'Skills talk' and the Practice of (Higher) Education

David Carter
The University of Western Australia

Abstract

This paper reflects on the relevance and applicability of 'key transferable skills' to the higher education curriculum. Although they are regarded as having common currency within universities, it is argued that their uncritical acceptance devalues and distorts the nature and character of the teaching and learning employed in academe. The paper focuses primarily on the contemporary context in the United Kingdom, with broader implications elsewhere, in which the nomenclature of skills was progressively introduced and became pervasive across the sector. Similarly, the social/political policies driving such changes were essentially vocational and instrumental in nature. It is affirmed that while transferable skills have an important place and role to play in higher education a body of evidence shows that they do not readily transfer from the university to the workplace as is tacitly assumed. Furthermore, skills dominance in curriculum design and implementation leads to confusion and tensions concerning curricular ends and means.

Introduction

It is evident to those working in the university sector that higher education has changed dramatically in the UK as elsewhere, in line with centralist government held policies (Dearing, 1997; West, 1998; OECD, 2000; DEST, 2005). Such policies were contextualised by one Secretary of State for Employment in the Conservative government of 1989 - 97, as '1990s: the skills decade' (Robertson, 1994, 29). Critics of current government policies in the UK's higher education sector go as far as to say that the sector is in a state of crisis, precipitated by an unprecedented increase in student numbers along with a parallel diminution of the unit of resource. As might also be added that higher

education is confronting a crisis of purpose. One manifestation of this, across post-compulsory education, appears to be an increasingly widespread emphasis on the use of jargon such as 'personal transferable skills' and 'generic competencies'. Scott (1995, 1997), for example, alludes to 'bite sized chunks' of learning and a popularised skills nomenclature that nowadays seeks to make reference erroneously to higher order procedural knowledge, attributes and habits of mind, repackaged as entities such as 'leadership skills', decision-making skills', 'creativity skills' and the like.

The overall aim of this paper is to identify and focus on the problematic nature of generic skills and skills transfer, as evidenced in contemporary professional discourse, in which skills dominate the lexicon of university based practitioners at the expense of other competing 'curriculum commonplaces' in the process of curriculum making. Joseph Schwab (1973, 1983) circumscribed these commonplaces to include the student, the teacher, the social milieu or context and the subject matter.

This paper is framed within an education context which has witnessed a shift in emphasis away from the traditional value of high status or elite knowledge towards more operational and instrumental approaches now evident in university curricula (Bernstein, 1971; Schön, 1983; Becher and Trowler, 2001). Thus, in the contemporary context, Bowers (1997) defines high status knowledge as that which leads to more technological development, more economic growth, and the further commodification of the human experience.

It is argued that the drivers for this shift *inter alia* are to be found in responses to the general dissatisfaction of industry with the performance of new graduates and the emergence of economic rationalism within the neo-corporatist state (Marginson and Considine, 2000; Carter, 1995; Broadfoot, 1985). The paper is informed by the tenets of postmodern discourse analysis (Dickens and Fontana, 1994; Gee, 2005), which has unearthed the problematic nature of the professional discourse and thereby facilitating the uncritical acceptance and dominance of skills and generic skills transfer in higher education. The problem brought into focus in this paper is that discourses act as pointers to larger social phenomena, in this case perceived as a shift in ideology from academic competence to one of operational competence.

Whilst the policy framework, at least since the 'eighties, has substantially altered as a function of the perceived need by central

government(s) to exercise greater control over public expenditure, the traditional autonomy of the universities has come under challenge. This shift has been driven, among other things, by the needs of the knowledge economy and employer demands for a more instrumental curriculum attuned to employment needs and employer expectations regarding the performance of new graduates.

According to Shils:

> If these statements that universities are "service stations", suppliers of "high level manpower", satisfiers of "the need for social change" and the like are true, then there is no alternative to Caesar. ...Intellectual activity is reduced to a consumer good. ... Everything must justify itself by its measured covering of its cost. According to this (*sic* economic) view, there is nothing but the self-indulgent investigator gratifying his arbitrary curiosity or the demands of society represented by the state.

