

## ***Does Educational Research Matter?***

Presidential Address to the British Educational Research Association  
given at the Annual Conference, University of Sussex, September 1999.

**PETER MORTIMORE**, *Institute of Education, University of London*

**ABSTRACT** *This article endeavours to set British educational research in the context of national and international economic developments and to take account of national educational policy making and educational practice.*

*It addresses seven questions:*

- *What does the term educational research include?*
- *What are the major tasks of educational research?*
- *What are its successes?*
- *What are its failures?*
- *Why is educational research attacked so frequently?*
- *Would we miss it if it did not exist?*
- *How can we enhance the value of educational research?*

*It is argued that the scope of educational research is broad, covering different techniques and methodologies and many aspects of the educative process, both formal and informal. Four main tasks emerge: to observe and record systematically; to analyse and draw out implications; to publish findings; and, crucially, to attempt to improve educational processes and outcomes. British educational researchers can point to a substantial corpus of successful work, ranging from large-scale longitudinal cohort studies to powerful individual case studies; to studies of differential effectiveness, school organisation, curriculum and assessment, inequality and discrimination.*

*Many such studies have influenced policy and practice. But success should not blind the research community to its shortcomings—the gaps in knowledge, the inaccessibility of some writing, the mediocrity of some work, and the ways in which researchers relate to those involved in, or affected by, research or those whom it is hoped will be influenced by it. Public perceptions of these shortcomings—some well founded, others driven by prejudice—underlie many of the attacks to which researchers and their work are regularly subjected. Whilst educational research might not be missed (even gladly dismissed) by some practitioners and policy makers, this paper argues that the work is essential if independent questioning and impartial evaluations of policy and practice are to take place. We should, however, make every effort to enhance our work. To this end we need to take note of the various BERA Codes of Practice, invest in developing our members' repertoires of research techniques and constantly guard against bias in our work. We must also continue our efforts to relate positively to the elected government of the day. In doing all of these things we must holdfast to our BERA values. We must do what we have been trained to do*

- *ask difficult questions*

- *demand evidence, rather than anecdote, for answers*
- *generate, through our research, new knowledge*
- *formulate new theories*
- *speak up for what we believe is right*

*A democratic society expects - and deserves - nothing less.*

## **Introduction**

I feel privileged to be your President in the twenty-fifth year of our Association's existence: the last BERA President of the twentieth, and the first of the twenty-first century. We are educational researchers at a time when *some* aspects of life are changing fast even though others remain amazingly stable. Those of us who listened to Anthony Giddens's Reith Lectures (Giddens, 1999) earlier this summer heard an interesting discussion of change and continuity in relation to globalisation, risk, traditions and customs; and the implications of change for the ways in which we live and work and for the governance of our countries. (We also learned that the Scottish kilt is a relatively modern invention and that television camera operatives reconstructed the fall of the Berlin wall so that they could record it for posterity.)

On the home front, our society has lived through 18 years of Conservative rule-with its predominant market philosophy applied to most areas of life, its obsession with educational reform and what Stephen Ball has termed its 'discourse of derision' with academics, especially those researching in the field of education. We have also experienced the first two years of a new Labour government, with its continuation of 'choice and diversity' in most forms of education provision and its pursuance of educational reform. It is an interesting time, therefore, to review the importance of educational research to our society.

But before discussing relationships with past and present governments, let me say something about the bigger picture-the world in which Britain exists today and in which research findings have a part to play in informing both governments and citizens.

In economic matters we have witnessed an increasing divergence between rich and poor countries and, within them, between rich and poor individuals. Figures from the

TABLE 1. Control of wealth by the richest and poorest fifth of the population in four countries

Country	% of wealth controlled by the richest 20%	% of wealth controlled by the poorest 20%
Brazil	64.0	2.5
Mexico	58.0	3.6
USA	45.2	4.8
UK	39.8	7.1

Source: World Bank, 1999, reported in the *Independent*, 2 August, p 11.

World Bank-hardly the most revolutionary body-illustrate the gulf between rich and poor.

Table I illustrates that, although the UK has more equitable figures than the USA and the two Latin American countries, the richest fifth of its population still controls almost 40% of the wealth whilst the poorest fifth controls only 7%. The purpose of the *Independent* article which carried this information was to suggest that information and communications technology (ICT) would be likely to increase, rather than decrease, this disparity. In the USA and the UK free universal schooling has not closed the gap; rather, it has increased it by creating two classes of people: those who, for a variety of reasons (including their greater social and cultural capital), are good learners who succeed in school and who are able to succeed in subsequent life-and those who are not an cannot.

In the UK, between 1967 and 1992, we experienced a 30% increase in income inequality (Dennehy *et al.*, 1997, p. 280). We now have one-quarter of our population, including more than 3 million of our children, living in official poverty-that is, at less than 50% of average earnings (New Policy Institute, 1998). The Acheson Report (1998) (*Inequalities in Health*) highlighted the consequences of such poverty for families. These were picked up by an article in the *Observer* by Will Hutton:

The poor are unhealthy. They live less long; they suffer more from lung cancer, coronary heart disease, strokes, suicide and violent accidents than their richer peers-inequalities that have been getting worse over the last 20 years. They are more likely to have their cars stolen and their homes vandalised. They eat less iron, calcium, dietary fibre and vitamin C. They are fatter. Their homes are colder. The schools their children attend have poorer results and they will be less well fed, with their mothers going without to achieve even that. (Hutton, 1998)

At the same time that some families have been growing poorer-and despite the turbulence in world trade-there has been an increase in the power of the multinational corporations. In the UK, as in a number of industrialised countries, we have seen a decline of manufacturing and agriculture (with massive implications for unemployment) and a rise in the service industries-which have created employment possibilities, although often in specific locations or needing particular skills. Under the last Government we saw the privatisation of utilities and much of the public transport and an increasing reliance on 'competition' to curb price increases.

We have also seen an ICT revolution in most work settings, including our own academic world where we have benefited from instant, worldwide communications and the exchange of knowledge. And we have lived through some profound changes in social attitudes: greater individualism and more diverse families; an uneasy mixture of liberalising and hardening views on crime and punishment; changing views on gender, sexual orientation and race; the creation of a 'blame culture' and an increase in the power of the media not only to report events but to influence them. We are becoming an extremely media-conscious society, with even the Government spending over £100 million on its own advertising (Central Office of Information, 1999).

All these changes have had an impact on how we live. No doubt all generations think that their own lifetime is a period of unprecedented change. My maternal grandmother travelled from Malta to Egypt in the late 1980s. She lived to see, in everyday use, radio and television, the car, the telephone and the jet aeroplane. She experienced a sea change in social attitudes

towards women. She witnessed a revolution in educational opportunities. Can the changes we have seen compete with that?

This uneven development is the context for my review of educational research - its value to our society and the problems it faces. The question in the title of the paper is a genuine one - does it matter and, if it does, to whom does it matter? Let us hope that the answer is not just 'to us'.

