

**Is it only 'what works' that 'counts' in new knowledge economies?
Evidence based practice, educational research and teacher education in
Australia**

**Jill Blackmore
Deakin University
Geelong
Victoria 3217
Australia
Ph 613 (0) 5227 1483
Email : jillb@deakin.edu.au**

Jill Blackmore, PhD

Is Associate Professor and Director of the Centre for Education and Change in the Faculty of Education at Deakin University, Victoria, and Regional Editor of *International Journal of Educational Leadership*. Her main research interests are in feminist approaches to administrative and organisational theory, educational leadership, educational restructuring, self managing schools, organisational change, teachers' work and learning communities and their policy implications. Recent publication is her single authored book *Troubling Women : Feminism, Leadership and Educational Change* (1999, Open University Press).

Recent texts on globalisation and education policy refer to the rapid flow of education policy texts producing or responding to common trends across nation states with the emergence of new knowledge economies. These educational policies are shaping what counts as research and the dynamics between research, policy and practice in schools, creating new types of relationships between universities, the public, the professions, government and industry. The trend to evidence based policy and practice in Australian schools is used to identify key issues within wider debates about the the 'usefulness' of educational research and the role of universities and university based research in education in new knowledge economies.

A longer version of this paper was presented to the Invitational Conference, University of Keele. *Travelling policies/local places* June 27-29 2001

Globalisation and the 'crisis of education'

In the past decade the 'modern' university has once again been re-invented. Information has become a core product of commercial exchange, and management of information a key occupational sector (Castells 1997). This paper situates the trend towards evidence based practice in the Australian education 'policyscape' (Ball 1999) of schools within national and international epistemological and political debates about the knowledge economy and what it means for the future of universities in general, educational research and teacher professional development. In it I argue that evidence based practice, particularly as derived from a particular tradition within medicine, does not fully capture the complexity of the theory- practice dynamic and relationships between education policy, research and practice. Furthermore, as education becomes even more central in a knowledge based society than it was in a industrially based economy through moves towards post foundational interdisciplinarity, it is even more important that our understandings about the nature of knowledge production, dissemination, reception and legitimation in education adopt more critical approaches. Indeed the only thing that may distinguish universities from market or private provider research may be that element of criticality underpinned by epistemological and methodological rigour.

Universities in general are in crisis -- as traditional producers and mediators of what constitutes valued knowledge and how it is to be dissemination and assessed. External pressures of globalisation have led the Anglophone states, in contrast to many Asian and European economies, to adopt neo-liberal responses of structural adjustment to meet the demands of the knowledge based economies. Calas and Smircich (2001, p. 148)comment;

Knowledge production in universities has become a contested affair. The moment 'knowledge' was positioned as a commodity in the wider context of capitalist modes of production and 'free market' forces, universities were to receive declining support for continuing as sanctioned sites for the production of innovations in the arts, the sciences and the professions, and still less support

for continuing as places of 'disinterested knowledge' in the quest for a better society.

Indeed, the notion of knowledge production for the public good is fast being replaced by knowledge production for profit and/or for policy solutions rather than policy setting.

Internally, universities face a crisis as their position as key agents in the production, legitimation and dissemination of valued knowledge is challenged with the proliferation of new knowledges and post modernist challenges to the foundational knowledges from indigenous, feminist, post colonial movements. Together with the multiplication of modes of dissemination facilitated by the rise of new information and communication technologies, there is a blurring of knowledge production, consumption and dissemination. Universities are no longer the primary definers of what counts as valued knowledge in the public sphere.

Furthermore, within universities what counts as knowledge, how knowledge is constituted, and indeed how it is counted, has also been revised by the entrepreneurial state seeking not to invest in, but rather to accrue economic wealth from, education. This shift is evident in the range of education policies promoting user pays, increased vocational relevance, instrumentalism and commercialisation based on partnerships with industry, and pressure for research to meet governmental and business demands. In turn these policies produce a range of responses at the national, institutional and individual level that create a complex web of education policy production. The role of universities has shifted more towards managing knowledge production for the state in the national interest rather than for intrinsic value of production of disciplinary knowledges. Together with a radical reform of university governance, these transformations have impacted on the nature, materiality if not legitimacy of academic work, captured by the notion of the 'enterprise' university (Marginson and Considine 2001).

This paper locates the shift to evidence based practice and 'what works' in schools within debates about the impact of educational research on policy and practice in schools, new modes of research management in universities, and the role of university

based educational research (Blackmore 1999). It situates these within pre- Federal election policy debates in 2001 over Australia's role in global knowledge economies. An analysis of various policy and media texts about research, university funding and the knowledge economy raise some doubt about the certainties promised by researchers focusing on 'what works'. I conclude by considering what these discourses mean for the reconstitution of professional work identity for both teachers and academics, and the role of educational research in a knowledge based society.