(Shils, 1997: 212)

In such a prevailing climate, labour market economics framed an employment agenda in which employer voices were increasingly heard by government. It is noteworthy at this juncture that Berg (1974, reprinted 2005), in a seminal text addressed to U.S. employers as much as the universities, critically examined the economic thesis, conventionally supported by statistical generalisation, that investment in education shows a rate of return that compares favourably with other forms of capital investment. He argued, in opposition to the prevailing orthodoxy, that education does little to provide many of its recipients with skills, abilities or knowledge likely to be of any direct use in initial employment. He also claimed that most employers have come to accept that a graduate will be almost totally useless to them until the job itself has taught him or her what they need to know. In a series of supporting studies Berg concluded that education is as often a negative as much as a positive predictor of a person's worth to an employer. This was shown to be true for technical, unskilled white-collar staff, and also professional staff.

Notwithstanding the foregoing exposition, a degree of cultural lag in the 'nineties resulted in a seeming disparity between emergent, instrumental societal needs and expectations and the more traditional offerings of extant university curricula. In some sectors of the labour force there appeared clearly voiced expectations regarding what it was that employers wanted new graduates to be able to *do*, rather than what they *knew* (Silver and Brennan, 1988). The former included; 'effective

communication skills; leadership qualities; problem solving skills; personal skills such as self discipline, organisation and decision making; teamwork skills and information technology' (Robertson, 1994). In the context of labour market demands in a knowledge based society the distinction between knowing and doing can be conceived of as rather artificial, but such a conception belies the inescapable fact that skill (doing activities) is distinguishable from knowledge, but they are not opposites. Acquiring knowledge necessarily involves acquiring skills, and vice versa (Reid, 1996).

Eventually, further curriculum change emanating from the extant external environment resulted in the accordance of a higher precedence to more instrumental educational objectives along with the tendency to marginalise more liberal educational values (Jones, 1996; Reid, 1996). From a policy perspective, the change is reflected in Dearing's assertion that:

> We see the historic boundaries between vocational and academic education breaking down, with increasing active partnerships between higher education institutions and the worlds of industry, commerce and the public service.

(Dearing, 1997:1)

His assertion reflected a social situation in which society was (is?) apparently framing the character of higher education, by placing a value and defining a precedence on those forms of knowledge, skills and understanding deemed to be the most socio-economically valuable. It is, therefore, not really surprising to note in certain quarters that 'transferable skills are a means to disenfranchising discipline-based academics of their expertise', through external agencies exercising various forms of curriculum control (Bennett, Dunne and Carré, 2000: 6). The need for structural change is not perceived when, along with other socio-cultural forms of which the university is but one, they continue to be valued by a society (or its gatekeepers) and therefore remain substantially intact. But when this is no longer the case the cultural form, of necessity, must change. In in higher education, curriculum change is the litmus test of this eventuality.

One of the drivers for educational change is the ideology of academic competence being displaced by one of operational competence. In this process there is a shift from contemplative knowledge to operational or instrumental forms of knowledge that provide students with skills and competencies deemed to be of value in the workplace (Barnett, 1994).

Skills-talk, both popular and professional in orientation, is manifested across a range of media and sources, in which the following exemplars, intended to be illustrative rather then definitive, are abstracted from different professional sources in higher education contexts.

Example 1

From an internal Teaching Quality Self-appraisal Report:

5.1.3 The development of personal transferable skills is included in the general aims of the School's' Masters programmes but is not generally specifically addressed at the modular level. The Panel anticipates that the School, as it continues to update its module specifications, will take the opportunity to ensure that personal and transferable skills, including assessment of student achievement of such skills, are properly recognised in module descriptors.