I will address seven questions.

- What does the term educational research include?
- What are the major tasks of educational research?
- What are the successes of educational research?
- What are the failures of educational research?
- Why is educational research attacked so frequently?
- Would we miss educational research if it did not exist? and-finally
- How can we enhance the value of educational research?

But, first, a few comments on the two national contexts in which educational research currently is pursued: educational policy-making and educational practice. These two arenas represent the two most common foci for our work (not the only ones; some colleagues work predominantly in 'basic' research and some are concerned mainly with theory-building). The norms and the cultures of these two arenas will affect what (and to some extent how) research can be undertaken, how it is perceived and the ways in which it is used - or ignored.

### *Prevailing Educational Policy-making*

Undoubtedly both the last Conservative Government and the current new Labour Government genuinely sought - and is seeking - to raise standards. In doing so, however, they have sometimes given the impression that standards have been falling - a view which is *not* supported by the available evidence:

Until the late 1980s, the governments of the day had exhibited fairly low expectations of the academic potential of most secondary school pupils ... It is against the norms of behaviour and popular aspirations of the period that 'average standards' have to be judged. Any talk of declining standards overall is nonsense. The record of gradual improvement is undeniable but-and this is the crucial point-from a low starting point at which only one fifth of each age cohort was expected to take academic examinations and an even smaller proportion was expected to succeed in them. (Mortimore & Mortimore, forthcoming)

Both the previous and the current Governments have embraced centralisation. Since the 1988 Education Reform Act the number of powers adopted by government can be counted in the hundreds. The equilibrium of 'a central service locally administered', which was worked out in the shadow of the Second World War, has been transformed into a strong centre and strong school with a weak local authority relationship - Kenneth Baker's strong hub and rim with unclear links between them. (In Scotland, Wales and Northern Ireland the status is different and seems likely to remain so.)

Both Governments have also pursued policies dedicated to diversity and choice, at least in England-so far. Neither Government appears to have questioned why a system previously considered to promote specialisation at the inappropriately early age of 16, now needs it at 11! Interestingly, the Conservatives demonstrated a puzzling inconsistency by opting for a comprehensive higher education sector (by removing the binary line between universities and polytechnics) whilst simultaneously attacking the existing comprehensive system of secondary schooling. Neither Government has undertaken a cost-benefit analysis of 'choice'. Diversity and choice seem to be two of the non-negotiables of modern British Governments' policies. In my view, 'diversity' is used all too often as an excuse to justify a pecking order of schools to suit a pecking order of social classes. It is particularly suspect in the light of our distinctly 'non-diverse' National Curriculum, prescribed literacy and numeracy hours and inspection framework.

Both Governments have been committed to enforcing policies through inspection - giving increasing powers to the Office for Standards in Education (OFSTED) - and to using 'naming and shaming' as a stick with which to beat schools. Within its first few weeks of power the new Labour Government chose to label 18 schools as 'failing' and it is talking of using a similar technique with further education colleges and local education authorities (LEAs).

Both Governments have increased the accountability of teachers. The new Labour Government sees them as vital to the success of schools but in need of 'modernisation'. The word is important and is used in both the Prime Minister's introduction to the *Green Paper (Teachers - meeting the challenge of change)* and a number of times in the document itself (Department for Education and Employment [DFEE], 1998a). It is also used in the 1998/99 *Government's Annual Report* (HM Government, 1999):

Excellent teachers and head teachers are vital to give all children the best start in life. This means modernising the profession itself so it is well led, has the status it deserves, and so teachers are better supported, trained and rewarded. (p. 10)

These objectives, and indeed those listed in the Green Paper, are excellent and have generally been welcomed by the education community. The problem is the principal means by which the Government has chosen to do the modernising: performance-related pay. In a newspaper article, for one of the Guardian Institute of Education Debates, I spelled out some of my reservations about this approach. In particular, I noted that the knowledge about effective schools generated by research studies showed the essentially collaborative structure of teaching. I also noted that introducing measures which 'set teacher against teacher and school against school' were likely to jeopardise the aim of raising overall standards.

Despite the rejection of the concept of performance-related pay by the overwhelming majority of those who responded to the consultation on the Green Paper, the Government remains committed to it:

We have listened to teachers' concerns about the practicality of introducing changes from September 1999. We will, therefore, use the next academic year as an introductory and training year while pressing ahead with our pay reforms. (HM Government, 1999, p. 10)

It is worrying that the Government has such confidence in a system which has very little support in published research or, indeed, even amongst business people who might be expected to favour its general philosophy. To me, such confidence illustrates a misreading of the psychology of the teaching profession. It is as if the Government cannot understand the vulnerability of teaching as 'a profession which can easily feel isolated and exposed' and as a result 'has a strong need for teamwork and peer support' (Mortimore & Mortimore, 1998, p. 211). Lessons from research on the teaching profession (Ozga & Lawn, 1981; Ironside & Seifert, 1995) seem not to have been heeded. Indeed, the Government appears intent on pushing ahead with policies which run counter to research evidence.

Both the previous and the current Governments have also demonstrated fairly ambivalent attitudes towards other research findings. Both have drawn on the school effectiveness studies, with which my colleagues and I have been involved, in order to argue that if one disadvantaged school can be effective, so can they all. But neither Government - as far as I know - has acknowledged the review Geoff Whitty and I carried out of the limits of school improvement in helping the disadvantaged (Mortimore & Whitty, 1997). Geoff Whitty and I had concluded that research showed that schools could indeed make a difference but that there were limits to how much and that it was not sensible to try to run an entire system on the basis of what exceptional schools managed to achieve. We also pointed out that the 'advantaged sometimes gained even more than the disadvantaged from some initiatives', even when these had been planned with the opposite effect in mind (Mortimore & Whitty, 1997, p. 11).

When I published a retrospective account of research studies undertaken in the field (Mortimore, 1998), in which I commented that the current Government seemed only to have read half the message about the power of schools, a *Times* leader (*The Times*, 1998) and an incandescent article in the *Sunday Times* by Melanie Phillips (1998) made personal attacks on me and Her Majesty's Chief Inspector followed me around the BBC's studios to counter my arguments.

Ambivalence to research continues. Witness the recent controversy about Peter Tymms's findings on homework in primary schools, which occasioned an article by the Secretary of State in the *Daily Mail* (18 July 1999) and his reported comments that 'researchers churn out findings which no one with the slightest common sense could take seriously'. Fortunately, a journalist - not a researcher, whose arguments might have been dismissed as those of an interested party - felt compelled to provide a sharp response (Purves, 1999).