Wider debates about the changing nature of knowledge in the informational economy and the future of the university (Blackmore 2000, 2001) have been shaped by distinctions between traditional disciplinary approaches premised upon distinctions between pure and applied, credibility derived from peer review and methodological rigour (Mode 1) and those based on a social organisation of knowledge that is trans-disciplinary, focused on problem solving, trans-institutional, with multiple financial sources, regulated by collaborative management structures, and assessed on a range of criteria (Mode 2) (Delanty 1998). Delanty (1998, pp. 149-50) describes four perspectives of the university.

1. Entrenched liberal thesis : the university as site of cultural reproduction is challenged eg. Bloom(1987) attacks post modernism and defends traditional culture of the canon;
2. Postmodern thesis that foresees the end of the state and of the university, the latter having lost its emancipatory role due to fragmentation of knowledge and separation of research from teaching eg Lyotard (1984);
3. Reflexivity thesis that claims that there is new mode of knowledge based on a reflexive relationship between user and produce of knowledge as old forms of knowledge production are increasingly irrelevant to the post Fordist economy eg. Barnett (1998);
4. Globalisation thesis that draws attention to the instrumentalisation of the university as it embraces market values and informational technology.

Here the university is central to the capitalist modes of production and is fully integrated into it. The new managerialism is the means by which capitalism takes over the university. The university thus becomes a major player in the global market and in information based capitalism eg. Currie and Newsom (1998), Marginson and Considine(2001), Slaughter and Leslie (1997).

The next section situates the Australian political debates around new and old economies in relation to these perspectives.

New or old economy¹? Technology rather than culture

Australia is situated geographically, as New Zealand, on the edge of the new regionalised economies :- the Asia Pacific Economic Community, North American Free Trade Alliance, and the European Union. As such, Australia is more open to uncertainties of international markets and more likely to bow to pressure of international monetary agencies to conform to dominant economic orthodoxies. During the 1990s, both Labor and Liberal education policies adopted structural adjustment policies that promoted privatisation and marketisation; reduced government expenditure in public education, health and welfare to balance national budgets; instituted labour market and financial deregulation; and focused on export not domestic markets. These policies were exemplified in Labor's federal corporatism that produced the radical rationalisation of higher education institutions after 1987 that introduced user pays through the deferred tax Higher Education Contribution Scheme, separated funding for teaching from research, reformed university governance to produce leaner and meaner corporate management, created the Open Training Market that meant all public and private education sectors competed for clients, encouraged the internationalisation of education markets. At the same time, Labor deregulated the sector financially by devolving responsibilities of management of finance and labour down to universities. In part, some of these measures of university restructuring were to fund Labor's policy of mass, and therefore arguably

1

more equitable, higher education. The conservative Coalition after 1996 had no such equity orientations. Universities are now 'fast forwarding' towards 40-50% self funding with the reduction of federal recurrent funding since 1998-9 by 12% (Allport 2000, p.9), impacting on particular equity groups eg. Indigenous students. The Coalition's policies signal a return to elitism with access contingent upon the capacity to pay or scholarships on merit.

In 2001, both the Australian Vice Chancellors Committee and the Senate's *Crisis in University* Report (2001) argue that universities are in crisis financially.

Education has become a federal election issue also because Australia has failed to reinvent itself to meet the needs of a knowledge economy, signalled by the lack of overseas investment and radical drop in the value of Australian dollar. Australia is perceived to be an old and not a new economy, given the lack of investment in the knowledge industries that are potentially lucrative export industries and reduction by 6% in real terms since 1998/9 of research funding (*The Age* 2001 July 12).

Furthermore, the crisis is being mobilised as a crisis in science and technology. The Batterham Report (2000) by the Chief Scientist refers to the four characteristics of a knowledge based economy-- a focus on knowledge based industries and service industries, an upskilling across all sectors, growth in export of high tech products and demand driven teaching and research (my emphasis) This leaves little scope for debates about other modes of knowledge and work eg social sciences or humanities or related issues of access and equity.

Backing Australia's Ability (DETYA 2000), the Coalition's election policy statement, thus prioritised science and technology, while increasing research concentration in to research universities of centres of excellence. Such a model of research best fits the research infrastructure and practices of science and technology that are capital intensive but not of the humanities, social sciences or education that are labour intensive. Labor has similarly made education central to the platform following their *Knowledge Nation Task Force* (2001) that sees knowledge as the new site of production and national capacity building. This report argues that a 21st education system should provide all citizens opportunities to develop skills and access to life long learning, make every school, government and non government, a site of

excellence and quality, universities able to attract leading international researchers and teachers, and encourage fundamental research and study of the humanities as well as applied knowledge. It emphasises the need for co-ordination based on a national data base or inventory of skills and expertise due to the shift from an old (material based economy) to a new economy (information based economy). Labor also focuses on the commercialisation of research, in particular ICT and biotechnology.