Example 2

Abstracted from a university wide, quality assured curriculum template for teaching a module on 'Green Politics and Theology':

By the end of this module students are expected to be able to:

Subject-specific skills

- Develop an understanding of the historical roots of ethical concern for the environment, especially as they relate to emerging Western theological thought.

- Investigate the way in which a spiritual dimension to environmental concern has evolved over the last two centuries in both North American and European contexts.

- Critically examine the biblical basis for a concern for creation, and be aware of the main contemporary contributors to this debate.

- Explore and be able to clearly articulate arguments relating to a range of values and views on environmental ethics.

Core academic skills

- Refine, practise and rehearse disciplinary information management and retrieval skills across a range of on-line and text-based resources.

- Develop critical evaluative skills within an ethical context of environmental concern.

- Write structured reasoned arguments that attend to academic conventions and style.

Personal and key skills

- Manage time effectively and prioritise learning tasks to achieve designated learning outcomes.

- Undertake independent study and work to deadlines.

- Reflect on their own learning and elicit and make use of constructive feedback on assignments.

Example 3

This is abstracted from a video-recorded discussion, constituting part of a workshop for professionals and academics, held in Bristol entitled 'Adding 'e' to Learning'.

Presenter 1: ... the workshop is around the technical and personal skills that are going to be necessary and in my experience – and really it is my own experience – you need to be able to troubleshoot early problems surrounding personality and technical skills that you think are going to be necessary ... it's most important to find early solutions to the problems that learners have.

Presenter 2: ... when someone creates an on-line course, and the assets that go in its structure, and the in-built pedagogy that will take the learner through it – and you decide what the tutor input will be, and what types of context (then) that will be far less virtual and planned for than a typical face-to-face provision ... .

This 'technicist' use of language with a skills orientation, illustrated above, is tending to become pervasive across the fields of education and training and more generally in the *zeitgeist* of contemporary life.

As a precursor to elaborating a considered educational view in describing the problematic nature of this phenomenon, the fundamental importance of the teaching and learning of skills is affirmed at the outset. It is qualified by the need to allow for skills integration in a balanced curriculum along with the attendant acquisition of knowledge and understanding, values and attitudes, dispositions and perceptions and the development of other attributes too, whilst recognising that, paradoxically, 'skills' are *not necessarily intrinsically valuable in themselves* (Gagné, 1985).

To confirm the importance of skills is to focus primarily on directed activity. It tacitly places an emphasis on purposeful learning and the acquisition of mastery. The obverse is that the failure to master basic skills, upon which so much other learning is contingent, severely curtails the possibilities for future, continuous and cumulative learning. Yet in the prevailing climate, in which skills talk is flourishing, it is easy to be seduced into assuming that virtually the whole educational endeavour in Westernised, technological societies appears to be one of having students acquire a range of skills. This stands in marked contrast, for example, to the tenets of liberal adult education for personal development and 'social purpose' (Watson and Taylor, 1998).

In the UK, as elsewhere, teachers in academe might reflect on how readily disposed they are to capturing teaching aims, objectives and outcomes in terms of skills to be taught and then to evaluate their achievement focused on the extent to which students have, or have not, acquired them to desired levels of mastery. Once university teachers across the disciplines become critically reflective of this dominant curriculum ideology they are more likely to become attuned to the dominance of skills talk in professional discourse in a variety of settings – in conferences, staff meetings and informally in the corridor, the tea room and at the photocopier.

The prevalence of skills talk may be attributed to the imprecise notion of what it actually comprises, or represents. There have been some protracted shifts regarding this over time, but the essential feature is that to have a skill is to demonstrate the capability of performing a fairly well defined task or series of tasks. These may be either process or product-oriented. The ability to perform to a standard has to be learned, and while instruction and example can facilitate that aim, practice and refinement are also needed to demonstrate evidence of mastery.

To recapitulate, skills are essentially 'doing' activities. They are evidenced in their execution as a performance to some more or less specified end and the learning of them is accorded the highest educational importance. But educational thinking and practice can become distorted if teachers believe that education is predominantly a matter of acquiring skills.

