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**CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION
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**EDUCATION RESEARCH AND DEVELOPMENT IN ENGLAND
BACKGROUND REPORT**

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1. PURPOSE OF THE REVIEW

1. The OECD has initiated reviews of research and development systems in different countries. In March 2001 the OECD undertook a review of educational research and development in New Zealand. In September 2001 they reported on this review that was subsequently discussed by the CERI Board. In May 2002 a similar review will be undertaken in England. This paper provides a general background for that review. Specific papers giving more detail in areas covered by this background paper have also been provided.

2. The purpose is to review the extent to which the educational research and development system within a country is functioning as an effective means for creating, collating and distributing the knowledge on which practitioners and policy-makers can draw. The aim is broader than a traditional educational research and development review focused on the quality of the research delivered. The focus will be on an evaluation of the contribution of educational research and development to the knowledge base of education in the emerging learning society. For the purposes of the review, educational research and development will be regarded as a multidisciplinary research field.

3. More specifically, the review will analyse national policies and agendas for educational research and development, how they are generated and the organisation and resources of the educational research and development system. It will explore whether educational research and development is perceived to be relevant to policy makers and practitioners, evidence of the impact on the improvement of policy and practice and how this is evaluated. The interaction between researchers, teachers and policy-makers will be of particular interest as will the interaction with the international research community.

2. THE CONTEXT: EDUCATION AND THE LEARNING SOCIETY IN ENGLAND

4. In a recent speech, Michael Barber (2001) head of the Prime Minister's delivery unit reiterated the determination of the government to pursue education reform and bring about a step change in the performance of the education service. Following the June 2001 election, Prime Minister Tony Blair reaffirmed his commitment to the delivery of improved education within the context of a wider reform of the public services as a whole. Indeed, he has placed delivery of reform of the public services at the centre of the agenda for the new Parliament. The goal is to ensure that all public services achieve consistently high standards and become increasingly tailored to the needs and aspirations of consumers. Only by doing so will they match the levels of quality that consumers have come to expect from the best businesses, while at the same time maintaining and strengthening an ethos of service to the public.

5. Michael Barber has argued that in order to deliver this level of performance, public services should:

- consistently achieve high minimum standards of performance and be held accountable for doing so;
- devolve resources and responsibility as far as possible to frontline units and staff in order to unleash their creativity and allow them to respond to the needs and aspirations of particular localities and communities;
- shape the pay, conditions and performance management of staff to enable the previous two objectives to be achieved;

- reward those who deliver and enable action to be taken in relation to those who do not;
- offer choice of both provider and types of provision as far as possible.

6. In education this has meant for example, national and school targets, external inspection and self-review of schools and local education authorities, delegation and self management of schools and colleges, introduction of performance related pay for teachers, extending parental choice of schools and choice of service providers for schools.

7. The sense of urgency in education is reinforced not just by the belief that every passing day when a child's education is less than optimal is another day lost, but also the belief that time is running out for public education to prove its worth. The danger is that, as the economies of developed countries grow, more and more people will see private education for their children as a rational lifestyle option. If this were to occur, they would become correspondingly less willing to pay taxes to fund public education which, over time, would demoralise and reduce the quality of the service. Public education must deliver in order to achieve social cohesion and prevent ever-growing inequality from one generation to another.

8. England has the opportunity in the next five to ten years to achieve high standards across an entire system of 24,000 schools and over 7 million school students. The foundations for progress have been laid in recent years. Expenditure on education is increasing and after four years of progress with some hard evidence of improved outcomes, a start has been made. The challenge ahead remains substantial. For example, a major challenge ahead is ensuring the recruitment and retention of enough teachers of quality, in spite of the fact that more teachers started teaching in schools last September than for seventeen years. Educational research and development has a key role in enhancing the status of the teaching profession through developing teachers as an evidence-informed profession.

3. FUNDING OF EDUCATIONAL RESEARCH: SOURCES AND RECIPIENTS

9. In the National Educational Research Forum's sub-group report on funding an attempt was made to map out existing funding and identify the overall budget. It is difficult to identify expenditure which counts only as "educational research" as distinguished from research in other areas of the social sciences or humanities. No central register of current research was kept at that time (although this has since been addressed - see CERUK below) so it impossible to obtain a clear overview of what research has already been done or is in progress. The second difficulty was that the major spender appeared to be central government but different and overlapping areas of government responsibility within the four countries of the UK mean that it is very difficult to clearly attribute spending to any one particular country. For example, the Higher Education Funding Council for England (HEFCE), is the biggest single funder and covers only England, as does the DfES, whereas the Research Councils have a UK-wide remit.

10. By using a combination of income and expenditure sources and inspired guesswork, the sub-group reached an estimate of about £70-75 million per annum expenditure on educational research in England. This may sound considerable but the sub-group noted that it represents less than one half of one per cent of the total national expenditure on education.

11. The major source of funding is central government, either directly through departmental budgets, or via the Research Councils or through the Higher Education Funding Council for England (HEFCE). These bodies account for about 80% of the total spend. The main individual sources of this funding as shown in the chart below (provided by Jim Hillage for the sub-group) are as follows:

- The annual allocation for research and scholarship from HEFCE that is distributed by means of the quality-related Research Assessment Exercise (RAE). This source is estimated to account for up to 60% of the total spend.
- Central and Local Government probably contribute about a further 14% of the total. Their expenditure is policy related and tends to be directed towards “applied” rather than “pure” research.
- Income from Research Councils – about 5% of the total. The biggest spender in this category is the ESRC which funds research studentship, standalone responsive mode grants and fellowships. It also supports research programmes, centres and groups addressing identified priority topics and manages the UK wide Teaching and Learning Programme which with a current budget of approx £25m is the largest single research programme in education in the UK. The Council estimates that just over half its expenditure on education research take the form of finance for specific programmes, one third goes on standalone grants and fellowships and the rest on dedicated Research Centres.
- Income from charities represents about 7% of the total. These charities reflect a range of priorities and fund research in Universities, schools and by voluntary agencies. Some fund on a local basis, some are England only and some support projects throughout the UK.
- The balance is made up of income from EU projects, industry and other sources including a wide range of private sector educational and training organisations.

12. Indications are that 90% of the work is undertaken within university departments of education, While there are at least 100 separate institutions conducting educational research, 80 per cent of the funding from government, charities and Research Councils goes to 22 institutions. This is a consequence both of the RAE system, which focuses on excellence, and external funding decisions. Relevant research is also conducted within other university departments and outside the higher education sector by government in various forms and by independent research institutes (e.g. the National Foundation for Educational Research). Finally there is research conducted by teachers and others, often as part of research degrees or increasingly through small scholarships (see below).

