Educational Research Capacity in Wales:
The Challenge of Deviolution

'Learning -for both children and adults - is at the top of the Assembly's agenda . ... We want Wales to be recognised as a Learning Country'.

('BetterWales.Com' (NAM 1998, paras 4.414.5)

'If we. are to prosper in these times we must learn not only to adapt rapidly to change but to capitalise on possibilities through the creation of new bodies of knowledge and wisdom. Learning in this profound sense, is the core concept of our time. This realisation places massive demands on all educational providers to enhance their efficiency and effectiveness. Good teaching, broadly conceived, was always a most difficult task. It is ever more so. Increasingly, there is an expectation that educational policies and practices be informed by research'. (Desforges 20002)

1. Background to the Review

The establishment of the National Assembly for Wales in 1998 has marked the growing separation of Wales from England in both educational policy and practice. No longer can it be said in relation to educational policy: 'For Wales see England'. There is now a growing confidence and difference in educational policy which is perhaps expressed most explicitly in the Assembly's ambitious educational policy document 'The Learning Country' (2001). Where there is a continuity with England however, and with many other countries, is the commitment to establish a growing role for educational research at all levels of the educational system. As in Australia, the mantra of 'evidence based policy' has been warmly embraced by the fledgling Assembly. But how well prepared is the higher education system in Wales to contribute the development of educational policy and practice and how experienced are educational institutions in Wales in effectively utilising educational research when it does exist? This paper reports findings from a recent review of Educational Research Capacity in Wales which examined both 'producers' and 'users' or educational research.

1.1 Introduction

Learning, as Desforges argues, is now the core concept of our time and this is true for organisations as it is for individuals. It is therefore perhaps no coincidence that as learning has come to take on this key strategic significance, educational research has increasingly been seen as having a vitally important contribution to make to the development of educational policy and practice. In recent years there has been substantial discussion about the quality of educational research and whether or not it is good enough to meet the growing expectations that are being placed on it. At the same time, in England, educational research has been the subject of a growing number of initiatives involving, amongst others, the Department for Education and Employment (DfEE) [Now the Department for Education and Skills (DfES)], the Teacher Training Agency (TTA) and the Economic and Social Research Council (ESRC). Potentially, these developments have great significance for educational research in the newly devolved Wales.

It was against this background of public debate and policy change that in November 2000, we were asked, by the Universities' Council for the Education of Teachers in Wales (UCET Cymru), to undertake a review of educational research in Wales. Our task was to review current 'capacity' for educational research in Wales and suggest how it might most

effectively be supported and developed in the future. In this opening chapter we set out the background to our review.

1.2 What is Educational research capacity?

But what is educational research and what do we mean by the concept of research capacity? Educational research is notoriously difficult to define. This is because, as many people have noted, education is a 'field of enquiry' rather than a discipline in its own right; moreover, as a field, it overlaps with a range of disciplines in the social sciences (e.g. psychology, sociology) and the humanities (e.g. history, philosophy). In this review we have, therefore, deliberately taken a broad and inclusive definition similar to that adopted by Hillage et al (1998) in their review of educational research on behalf of the DfEE. In their report they say:

It seems to be sensible to regard educational research as that set of

activities which involves the systematic collection and analysis of data

with a view to producing valid knowledge about teaching, learning and

the institutionalframeworks in which they occur. (Hillage et al., 1998,7)

As a result, we have included in our review many different forms of 'research' which vary in terms of.

• **subject matter** - following Research Assessment Exercise (RAE) definitions, we have included research relating to all sectors of the educational system - pre-school, school, post-school, continuing, further, adult and higher education;

• **funding** - ranging from large scale publicly funded projects to personal unfunded research projects;

• **purpose** - including, for example research that aims to produce knowledge which is primarily theoretical, is applied or is a form of action research; involves the development of 'new' knowledge or is a form of 'scholarship', reviewing 'what is known';

• **outcome -** including research that aims primarily to develop knowledge for its own sake; 'blue skies' research where practical outcomes are unpredictable; research that is designed directly to inform policy, practice, or new materials; research that is primarily for personal development;

• **method** - including, for example, research that involves original data collection or the analysis of secondary data; research based on different techniques - qualitative, quantitative, philosophical, historical etc.

What unites the different activities we have included in our broad definition of research is that that they are systematic and analytical, are conducted for a purpose related to the education system and have been intended to add to the body of knowledge.

However, in setting about our study, we were not only concerned to adopt an inclusive definition of research itself, but also wanted to base our review on a broad definition of 'capacity'.

In our review we have therefore defined research capacity as including an understanding of the size of the system as well as the current expertise of research community. Critically, capacity, also includes both the ability to undertake high quality research *and the ability to utilise it effectively.*

As the National Educational Research Forum for England have recently noted in their working party report on research capacity:

Research is the concern of all who are involved in the education system rather than of specific groups, organisations or sectors. It follows that research capacity is needed throughout the system. Research capacity is not simply about undertaking research projects, but is about engagement with the whole research process, including specifying, accessing, interpreting and applying research. (NEPT 2000: 1)

1..3 Quality in Educational research

As we have already noted, in recent years there has been considerable public debate regarding the quality of educational research. Commentators such as Hargreaves (1996), Woodhead (1998) and Tooley & Darby (1998) have argued that much educational research is of low quality when compared with other areas such as medicine and that the findings have little 'use-value' for practitioners and policy-makers. Many educational researchers, it has been argued, are partisan or ideologically-driven and research findings are primarily disseminated to other researchers in academic journals.