Curriculum ends and means

As noted above, to acquire a skill is to become competent at performing some task or achieving some outcome. This is true regardless of the worthiness of the task or objective; being skilled at something does not as a matter of course reflect on its intrinsic value or desirability. Concern with the development of skills is at once to be concerned with improvement of the means for further learning, rather than on reflection on ends. It follows therefore, from an educational standpoint, that a curriculum that is fundamentally concerned with the development of skills, *as ends in themselves*, cannot be justified. As alluded to above they are essentially the tools for further learning. A narrow focus on skills is also unlikely to be approved of by those theorists who regard education as less of a behaviourist enterprise aimed at shaping learners towards others' predetermined outcomes, and more as the means of equipping them to determine and realise their own ends.

Much of the technical content of a behaviourist approach to 'rational curriculum planning' consists of employing techniques, procedures and skills to be exercised in the development and evaluation of curricula. In the literature there is invariably an acceptance that curriculum development and evaluation must involve making value judgments about the formulation and selection of aims, goals and purposes. However, beyond recognition of this, the curriculum guides and quality assurance manuals say very little on the matter. By contrast, procedural 'how to' books offer and account for procedures and skills for developing and assessing means to ends, but they manifestly, fall short in helping readers to gain insights into ways to deliberate rationally on educational ends. When this shortfall is perpetuated in induction courses and continuing staff development activities, and supported by a dominant view of curriculum reduced to a technical specification, deliberation on curriculum outcomes regarded conceptually as 'ends-in-view' (in John Dewey's terms) and the latter's relationship to curriculum process are marginalised. The former 'technicist' orientation frames skills as ends in

themselves, substantially underpinned by principles of behaviourism and captured in predetermined outcomes. By contrast, a reflective, deliberative orientation regards skills as means to a non-determined end, requiring flexibility, application and self-determination in their acquisition and realisation. As reflective practitioners, teachers are expected to contribute significantly to curriculum deliberations and curriculum making when justifying the relationship of means to ends. It is here, in particular, that teachers have a professional and informal role in curriculum construction and formation as well as responsibilities for implementation. This role becomes severely attenuated, however, when curricula come to be regarded as 'givens' framed in terms of predetermined technical specifications – in form if not in content.

A curriculum that emphasises skills emphasises praxis ('knowledge how') rather than declarative knowledge ('knowledge that'). There is an extensive history in higher education of curricula that have emphasised 'knowledge that'. It is unlikely, however, that any educator would willingly advocate a pedagogy that promoted acquisition of information with minimal concern for those higher order processes requiring understanding, critical judgment, application and reflection (Thayer-Bacon, 2000; McPeck 1981; Dewey, 1933). An undue concern with skills as essentially 'doing' activities, at the expense of content knowledge, may advance process but marginalise or neglect the teaching of facts, concepts and principles. Adult students, in particular may, be disadvantaged by this pedagogical style. It is noteworthy that cognitive psychologists emphasise the existence of fundamental process skills underlying the learning of all content. However, from a curriculum perspective, it is asserted that there is a clear distinction between 'knowing how' (to perform skills) which is essentially procedural, and 'knowing that' (learning of a factual nature), which is essentially propositional in nature (Ryle, 1949). This is duly recognised in the concept of curriculum balance. It is a moot point, however, as to whether many skills amount to much unless they are coupled with declarative (abstract, theorised and factual) knowledge.

An impoverished conception of education

'Skills-talk' has become so fashionable that it has become a curriculum commonplace and easy to use in situations where it is not appropriate in professional circles. For example, in professional discourse there is anecdotal evidence of teachers making reference to 'creativity skills'.