### *Prevailing Educational Practice*

Here I wish to highlight just two major issues:

- *the thrust for improvement*

I believe both recent and current Governments have genuinely been committed to improvement but on the basis of an assumption of falling standards-the accuracy of which has already been queried. A more plausible assumption would have been that the standards simply are not good enough for today's world. This would be accepted by practitioners and by researchers who, after all, have been highlighting for years the fact that the system does not serve all pupils equally well (Sammons *et al.*, 1983) and needs to be redesigned. What an opportunity here for 'modernisation'! Both Governments, directly and indirectly, imply that teachers, LEAs and others in the

'education establishment' are to blame for this state of affairs. This reasoning is unfair and ignores the limits to success imposed by the assessment system itself—a system which was established in order to achieve only partial success. High status examination success was expected to be achieved by only the most able 20%, with considerably less success expected of the next 40%, tapering to little or nothing for the remaining 40% (Beloe Report, 1960). This situation pertained until 1987 and the advent of the General Certificate of Secondary Education.

- *the potential threat to autonomy*

Due to the excessive dependency on inspection, effective classroom practice in England is being defined solely according to OFSTED norms. No matter how good, these norms are likely to have a constraining effect on the scope of teachers to innovate and experiment. Dogma can underpin practice which is initially good but which, as circumstances change, can end up as bad practice.

There is also a threat to any autonomy in initial teacher training in England, where the Teacher Training Agency (TTA) norms and the frequent rounds of inspections by OFSTED are severely reducing scope for innovation. (At the Institute of Education, the postgraduate course for intending primary school teachers, despite achieving very good grades, is about to be inspected for the third time in 5 years. What price the much vaunted principle of 'intervention in inverse proportion to high quality'?)

Similarly, in research, the potential control of funds, stipulation of topics, suggestions for appropriate methodology and control of results all pose serious dangers. In the late 1980s I chaired the steering group for a National Foundation for Educational Research (NFER) study of parental involvement. The study was a good piece of work with no particularly controversial findings. But, for some unexplained reason, publication was blocked for months. Eventually, after much pressure, permission was given for publication. But I never discovered any reason for the delay. I suspect an overzealous official interpreted some of the findings as criticism of current policy and resisted showing the completed report to the minister responsible. Imagine the temptation to do so in today's climate, especially if the research findings run counter to the claims of policy-makers or their pundits. So, to my first question.

### **What Does the Term Educational Research Include?**

In posing this question I accept the definition of research used by the Higher Education Funding Council of England (HEFCE) as being 'an original investigation undertaken in order to gain knowledge and understanding' (HEFCE, 1999, p. 261). In answering it, I will begin with the categories from the terminology agreed by the Organisation for Economic Cooperation and Development (OECD) and used by McGaw (1997) in a keynote speech to the NFER:

- *Basic research* - using the OECD Frascati Manuals' agreed terminology. For example, a study of the motivation of young children.
- *Applied research* - which sets such an inquiry in the context of a particular problem. Using the same example this could mean a study of how some teachers evoke greater motivation from their 14 year-old pupils.

- *Experimental development* of the research ideas - again using the same example, this could mean offering pupils greater choice or independent counsellors (as in some American schools) - and evaluating the impact on their motivation.
- A radical approach to research which, to quote a former BERA president (Brown, 1997), stems from 'the blast of deconstruction which postmodernist questioning has landed on the kinds of truth claims pursued by the research traditions in education' (p. 81). Brown made it clear that she had in mind Eagleton's (1996) description of postmodernity as 'seeing the world as contingent, ungrounded, diverse, unstable and indeterminate' (p. vii). This view challenges the assumptions we make about ourselves and our tasks. It may be hard to grasp in relation to existing paradigms but it should not be ignored - and it goes some way towards explaining the conflicting pressures on pupils which can affect their motivation.

These categories and approaches make the scope of educational research enormous. Research ranges from studies of the learning of babies and young children, through to the lifelong learning of the university of the third age and of those who learn outside of educational institutions. It includes anything to do with the educative process - formal and informal - and many topics within health, childcare or delinquency. It may focus on places (schools, playgrounds, libraries or homes) or on people (pupils, teachers, childcare workers, support staff, chief education officers or civil servants). Just as medicine tries to deal with health and sickness, causes and effects, prognoses and sequelae, education is concerned with the whole person and their mental, spiritual, physical and emotional developments.

Now to my second question.

### **What Are the Major Tasks of Educational Research?**

The first major task of research is to conceptualise, observe and systematically record events and processes to do with learning. The second task is to analyse such observations in order to describe accurately their conditions, contexts and implications. Both tasks are concerned with learning in its widest meaning, defined by Abbott as: 'that reflective activity which enables the learner to draw upon previous experience to understand and evaluate the present, so as to shape future action and formulate new knowledge ...' (Abbott, 1994, p. vii). The third task is to publish accounts of all that is known about the particular topic under consideration, drawing on existing theory from one of the disciplines which contribute to our field, from educational theory itself, or from emerging theory that will itself be aided by the work. Ranson (1996), in a definition which neatly sums up the complexity of theory, terms it: "the indispensable intellectual capital that connects the particular to its context, whilst analysing, explaining and challenging the relationship between them' (p. 529). But even with a theoretical underpinning, the researchers' task is not complete for they have to relate their findings to political, economic and social aspects of society.

Research may be empirical or philosophical; it may involve fieldwork or it may be concerned with texts alone. Where it differs significantly from many forms of intellectual endeavour is through its essential transparency - it is a public process and replication is encouraged. Stenhouse defined research as 'systematic inquiry ... to provide a general theory of educational practice ... made public' (Rudduck & Hopkins, 1985).



The fourth task, and - in my view - the main purpose, of educational research is to further educational improvement. In the words of the BERA Working Group creating the Code of Practice of Good Writing in Educational Research, research can do this most easily through 'the advancement of trustworthy knowledge about education' (BERA, 1999). Research is not just for fun - although hopefully it sometimes will be - nor just for theory-building. Rather, we want something to happen as a result of the endeavour which leads me to my next question.

### **What Are the Successes of Educational Research?**

Everyone will have their own list of valuable work-like collectors at an art auction and it is impossible to do more than provide a, glimpse of the varied successes of educational research. On the whole I have tried not to name names because there are so many I could include. My list begins with the political arithmetic tradition and the pioneering studies for an earlier Labour Government on educational priority areas and inequality. (The latest work by Chelley Halsey and colleagues-Halsey *et al.*, 1997-is a masterpiece of the genre.) My list continues with the radical approaches of the early researchers in special education who showed us the way to use knowledge to improve the lives of people who had been written off by society. Anyone who has read *The Empty Hours* - an account of what life was like for children in the back wards of residential care - will understand how powerful an advocate straightforward descriptive accounts can be (Oswin, 1971). The Warnock Report and subsequent Acts of Parliament and Codes of Practice were all influenced by this early work.

I also wish to include the various longitudinal studies which illuminate the changing and the constant patterns in people's lives. Unique to Britain, these studies can answer questions posed today with data carefully collected and stored some 50 years ago. We should be grateful to all the researchers involved with the various cohort studies. Longitudinal studies provide a good illustration of how research needs financial investment, high quality data collection and appropriate analytic techniques in order for its potential value to be fully exploited.