13. A report (*Cross cutting study of science research funding: analysis, arguments and proposals*) reviewing science and research published by the Treasury in 2000 noted that publicly funded science is increasingly important for the UK’s innovation and productivity performance in a globalising knowledge economy. It noted the evidence of links between science and economic growth. A key recommendation was that current spending on the UK science base should at least be kept constant and that there is a strong case for increasing the volume of research undertaken.

4. REVIEWS OF EDUCATIONAL RESEARCH AND DEVELOPMENT

14. In 1995, the Teacher Training Agency (TTA) began to develop a range of strategies to promote teaching as a research-informed profession. In 1996, they invited David Hargreaves to give their annual lecture (*Teaching as a research-based profession: possibilities and prospects*) in which he compared the quality of educational research unfavourably with that of medicine. He argued that educational research is non-cumulative, that there is an unhelpful distinction between researchers and users, promotion in education has been de-coupled from both practitioner expertise and knowledge of research and that educational research is poor value in terms of improving the quality of education in schools. This was not a new debate and indeed Hargreaves himself had described ‘...educational research as generally

disappointing...’ In an earlier publication (Hargreaves, 1994) but it fuelled an ongoing discussion within the research community. Over the next few years the quality and impact of educational research was considered in detail in many sources (e.g. Edwards, 2000; Furlong, 1998; Gray, 1998; Mortimore and Mortimore, 1999; Rudduck and MacIntyre, 1998).

15. In 1998 two reviews of educational research were published. The first commissioned by Ofsted (Tooley and Darby, 1998) was an analysis of the quality of research publications while the second (Hillage et al, 1998) was commissioned by the Department for Education and Employment to analyse the direction, organisation, funding, quality and impact of educational research. This latter report concluded that the relationship between research, policy and practice needed to be improved. One of its conclusions was to suggest that the research agenda was too supplier driven and that this was exacerbated by the process of research funding. The review noted that the overemphasis on short term evaluations at the expense of exploration and development in government-sponsored research meant that research was following, rather than leading policy.

16. While the OECD review focuses on the use of knowledge rather than on the quality of research, the Hillage et al review made clear that the shortcomings in the quality of some research was limiting its use. They noted that the research that addressed issues relevant to policy and practice was too small scale, incapable of generating findings that are generalisable, insufficiently based on existing knowledge and inaccessible. Pressure on researchers to produce empirical findings in published journals of international repute reflected different priorities to those which ‘users’ in the system need to inform policy and practice. Dissemination of findings was described as ‘rampant ad hocery’ with little evidence of a strategy or concerted approach. The report concluded that a lack of interest and understanding of research among policy-makers and practitioners, the absence of a capacity to use findings and lack of a system for using evidence in policy-making limited the impact of research on policy and practice.

17. The review had a mixed reception. Funders, users and some researchers welcomed it. Other researchers were critical of the methodology describing it as ‘quick and dirty’ or considered that it was too easy to blame the researchers predominantly for problems that the authors had acknowledged needed to be addressed by all stakeholders. Furthermore, some felt that the impact of research was greater than that described in the report but not recognised where it was implicit rather than explicit. An example of this is when teacher educators refer to teaching practices without making specific reference to the research that has informed them or teachers use research-based curriculum materials.

18. The Department for Education and Employment drew up an action plan to address each of the recommendations in the report. The current Department for Education and Skills (DfES) research strategy reflects further developments of this action plan. The review prompted and highlighted the need for a research strategy but the wider context should be acknowledged. Since 1997 government departments in England have embarked on a process of modernising government which has promoted the use of evidence in the policy process. The Centre for Management and Policy Studies in the Cabinet Office and the Civil Service College within it have developed a programme for senior civil servants and ministers designed to promote a better understanding of evidence and how it should be used.

19. The wider international context is important. Furlong and White (2002) have recently undertaken a review of current educational research capacity in Wales commissioned by Universities Council for the Education of Teachers (Cymru). The National Research Council in US published a study (Shavelson and Towne, 2001) to examine and clarify the nature of scientific inquiry in education and how the federal government can best foster and support it. The Scottish Educational Research Association (Kirkwood, 2002) is considering how best to encourage further developments of a research strategy for Scotland. Many of the issues identified in the Hillage et al review and reflected in the DfES’s research strategy, are noted in all these reports and are in no sense unique to England.

5. THE DFES RESEARCH STRATEGY

20. The review of educational research identified two underlying themes which needed to be addressed; better use of the current evidence base and greater investment in a high quality evidence base for the future. Each of the components in the research strategy contribute to one or both of these overarching aims. The DfES research budget has nearly doubled since 1997 and one third of it is now invested in the strategic initiatives described in this paper with the remaining two thirds spent on individual research projects. The DfES evaluations of policy are funded through programme budgets controlled by policy teams but are quality assured and monitored by the research teams. Much of the work on Information and Communication Technology (ICT) is funded through this stream.

5.1 Dedicated research centres

21. The Hillage et al review identified the need for research centres of excellence. Consultation suggested that concentrating more resources in a few centres based in single institutions would contribute little to the development of research capacity or interdisciplinarity. Hence it was decided to invest in 'dedicated' research centres dedicated in their focus on a particular area but cross-institutional and interdisciplinary drawing on the key researchers in a given field wherever they are based. These centres involve collaborative teams of researchers from different disciplines and institutions working on a longer term research programme for 3-5 years. This will enable sustained work in priority areas to establish better quality evidence and continuity. A sustained programme of research also enables theoretical advances to develop alongside shorter term practical and evaluative research. Research capacity can be built through the different disciplines working together and thereby extending their skills and through studentships and attachments. The centres provide a focal point for information and discussion for other researchers, ministers, civil servants and practitioners, encouraging debate, challenge and greater mutual understanding of the issues. The investment involved in these centres is considerable – an average of £1m per centre for the first three years, renewable for a further two years.

22. Two dedicated research centres begun work in 2000. The first is focused on the **wider benefits of learning** and is directed by Professor John Bynner and Professor Andy Green at the Institute of Education and Professor Tom Schuller at Birkbeck College, University of London. It is researching the non-economic benefits that learning brings to the individual learner and to society as a whole. The overall programme covers health, ageing, family and parenting, crime, citizenship and participation and leisure and lifestyle. It is undertaking methodological work on models and measures that have been used to assess the social benefits of learning alongside data analysis on indicators of social cohesion and quality of life. For example, one recent research report (Bynner et al, 2001) noted that when controlled for earlier family circumstances and educational achievement, individuals who are engaged in adult learning suffer less from poor health and are more likely to be active citizens.