This pattern of discourse suggests that creativity is itself a matter of skill or skills acquisition (Riffe, 1994). But whatever else creativity is, it is clearly a matter of going beyond what has been taught and mastered and moving into original and/or unknown territory. This involves outstanding qualities of mind and learning involved with depth of understanding, great insight, and powerful synoptic imagination. Further, the technical rationality that reduces creativity to a skill, or set of skills, at the very least suggests that it no longer constitutes creative and original endeavour. In short, it ceases to be creativity! Thus, a curriculum that espouses creativity conceived exclusively in terms of skills is not only unlikely to foster creativity but will inevitably result in an impoverished view of education.

Arguably, similar semantic and substantive confusion and impoverishments are likely to follow if one conceives of education as the imparting of life-skills in which, for example, the preparation of new researchers is reduced ostensibly to the imparting of research skills, or in circumstances where teacher educators come to regard the professional education of teachers as the imparting of classroom survival skills.

The language of 'skills-talk'

The language used to identify or describe 'skill' is more apparent when we talk about a skilled sporting performance, or when framing an ability such as constructing an intricate piece of laboratory apparatus or teaching one how to drive a car. Less obviously apparent are those required of a politician, a teaching performance, or the execution of a strategic advertising campaign. From an educational standpoint, however tightly circumscribed the performance may be, it is clearly not a commendation if a teacher, politician or marketing executive exhibits a highly refined and circumscribed skills repertoire but very little else.

Society recognises skills embedded in the creative and performing arts, in the work of great social reformers, of scientists, orators and religious leaders, but to respond only to the skills of such people is to fail to discern the very nature of their greatness. One may also acknowledge the skills of people who do things not socially approved of. There is nothing self-contradictory in talking of, for example, highly skilled counterfeiters, confidence tricksters and cat burglars.

In addressing the conceptualisation and identification of a *core* of skills it is exceedingly difficult to capture precisely what this entails, and it is fraught with substantive and semantic confusion. Thus the notion of skills has several synonyms, including key, generic, personal transferable, work-related, process, product, and 'soft' skills. Labelling aside, there is further semantic confusion surrounding notions of competence and competencies, abilities, attributes and capabilities, and a proliferation of skills lists embedded in the literature. To these can be added government and agency reports and papers and cognate accounts reflecting private sector views. In sum, they reflect different emphases and statements as to purpose, definition and weight according to the relative significance attributed to them by different authorities (Bennett et al., 2000).

This confusion seemingly originates in the more ideologically driven, and radical agenda, held by both the political Left and Right on the need for change in higher education, but parts company over which constituencies are the ultimate beneficiaries. Hyland (1994), seeks to account for this diversity of opinion by noting that the inclusion of core skills in National Vocational Qualifications (NVQs) in the UK can be identified in the natural development of ideas that have been promoted by a diverse range of bodies and agencies in the recent past. This is elaborated upon by Bennett and his co-workers who note with respect to skills in higher education and employment that:

> ... not all these agencies were singing from the same song sheet, leading to differences in the terms used to recommend core elements. For some it was common skills, or other common learning outcomes, general skills or personal transferable skills. This problem of terminology is now endemic (and) exacerbated by the remarkably short shelf life of many of these terms. ...The favoured skill label has shifted from personal transferable, to core, to employability, and most recently, to key a shift not paralleled by any theoretical or conceptual development or justification.

> (Bennett, Dunne and Carré, 2000: 11)

The picture is further confused when it comes to definitions. Symptomatic of this are the differences in meaning over the terms 'personal transferable' and 'core' skills. In the UK, the Department of Industry's paper *Industry in Education* (1995) sees them as both identical and transferable to other settings. The broader definition advocated by Jessup (1997) refers to all knowledge, understanding and skills, which are potentially transferable. When attributes are also added to inter-

changeability within the skills lexicon (Harvey, Moon and Geall, 1997) then confusion abounds.

The problematic nature of transfer

The reasons advanced for the poor transfer of knowledge and skills differ as a function of one's theoretical persuasion. From a cognitive perspective knowledge and skills are conceived as internal properties of the individual, and consequently investigators are concerned to identify the instrumental conditions that most effectively allow their utilisation to be evident in external contexts (Billing, 2007).