The research at the NFER and in universities which, in different ways, revealed the invidious basis of the 11-plus testing regime and which helped influence the move to comprehensive education also deserves mention. The extraordinary mystery of Cyril Burt's analyses may have captured our imaginations but the less controversial, though meticulous, studies of the processes and outcomes of selection played a significant part in our educational history.

I have also found the crop of case studies of individual schools fascinating for the ways in which they revealed so effectively the reality of pupils' and teachers' school lives, their anxieties and expectations, their cultures and subcultures.

Much good work has been devoted to uncovering the lack of equality in our educational system. Studies of social class, gender and race issues have changed the way pupils are treated. Painstaking studies of grant-maintained schools, the assisted places scheme and single-sex schooling have added considerably to our knowledge. More recent studies of gay and lesbian pupils, hopefully, will help bring about changes of attitudes. The report of a study by Epstein & Johnson (1998), which highlighted the bullying of a young boy because of his sexual identity, evoked a number of letters from parents of children who had faced similar persecution. Sometimes studies reveal paradoxical findings. An Inner London

Education Authority (ILEA) study of women's careers in teaching showed that the proportionate success of women competing for promotion was higher than their male counterparts but because, in terms of absolute numbers, women applicants were fewer, men appeared to be more successful (ILEA, 1984). However, women, unaware of the success rates, gave up their attempts at promotion after only two or three unsuccessful attempts whereas the men went on-and on-and on. Revealing the reality of these data encouraged more women to apply for promotion - and to succeed.

In my own field of school effectiveness and improvement many colleagues from all over the UK have conducted studies, some large-scale longitudinal, and have sought to develop appropriate statistical techniques with which to analyse the data. Others have worked with teachers and heads in exploring ways of promoting better learning, increased self-confidence and less conflictual approaches to schooling. Findings on what pupils have to say about their schooling-when researchers take the trouble to ask them-have revealed important gulfs in the understanding of teachers and learners.

My list also includes the considerable body of research on curriculum and assessment (despite the sad loss of Ros Driver). The development of science education, for instance, has sparked interest in many countries. Much research was focused on a successful brainchild of the Conservative Government - the Technical and Vocational Educational Initiative (TVEI) which, sadly, was dropped with the adoption of the National Curriculum. The good work on assessment continues, again despite another sad loss in Desmond Nuttall, and has broadened to examine the impact of feedback on children's performance.

And, of course, I must include the work of the numerous methodologists who have created systematic ways of handling complex qualitative data and those who have made the quantitative analysis of nested data much more accessible.

This list does little justice to the numerous researchers who have devoted themselves to work in our field, or to the burgeoning numbers of teacher-researchers, but it provides some measure of the breadth of work and the quality of its contributions. We must not, however, be complacent and must maintain our endeavours to produce the highest quality research work.

### **What Are the Failures of Educational Research?**

As with the list of successes, this will be my personal view. In my judgement, we have not invested sufficient energy in developing theories of learning and in investigating the reasons for learning problems. Despite good work in constructivism, there remains much we just do not know about why and when and where learning does or does not take place. We still do not know much about pedagogy: about, for instance, whether it is wise to begin formal teaching at age 5, despite a new study by my colleagues, Judy Ireson, Sue Hallam and others, (Ireson *et al.*, 1999) or about the impact of grouping learners of similar or different abilities. We still do not know enough about the interdependent relationship of assessment and learning. We do not understand sufficiently the impact of disadvantage. And our knowledge of the effect of ICT on learning is still in a rudimentary state.

Nor have we, in the last 20 years, undertaken many large-scale studies of the equivalent of the ORACLE (Galton *et al.*, 1980) or the Junior School Projects (Mortimore *et al.*, 1988).

Neither have we looked beyond our own system sufficiently, with the result that the educational systems operating in our sister European nations are unfamiliar to many of us.

It is, of course, the case that large-scale studies-particularly longitudinal or comparative ones - cost a great deal of money and that the UK spends less than 0.2% of its budget on research - in comparison with the USA, for instance, which in 1992 spent 0.8% of its federal budget on research. Compared with health, education research - everywhere - is funded at a very low rate. But my point is that we - the research community - should perhaps have been banging on more doors with more plans for the studies which we think need to be undertaken.

Furthermore, some of our research reports are somewhat convoluted in style. One reason for this may be the researchers' desire to give as much information as possible to their readers. But another may be the need for findings to be better digested before publication.

A legitimate difficulty is that researchers are expected to write for quite different audiences. The new BERA Code of Good Practice in Educational Research Writing, proposed by Margaret Brown and working party colleagues (BERA, 1999), suggests a 'pyramid' model of writing. The model begins with a full report, which should provide sufficient detail for replication and for an audit of methodology, and ends some three stages further on with a brief and accessible news report. This should help by making it much clearer *what* is being written for *whom*, so that we may in future avoid the pitfalls of supplying too much information or technical detail for some audiences and too little for others. Of course, sometimes we are wrongly accused of omitting detail when, in fact, the reader has simply not looked for it. I remember a critic of *School Matters* (Mortimore *et al.*, 1988) complaining of the lack of technical data, despite the numerous references in the book (written for a wide readership) to three lengthy technical reports aimed at researchers.

The fact remains, however, that some of our work as educational researchers is probably not good enough. Hillage *et al.* (1998) found it ill-coordinated and fragmented; Tooley (1998) questioned its intellectual quality; and-if we are honest-many of us sometimes wonder why colleagues have not thrown their energy into some of the obvious theoretical and practical lacunae that we encounter in our work. I am hopeful that the National Education Research Forum, first proposed by David Hargreaves (1996) and endorsed by Hillage *et al.*, and which the Department for Education and Employment is now promoting, will provide an arena in which BERA can play its part by helping to provide greater coordination, and that this will result in less fragmentation. I am not convinced that, as a research community, we yet take our policy 'users' seriously. At a recent conference, David Willetts (a former Conservative spokesperson for education and a former member of the Downing Street Policy Unit) noted that 'there are many researchers who are active in policy-relevant research, but who are unwilling or unable to engage with policy practitioners except remotely through academic publications'. This illustrates the systemic nature of the problem. We are driven by the Research Assessment Exercise (RAE) - introduced by politicians - but are then criticised for presenting our work in a form which is not user-friendly to those same politicians. Members of think tanks, unlike academics, do not have to compete for RAE funding and so can write directly for the policy users. Somewhat unfairly, their work is often contrasted with ours. Brown's pyramid model should, in future, help researchers avoid this situation.

Neither do we treat practitioners and pupils with sufficient respect. Many years ago, when one of my responsibilities was to screen applications for research access to schools in the

ILEA, I was frequently surprised by the poor quality of some research designs and instruments and by the researchers' unrealistic or even arrogant demands on schools. It is true that some of these studies were being undertaken by students, but they would have been approved initially by supervisors.