23. The second centre focuses on the **economics of education** and is directed by Professor Steve Machin at the London School of Economics. It also involves the Institute for Fiscal Studies and Institute of Education bringing together researchers from economics, education and other social sciences. A major strand of this centre's work has been on the methodological challenge of developing cost effectiveness measures of educational interventions. The areas of research include the production and supply of education and skills, the demand for education and skills and the returns to education and skills. One project looked at participation in post-compulsory education and found that it is unlikely to increase further without marked improvement in examination results or major increases in youth unemployment as a result of an economic recession. Further analysis revealed that while prior attainment strongly determined the level of qualification attained, the type of qualification was more likely to be influenced by family

characteristics and regional conditions. Another project is looking at the effects of lifelong learning on future income and employment experiences.

24. A third centre that began its work in 2001 focuses on **Information and Communication Technology (ICT)**. It is directed by Professor Steve Molyneux at the University of Wolverhampton in association with the Learning Lab, a not-for-profit centre (funded by a number of IT and telecom companies). This centre will look at the impact of levels and type of access to ICT on social and educational inclusion, initially for adult learners.

25. A fourth centre, the National Research and Development Centre for Adult Literacy and Numeracy, has been established as part of the Adult Basic Skills Strategy to develop the knowledge base on how to improve literacy and numeracy and the impact of this on individuals and the economy. It involves a consortium led by the Institute of Education, University of London together with other universities including Sheffield. It is funded by the DfES's Adult Basic Skills Strategy Unit

26. The Learning and Skills Development Agency who are independent of government have established a National Research Centre for Learning and Skills. This was a response to concerns that further education, adult and community learning are under-researched. The new Learning and Skills Research Centre will help address the gaps in our knowledge and strengthen the evidence base.

5.2 Longitudinal Studies

27. The Department's research programme is currently supporting 10 longitudinal studies. Two major developments for example are:

- A project group is taking forward plans to launch a major new longitudinal survey of 14-21 year olds which will bring together in one study previously separate proposals for surveys of young people, young ethnic minorities and of potential entrants to higher education. The project is seen as a potential successor to the current Youth Cohort Survey.
- The Millennium Cohort, led by the Economic and Social Research Council (ESRC), is a new longitudinal study to which the DfES is contributing. The main fieldwork commenced last autumn, surveying 20,000 babies born between July 2000 and June 2001. DfES is contributing £200k pa to the survey. Other government departments and the Office for National Statistics are also co-funding. The study will provide a vital comparison sample for the evaluation of Sure Start (major new programme for early intervention).

28. These longer term studies provide an opportunity for more proactive research questions to be addressed and for complex issues that may be misinterpreted through shorter term perspectives to be researched. Again, the sustained focus on a given area should enable researchers to develop their theoretical understanding of these issues alongside generating research findings for shorter term application. The Department is continuing to provide collaborative funding for the major birth cohort and household studies.

5.3 International Studies

29. The DfES participates in a number of collaborative international studies which provide insights into the factors affecting achievement and opportunity. These include:

- OECD programme for developing indicators on student achievement (PISA)

- Progress in International Reading Literacy (PIRLS)
- Third International Study of Science and Maths (TIMSS) repeat
- IEA citizenship study

30. Richard Bartholomew, the chief research officer of the DfES represents the UK on the CERI board of OECD and we are participating in a number of OECD initiatives including that on brain research and learning, knowledge management, schooling for tomorrow and the proposed work on teacher recruitment, retention and development.

31. International researchers are involved in DfES externally commissioned work. For example, a team of researchers from Ontario and Manitoba led by Professor Michael Fullan has been commissioned to undertake a four year evaluation of the national literacy and numeracy strategies in primary education. Professor Peter Cuttance from Australia is involved in the evaluation of the key stage 3 national strategy. Many of the research review groups registered with the EPPI centre have corresponding members in other countries and of course the literature reviewed is drawn from international sources with a couple of the review groups managing to include some studies reported in languages other than English.

32. The DfES is represented at international research conferences. Representatives attend the annual British Educational Research Association conference, which attracts considerable attendance from abroad. Symposia on the research strategy and on the systematic review work have been featured at these conferences for the last three years. Judy Sebba, Senior Adviser (Research) participated in a ROLE program panel at the National Science Foundation (NSF) assessing research proposals as part of the reciprocal arrangement between the Economic and Social Research Council, Teaching and Learning Programme (see below) and the NSF. We have agreed to submit a proposal for a joint symposium with the NSF to next year's American Educational Research Association conference.

6. THE NATIONAL EDUCATIONAL RESEARCH FORUM: DEVELOPING A FRAMEWORK FOR RESEARCH

33. The remit of the National Educational Research Forum is to provide strategic direction for educational research in England and to raise the quality, profile and impact of educational research. Its key objective is to develop a national framework within which a more coherent, better quality and relevant research programme in education can develop.

34. The Forum was set up by the DfES in September 1999. The independent chair was appointed by the Secretary of State and members were appointed by an independent panel led by the chair following open advertisement. It currently has 19 members including two teachers and one teacher organisation representative and is chaired by Sir Michael Peckham, previously Director of the School of Public Policy at University College London and a key figure in the development of the NHS research and development strategy. Five sub-groups focussing on priorities, funding, capacity, quality and impact consulted literature, unpublished reports and expert witnesses to inform its first consultation document.

35. The Forum published a consultation document in November 2000 outlining possible components of a strategy. It invited individuals, institutions and organisations from within the UK and overseas to contribute actively and imaginatively with suggestions, analyses and ideas. Over 100 responses to the consultation were received and analysed. Two national consultation conferences were held and meetings held with specific groups who were under-represented in the responses such as parents and employers. In September 2001, the Forum redrafted and published its strategy document in the light of the consultation

responses. These proposals were warmly received. The proposals include establishing a priorities group, dedicated education foresight, funders' forum, improving research capacity, review of training and improving the knowledge base and access to it, all of which are discussed in the rest of this paper.

6.1 Funders' Forum

36. The National Educational Research Forum's strategy document proposed the setting up of a funders' forum to coordinate the efforts of individual funders, establish greater sustainability of funding and explore possibilities for greater collaboration between funders. It also suggested exploring ways in which major research funders who have not funded research in education might be persuaded to do so and how university departments other than education can be funded to undertake educational research. The funders' forum set up by the National Educational Research Forum met for the first time in November 2001 and has recently had a further meeting. Sir Brian Fender, previously chief executive of the Higher Education Funding Council for England chairs the funders' forum. Organisations that fund educational research were all invited to join the forum and 29 organisations did so.