Transfer of learning occurs when a person applies knowledge or skills acquired in one context to that of a new context (Perkins and Salomon, 1994). The British Government's Department of Employment (1993) has emphasised that the core skills movement is based on beliefs about skills transfer. It reinforces the prior assumption that core or transferable skills transfer easily (by osmosis?) from educational to 'world-of-work' contexts.

Bennett, Dunne, and Carré (2000) assume in their literature review, that it is possible to identify generic skills that are transferable across education and work contexts and that the acquisition of such skills will enhances the learner's flexibility, adaptability and autonomy. The research literature regarding transfer fails to support such an assertion. Most of it tends to be critical of the notion of general transfer of learning or training. Where adherents do subscribe to 'personal transferable' skills they tend to raise too few questions regarding their transferability and too easily accept their appropriateness for higher education (Drummond, Nixon and Wiltshire, 1998). In this regard, Perkins and Salomon (1994) draw upon a range of evidence to show that the anticipated transfer from learning experiences to new settings did not occur in those studies that they reviewed. Most of the latter takes place in situated learning contexts or environments, and when any transfer of training has been shown to take place it is usually highly specific and contextually related.

A widely accepted view evidenced in the literature surrounding situated learning shows that much of what is learned is specific to the nature of the situation and the circumstances under which knowledge is acquired (Ennis, 1992). Then it is more likely to influence the subsequent deployment of that knowledge to other situations and

contexts. Under this rubric learning is inseparable from situation and it is contextually embedded. The interpretation of the problem of transfer is therefore not a search for knowledge or skills which are transported wholesale from one setting to another, but how learning and performance in one setting prepares one to learn the rules, habits of mind and knowledge appropriate to a new setting (Resnick and Collins, 1994).

Teaching for transfer

The concept of 'teaching for transfer' has been largely derived from cognitive research drawing upon the distinction between *near* and *far* transfer. Near transfer occurs when the application of the same knowledge and/or skill takes place in very similar circumstances. The obverse - far transfer - relates to transfer between contexts that seem different or remote from that in which the knowledge or skill was originally acquired. From the analysis of a protracted body of research, Perkins (1995) concluded that near transfer appears to have better prospects than far transfer, and that the latter requires more conditional and deeper disciplinary content knowledge. Both Perkins and Salomon (1994) and Anderson, Reder and Simon (1996) report on some of the positive outcomes of research on transfer and the conditions under which this is most likely to occur. They include thorough and diverse practice, explicit abstraction, active self-monitoring, arousing mindfulness and the use of metaphor or analogy (Assiter, 1995).

Accumulated research evidence shows that teaching programmes that leave any transfer to the learner are less effective (Blagg, Ballinger and Lewis,1993), and that teaching for transfer requires careful thought and high levels of pedagogical skill. The assumption that skills will transfer easily is simply not tenable. Skills formation is really a matter of degree concerning propositional and procedural knowledge and learning. It should not be seen in terms of objects or entities that have a life of their own as often appears to be the case in practice. They are essentially doing activities and as such connote both practice and mastery. Skills are the tools for further learning, but they are not justifiable *educationally* as ends in themselves. Once formed and practised to automaticity they are very stable.

Conclusion

Like educational outcomes or objectives, not all skills are equally important, hence it is necessary for teachers to contextually prioritise meeting learner needs for mastery of routinely important skills and literacies such as computation, writing and summarising and so on, together with facilitating the higher order processes. If the former are not dealt with systematically, over time learners are likely to become increasingly educationally disadvantaged.

A major theme of this paper has been that skills are potentially at risk if practitioners allow themselves to be carried along too readily with the dominant instrumental ideology of thinking of educational endeavour fundamentally as the acquisition of skill. The risk is exacerbated when practitioners uncritically accept the notion of generic skills transfer. In the enthusiasm to innovate, it is easy for the teaching profession at large to jump from one bandwagon to another, rather than to discern the middle way.