Most of us, I am sure, do consult with those we wish to involve in our research, we enlist the advice of steering groups and, hopefully, we provide advance copies of our findings. But too often this is all we do. Of course, it is sometimes difficult to do more. Those whom we hope to help or influence by our findings are usually busy people (if they are not then they are probably not very useful to the research) and they perceive problems from their own different perspectives. Some will not be familiar with the snares that exist for researchers. Why should they be? But we do need to try harder to find different ways of bridging the gap between the research community and those whom we wish to include in, or influence by, our research.

At last year's Conference, we faced the Hillage *et al.* (1998) critique. One of its major criticisms was that we present findings 'in a form or medium which is largely inaccessible to a non-academic audience and lack interpretation for a policy-making or practitioner audience' (p. xi). For me, this criticism provides a useful insight into how others see us. The review was limited by its terms of reference and by its inability to do more than note what people said about research and to present this in a 'pot-pourri' of digested opinion. Nonetheless, we surely ignore what people say about our work at our peril.

### **So Why is Educational Research Attacked so Frequently?**

Our work is often condemned as being too theoretical; theory being seen as a term of abuse! There is a poem by Goethe with a line, 'All theory, dear friend, is grey, but the golden tree of actual life springs ever green', and this seems to sum up the view of many people that theory is boring and irrelevant. It seems to me that, despite this criticism, theory is often ignored by educational researchers, although we all dutifully regret its absence. The number of researchers who have made significant contributions to theory - the Piagets or the Bernsteins - are few and far between and mostly come from - as did they - other social science traditions.

Another criticism made of our work is that it is frequently biased! This has been the constant criticism of the various right-wing think tanks who, over the years, have identified bias in other people's work whilst being blind to it in their own. Tooley's critique of published articles in a limited number of journals is in this tradition (Tooley, 1998). During the 1970s the fear of bias was so strong that the then Permanent Secretary established a special team to check the output of one university although, eventually, it was given a clean bill of health. Of course, some research probably is biased. Social psychologists are only too aware of how easy it is to fool ourselves through our selective perception of events. A classic study by the American social psychologist, Kelley (1950), illustrated how students can judge the same lecturer positively or negatively, depending on the mindset which has been established prior to the lecture. Just because we are researchers does not mean that we are not subject to similar restricting mindsets which can bias our work. This is an ever-present danger for all researchers to be aware of and to guard against.

A different kind of bias has been the subject of challenge by the 'postmodernists'; those who Stronach & MacLure (1998) term the 'responsible anarchists', questioning the 'fantasies of

grand narratives, recoverable pasts and predictable futures' (cited in Elliott, 1998) about which we sometimes glibly write. I think we have to take this criticism seriously although, like Elliot (1998), I think that we probably have to learn to live with the resulting tensions between their view of the world and that of more orthodox thinkers.

It seems to me that much of our work is criticised because it is perceived as threatening. Amazingly, despite the lowly state of research, people with power - such as politicians and civil servants - often seem to find it so. They appear to resent the authority that comes from a systematic investigation; the more so if the research findings contradict received wisdom or challenge policy. Other researchers can also feel threatened by work which contradicts their own findings. This happens in all forms of science and illustrates its essential democracy. Research needs criticism to improve. But, of course, if criticism is based on ignorance, on a partial reading of the evidence, or on a 'straw man' constructed from a distorted version of our argument, then it is rightly resented.

There have also been attacks on research from OFSTED. The infamous introduction to the Tooley Report by the Chief Inspector of Schools ('Educational Research is not making the contribution it should. Much that is published is, on this analysis, at best no more than an irrelevance and distraction') is a case in point. As even the most casual reading of Tooley shows, this criticism was wide of the mark. But it was picked up and echoed in the press release issued by the DFEE (1998b). The clarity and presentation of OFSTED publications is excellent - not the school inspection reports, which vary enormously in quality - but the major reports from the Chief Inspector. The problem is that this clarity is often bought at the price of oversimplification (Campaign for State Education [CASE], 1996; Goldstein & Mortimore, 1999).

Some of OFSTED's own research is suspect. Harvey Goldstein and I examined in detail the study of reading in three London Boroughs and found it deeply flawed (Mortimore & Goldstein, 1996). But some of OFSTED's commissioned reviews of work by independent researchers, such as the *Achievements of Ethnic Minority Pupils* (Gillborn and Gipps, 1996), are excellent.

The relatively poor academic standing of education in relation to other subjects and of educationalists in relation to their peers in medicine, law or even the other social sciences does not help us. The reasons for this are complex and are rooted in the history of the teaching profession and the development of education as a university subject. We are stuck, however, with unhelpful perceptions and we need to challenge low expectations and unfounded prejudice whenever they appear. There is now a growing number of vice- and deputy vice-chancellors with education backgrounds being appointed to British universities and it is to be hoped that a more positive-less elitist-culture will emerge which, in time, will raise the status of educational research in universities.

Finally, our work is criticised because it is seen as mediocre. Some of our work probably deserves this judgement, as I have already acknowledged. But it is impossible to make a sensible assessment of this criticism without undertaking a large-scale exercise evaluating a representative sample of work in education and other comparable fields. As I noted earlier in this paper, many of us recognise shortcomings in our work. Some of it is too small-scale, too short term, or too jargon-ridden or obscure in its written form. Some of it is not directly relevant to users and some takes users for granted (but whether this is more or less than in

other disciplines is simply not known). We need to attend seriously to these criticisms but not to lose faith in the value of the other, high quality, work we have produced.

The potential solution to these problems put forward by some of our critics is to establish greater controls over competitive research funding: in order to make it more difficult for researchers to win grants; to allow them less freedom over research design; and to have research reports vetted by the funding authority. An even more extreme solution would remove the research time that is given to British academics as part of HEFCE funding and make this competitive on a project by project basis.

These 'solutions', based on imposing greater levels of control over researchers, are-in my view-unlikely to work and could prove disastrous. They would make researchers compliant rather than creative. And we know from other research fields how serendipity has led to creative discoveries of enormous significance: antibiotics, laser beams, optic fibres and semi-conductors are just a few such examples. If the scientists involved with these developments had been bound by agreed research protocols they would not have had the freedom to follow their intuition and to make their discoveries. And it is the equivalent discoveries that educational researchers need to make about learning if our society is to flourish.

### **Would We Miss Educational Research if it Did Not Exist?**

It is possible that, if educational research did not exist, it would not be greatly missed. After all, we know from Hillage that policy-makers do not make great use of our findings. We also know that practitioners do not have much time to read our work and may find it hard going when they do. The education system would still be in place and, when it was needed, other evidence would be found and used. There are plenty of organisers of focus groups who would be only too willing to supply information on the attitudes and opinions of people providing or using the education service. There is also a rapidly expanding OFSTED data base on school practice. Inspection evidence is sometimes seen as an acceptable substitute for research data. This argument should never be accepted: such data are collected for a *different* purpose to research, in *different* circumstances, by people with *different* approaches.

It is also a fact that, if educational research did not exist, some resources would be saved although, given the low level of funding, this would not be a great deal. Moreover, all those academics who currently spend so much of their time on research would have more to spend on other activities such as their teaching.