Indeed, education in all these policy texts is written in as a growth industry to be encouraged. Already an emergent education export industry has produced a return to the national economy from higher education \$22 billion for the investment of \$9 billion and government returns of \$5.33 billion on teaching in 1997/8 have returned in the form of higher incomes of graduates of \$8 billion (Allport 2001) although, deregulation and the rapid growth of full fee paying international students has raised issues of falling standards, leading to the Senate Committee on The Adequacy of Funding for Higher Education (Smith and Frankland 2000, pp. 7-9). Fees can mean the failure or survival of particular courses, academic careers or indeed universities. Opposition Labor's response to the dual problems of finance and access/ equity has been a 'technofix', promising to establish a University of Australia Online to increase access and 'stimulate the growth of a world's best online export education industry by funding the 'development of Australian companies specialising in the conversion of academic content into high-quality online courses' and making Australia a world-leader in research into online teaching, learning and course design.

The assumptions embedded in the conditions of operation of the enterprise university and the newly constituted academic worker as outlined in both Labor and Coalition policies would appear to be positioned quite centrally into that of Delanty's globalisation thesis-- placing the university as central to national competitiveness and the growth of capitalism in the new world order. Where they differ perhaps is on their perspective on what the 'new work order' in a knowledge economy may look like (Gee 1998). Howard's policies, with higher fees, student choice and deficient equity policies, foreshadows a core-periphery division of labour between the professional /managerial elite, the technicians (which includes teachers) and the service workers, the peripheral, flexible and casualised labour force on the margins 'servicing' the core. Labor's view, as stated in *Knowledge Nation*, more

optimistically assumes that a knowledge economy requires the general upskilling and multiskilling across the workforce, with extremes moderated by equity policies. Both parties advocate policies informed by market philosophies that have already produced a distinct value shift in the operations of the university and of academic work. As Marginson and Considine (2001, p. 370) suggest, higher education has 'moved from its broad role in public culture and its functions in raising the level of participation of citizens to a new orthodoxy that favours business values and income generation'. Teaching and research are to be demand driven, and national interests are science and technology not culture driven.

Educational research and the knowledge based economy

These policy debates about a knowledge based economy contextualise the publication of the report on *The Impact of Australian Educational Research(2001)*. Within months of the Tooley and Darby report (1998) in England that criticised the relevance and quality of educational research, the Australian federal Department of Education, Training and Youth Affairs tendered for a project to investigate the impact of educational research on policy and practice. In 1996 in England, David Hargreaves (1996) had argued that education research was remote from practice, of poor quality and a waste of public money. He proposed that research in teaching should be evidence based as it is in medicine. His argued for a greater focus on 'what works' in schools and on learning. Tooley and Darby's and Hargreave's very instrumental notion of research promoted 'evidence based teaching and research'. It largely drew on business notions of 'best practice', itself a problematic term given that best practice emerges most often in 'exceptional' contexts with particular configurations of people, opportunity, resources and political will. In so doing, Atkinson (2000a, p.317) argued, Hargreaves both 'decontextualised and depoliticised what many see as a deeply socio-political process around issues of power/knowledge, effects and context'. The policy changes following from Hargreave's critique and then the Tooley and Darby report have been a 'increasing central control over education policy and practice that has put the autonomy of educational research into question'(Atkinson, 2000, p. 318).

For Atkinson (2000a, p. 319), the Tooley and Darby report led to public denigration of educational research of a particular kind (ie qualitative, critical and feminist), and

changes in the 'funding, focus and dissemination of research in education, with the concentration of research activity in a handful of higher education institutions, a move that will end independent research activity in most universities in England'. In particular, the trend to evidence based policy and teacher practitioner research is indicative, Atkinson argues, of how school effectiveness and improvement literature on literacy, and not socio-linguistics, have driven literacy policies. Furthermore, the Teacher Training Agency has moved towards teaching as a research based profession with the funding of a number of small scale school based research projects and school-university consortia. The focus of this emerging research agenda has been on classroom practice and not on schools, the context of schools or systems which is the frame of critical socio-cultural and economic perspectives.

It was difficult for Australian left and feminist education academics not to perceive the DETYA tender of 1999 as creating possibilities for a similar attack on the Australian educational research community. Three empirical studies were contracted by DETYA to back track policies to their research origins, to observe teacher practitioners and identify their sources of professional knowledge, to interview stakeholders in education (parents, policy makers, teachers) about their perceptions about research and to map educational research paradigms. Two other articles, one on citations and another on research in the Vocational Education and Training sector, were included. The *Impact Report* (DETYA 2001) concluded that:-

The links between educational research and schools were clearly evident. The researchers found that almost all the school principals, professional associations of educators, and school system administrators expressed the view that educational research had benefited Australian education (p.5)

Teachers' decisions were strongly influenced by sources that are themselves directly impacted on by research, specifically initial teacher training, professional reading, the advice of other teachers, professional development courses, and formal postgraduate

studies.(p.8)

Australia ranks a creditable fourth out of 35 nations in terms of its publications and citation record over the period 1987-1998.

