendations for teachers include tell students why specific methods are being used, recognise different learning methods and diversify approaches and methodologies used in online education and make positive pluralism one of the goals of all online programs.

Choy, S, McNickle, C & Clayton, B 2002, *Learner expectations and experiences: an examination of student views of support in online learning*, NCVER. <<http://www.ncver.edu.au/research/proj/nr0F02.pdf>>

Report of a study of 201 online learners in 23 private and public VET Registered Training Organisations (RTOs) in New South Wales, Queensland, Victoria, Australian Capital Territory and South Australia. The study comprised a review of the literature and of websites and other databases of online provider, a survey of online students, and brief interviews with key staff responsible for online delivery within RTOs. The study found that the essential features of student support include pre-enrolment support, teaching and learning support and technical support.

## **5 Areas of adult learning**

### **5.1 ABE, ESOL and literacy**

Kallenbach, S & Viens, J 2002, 'Open to interpretation: multiple intelligences theory in adult literacy education', *NCSALL Reports*, no. 21, May. <<http://ncsall.gse.harvard.edu/research/report21.pdf>>

Report of the first systematic effort related to multiple intelligences (MI) theory in adult literacy education. This publication reports on two interwoven qualitative research projects focused on applying MI theory in practice. The first involved 10 practitioners conducted case studies. The second, which is the primary focus of this report, was a study across those 10 contexts, and invited analyses and comparison of specific applications of MI theory across different instructional contexts and with different teacher and learner populations. Methodology included on-site observations, qualitative interviews and teacher journals. Subjects were 10 teacher researchers and about 175 students. Includes detailed implications of MI theory for practice, policy, and research.

Kegan, R et al. 2001, 'Towards a new pluralism in ABE/ESOL classrooms: teaching to multiple 'cultures of mind'', *NCSALL Reports*, no. 19a, August. <<http://ncsall.gse.harvard.edu/research/report19a.pdf>>

This document is an executive summary of a larger, detailed monograph. The study followed 41 ABE and/or ESOL learners of diverse backgrounds enrolled in three US programs (a community college, a family literacy site and a workplace site) oriented to enhancing greater English language fluency, increasing content knowledge and improving effectiveness as workers, parents or students. Investigated how the participants made sense of their instruction, their motives and goals for learning, their expectations of themselves and their teachers, and their definitions of and sense of themselves in their social roles as students, workers and/or parents.

Magro, K M 2002, 'Exploring teaching roles and responsibilities in adult literacy education: do teachers see themselves as transformative educators?', paper delivered at the 43rd annual Adult Education Research Conference, Raleigh, North Carolina USA. <<http://www.ncsu.edu/ced/acce/aerc/papers/magro.pdf>>

This qualitative study compared English and ESL teachers' perspectives of teaching and learning with the role of the adult educator and the process of learning. The research was from the perspective of Mezirow's theory of transformational learning and Freire's critical theory of adult education and involved three semi-structured interviews with each teacher. Findings include significant parallels between some of the teachers' intentions, views of learning and curriculum orientation consistent with the role of the educator and the process of learning described in transformative theories of adult learning. However, partnerships with business, English for a technical purpose, computer literacy, workplace literacy and training, and standardised evaluation all emphasise a transmission of specific skills and competencies and, in these contexts, the teachers felt more closely connected with the role of 'instructor' or 'technician' than with the role of 'educator'.

## **5.2 Multicultural education**

Cumming-McCann, A 2003, 'Multicultural education: connecting theory to practice', *Focus on Basics*, vol. 6, issue B, February. <<http://ncsall.gse.harvard.edu/fob/2003/mccann.html>>

Reviews the goals of multicultural education and provides a theoretical framework for implementing multicultural education within adult basic education programs. Outlines the various models of multicultural curriculum: the contributions approach, the additive approach, the transformative approach, the decision making and social action approach based on the work of JA Banks.

## **5.3 Indigenous education**

Seeman, K 2000, 'Technacy education: towards holistic pedagogy and epistemology in general and indigenous/cross-cultural technology education', *Technology Education Research*

Conference, December. <<http://www.scu.edu.au/schools/edu/courses/edtech/sections/downloads/Technacy.pdf>>

'Technacy' provides a framework for considering science and technology within a socio-environmental context and is a way of defining the meaning of technological literacy that goes beyond competency in using technology. Describes how indigenous approaches to technacy have been incorporated into the design of the Aboriginal Technical Worker program.

#### **5.4 Career and technical education (primarily school-based)**

Brown, BL 2002, 'Generic skills in career and technical education', *Myths and Realities*, no. 22, ERICACVE. <<http://ericacve.org/docgen.asp?tbl=mr&ID=112>>

This publication explores the myths and realities in the relationship between generic skills and career and technical education (CTE). It is a review of 14 papers from 1995 to 2002 and provides an overview of the differing definitions of generic skills, the debates about whether generic skills can be learned through traditional instruction methods, and what the literature tells us about employer attitudes to generic skills.

Brown, BL 2003, 'International models of career-technical education', *Trends and Issues Alert*, no. 42, ERICACVE. <<http://ericacve.org/docgen.asp?tbl=tia&id=165>>

This Alert reviews the trends and issues involved in international approaches to career and technical education and vocational education. An annotated bibliography of 23 documents written between 2000 and 2002 relevant to career and technical education issues

Rojewski, JW 2002, 'Preparing the workforce of tomorrow: a conceptual framework for career and technical education', paper prepared for the 2002 National Career and Technical Teacher Education Institute, National Dissemination Center for Career and Technical Education. <[https://www.nccte.org/publications/infosynthesis/r&dreport/PrepWrkrfceAll\\_Rojewski.pdf](https://www.nccte.org/publications/infosynthesis/r&dreport/PrepWrkrfceAll_Rojewski.pdf)>

This document examines issues connected to the development of a conceptual framework for public career and technical education in the United States. Surveys the literature and the prevailing US models for CTE. Identifies three philosophical models in CTE: essentialism, where the purpose of CTE is to meet needs of labour market; pragmatism, where the purpose of CTE is to fulfil individual needs for personal fulfilment and life preparation; and pragmatism (reconstructionist strand) where the purpose of CTE is to transform work into democratic, learning organisations. Argues that these different philosophies influence curriculum structure, instructional strategies and program delivery. Attempts a synthesis of the different approaches to settle on the key elements of a conceptual framework.

## **6 Case studies of practice**

Mitchell, J et al. 2003, *Emerging futures: teaching and learning in VET*, ANTA, Reframing the Future and Office of Training and Tertiary Education, Vic. <[http://www.reframingthefuture.net/publications/Emerging\\_Futures.pdf](http://www.reframingthefuture.net/publications/Emerging_Futures.pdf)>

This is a newly released report of a national review of good practice drawn from current VET provider activity. It contains five case studies and 10 vignettes describing innovative practices and bases its analysis on this data, a literature review, 67 interviews and nine focus groups. It concludes that specific innovation is highly contextual, and the interpretation of possibilities and solutions relies heavily on the professional judgment of the VET practitioners involved.

Tait, T, Frankland, G, Moore, S & Smith, D 2002, *Curriculum 2000 innovations, opportunity and change*, Learning and Skills Development Agency, UK. <<http://www.lsda.org.uk/files/PDF/ISBN1853387347.pdf>>

This publication is a collection of case studies arising out of research by the Learning and Skills Development Agency in the UK into Curriculum 2000 which aimed to offer a more flexible curriculum for post-16 students. Participating organisations were asked to provide a case study to demonstrate the innovative activities brought about by Curriculum 2000. While primarily reports of school based initiatives, it does include further education colleges.