Curriculum content is fundamentally important – but so is the learning process and both must come together in a well-designed curriculum. On the one hand tertiary teachers and curriculum developers need to be alert and attuned to the fallacy of universalism – that the curriculum is essentially an expression of content; and on the other the fallacy of process – captured in the maxim that ' it matters little what you learn as long as you learn to learn'. Ideally, in a balanced curriculum both dimensions are given due credence via a well integrated skills map that has its ultimate expression in the manifest curriculum – the curriculum as housed.

One role of rigorous curriculum theory is to guide and inform curriculum design and where this is not followed through at the level of practice it manifests in the intrusion of vague and loose talk and associated thinking, which circumscribes the discourse accordingly. This appears where a professional discourse fails to acknowledge and/or ignores, semantically confused linguistic entities like 'personal transferable skills', 'decision-making skills' and 'creativity skills'. As curriculum commonplaces, lacking in conceptual clarity and commonly agreed meanings, they readily deflect attention from real and important skills that are well understood and precisely delineated by good teachers in bringing about higher order learning and habits of mind. The caution is that, by too readily accepting an over-dominance of skills in curriculum and pedagogical discourse at the expense of other

curriculum concerns, we may neglect the curriculum precept of a balanced curriculum in the provision of *a higher ?* education.

REFERENCES

Anderson, J.R., Reder, L.M. Simon, A. (1996). Situated Learning. *Educational Researcher,* 25(4), 5 -11.

Assiter, D. (1995). *Transferable Skills in Higher Education.* London: Kogan Page.

Barnett, R. (1994). *The Limits of Competence: Knowledge, Higher Education and Society.* Buckingham: Open University Press/SRHE.

Becher, T. and Trowler, P.R. (2001). *Academic Tribes and Territories: Intellectual Enquiry and the Cultures of the Disciplines.* Milton Keynes: Open University Press.

Bennett, N., Dunne, E., and Carré, C. (2000). *Skills Development in Higher Education and Employment.* Buckingham: OUP/SRHE.

Berg, I.E. (1974 reprinted 2003). *The Great Training Robbery.* New York: Percheron Press.

Bernstein, B. (1971). 'On the classification of educational knowledge'. In B. Bernstein (Ed.). *Class, codes and control, Volume 1.* London: Routledge and Kegan Paul, 202-230.

Billing, D. (2007). Teaching for Transfer of Core/Key Skills in Higher Education: Cognitive Skills. *Higher education: The International Journal of Higher education and Educational Planning,* 53(4), 483-515.

Blagg, N., Ballinger, M. and Lewis, R. (1993). *Development of Transferable Skills in Learners.* London: Employment Department and N. Blagg Associates.

Bowers, C. A. (1997). *The Culture of Denial: Why the Environmental Movement Needs a Strategy for Reforming Universities and Public Schools.* Albany, NY.: State University of New York Press.

Broadfoot, P. (1985). Towards conformity: Educational control and the growth of corporate management in England and France. In, J. Lauglo and M. McLean (Eds.). *The Control of Education.* London: Heinnemann.

Carter, D.S.G (1995). Curriculum Reform and the Neo-corporatist State in Australia. In, D.S.G. Carter and M.H. O'Neill (Eds.). *International Perspectives on Educational Reform and Policy Implementation.* London: The Falmer Press.

Dearing, R. (1997). *Higher Education in the Learning Society.* Norwich: HMSO.

Department of Education, Science and Training (2005). *Our Universities: Backing Australia's Future.* Canberra: DEST.

Department of Employment (1993). *Development of Transferable Skills in Learners.* Sheffield: Employment Department Methods Strategy Unity, Report 18.

Department of Industry (1995). *Industry in Education.* London: HMSO.

Dewey, J. (1933). *Experience and Education.* New York: Macmillan.

Dickens, D. R. and Fontana, A. (1994) *Postmodernism and Social Inquiry.* New York: Guilford Press.