Australia's share of international publications is greater in education than any other major field in this country except for the earth sciences. ... Despite this record, productivity is very uneven between universities.(p.10)

The report indicated the capacity for Australian educational research to inform policy and teacher practice. The overall conclusion stated that the relationship between research and practice was complex, diffuse, indirect, unstructured and largely mediated through individuals and associations, policy and the media. The role of professional development was seen to highly significant, as was that of professional associations. The concerns were that research concentration was in particular faculties and with particular individuals; and that while publications were increasing in quantity, that citations were in decline. But in general, publications and citations relative to research income was extremely high. That is, education faculties do good research cheaply and are highly productive. To that extent, the positive nature of the report was pleasing to most educational researchers, although there was concern that if the report had covered citation statistics post 1997 with the doubling of teaching/student ratios, and moves to internationalise and marketise, that the results would be different.

The *Impact* report, when situated in the wider policyscape of international education politics nationally and internationally, is significant(Ball 1998). First, the focus on the classroom indeed would seem to mimic that of the focus in the English policies. As in the UK, the most significant policy initiatives in Australia in recent years have been in areas of Early Years Literacy, Middle Years Schooling and Information and Communication Technologies. These programs and the associated teacher professional development (Kenway , Blackmore et al 1999) have been informed in many states by large scale quantitative research on school effects (eg Hill 1995) rather than socio-political or socio-linguistic research. The exception is Queensland where there has been a particularly dynamic research based engagement between academic

educational researchers and the state school system around the notion of productive pedagogies (Luke et al 2001). Evidence based practice is embedded in the policies, implementation, teacher professional development and evaluations of these initiatives in schools eg. The Middle Years Research and Development project (MYRAD) in Victoria, that feeds back 'results' to inform schools. These programs are also closely associated with notions of benchmarks and standards in an outcomes based environment.

Second, the notion of teachers as research practitioners has been linked to discourses of 'best practice' and evidence based research. Australia as the UK has a strong tradition both in universities and schools of practitioner research that developed since the 1970s. The *Impact* report signals the wider trend in school based professional development towards the adoption of action research processes (but not its democratic principles or intent) by governments during the 1990s to facilitate school reviews and policy implementation, an appropriation that has depoliticised action research as an emancipatory movement. Action research has thus become another managerial technique to implement government policies rather than bottom up reform.

Third, the *Impact* report, despite reference to complexity of relationships around the dissemination of research, still implies a linear model of research to practice. Despite its argument about the indirect and amorphous nature of influence, each report tends to adopt an instrumental perspective about what works and the importance of applied research. In particular, the report failed to recognise the discursive shifts that government policy itself has produced, how policy itself was informed by research, the role of the media in the dissemination of research, and how the language of practitioners also changes as new ideas from research permeate through policies and practice. That is, because of the focus on classrooms there was little attention paid to the 'policyscapes' and the politics about who gets to do what research and why, that perhaps a more critical qualitative, even post structuralist methodological approaches may have elicited. Implicitly, teachers were treated as consumers of research who digest it unproblematically, the primary concern of this report being how to synthesise research to make it more readily digestible for teachers. There is a particular linearity in the view of knowledge production and knowledge utilisation implicit here, that does not recognise teachers as agents or as researchers of their own practice.

Finally, there is little mention in the *Impact* report of the changed policy context and material conditions under which educational researchers and teachers now work. Over the past fourteen years there has been a shift in values and the nature of knowledge production and dissemination, a focus upon research management by government, and not just 'doing research' as an autonomous function of universities as primary sites of knowledge production.

The divorce or marriage of university based educational research and teacher practice?

The *Impact of Educational Research* report is symptomatic of changes in the role and nature of university based research in education. Policies are significantly altering the practices, valuing and nature of the type of research that has been done, who does it and with what effect with new institutional relationships between schools and universities forming around teacher education (Blackmore 1999).

Similar restructuring to that in universities has occurred in government school systems during the 1990s, with devolution to self managing institutions in the name of parental involvement and choice, the rise of education markets as schools are funded on per capita enrolments, and a trend to focus on outcomes not inputs or process. At the same time, government policy control has strengthened through curriculum and assessment frameworks and strong performance management and accountability frameworks eg standardised assessment, school triennial reviews etc. back to the centre²(Blackmore 1998). There two aspects relevant to this discussion on the relationship between universities, schools and educational research.

First, the new information and communication technologies have facilitated education authorities to develop comprehensive data bases of student performance statistics based on curriculum and assessment frameworks and standardised testing. For example, in Victoria, this data is statistically massaged and returned to be used as 'evidence' in a tightly controlled process of triennial school review. Schools receive,

and also collect data, about retention and attendance. This data is then compared (statistically) to 'like schools' ie. schools that have the same profile on two indicators- proportion of NESB students (proxy for cultural diversity) and of the Education Maintenance Allowance (proxy for low socio-economic status)(Thomson 1999). This data ('evidence') drives the process of the review, and informs the planning for the next triennium, leaving little scope for professional or indeed community input as to setting their desired local priorities. Evidence has in this policy frame been reduced to data and information. This approach is distinctly different to the pilots in Queensland in the that began with a pedagogical base that addresses the type of knowledge work that will be the basis for work and citizenship in a critically reflexive manner (Luke et al 2001).