37. At the first two meetings they compared the research interests of individual member organisations and discussed their role in dissemination and impact including knowledge management. They have undertaken a funders' mapping exercise to share information about the rationale, mission, current programme of research activities, types of studies funded, strategies for enhancing participation by users and strategies for measuring impact.

6.2 Establishing Priorities in Education

38. The Forum proposes to establish an education priorities group to develop a methodology and criteria for setting priorities for research and development in education. This group will advise the National Educational Research Forum on priority issues in education. This advice will form part of the information made available to research funders, researchers and other interests. The chair of the Forum has invited Professor Charles Desforges, a member of the Forum to chair the priorities group and membership will reflect the range of constituencies in education. Both the Forum and the priorities group will also be informed by analytic workshops that are being set up to look at key issues in education such as the impact of buildings on learning and innovation in education.

39. The Forum will establish an Education Observatory to examine current and emergent developments as well as medium and longer-term trends likely to shape the future. The Observatory will assume responsibility for taking forward the Foresight proposals outlined in the strategy document. The outputs of the Observatory will inform the activities of the Education Priorities Group and the Forum.

40. Education needs a dedicated Observatory/Foresight exercise to enable it to be prepared to shape future changes. Its focus will be the learning society, placing learning at its centre wherever it takes place, be that an institution, the home or a workplace. It will look at the national and international context, and at formal and informal learning. It will consider differences in class, gender and race and ensure that differentiation is made between different social groups. It also needs to be focussed on the role that research can play in helping us be prepared for the future, and in informing us as to what we need to know. The Forum has synthesised the outcomes of other Foresight exercises so as to complement rather than duplicate them. The Forum is in the process of identifying a possible chair and members for this exercise with the intention that the group will produce a report within 18 months of starting their work.

7. INVESTING IN THE FUTURE EVIDENCE BASE

7.1 Developing systematic reviews in education

41. In response to the recommendation in the Hillage et al review and informed by the experiences of the international Cochrane Collaboration in healthcare intervention, the DfES has made a significant investment in systematic reviewing. The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI), directed by Professor Ann Oakley at the Social Science Research Unit was set up for five years to provide centralised resources and support for those wishing to undertake systematic reviews around what is known about a range of educational policy and practice issues.

42. Systematic reviewing involves identifying research reports through electronic searching and other means and assessing them in an explicit and transparent way so as to produce accessible, relevant and quality-assured syntheses of research findings. Research employing the full range of methods is included in the reviews. The EPPI centre has been running for just over two years. It has developed guidelines for carrying out systematic reviews, criteria for data extraction and inclusion and exclusion of studies and training and support for the review groups as well as influencing the wider research community through disseminating methodological developments. Groups have been self selected to date but include researchers, policy makers and practitioners. The groups have been strongly encouraged to include the widest possible range of research perspectives in particular, researchers known to disagree in order to increase the credibility of the reviews. One recent group to register, looking at continuing professional development for teachers was instigated, and is led by, a major teacher organisation.

43. There are 10 review groups now registered including assessment, leadership and management, inclusion, gender, English teaching, further education, early years, thinking skills, modern foreign languages and continuing professional development. Each of the six groups who registered in the first year undertook one review. The review questions were:

- The impact of summative assessment and tests on pupils' motivation for learning;
- The impact of ICT on literacy learning in English 5-16;
- A systematic review of the effectiveness of school-level actions for promoting participation by all students;
- The impact of financial circumstances on engagement with post-16 learning;
- The impact of leadership and management on school achievement;
- What kind of strategies improve equal opportunities relating to gender for pupils in mixed sex primary schools?

44. Summaries of the reviews for policy makers, teachers, lecturers, researchers, parents, governors and students as appropriate to the topic are being prepared by representatives from those groups.

45. Insofar as this work has been publicised to date, it is recognised to be ground-breaking. These will be the first systematic reviews in education to incorporate a full range of methodologies. The keywording system developed by the EPPI centre was adopted in the review of research capacity in Wales and the review manual and techniques are attracting international interest. In England, the resistance from some researchers that was apparent when the centre was commissioned has reduced although is still

evident. There are concerns that by focusing on 'what works' that the reviews will be atheoretical. There are still concerns that too much weight will be given to quantitative studies and that a single view of 'best practice' will be promoted. This latter fear could only be realised if the reviews were to conclude that the research indicated one unequivocal answer on each review question which seems unlikely to occur. There is a view that funders will limit the scope of future research according to the EPPI criteria or the gaps identified by the reviews but the diversity of funders and their determination to remain independent of government suggests they will continue to fund a broad range of issues.

46. Some clear challenges have emerged from the experiences of these groups in completing their first reviews. The process is rigorous but cumbersome demanding major time commitment and substantial coordination between those involved. The groups have received a small grant of £20,000 towards each of these first reviews with funding reducing to £15,000 for subsequent reviews, in recognition that the first reviews received less support as the system was being developed. The groups have indicated that the true costs are nearer £70-80,000. A key challenge for the longer term is to establish multiple funding streams to support reviews as occurs in the international Cochrane Collaboration and to ensure that systematic reviews are recognised as high status scholarly activity in the assessment and funding of research.

47. The work on systematic reviews is providing the basis of important debate on methods and purpose. The methodological developments has begun to influence funders in their commissioning and reviewing of research proposals. For example, the criteria in the EPPI manual offer a basis for reviewing proposed methodology. The review groups provide a real opportunity to bring together not only competing research interests but the differing perspectives of researchers, policy makers and practitioners. In a couple of months we will begin to see whether the reviews succeed in their most important but hardest test – that of being accessible and influencing policy and practice.

7.2 Developing systematic reviews in the social sciences: the ESRC evidence-based network

48. Professor Ken Young and colleagues are undertaking further work on approaches to systematic reviewing at Queen Mary and Westfield College, University of London funded by the Economic and Social Research Council. The Centre began in December 2000, and is both undertaking research itself and supporting a network of seven research teams across Britain not focused specifically on education. This evidence network is committed to developing the knowledge base and building access pathways to it for the user community. This will be done primarily through the mechanism of systematic reviews but also via less complex, time consuming and costly narrative reviews, methodological and conceptual papers, bibliographic listings and critiques in order to satisfy the differing needs and timescales of the initiative's potential clients. The ESRC funding enables a number of researcher-driven activities to be undertaken and currently these include:

- At Queen Mary, a bibliography on evidence-based practice, a map of relevant organisations and individuals to whom the Network will relate, a review of training provision for both researchers and practitioners and factors affecting the implementation of guidelines for professional practice.
- Across centres within the network, a range of studies, including a discussion paper on EBP requirements (St Andrews), research relevant to children (Barnardos/City/York), the work recruitment and retention of ill and disabled people (Glasgow), and the effects of residential turnover (Glasgow/Bristol).