Some aspects of research, however, might be missed. Who else but independent researchers would risk making themselves unpopular by questioning the wisdom of hasty or incoherent policy? Who else could challenge inspection evidence and offer a reasoned argument as to how empirical flaws had led to erroneous conclusions? Who else would dare say 'the King has no clothes'?

Who else would work with teachers and others in the system in order to look below the surface:

- to notice the unfairness suffered by those who are young for their school year yet for whom no adjustment is made to their assessment scores;

- to count, and to identify variations in, the numbers of minority pupils excluded from school;
- to point out that many of the supermarket shelf-fillers are our further education students trying to get by financially;
- to investigate whether adult learners need the same or a different pedagogy from pupils;
- to make fair comparisons of schools, as opposed to the travesty of league tables;
- to tease out why poverty is associated with failure in a competitive system, in which only so many can succeed, rather than just being an excuse for low expectations or poor teaching;
- to monitor trends and changes in educational aspirations, attitudes and attainments.

Some of these investigations could, and indeed should, be carried out by those concerned with running the system. But our experience has shown that those who are close to a particular development are not in a good position to recognise its problems. To do so requires the systematic and critical-but non-authoritarian-eye that research can provide and this is where researchers have been so successful.

Of course, educational researchers are not alone in raising questions. Philosophers through the ages have challenged poor judgements and bad government and, today, many teachers risk the consequences of speaking out. But in every other discipline researchers raise questions and society benefits. So it would be likely to prove counterproductive for education to be excluded from the area of contestability.

Educational researchers worry that we do not have a distinctive discipline; that we rely on-and play second fiddle to-a range of mother disciplines-philosophy, sociology, psychology, history, and the curriculum subjects. Like Ranson (1996), I see this as a benefit, albeit at times also a challenge. It means educational research does not have its own language, exclusive theories or separate methodologies. It means that researchers cannot assume that colleagues have all read the same research papers. It means that time has to be spent creating common frames of reference. Such heterogeneity fits well with the intellectual climate of our times-with Giddens giving his Reith lectures from London, Hong Kong, Delhi and Washington as well as simultaneously worldwide on the Internet. It also fits with the 'diverse ... indeterminate ... disunited cultures' of the postmodernists (Eagleton, 1996, p. 81).

Such diversity means we have to make more efforts to communicate with each other, with those outside our field and with society in general. Perhaps we should look to unfashionable 'John Dewey as a model of one who saw democracy as 'a society permeated by a mutual regard of all citizens for all other citizens' and who was driven by an ambition to make it 'both a greater unity and one that reflected the full diversity of its members' talents and aptitudes' (Ryan, 1995, p. 25). If such a view is appropriate for democracy then it is probably fine for BERA.

So-on balance-my view is that if educational research did not exist, there would be less knowledge about learning generated and society would be the poorer.

## How Then Can We Enhance the Value of Educational Research?

We could enhance the value of our work by acting like the wise physician and trying to heal ourselves before putting everyone else right or allowing others to 'reform' us. This means that we need to work within our own professional and ethical BERA codes-and revise such codes regularly. Hence the draft Code of Good Practice recently formulated by Margaret Brown's group (BERA, 1999). Like any other learned society, we need to enhance our publications. Both the *British Educational Research Journal* and our in-house *Research Intelligence*-in my opinion-are very good, but we need to keep them so. Everything we publish must meet the criteria we have set. In a postmodern age this will be difficult and we will just have to struggle with the challenges to those 'fantasies of grand narratives' about which Stronach & MacLure (1997) warn us. Elliott (1998) recommended to the European Educational Research Association that it acknowledges and accommodates any 'conflicting research identities and methodological antagonisms' amongst its membership. We shall have to do the same and ensure that we have enough 'responsible anarchists' on the editorial teams.

We also need to invest more in our own learning. BERA currently has a training programme aimed at new researchers but I suggest that we need to think about updating this for researchers at all career stages. New techniques are constantly being developed and we need to include them in our repertoires. We also face an enormous challenge in keeping up with the increase in written texts in our specialist areas. The Internet is a valuable asset-I was able to read John Elliot's European Conference for Educational Research (ECER) paper even though I was unable to hear him in Ljubljana.. But, given the sheer volume of material which is available, most of us need to develop our information handling skills to a much more sophisticated level. We also need to broaden our general use of ICT equipment. Having seen and heard a case study of a school, presented using multimedia techniques in which the economic basis and geography of the catchment area were set alongside the attitudes of parents expressed in recorded face-to-face interviews-and related to the actions of teachers and pupils in filmed classroom observations, I now find many written accounts bland and pre-digested. But learning new ICT skills takes time and we will have to find ways to undertake it which do not simply add to the long hours already worked by many researchers.

We can seek to expand our repertoire of empirical methodologies-experiments, case studies, surveys, action research-or, as the Americans increasingly call it amidst their paradigm wars' (Andersen & Herr, 1999), practitioner research. The recent popularity of experimental approaches-such as random controlled trials-amongst education civil servants is interesting. (I wonder if it would extend to random allocation of pupils to schools in order to test their effectiveness.) It is, of course, an approach widely used in medicine; Harlen (1997) discusses it in relation to a new review methodology. It is a key part of the DfEE's plans to establish an information centre based on the methodology of the Cochrane Collaboration in medical research. One of its key characteristics is that it seeks collaboratively to involve users in helping to determine the questions, as well as disseminating the findings, of any review.

Most importantly, we need to fight for our values. The BERA values were neatly summarised by Jean Rudduck in her 1995 Presidential Address: 'respect for evidence, respect for persons, respect for democratic values and respect for the integrity of our acts at every level of the research enterprise' (Rudduck, 1995). We must seize every opportunity to state these publicly and to try to live up to them. This will not always be easy or straightforward, given the pressures we sometimes face from the Government and the media.



The public role of the educational researcher in an information driven society will never be easy. Roger Murphy, in his Presidential Address, touched upon the challenge - 'we have much to learn from colleagues in disciplines which have become more media-wise' (Murphy, 1996, p. 11). Dealing with the media over a complex research finding has always been difficult; doing so when the finding might be contrary to a Government's policies is even trickier. The media will be most interested in the potential for conflict-which it will seek to maximise because controversy sells papers. As Bob Doe, the deputy editor of *the Times Educational Supplement*, informs us:

Reported news is a largely synthetic product, depending as much upon the canvassing of outspoken comment, supposedly informed opinion and pessimistic interpretation as it does on the reportage of contemporaneous events which in any case can be manufactured and orchestrated to order. (Doe, 1999)

What a remarkable admission by Doe. It demonstrates the challenge we face in presenting our findings and attempting to assert the integrity of our values. Yet, in fighting for our integrity, it is essential that we resist slipping into the role of victim. Certainly, researchers do not have much actual power. Education is a low status field of inquiry; even our natural allies within the system fail to argue our case; and-yes-sometimes-all of us have produced less than brilliant work. It is essential, therefore, that we both do something about our own standards and that we fight for more influence-and do not just moan and feel persecuted.