Second, since 1996, there has been a shift to school based professional development, exacerbated by the withdrawal of federal funds from teacher professional development that had funded, for example, university-school partnership schemes such as the National Professional Development Programs and Innovative Links. Such national programs were seen by both teachers and university researchers as creating productive dialogues that unsettled theory/practice divides. Within state systems, even in the more structurally devolved state education systems eg. Victoria, where responsibility for professional development of teachers has been devolved to schools with per capita funding, system wide priorities tend to dominate professional development (eg. early literacy, middle years and technology). On the one hand, schools and teachers are increasingly responsible for funding teacher professional development, and therefore more focused on immediate problems. On the other hand, there has been a decline in long term professional renewal based on post graduate courses, a trend exacerbated by a lack of time for teachers with the intensification of labour, the ageing profile of the teacher labour force, the introduction of fees into postgraduate courses, moves towards competency based professional standards, and the lack of system wide rewards or school recognition of postgraduate qualifications. Teachers engaging in postgraduate courses are often depicted as being self interested because they are not focusing on quick solutions to immediate problems in the school or classroom ie. less on 'what works'. There is little space for critical reflection or reflexivity upon practice.

University based professional development in this context is often perceived to be irrelevant, impractical and out of touch with the real work of teachers, schools and systems, thus exacerbating the discursive binary between research and practice (Gitlin et al 2000). While many teachers do not see their work being informed by research, the *Impact* study indicated that most teachers use key theoretical concepts that originated in recent research, concepts that had been taken up both in policy and disseminated through professional development and by their colleagues, both being cited as key sources of teachers' professional knowledge. Indeed, the exemplary teachers, the colleagues of teachers, in the *Impact Report's* chapter on professional knowledge (Chapter 3) cited post graduate research as stimulating their thinking and changing their thinking and practice. Theorising about their work provided them with a way that positioned them as knowledge producers or critical thinkers in their field of practice. Autonomous knowledge production by researchers and teachers outside the frame of immediate policies and problems does lead to professional development that improves practice, professional development that is both research and evidence based, building upon the dynamic tension between theory and practice and multiple epistemological positions (Gitlin et al 1999).

Ironically, the evidence based approach and how it has been constructed as the 'one best practice' ignores the benefits of epistemological pluralism seen to typify postmodern organisational life. It does not legitimate the significant tradition in teacher practitioner research of teacher professional or practical knowledge, teachers as action researchers; and teachers as intuitive practitioners, traditions that also recognise the social, emotional, and ethical dimensions of teaching(eg. Cochran Smith and Lytle 1993). These traditions are based upon a range of capacities that allow teachers to make their work meaningful as well as a will to act on understandings that are not merely gleaned from evidence. It fails to recognise the role of professional discourses around what constitutes good teaching, and in turn how evidence is read, interpreted and acted upon by practitioners as they exercise professional judgement. After all the 'evidence' is in, it is ultimately left up to teacher professional judgement to read and act upon this evidence in their particular classroom mediated through their local knowledge of their students, the conditions of work made possible in that school, the community attitudes and involvement, and their own individual and collective sense of professionalism. Narrow conceptualisations of 'what works' will

constantly be mediated by teacher practice that derives from a range of different sources and forms of knowledge -- intuitive, university based research, evidence (evaluation, data, assessment) as well as professional and ethical positions. Evidence alone, without a wider analytic framework of how policy works and of social relationships, cannot provide a wide enough epistemological, least of professional, base upon which to build teacher practice. Evidence based research makes particular epistemological assumptions about the nature of the world premised upon certainty and linearity, whereas teachers experience the world as one of uncertainty and pluralism.

The nature of relationships between academics and their communities of researchers, their professions and their students are therefore being transformed by new modes of educational governance that seek to manage the processes and content of research and the nature of knowledge production. As the role of government has shifted away from the provision of education, to that of regulator, then universities have become the managers of knowledge production. The focus of education policy has therefore shifted beyond the 20th century human capital view that investment in education was for individual and collective benefit through the reproduction of skills for a Fordist workplace to the view that education and training are sites of economic production that can be commodified for the national good to gain competitive advantage in a new informational economy.

Implications for educational research

So educational researchers are confronted with competing discourses about their priorities. On the one hand, there is the need to increase research funding and productivity as DETYA funding becomes more focused on particular inputs and outcomes as measures by which to fund research and research training in universities. From 2001, institutional grants for research are based on a formula comprised of an input measure of research funding(60%), and output measures of research publications(10%), and HDR graduations (30%)(research training funding is 40%, publications 10% and HDR completions50% respectively). A cap on HDR students based on institutional histories has effectively reduced the newer universities capacities to retain, let alone grow, their research and training profile, with some

universities foreseeably not receiving any funds for research or HDRs. The DETYA research funding model is premised upon old knowledge hierarchies, foundational disciplinarity, and a pure/ applied view of knowledge. Marginson and Considine(2001, p. 133) comment:

In a competitive higher education system, research (among other things) is a mean for defining value and manufacturing skills of excellence. It is a primary source of institutional prestige and income: in its most prosaic form, research is pre-eminent numbers game in the Enterprise University.