49. Regular contact between the team at Queen Mary and Westfield and the EPPI centre takes place to ensure complementary progress.

7.3 Current Educational Research in the UK (CERUK) database

50. Hillage et al noted that educational research and development was insufficiently based on existing knowledge. Policy makers, practitioners and researchers complained of the lack of access to comprehensive databases of current and published research. Current Educational Research in the UK (CERUK) is a freely available database developed by a partnership between the National Foundation for Educational Research (NFER) and the EPPI centre, co-funded by the DfES. It links closely with the comprehensive databases of educational research and reviews that are being developed by the EPPI centre.

51. It holds information on educational research projects which are being undertaken in the UK covering pre-school, school, FE, HE, adult, lifelong and continuing education. It was launched at the BERA conference in September 2001 and has been warmly welcomed. The DfES makes it a requirement of their research contracts that details are logged on to the database and other funders are considering doing the same. It is an attempt to ensure that funders, researchers and users can access what is going on and that related projects can assist one another rather than wasting resources through unintended overlap.

7.4 The Economic and Social Research Council (ESRC) Teaching and Learning Programme

52. The ESRC are managing a £25m programme of research on teaching and learning funded by top-sliced HEFCE money and contributions from the Welsh Office, the Scottish Office and DfES. The first phase of the programme funded research networks across institutions focusing on inclusion, science education, pupil perspectives and work related learning. Following extensive consultation with users and researchers phase 2 focused on motivation and engagement in learning processes, transforming research on cognition to promote learning and developing learning communities. A further nine projects were funded in this phase including work on further education, enhancing teaching and learning in undergraduate courses and learning in the workplace. Phase 3 is focusing on post-compulsory education and outline bids are being reviewed.

53. The ESRC programme criteria stipulate involvement of users in every part of the research process: identifying research priorities, commissioning projects, conducting the research and evaluating outcomes. The requirements also emphasise the need to identify clear outcomes for learners and contributions that the research will make to building research capacity which is supported by a further major strand of the programme described later in this paper. Applications are expected to build in plans for dissemination and impact.

8. EVALUATING AND IMPROVING THE QUALITY OF EDUCATIONAL RESEARCH AND DEVELOPMENT

8.1 The Research Assessment Exercise (RAE)

54. The Research Assessment Exercise (RAE) is the main mechanism by which research quality is assessed and funding allocated. Researchers submit a selection of their 'best' publications (in terms of international, academic excellence) to the education subject panel representing the Higher Education Funding Council (HEFCE). In the Hillage et al review concerns were raised that researchers find this process conflicts with the demands to disseminate research in ways that might impact on policy and practice. In 1998, the HEFCE set up a task force to explore membership of the research assessment exercise education panel and the application of the criteria for the RAE in 2001. The report recommended to the Chair of the panel that a quarter of the members should be users of research, in particular teachers.

This recommendation was implemented although only one of the four users was a teacher. The users prepared a report on their experiences.

55. A second recommendation was that greater emphasis be placed on the impact of research on policy and practice. The criteria were revised to recognise curriculum, teaching and assessment material where justified by the underlying research. The criteria also suggested that the quality of research will often be demonstrated through its influence on other researchers, policy makers and practitioners. These changes are significant in providing the basis for high quality, relevant and practical research to be credited. Further work will need to be done to ensure that high quality research reviews are adequately recognised in this process. In particular, where different disciplines are involved, collaborators from disciplines other than education submit their work to other subject panels whose criteria reflect less recognition of applied research. The outcomes of the 2001 RAE were announced in December and more recently, the translation of the ratings into funding allocations have been met with strong concerns in the universities due to the limits imposed. There are concerns that too much concentration of resource fails to allow for nurturing of emerging areas of excellence.

8.2 Journal Editors' Conference

56. Peer review is the main mechanism for assessing the quality of research and given the focus of the RAE on published papers in academic journals, of subsequent funding allocations. The quality and consistency of peer review has been debated for many years internationally and in every discipline. It was raised as an issue in the Hillage et al review in connection with the RAE and more generally. In November 2000, under the auspices of the National Educational Research Forum and initiated by five journal editors, a conference was held for journal editors in education and included colleagues from Scotland and Wales. Inputs were provided on the work of the Forum in particular, about different ways of considering dissemination of research and on the systematic review work. Lively debate took place on the role of editors, the quality of manuscripts submitted, issues relating to peer review and the impact of the RAE on publishing. A second journal editors' conference is being held in May and inputs on the 2001 RAE and on peer review are being made.

8.3 Advisory panels

57. The DfES set up research advisory panels following other attempts to widen the participation on research priorities (such as open advertisements in the press which produced some 300 responses). There are three panels addressing early years and schooling, education and skills for 14-19 year olds and higher education, workforce development and skills. On each panel there are 7-10 leading researchers and about the same number of research analysts from the DfES. The DfES chief economist, Paul Johnson, chairs all three panels. The purpose of the panels is to advise the department about priority areas for research and discuss the latest research evidence drawing out the implications for future work. Two meetings of each panel have been held to date and from feedback received it is proposed to extend their role to include identifying priorities and shaping the research programme, helping to develop research specifications through literature reviews and advisory work on methodology, and peer reviewing tenders and reports and undertaking and discussing reviews of evidence in key current topic areas.

8.4 The National Teacher Research Panel

58. The Teacher Research Panel was established by a partnership between the DfES and TTA. It is a group of teachers who have research experience and expertise and are consulted in determining research priorities, commissioning research, contributing to steering groups and assisting in more effective

dissemination strategies. In the ESRC funded Teaching and Learning Programme they contributed to reviewing the large number of proposals submitted in phase 2 and there was clear evidence of their influence. In March 2001, they made a major contribution to a very successful national conference about evidence-informed policy and practice attended by more than 300 teachers and in December 2001 contributed to the first annual DfES research conference. They have prepared papers about teachers' perspectives on research for international conferences. The current chair of the panel Jill Wilson, is also a member of the National Educational Research Forum.

9. CAPACITY BUILDING

59. The National Educational Research Forum proposed a review of existing training programmes in research skills for researchers and teachers. This is being undertaken through the documentation that is available from accreditation recognition procedures. The ESRC teaching and learning programme has a major strand of work on building capacity and the Forum is collaborating with them on reviewing research skills amongst researchers. The Forum recently produced a discussion paper on capacity building (Dyson and Desforges, 2002) to stimulate further debate and proposals.