As members of BERA we have a number of assets to help us in our task:

- our membership has grown from a handful of founding members in 1974 to almost 1000 today. We still need more members so that we can truly represent the 3000 active researchers entered in the last RAE and those professional researchers outside higher education; and
- we have positive relationships with the Royal Society, the British Academy and many other learned societies and we expect to have founder members of the new Academy for the Social Sciences.

We have a further advantage-the 'reflexive' nature of our work. We, of all groups working in the field of education, should be in a position to learn from what we study and this must mean avoiding accusations of a double standard. We should not accuse others of prejudice without first checking our own record. We should not criticise others for cherry picking convenient findings and ignoring others without ensuring that we have not done the same. We should not condemn others for refusing to speak up if we have remained silent.

The location of our work, poised between a world of practical activity and a world of scholarly analysis and reflection, provides considerable scope for creating new knowledge about learning. But we have been slow to use this. According to Kaku's (1998) survey of Nobel laureates, science has made enormous progress this century-experiencing quantum, computer and bimolecular revolutions. But in our field of learning we have not even begun to identify the major forces at work. We do not know why learning is easy in some contexts and not others. We do not understand why many young people seemingly find 'real-life learning' about the control of complex machines (such as cars or video recorders) or to do with taboo subjects (such as sex or drugs) effortless, whilst school-based learning of

academic subjects can prove so difficult for them. We have little idea about how liking a particular teacher can make learning her or his subject easy. We know that active involvement aids learning. We also know that having a positive view of oneself makes us more efficacious-but we are not sure of the neurological, psychological, sociological or educational causes of this.

One particular challenge for BERA-and all its educational researcher members-is how to relate to the current Government, which is acutely aware of the power of information management. We cannot ignore the democratically elected Government of the country. It will take decisions on matters of policy, whether or not research is undertaken and offered as evidence for following a particular path. It has the power to control many aspects of researchers' lives. It has shown itself critical of our work, as the DFEE press release accompanying the Hillage Report, illustrates: 'Too much research neither helps teachers by showing them what works best in the classroom, nor provides policy makers with rigorous research on which to build their ideas' (DFEE, 1998b).

Despite such criticisms, we must continue to seek ways to work with Government by:

- maintaining channels of communication through which we can dispute what we believe to be wrong judgements (for instance, the exclusion of all UK researchers from the opportunity to tender for the evaluation contract of the Literacy and Numeracy Hours-a contract awarded to a Canadian team); collaborating on appropriate projects, such as the establishment of a National Educational Research Forum; and
- listening to-and taking seriously-its legitimate criticisms of our work.

But we must also fiercely guard our independence. We must not become an arm of government or cosy companions of its representatives. We must insist on our right to:

- generate our own research topics;
- evaluate Government actions and programmes;
- use-what legally has been granted to *us-academic freedom-to* question and dispute (preferably responsibly and positively, rather than negatively) any matter on which we have expertise or knowledge gleaned from our research.

Without such rights we will be impotent and would fail in our duties to the research community and, ultimately, to society.

Our training and our experience as researchers should have equipped us with the skills to innovate and to experiment with new ways of fostering learning and with learning more ourselves. We are-or should be-adept at monitoring, evaluating and theorising the outcomes of the education processes. Although this may sound rather grand, we are in a privileged position to use this knowledge-as valid and as reliable as we can make it-for the public good. (And if the post modernists are unhappy with this language, they can continue to pose questions and challenge the answers.)

What is supremely important is that we maintain our integrity at a time when 'political spin' is deemed acceptable; when even the statistics on the level of resources invested in the system cannot be taken at face value; when school comparisons are based on crude league tables

taking no account of intake variation; and when myths, such as falling standards, are regularly propagated.

Our Executive Secretary has set our sights high:

We have the potential for making the world a better place. Research in education needs to eschew trivial pursuits and instead tackle significant issues about learning which are of national and global importance. (Bassey, 1995, p. 142)

On the fiftieth birthday of the NFER, Malcolm Skilbeck (the former head of education at the OECD) argued for: 'more theory, more global analyses, more connections among diverse elements in our field of action' (Skilbeck, 1997, p. 276). As for action, Michael Fullan, at the end of his latest book, suggests 'it is time to return to large-scale reform with even more ambitious goals than we had in the 1960s' (Fullan, 1999, p. 84)-and he is addressing his remarks not to governments but to teachers.

My own view is that BERA must become a better learning organisation-we still have much to learn about new developments in our own field as well as about working in a *political* context. We are a learned society; we must become a learning one. We must fight for our independence and resist all attempts to control our work or our findings. But we must also learn how to relate to governments and powerful bodies within our system so as to be able, in this media-dominated world, to address the most apposite questions in the most appropriate ways. Finally, we must learn to listen to our users-not to abdicate our own responsibilities, nor to provide 'tips for teachers' or ready-made policies for politicians-but in order to ensure that the serious business of research, such as its capability to create new knowledge or to challenge accepted ways of thinking, matters to them and not just to us.

So to the future. What should we actually do? My answer is that we should do what we have been trained to do:

- ask difficult questions;
- demand evidence, rather than anecdote, for answers;
- generate, through our research, new knowledge;
- formulate new theories; and
- speak up for what we believe is right.

The late Bishop Trevor Huddleston told the staff and students at Lancaster University that 'Universities are the eyes of society'. That is a daunting responsibility-but one we must not shirk.

*Correspondence:* Peter Mortimore, Institute of Education, University of London, 20 Bedford Way, London WC1H 0AL, UK.

#### REFERENCES

- ABBOTT, J. (1994) *Learning Makes Sense* (Letchworth, Education 2000).
- ACHESON, D. (1998) *Inequalities in Health* (London, The Stationary Office).
- ANDERSON, G. & HERR, K. (1999) The new paradigm wars: is there room for rigorous practitioner knowledge in schools and universities? *Educational Researcher*, 28, pp. 12-21.
- BASSEY, M. (1995) *Creating Education Through Research* (Newark, Kirklington Moor Press/British Educational Research Association).