Such funding policies will effectively reproduce structurally, the old divide between research and teaching universities, and increase the concentration of research into fewer 'elite' universities. These policies privilege the older universities with highly capital intensive science, engineering and medical faculties and highly concentrated and team based research; and disadvantage low capital intensive humanities, social sciences and education based faculties in newer universities where publications are the primary measure of productivity based on more individualised research dispersed across all institutions.

Therefore the current research funding regime has differential effects on universities and in turn for educational research. The larger undergraduate Faculties of Education tend to be located in the newer universities most likely to become teaching and not research universities. This has significant implications for knowledge production in the field of education, given that in 1994-5, research in higher education accounted for 87% of all educational research expenditure, whereas the figure in other fields was 46.5%(Lingard & Blackmore 1997, p.6). Since 1992, state education departments (as in UK and USA) have closed down their research branches, with a reduction of expenditure on educational research by 50% in real terms between 1986-7 and 1992-3, down from 15% to less than 5% of all educational research expenditure, with the exception of Queensland (eg. Shavelson and Berliner 1991).

Thus at the same moment that Departments of Education and indeed schools, are awash with more

test-based data about their students than ever before, these very systems have less capacity than ever to analyse, interpret and draw practice and policy implications from such data... Finally, these cash strapped public education systems... which tend to value quantitative over qualitative research [because it claims to be more generalisable and predictive], make up a large proportion of the education industry which educational researchers are now expected to tap as the privatisation of universities decreased their reliance upon DETYA funding(Lingard & Blackmore 1997 p.8)

These system data bases are not available to researchers for analysis, yet there are few trained policy analysts and researchers within education authorities capable of undertaking theoretically informed research on this data. As a field of practice and research, therefore, educational research has in the past decade been highly dependent on universities for its base. To reduce the research capacity of Faculties of Education is therefore to erode the primary base of educational research despite Australian educational research having an excellent international reputation (citations second only to earth sciences DETYA 2001).

There is a contradictory message emanating from Canberra. Policy makers³ are also arguing that educational research needs to be more closely directed towards contemporary and identifiable problems, that there should be increased co-ordination of dissemination of research, and greater recognition by supervisors of the new type of graduate research student --'the learner earner' who undertakes full time study and full time work. This discourse at first glance appears to be promoting Delanty's reflexivity thesis. The message for educational researchers are that they should :-

- (i) be more responsive to problems and issues and not just follow their own serendipity(and by implication self interested) research paths.

³ These points are a summary of a presentation made on June 13, 2001 to Research Leaders in Faculties of Education at AARE conference in Canberra by the DETYA Higher Education Research Policy Director.

- (ii) manage their research students better in terms of what research they do to be more relevant (no esoteric topics) and focused eg. supervisor allocating research topics to students as part of wider project;
- (iii) be more strategic in terms of timeliness and possible impact by centralised forecasting where the field is going;
- (iv) be more public involved in consolidation, synthesis and dissemination of research, by making research more accessible eg. universities as knowledge clearing houses;
- (v) use complimentary research methodologies -- quantitative and qualitative;
- (v) actively promote teaching and learning within institutions and within communities by communicating in different forums ie walk the talk;
- (vi) focus on generic and specialist graduate attributes and outcomes (retention and graduation rates) to address demand of both government and professional associations ie. be more relevant.

Much of this signifies a shift in the nature of research supervision and knowledge production in the social sciences, humanities and education away from an individualised model and from an inductive to a deductive mode of thinking. What this view fails to recognise is that the DETYA research funding regime, and therefore universities, do not reward publications in professional journals, professional development work, teacher-researcher partnerships, communication of research in professional forums etc. For educational researchers, it is like being between a rock and a hard place:- between winning high status DETYA points and funding necessary for individual careers and institutional survival by writing for international refereed publications and winning big grants; or working in schools with teachers in practitioner based problem solving research that more immediately informs practice, but that receives few system rewards. This produces a form of both individual and institutional schizophrenia (Blackmore & Sachs 1999, Atkinson 2000b)

Similar discursive shifts and paradoxical relations are therefore evident in both Australian and English educational research communities emphasising strategic targetted research, practitioner research, what works in classrooms, applied research for policy and workplace, readily consumable research and research concentrations in teams in fewer institutions (Adkinson 2000). As Beck (1999) suggests, this signals a

new set of relationships between knowledge, knowledge production and the knower, in which both researchers and teachers are less autonomous as professionals. What is not evident is reflexive relationship between interdisciplinary knowledge depicted in Delanty's reflexivity thesis. There is little reflexivity on the part of the subject (teacher or educational researcher) here. Reflexivity in a sense of critical thinking, problem setting cannot be reduced to problem solving. Is this, as Bernstein suggests, the divorce of knowledge from the knower, where knowledge is 'separated from inwardness, commitments, from personal dedication, from deep structures of the self'? (Quoted in Beck 1999, p. 227) as neo-liberal governments seek to manage knowledge legitimisation, production and dissemination on the bottom line criteria of market relevance for post industrial economies. Instead, these policies collectively epitomise limited understandings about the nature of knowledge production and role of the university in new knowledge economies with the prioritising of disciplines of science and technology over interdisciplinarity, denying the use value of the social sciences and humanities and the role of cultural production and citizenship. It suggests that university based research will become the primary activity of a few academics concentrated in a few universities with particular research paradigms. It does raise critical questions about whether educational research will be reduced to evidence based practice where the 'evidence' is largely data collected in house (schools and systems) rather than through rigorous, ethical and theoretically informed university based research.