9.1 The ESRC Teaching and Learning Programme Research Capacity Building Network

60. This network was set up to build capacity in particular, in research skills in the research community. Professor Stephen Gorard and colleagues at the Cardiff University School of Social Sciences lead it and have produced helpful papers and newsletters. The key aims of the network are to promote and extend multidisciplinary and multi-sector research in teaching and learning, to enhance system-wide capacity for research based practice and to develop the capability to transform the knowledge base relevant into practice. Initially, it is working with the researchers involved in the 14 projects in the ESRC Teaching and Learning Programme and those preparing bids for phase 3 of the programme which focuses on post-compulsory education.

61. The activities include setting up training events, workshops, discussions and publications. Its main focus is needs-directed training provision although it is acknowledged that there is a shortage of particular skills within the range of methodologies required. For example, there are increasing opportunities to interrogate large datasets but too few researchers with the range of skills and experience to do so effectively. Similarly, complex issues being researched in education often require combining quantitative and qualitative skills yet there are insufficient researchers trained and experienced in both. Techniques such as multilevel modelling and software for analysing qualitative data had not yet developed when most of the research community in education undertook their initial research training. This initiative is contributing to the capacity of educational research and development to tackle more complex research questions and increase potential impact on policy and practice in the future.

9.2 Coordinating capacity across government

62. The Hillage et al review suggested that research activity across government within education lacked coordination. In 1998 we set up a research liaison group to coordinate effort across the government agencies working on educational research. Twice termly meetings are held of the DfES, Ofsted, QCA and TTA to ensure better coordination of our research programmes and greater consistency in commissioning and quality control procedures. Once a year this meeting is attended by a wider group of organisations including the GTC, National College of School Leadership and others who are independent of government. Twice a year the chief executives of these organisations meet to discuss their research and development strategies.

9.3 Capacity for practitioners to engage in research

9.3.1 TTA school-based research consortia

63. The TTA school-based research consortia initiative included two secondary and two primary partnerships funded by the TTA and the Centre for British Teachers to support teacher engagement in and with research as a means of improving teaching and enhancing learning. The consortia, involving classroom teachers, their schools, HEIs and LEAs, each took a specific theme:

- Manchester and Salford Schools Consortium - a primary consortium focusing on literacy, numeracy and science;
- Leeds Primary Schools Consortium - a primary consortium focusing on numeracy and literacy;
- Norwich Area Schools Consortium - a secondary consortium focusing on overcoming disaffection;
- North East School Based Research Consortium - a secondary consortium focusing on critical thinking skills.

64. The partnerships have developed a range of evidence, activities and resources relating both to their specific themes and to the development of research related partnerships. The success of this scheme has been in the partnerships it has established both within each network between schools, local education authorities and higher education and beyond the network to other institutions.

9.3.2 A Strategy for the Continuing Professional Development of Teachers

65. In 2001, following a consultation on professional development, the DfES published *Learning and Teaching: A strategy for Professional Development*. This was warmly welcomed by teachers and researchers who noted that in addition to creating more opportunities for teachers to engage in research, the professional development it was advocating was itself informed by research. For example, the strategy notes that teachers learning from and with each other and from evidence are the most effective ways to build professional skills. It outlined the range of professional development opportunities for teachers and the support available for them. Three of the initiatives – Best Practice Research Scholarships, professional bursaries and sabbaticals are all potential routes to support to use or undertake research although the scholarships is the route designed to do so explicitly.

9.3.3 Teacher Research Grant Scheme and Best Practice Research Scholarships

66. The TTA Teacher Research Grant Scheme aimed to contribute to the development of a cumulative stock of high-quality, small-scale, classroom-based research carried out by teachers, to raise other teachers' interest in research and evidence, and to extend the debate about the role of teachers in classroom research in order to raise standards and improve classroom practice. Teachers awarded grants undertook classroom-based research over a period of one academic year. Each project was undertaken with the support of a mentor from higher education or a local education authority to help with research methods, access to existing research and evidence and to ensure clarity of focus and direction. On completion of their project, teachers submitted both a report and a summary aimed at providing easily accessible information for colleagues to whet teachers' appetite for finding out more.

67. Following a pilot involving 27 grants in 1996-97, over a hundred grants of £2,500 for a teacher working alone or £3,500 for collaborative projects were funded during 1998-2001. Summaries of findings of their work are available from the TTA and examples are on the website. After the pilot phase, the TTA gave particular emphasis to projects which build cumulatively on previously established research and evidence by testing or exploring specific, identified evidence from previous enquiries. From 2000, the TTA's remit became focused on recruitment, initial training and induction so the continuing professional development work transferred elsewhere. The DfES began the Best Practice Research Scholarships in 1999 building on the experience of the Teacher Research Grant Scheme.

68. The Best Practice Research Scholarships programme (BPRS) is one of a series of initiatives supporting teachers' continuing professional development. To contribute to teachers' continuing professional development and to encourage the sharing of best practice, teachers in England are offered up to £2,500 to undertake sharply focused inquiries into classroom practice. The criteria require teachers applying to specify how the work will impact on learning outcomes and to describe plans for dissemination and impact. There are over 2000 teachers in receipt of the scholarships and many of the reports submitted have been disseminated at conferences, training sessions and in professional journals although a significant proportion of teachers who have completed their scholarships have not yet produced their reports.

9.3.4 National Union of Teachers' Scholarships

69. The Teacher2Teacher programme provides opportunities for teachers to meet other teachers and learn more about various aspects of teaching and learning. Teachers then have the chance to try out and evaluate particular teaching strategies in their own classrooms. The programmes support teachers in carrying out research and investigations, passing on their findings to other teachers, and contributing to professional knowledge about teaching and learning.

70. Twelve pairs of teachers working with all ages of children in the North of England have been awarded NUT-funded scholarships to investigate the effective teaching of thinking skills. The Union has established a partnership with the Education Department at Newcastle University which has expertise in teaching thinking skills and supporting school-based projects. Over approximately 20 weeks, teachers have been trialling and evaluating the teaching of thinking skills in their classrooms. Support from tutors is provided by telephone/e-mail. A network has been set up for teachers involved in thinking skills projects.

9.3.5 NCSL Networked Learning Communities

71. The National College of School Leadership is promoting practitioner research through a range of means including attached research associates and support for the development of networked learning communities. Networked Learning Communities are purposeful social entities that are characterised by a commitment to quality, rigour, and a focus on outcomes. They are also an effective means of supporting innovation in times of change. In education, Networked Learning Communities promote the dissemination of good practice, enhance the professional development of teachers including use of and involvement in research, support capacity building in schools and mediate between centralised and decentralised structures.