Drummond, I. Nixon, I and Wiltshire, J. (1998). Personal transferable skills in Higher Education. The problem of implementing good practice. *Quality Assurance in Education,* 6 (1),19-27.

Ennis, R. (1992). The Degree to which Critical Thinking is Subject Specific: Clarification and Needed Research. In, S. P. Norris (Ed.). *The Generalizability of Critical Thinking.* New York: Teachers College Press.

Gagné R. (1985) *The conditions of learning and theory of instruction* (4th. Edition). New York: D.C. Health and Co.

Gee, J. P. (2005). An Introduction to Discourse Analysis: Theory and Method. London: Routledge. Jessup, G. (1997). Establishing a Learning Society. Paper presented at ESRC Learning Society Conference, Bristol, January 1997.

Jones, S. (1996). *Developing a Learning Culture: Empowering People to Deliver Quality, Innovation and Long-term Success.* London: McGraw-Hill.

Harvey, L., Moon, S. and Geall, V. (1997). Graduates' *Work:* Organisational Change and Students' Attributes. Birmingham: The University of Central England, Centre for Research into Quality.

Hyland, T. (1994). *Competence, Education and NVQs: Dissenting Perspectives,* London: Cassell.

McPeck, J. (1981) *Critical Thinking and Education.* Oxford: Martin Robertson.

Marginson, S. and Considine, M. (2000). *The enterprise university: Power, governance and reinvention in Australia.* Cambridge: Cambridge University Press.

Organisation for Economic Cooperation and Development (2000). *The Response of Higher Education Institutions to Regional Needs.* Paris: OECD Publishing.

Organisation for Economic Cooperation and Development (1998). *Redefining Tertiary Education.* Paris:OECD Publishing.

Perkins, D. (1995). *Outsmarting IQ.* New York: Free Press.

Perkins, D. and Salomon, G. (1994). Transfer of Learning. In, T. Husen and N. Postlethwaite (Eds.).*The International Encyclopedia of Education:* Oxford: Pergamon Press.

Reid, I. (1966). *Higher Education or Education for Hire.* Rockhampton, Queensland: Central Queensland University Press.

Resnick, L. and Collins, A. (1994). Cognition and Learning. In, T. Husen and N. Postlethwaite. (Eds.). *The International Encyclopedia of Education.* Oxford: Pergamon Press.

Ryle, G. *The Concept of Mind,* Chicago: The University of Chicago Press, 1949.

Robertson, D (1994). *Choosing to Change: Extending Access, Choice and Mobility in Higher Education,* Report of the HEQC CAT Development Project, London: HEQC.

Schwab, J.J. (1983). The Practical 4: Something for Curriculum Professors to Do. *Curriculum Inquiry.* 13(3), 239-265.

Schwab, J.J. (1970). *The Practical: A Language for Curriculum.* Washington, DC.: National Education Association Center for the Study of Instruction.

Schön, D.A. (1983). From technical rationality to reflection-in-action. In D.A. Schon, *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Scott, P. (1997). The Crisis of Knowledge and the Massification of Higher Education. In, R. Barnett and A. Griffin (Eds.). *The End of Knowledge in Higher Education.* London: Cassell.

Scott,P. (1995). *The Meanings of Mass Higher Education.* Buckingham: SHRE and The Open University Press.

Shils, E. (1997). *The Calling of Education. The Academic Ethic and Other Essays on Higher Education.* Chicago: The University of Chicago Press.

Silver, H and Brennan, J. (1988). *A Liberal Vocationalism.* London: Methuen.

Thayer-Bacon, B. J. (2000). *Transforming Critical Thinking: Thinking Constructively.* New York: Teachers College Press.

Watson, D. andTaylor, R. (1998). *Lifelong Learning and the University. A Post-Dearing Agenda.* London: The Falmer Press.

West, R. (1998). *Learning for Life: Review of Higher Education Financing and Policy.* Department of Employment, Education, Training and Youth Affairs: Canberra: Australian Government Publishing Service.