The case for research informed policy and practice

So what really counts in educational research? Paradoxically, in post modern times, educational researchers are confronted with a limited range of possibilities in policyscapes that produce old tensions that emerge as exclusionary possibilities (either/or) along a range of embedded dichotomies (research or teaching, theory or practice) based upon foundational knowledge. The task for educational researchers is to negotiate a policy terrain founded upon contradictory positions extolling the primacy of science and technology in a knowledge economy and that makes judgements on the basis of usefulness and relevance in primarily economic terms, rather than strong interdisciplinarity underpinned by the rigour of the disciplinary

traditions (Atkinson 2000) of a knowledge society that recognises the importance of the humanities and social sciences and cultural to oil the wheels of economic and cultural growth in the long term. Knowledge production in post industrial times requires a multiple epistemological base, one in which all research can or should be 'useful' (Ozga 1998). It is the serendipitous nature of research that leads to new ways of thinking outside the frame, of critical thinking premised upon reflexivity by both researchers and teachers. This epistemological position recognises the complexity of educational sites, of how classrooms cannot be studied without understanding social and political contexts, and that all research is disputed, as each 'research story' is inevitably partial. There is no single answer about what works, as what works is contingent upon a range of contextual factors and variable material conditions. To focus on what works in the classrooms ignores the wider sociological issues eg. class and race, and how schools simultaneously reproduce relations of inequality, and indeed how system wide policies can inform or impede the improvement of practice.

This raises the question about what counts as evidence and indeed research. Evidence based practice in medicine is one premised upon assumptions about random sampling of large populations, in what is often a relatively technical field, although this is not without dissension. Evidence is most generally understood as that provided by a large statistical analysis that is generalisable and offers some form of predictability, some form of 'hard data' that is too often equated to statistics. Epistemological debates have in the social sciences, and in particular education, indicated that what counts as evidence is itself a social construct, as all data is developed from particular assumptions about how the world works (or should work), and that teaching and learning are indeed more complex processes of social interaction that cannot be reduced to statistical analyses. There is now some agreement that there are range of epistemological approaches, each of them offering partial explanations. The school effects literature is a case in point. It can list what constitutes an effective school from studying a number of effective schools and identifying correlations. Thus leadership, coherent policy framework, high expectations of all students and in particular quality student teacher interaction etc.... But this particular methodology cannot explain why schools are not effective, other than lacking the above characteristics, or what it is about that student teacher interaction, what happens in different contexts for different students (Creemers and Reezigt 1997, Lingard et al 1998). This is where thicker more

descriptive case study and qualitative data provides depth to the analysis. Yet policy makers are more readily persuaded by quantitative evidence because of its generalisability, predictability and the too easy reductionism of causal relationships as simpler explanations for complex problems than by messier ethnographic research that highlights the unpredictability and context boundedness of social life in schools.

Research based policy and practice then recognises the different ways in which research issues are framed, theorised and then operationalised through particular methods. It therefore problematises what constitutes as data and reductionist views of evidence, it raises questions about which perspectives are absent, and raises issues about the relative explanatory power of different theories, without privileging one or the other. Research based practice works through the theory practice dynamic critically, and it is that criticality that is crucial for a knowledge based democracy which takes into account the social and cultural as well as the scientific and technological. It requires researchers to problem set and not just problem solve, to be strategic as well as relevant. It requires from teachers as practitioner researchers another level of professional judgement that derives from the theoretical underpinnings of their disciplinary field of practice.

Reconceptualising the discussion about the relationships between universities and in a knowledge society, Delanty (2001, 151) argues that universities are a zone of mediation between the knowledge as science and knowledge as culture, and cannot be reduced to one or another. The key role of the university in the future, he suggests, is linked to reflexive communication and citizenship ie articulation of technological and cultural citizenship. The knowledge society perspective argues that the new challenges and technologies of the 21st century will demand new social, political and ethical responses that will only come from the humanities and social sciences. It has a greater conceptual capacity to recognise all citizens, in and out of work, values the 'public' collectivity, stresses the need for the upskilling of all, views professionalism as a matter of trusteeship and advocacy as well as technical expertise, and is about sociability and situated knowledges. A knowledge society presumes that knowledge is produced as a collective enterprise in which dialogue is essential for its dissemination, while access and openness are necessary conditions. Policies aiming for a knowledge society are therefore premised upon a reconceptualisation of the public in the

informational society, as there are new modes of communication and collectivity eg internet, migration. It recognises that while applying research to problem solving relies upon interdisciplinarity, strong interdisciplinarity can both problem set and problem solve. But this relies upon recognising the legitimacy of core scholarship and research in all knowledge fields.