9.3.6 British Educational Research Association (BERA)/ESRC fellowships

72. Capacity building in educational research is partly limited by the current profile of educational researchers. Two thirds of the current academic educational research community are over 50 years old and insufficient young graduates are being attracted into research as a career. In 1999, BERA put a proposal to

ministers for the possibility of support for research fellowships. The scheme developed is intended for established, practising teachers, local education authority staff or others working in the education service who want to do a part-time Phd but may continue to work in education, change to a research career or combine research and practice in the future. The scheme is administered through the ESRC Teaching and Learning Initiative and those registered are attached to one of the projects or networks in the programme to ensure adequate training and support. Funding is provided to support a combination of full or part-time release for the full-time equivalent of not more than 28 months over a period of up to five years. Two individuals started on the scheme in October 2001 and a further two will begin later this year. Other schemes for attracting graduates into research include Phd attachments to the dedicated research centres.

9.3.7 Students as researchers

73. There has been a growing interest in the role of school students themselves in research. The ultimate test of the accessibility of research might be, for example, students using the outcomes of systematic reviews to discuss or even challenge the teaching approaches used in their lessons. But involving students as researchers has been demonstrated to be a powerful catalyst to school improvement (Raymond, 2001). Work at Sharnbrook Upper School in Bedfordshire suggests that data collected by students from other students may be more valid and reliable. In a school in which the ethos of 'pupil voice' is well developed it can also lead to significant changes in the school curriculum. The theme of student voice is the focus of a major research network within the ESRC Teaching and Learning Programme and is explored more fully in Fielding (2002).

10. DISSEMINATING RESEARCH TO PRACTITIONERS AND OTHER USERS

10.1 Research of the month

74. The General Teaching Council (GTC) is committed to developing teaching as a more evidence informed profession. It believes that teachers should be able to benefit more directly from others' research as well as supported in initiating their own. This is more likely to happen if teachers can engage with research rather than just read about it: we are trying to adopt a 'pedagogical' model of research dissemination. So, the aim of *Research of the month* is to interrogate research on behalf of practitioners. Research is selected that, in the view of the GTC:

- illuminates the complex tasks involved in teaching;
- enables teachers to see clearly whether there are links with their own pupils and practice, and what these are;
- provides detailed information about the particular teaching and learning processes in classrooms with which teachers can identify;
- is written and presented as accessibly as possible, in case teachers want to obtain and read the original text.

75. For each topic, a team from the Centre for Using Research and Evidence in Education (CUREE) has reviewed, selected and summarised one or more published research studies. Each topic is presented and structured according to a series of questions that the GTC has designed to bring out the messages for teachers and teaching. Findings are illustrated by high quality case studies. The review criteria for selecting

studies cover the readability and relevance of research as well as its ethical integrity and methodological quality.

10.2 Research summaries on the web

76. The Centre for the Use of Research and Evidence in Education (CUREE) is contracted to summarise research findings on the Standards Site of the DfES web site. They identify research and quality-assure it with particular consumers in mind for example, local education authority staff, teachers, lecturers and parents. Part of the work will be seeking to ensure that these groups are able to feed in their priority areas of research. Researchers will be invited to summarise their research in 3-4 pages giving further sources. Around 25 such summaries will be lodged on the site each year. Comments will be invited via the site and once the site is launched in the Autumn, there may be areas that generate sufficient interest to set up discussion fora.

10.3 Research briefs and reports

77. The DfES is committed to publishing all research that it commissions. The full reports are available both on the website and in hard copy. All reports are summarised into four page research briefs again available on the web or in hard copy. A contact name with e-mail address is given on these research briefs and readers are invited to request further details. Experience suggests that some studies have generated much interest leading to requests for information for further research on that topic, speakers to attend conferences or training events and many practitioners pursuing part time higher degrees or full time students wanting further clarification or support.

10.4 Teachers' Magazine

78. Teachers' magazine was launched in spring 1999 and is the DfES's magazine for the teaching profession in England. The magazine tackles the issues of the day for the teaching profession. It aims to be contemporary, challenging, thought-provoking, dynamic, interesting, informative, professional and entertaining. It aims to provide classroom teachers with an informative view of what is happening in school education. The magazine is aimed at all teachers in England. It is written for classroom teachers in the primary and secondary sectors, but heads of department, senior teachers and head teachers also form part of the readership. Since January 2002 there have been two versions of the magazine, one for primary and one for secondary teachers. It has a circulation of 360,000 – 230,000 copies are sent direct to teachers' homes and the rest are sent to schools. It carries articles about research sporadically but plans to increase the coverage of research are being considered.

10.5 Seminars and conferences

79. There has been a substantial increase in the activities focusing on practitioner research over the last few years. The annual BERA conference has more teachers contributing both about the process of teachers undertaking and using research and on specific research projects. Findings from the Teacher Training Agency funded school-based research consortia were recently reported at a national conference and a major conference on teachers and research was held in March 2001 also hosted by the Teacher Training Agency. The DfES held its first annual research conference in November 2001 at which teachers contributed sessions. Smaller seminars are held for senior policy makers and ministers at which researchers summarise ongoing or recently completed research followed by questions and discussion.

11. THE IMPACT OF RESEARCH ON POLICY AND PRACTICE

80. The sub-group of the Forum that addressed impact distinguished clearly between dissemination and impact. Most existing activity could better be described as dissemination than impact and assumed rather than planned. There are a number of research studies that have had a clear impact on policy and in the longer term may be expected to influence practice. However, there are areas that are not served well by good quality research evidence, where research is inconclusive or in which the research evidence is not easily accessible. These factors may contribute to policies for which underlying research cannot easily be linked. There are other studies such as the work on pupil mobility (Dobson & Henthorne, 1999) which provide rich data but where the issues are highly complex and policy implications are conflicting making it more difficult to ensure appropriate action is taken. There is much progress to be made in developing the willingness and capacity of policy makers to use evidence. However, some examples where impact has been apparent are provided here for illustrative purposes.

11.1 The impact of research on primary to secondary school transfer and teaching and learning for 11-14 year olds

81. The review of research and practice on transition and transfer (Galton, Gray and Rudduck, 1999) noted the poor progress made by pupils in years 7 and 8 and the drop in motivation that appears to contribute to this. The research evidence has informed policy and practice at national, local education authority and school levels. Nationally, the DfES introduced common transfer forms to ensure all schools receive minimum basic information to enable them to build on pupils' previous standards. The Qualifications and Curriculum Authority developed 'bridging units' which are pieces of work that pupils begin in year 6 in the primary school and complete in their new school in year 7. Many local education authorities included transfer and transition in their Education Development Plans and many schools have further developed their strategies in this area. The second stage of this research is an intervention programme in which local education authorities and schools that have volunteered to do so, are introducing specific strategies and outcomes are being carefully monitored.