- BELOE REPORT (1960) *Secondary Schools Examinations other than the GCE* (London, HMSO).
- BRITISH EDUCATIONAL RESEARCH ASSOCIATION (1999) Draft BERA Code of Good Practice in Educational Research Writing, *Research Intelligence*, 68, pp. 17-20.
- BROWN, S. (1997) Respondents' comments, in: S. HEGARTY (Ed.) *The Role of Research in Mature Education Systems*, pp. 81-88 (Slough, National Foundation for Educational Research).
- CAMPAIGN FOR STATE EDUCATION (CASE) (1996) The OFSTED X-Files, *Parents and Schools*, 89, p. 4.
- CENTRAL OFFICE OF INFORMATION (1999) *Annual Accounts* (London, COI).
- Daily Mail* (1999) 'Moaners who are cheating your children', 18 July, p. 26.
- DENNEHY, A. SMITH, L. & HARKER, P. (1997) *Not to Be Ignored: young people, poverty and health* (London, Child Poverty Action Group).
- DEPARTMENT FOR EDUCATION AND EMPLOYMENT (1998a) Green Paper: *Teachers: meeting the challenge of change* (London, The Stationery Office).
- DEPARTMENT FOR EDUCATION AND EMPLOYMENT (1998b) Educational Research needs greater focus-Blackstone. Press Release 406/98, 26 August.
- DOE, R. (1999) The role of the media in the reform of school management, *Educational Management & Administration*, 27, pp. 335-343.
- EAGLETON, T. (1996) *The Illusions of Postmodernism* (Oxford, Blackwell).
- ELLIOTT, J. (1998) Living with ambiguity and contradiction: the challenges for educational research in positioning itself for the 21st century, paper presented at the *European Conference for Educational Research*, Ljubljana.
- EPSTEIN, D. & JOHNSON, R. (1998) *Schooling Sexualities* (Buckingham, Open University Press).
- FULLAN, M. (1999) *Change Forces: the Sequel* (London, Falmer Press).
- GALTON, M., SIMON, B. & CROLL, P. (1980) *Inside the Primary Classroom* (London, Routledge & Kegan Paul).
- GIDDENS, A. (1999) Runaway World. BBC Reith lectures. BBC Home Page. <http://news.bbc.co.uk>
- GILLBORN, D. & GIPPS, C. (1996) *Recent Research on the Achievements of Ethnic Minority Pupils*, OFSTED Reviews of Research (London, Office for Standards in Education).
- GOLDSTEIN, H. & MORTIMORE, P. (1999) *The Role of OFSTED in Educational Research* (London, The Education and Employment Committee of the House of Commons).
- HALSEY, A.H., LAUDER, H., BROWN, P. & STUART WELLS, A. (1997) *Education: culture, economy and society* (Oxford, Oxford University Press).
- HIGHER EDUCATION FUNDING COUNCIL OF ENGLAND (1999) Research assessment exercise 200 1: consultations on assessment panels' criteria and working methods (Bristol, HEFCE).
- HM GOVERNMENT (1999) *The Government's Annual Report* (London, The Stationery Office).
- HARGREAVES, D. (1996) *Teaching as a Research-based Profession* (London, Teacher Training Agency).
- HARLEN, W. (1997) Educational research and educational reform, in: S. HEGARTY (Ed.) *The Role of Research in Mature Education Systems*, pp. 135-153 (Slough, National Foundation for Educational Research).
- HILLAGE, L., PEARSON, R., ANDERSON, A. & TAMKIN, P. (1998) *Excellence in Research on Schools* (Brighton, Institute for Employment Studies).
- HUTTON, W. (1998) The Acheson Report shames us all, *Observer*, 29 November.
- INNER LONDON EDUCATION AUTHORITY (1984) *Womens' Careers in Teaching: a survey of teachers' views* (London, ILEA Research and Statistics Branch).
- IRESON, J., HALLAM, S., HACK, S., CLARK, H., PLEWIS, I. & MORTIMORE, P. (1999) Ability grouping in the secondary school: the effects on academic achievement and pupils' self esteem, paper presented at the *British Educational Research Association Annual Conference*, Brighton, September.
- IRONSIDE, M. & SEIFERT, R. (1995) *Industrial Relations in Schools* (London, Routledge). KAKU, M. (1998) *Visions: how science will revolutionise the 21st century and beyond* (Oxford, Oxford University Press).
- KELLEY, H.H. (1950) The warm-cold variable in first impressions of peers, *Journal of Personality*, 18, pp. 431-439.
- McGAW, B. (1997) Nature and function of educational research, in: S. HEGARTY (Ed.) *The Role of Research in Mature Education Systems*, pp. 59-80 (Slough, National Foundation for Educational Research).
- MORTIMORE, P. (1999) The voice of concern, *Guardian Education*, 26 January.
- MORTIMORE, P. (1998) *The Road to Improvement: reflections on school effectiveness* (Lisse, Holland, Swets & Zeitlinger).
- MORTIMORE, P. & GOLDSTEIN, H. (1996) *The Teaching of Reading in 45 Inner London Primary Schools: a critical examination of OFSTED research* (London, Institute of Education).
- MORTIMORE, P. & MORTIMORE, J. (1998) The political and the professional in education: an unnecessary conflict? *Journal of Education for Teaching*, 24, pp. 205-219.

- MORTIMORE, P. & MORTIMORE, J. (forthcoming) *Education: problems and policies* (London, Paul Chapman).
- MORTIMORE, P. & WHITTY, G. (1997) *Can School Improvement Overcome the Effects of Disadvantage?* (London, Institute of Education).
- MORTIMORE, P. SAMMONS, P., STOLL, L. LEWIS, D. & ECOB, R. (1988) *School Matters: the junior years* (London, Paul Chapman).
- MURPHY, R. (1996) Like a bridge over troubled water: realising the potential of educational research, *British Educational Research Journal*, 22, pp. 3-9.
- NEW POLICY INSTITUTE (1998) Rowntree Foundation-funded Survey of Poverty Indicators, cited in the *Independent*, 16 December.
- OSWIN, M. (1971) *The Empty Hours: a study of the weekend life of handicapped children in institutions* (London, Allen Lane).
- OZGA, J. & LAWN, M. (1981) *Teachers' Professionalism and Class* (London, Falmer Press).
- PHILLIPS, M. (1998) Spare the teachers and spoil the child, *Sunday Times*, 18 October.
- PURVES, L. (1999) Hothouse hokum, *The Times*, 20 July.
- RANSON, S. (1996) The future of education research: learning at the centre, *British Educational Research Journal*, 22, pp. 523-535.
- RUDDUCK, J. (1995) Enlarging the democratic promise of education, *British Educational Research Journal*, 21, pp. 3-14.
- RUDDUCK, J. & HOPKINS, D. (1985) *Research as a Basis for Teaching: readings from the work of Lawrence Stenhouse* (London, Heinemann).
- RYAN, A (1995) *John Dewey and the High Tide of American Liberalism* (New York, Norton).
- SAMMONS, P., KYSEL, E. & MORTIMORE, P. (1983) Educational Priority Indices: a new perspective, *British Educational Research Journal*, 9, pp. 27-40.
- SKILBECK, M. (1997) Closing reflections, in: S. HEGARTY (Ed.) *The Role of Research in Mature Education Systems*, pp. 269-276 (Slough, National Foundation for Educational Research).
- STRONACH, I. & MACLURE, M. (1997) *Educational Research Undone: the postmodern embrace* (Buckingham, Open University Press).
- The Times* (1998) Named and shamed: failure should not be a dirty word in education, Leader article, 15 October.
- TOOLEY, J. & DARBY, D. (1998) *Educational Research: a critique* (London, Office for Standards in Education).