References

- Allport, C. (2001) Research Report *NTEU Advocate* Sept, p.8-9
- Atkinson. E. (2000a) In Defence of Ideas, or Why 'What works ' is not Enough *British Journal of Sociology* 21(3) pp. 318-30
- Atkinson. E. (2000b) Critical distance and critical schizophrenia :the struggle between policy delivery and policy critique *Research Intelligence* 73 (Nov) pp. 14-16
- Ball, S. (1999) Labour, Learning and the Economy: a 'policy sociology' perspective. *Cambridge Journal of Education* 29(2) pp. 195-206
- Barnett, R. (1999) *Higher Education : A critical Business* Open University Press, Buckingham
- Batterham, R. (2000a) *The Chance to Change*: Discussion paper by the Chief Scientist (www.isr.gov.au/science/review/: Accessed August 25 2000).
- Beck, J. (1999) Makeover or takeover?The strange death of educational autonomy in neo-liberal England *British Journal of Sociology of Education* 20(2) pp. 223-36
- Blackmore, J. (1999) Intellectual labour at risk or under reconstruction? Australian Association of Research in Education Conference Proceedings, 2-4 December, Melbourne. Nov 27-9 www.swin.edu.au:80/hGET%20/aare/confpap.htm
- Bloom, A. (1987) *The Closing of the American Mind* New York Simon and Schuster
- Calas, M and Smircich, L (2001) Introduction: Does the House of Knowledge have a Future? *Organisation* 8(2) pp. 147-9
- Castells, M. (1997) *The Rise of the Network Vol 1* Society Oxford
- Chifley Research Centre *Knowledge Nation Task Force*, Report, Canberra. http://www/alp/org.au/print.html?link=/kn/kn_report_020701.html
- Cochrane Smith. M. and Lytle, S. (1993) *Inside Outside: Teacher research and knowledge* New York. Teachers College Press.
- Creemers, B. and Reezigt, G. (1997) Schools Effectiveness and School Improvement: sustaining links. *School Effectiveness and School Improvement* 8(4) 396-429.
- Currie, J and Newsom, J. (eds) (1997) *Universities and Globalisation:Critical Perspectives* London, Sage
- Delanty, G. (2001) The University in the Knowledge Society *Organisation* 8(2) pp. 149-54
- Department of Education, Training and Youth Affairs (DETYA)(2001) *Backing Australia's Ability*. Canberra

- DETYA(2001) *The Impact of Educational Research on Policy and Practice* Canberra, CGPS
- Education Queensland, (1999) *New Basics Project : Technical Paper*. Brisbane
- Senate Committee (2001)*Universities in Crisis* Report of Committee on the Adequacy of Funding for Universities, Canberra.
- Gitlin. A. Kauchak, D, and Burbank, M. (1999) The struggle for legitimate knowledge. *Teacher's Thinking on Research*. Paper presented AERA.
- Hargreaves, D. (1996) *Teaching as Research Based Profession* TTA, London
- Hill, P. (1995) *100 Schools*. University of Melbourne
- Lingard, B. and Blackmore, J. (1997)The performative state and the state of educational research, *Australian Educational Researcher* 24 (3) pp. 1-30
- Lingard, B. et al (1998) School effects in post modern conditions. in Slee, R. and Weiner, G. (1998) *School effectiveness for Whom?Challenges to the school effectiveness and school improvement movement*. Falmer Press.
- Lyotard, J-F (1984) *The Postmodern Condition : A Report on Knowledge* Manchester, Manchester university Press.
- Marginson, S. and Considine, M. (2001) *The Enterprise University. Power, Governance and Reinvention in Australia* Cambridge University Press, Melbourne
- Ozga, J. (2000)*Policy Research in Educational Settings*. Open University Press
- Readings, B. (1996) *The University in Ruins* (Cambridge, Mass. Harvard University Press).
- Rhoades, G, and Slaughter, S. (1998) Academic Capitalism, managed professionals and supply-side higher education in M. Randy (ed) *Chalklines. The politics of work in the Managed University*. Duke University Press Durham and London.
- Shavelson, R. and Berliner, D. (1991) Erosion of education research infrastructure. *Educational Researcher* 17(1) pp. 9-12
- Smith, B. and Frankland, M. (2000) Marketisation and the new Quality Agenda: post graduate coursework at the cross roads *Australian Universities Review*. pp. 7-11
- Thomson, P. (1999) "Like schools, educational disadvantage and 'thisness'. *Australian Education Researcher* 27(3) pp. 157-72
- Tooley, J. and Darby, (1998) *Educational research : A review* London. OtSE
- Willinsky, J. (2000) Strategic Education Research: The Public Value of Research *Educational Researcher* 30(1) pp. 5-14