82. The main impact of the transition and transfer study was that it informed the National Key Stage 3 Strategy for 11-14 year olds. Together with international evidence on the middle years of schooling, it informed the teacher development programme. Evidence from studies and reviews of the effectiveness of approaches incorporating thinking skills (McGuinness, 1999) and assessment for learning (Black and Wiliam, 1998, Wiliam and Lee, 2001, often referred to as formative assessment) which demonstrated increased motivation, pupil engagement and management of their own learning, further informed this strategy. In Autumn 2000, the strategy was introduced as a pilot, targeted at those teaching 11-14 year olds and included subject training, literacy and numeracy across the curriculum, assessment for learning and thinking skills. The strategy is being independently evaluated by a consortium of researchers from the universities of Bath, London and Melbourne.

83. Further support for this work was provided through revisions to the national curriculum in 2000 including thinking skills in the general requirements, published schemes of work and development of resources. Thinking skills and assessment for learning were also prioritised in the guidelines for applicants for Best Practice Research Scholarships and encouraged in the Beacon School policy as a means of schools in receipt of extra resourcing working with teachers in other schools on these skills. The schools in the University of Newcastle school-based research consortium funded by the Teacher Training Agency worked on development of thinking skills with encouraging results (for example, see McGrane, 2000).

11.2 Other examples of impact

84. Other areas in which research evidence has had an impact on policy and in some cases practice, include that on the evaluation of the national literacy and numeracy strategies, school governors, the provision of study support, the evaluation of the Beacon School policy, citizenship and the strategy for continuing professional development of teachers. Beyond schooling there are further examples, one being the strategy on adult skills. The Birth Cohort Study and International Adult Literacy Surveys provided important evidence of the impact on the rates of return to learning. This informed the national strategy for Adult Basic Skills.

12. CONCLUDING COMMENTS

85. While progress is being made there is no justification for complacency. The ‘juries’ of researchers, teachers, policy-makers and funders are still out on the progress made over the last five years. Some of the key issues that need to be addressed include:

- continuing to develop and make more transparent the criteria for judging quality across the range of methodologies in educational research;
- generating more high quality evidence capable of having an impact on policy and/or practice;
- providing more development opportunities in research methods;
- improving the access to currently available ‘best’ evidence;
- establishing the support and involvement of many, if not most educational researchers to contribute to systematic reviews;
- securing long term resources for systematic reviewing;
- improving the capacity of policy-makers to access and use research;
- developing greater demand for, understanding of and opportunities to participate in research amongst practitioners;
- supporting the development of greater collaboration between higher education, local education authorities and schools on research which will contribute towards genuine user engagement.

86. This list involves culture changes at every level which are beginning to occur but have further to go. Policy makers need to ‘value’ the role of evidence. Teachers need to look beyond their own schools for evidence. Funders need to make user engagement and planning for dissemination and impact requirements of research funding. Researchers need to be rewarded for appropriate achievements relating to impact in assessments of research.

REFERENCES

- Barber, M. (2001) Large-scale educational reform in England: work in progress. A paper for the school development conference, Tartu University, Estonia
- Black, P. & Wiliam, D. (1998) *Inside the Black Box: raising standards through classroom assessment* London: King's College
- Blunkett, D. (2000) *Influence or Irrelevance: can Social Science improve government?* Secretary of State's ESRC Lecture 2 February, London: DfEE
- Bynner, J., McIntosh, S., Vignoles, A., Dearden, L., Reed, H. & Van Reenen, J. (2001) *Improving Adult Basic Skills: Benefits to the individual and to society* London: DfEE
- Dobson, J. & Henthorne, K. (1999) *Pupil Mobility in Schools*. London: DfEE
- Dyson, A. & Desforges, C. (2002) Building research capacity: some possible lines of action. A discussion paper for the National Educational Research Forum. www.nerf-uk.org
- Edwards, T. (2000) *Some reasonable expectations of educational research*. UCET Research Paper No 2 London: Universities Council for the Education for Teachers
- Fielding, M. (2002) Beyond the rhetoric of student voice: new departures or new constraints in the transformation of 21st century schooling? Paper presented to the AERA annual conference, New Orleans, April, 2002
- Furlong, J. (1998) *Educational Research: Meeting the challenge* Inaugural lecture, University of Bristol.
- Furlong, J. & White, P. (2002) *Educational Research Capacity in Wales* Cardiff: School of Social Sciences, Cardiff University
- Galton, M., Gray, J. & Rudduck, J. (1999) *The Impact of School Transitions and Transfers on Pupil Progress and Attainment*. London: DfEE
- Gray, J. (1998) The contribution of educational research to the cause of school improvement. Professorial lecture, Institute of Education, University of London, 29 April 1998.
- Hargreaves, D. (1994) *The Mosaic of Learning: Schools and Teachers for the Next Century* London: DEMOS
- Hargreaves, D. (1996) Teaching as a research-based profession: possibilities and prospects. *The Teacher Training Agency Annual Lecture 1996*.
- Hargreaves, D. (1998) *Creative professionalism: the role of teachers in the knowledge society* London: DEMOS

Hillage, J., Pearson, R., Anderson, A. and Tamkin, P. (1998) *Excellence in Research on Schools* London: DfEE

Kirkwood, M. (2002) Educational research in Scotland: policy context and key issues *Research Intelligence* 79 33-40

McGrane, J. (2000) It's all in the mind *Teachers* London: DfEE

McGuinness, C. (1999) *From Thinking Skills to Thinking Classrooms: A Review and Evaluation of Approaches for Developing Pupils' Thinking*. London: DfEE

Mortimore, P. & Mortimore, J. (1999) Does educational research influence policy or practice? In I. Abbott (ed.) *The Future of Education Research* London: Falmer.

Raymond, L. (2001) Student involvement in school improvement: from data source to significant voice. *Forum* 43, 58-61

Rudduck, J. & McIntyre, D. (eds.) (1998) *Challenges for Educational Research* London: Paul Chapman

Shavelson, R. & Towne, L. (2001) *Scientific Inquiry in Education* Report of the National Research Council. Washington: National Academy Press

William, D. & Lee, C. (2001) Teachers developing assessment for learning: impact on student achievement. Paper presented to the annual BERA conference, University of Leeds, September 2001