The research community has countered these arguments by suggesting that such critiques are based on fundamental misconceptions of the nature and role of social and educational research, ignoring the complexities of educational and social processes (Hammersley 1997). As a result, the critics do not have 'reasonable expectations' of what educational and social research can achieve (Edwards 2000).

Significantly, the Hillage Report took a more even-handed approach to such debates, highlighting the limitations of research but also the lack of interest amongst many policy makers and practitioners in research even when it is of high quality.

However, they went on to suggest that where the research *does* address policyrelevant and practical issues it tends to be:

- small scale
- insufficiently based on existing knowledge
- presented in a form or medium which is largely inaccessible to a non
- academic audience.

In our own review of educational research in Wales, we have not been in a position to form an independent judgement about research quality, though we have no reason to suppose that it is in principle any better or any worse than that undertaken elsewhere. However, whatever its current strengths or weaknesses, it **is clear that improving the quality** and the impact of educational research is as important in Wales as elsewhere in the UK. Like the National Educational Research Forum for England we recognise that 'enhancing research quality requires building research capacity' (NERF 2000a: 11). In reviewing research capacity in Wales, and suggesting strategies for its improvement, we are therefore intending to address issues of research quality as well.

1.4 Developments in England

Questions about current capacity for educational research in Wales must of necessity be set in the context of the way the UK Government has, through the MES, given an increasingly high priority to research in England.

During its first term in office, the new Labour government made many moves to strengthen (some would argue 'manage') the role of educational research in the policy process. Leadership has come from the top. For example, David Blunkett, as Secretary of State for Education, said in 2000:

> 'Good government is thinking government. And a good department is a thinking department. Rational thought is impossible without good evidence and to get this we need a revolution in the relations between government and the research community' (Blunkett, 2000, para 62)

That 'revolution' has major implications for Wales and monitoring developments in England has therefore been an important aspect of our review.

The Labour administration signalled its interest in educational research almost immediately on coming into office in 1997, with the commissioning of the Hillage Report (Hillage et al. 1998). Following that report, there have been a number of important initiatives. For example:

• Increased funding.

There has been increased expenditure on research and evaluation in education rising from about £5 - £10 million a year, with additional funding of about £5 million a year for research within the employment service and a further £1.4 million spent by the 'Skills Unit.' 'These figures understate our full expenditure: evaluations are increasingly being funded as part of the programme budgets for new initiatives rather than from our central research budget' (Sebba 200 1)

The new funding has, amongst other things, allowed increased investment in longitudinal studies and the setting up of new research centres focussing on key policy issues. The aim of establishing these centres is to build cumulative, multi-disciplinary knowledge and expertise by ensuring continuity of funding.

• Best practice research scholarships

A rather different development, the Best Practice Research Scholarship scheme, has been established by the DfES. This scheme, with a budget of approximately £3 million a year, is built on the earlier Teacher Research Grant Scheme developed by the TTA, and offers up to a thousand year-long research grants to teachers in England each year. The TTA originally set up the scheme with the aim of contributing to the development of 'a cumulative stock of high-quality, small-scale, classroom-based research carried out by teachers' (TTA 2001). As the DfES (2001) note

> i using research processes to investigate classroom practice is a good way of increasing understanding about how to raise standards of teaching and learning. It can have benefitsfor the individual teachers and their school andfor other schools through sharing lessons learned'DIES2001:1

- The Eppi-Centre (The Evidence for Policy and Practice Information and Coordinating Centre)

Complementing these initiatives designed to produce 'new' knowledge, is the Eppi-Centre. The aim of this centre is not to produce new research; it is to help policy makers, practitioners and others access existing findings and understand the implications of research for practice. Based on the Cochrane Collaboration in healthcare intervention, at the heart of the new Centre is the idea of developing 'systematic reviews' of research. Following these reviews, the Centre aims to draw out lessons of 'what works' and disseminate the findings in forms that are appropriate to the needs of different audiences e.g. practitioners, parents, policy makers, pupils. [**A parallel initiative on an international scale is the Campbell Collaboration (WWW. cambell.gse.upeiiii.edu) which is promoting systematic reviews in the fields of criminology, social work and education.**]

Although funded by the DfEE, if it is successful the EPPI-Centre will clearly have a major influence on the practice and impact of educational research across the UK. The hope is that through its work, some of the key weaknesses of educational research identified by Hillage et al (1998) will be overcome, with research becoming more systematically cumulative and findings more widely accessible.

- CERUK (Current Educational Research in the UK)

A further initiative is the establishment of a new data base, managed by the National Foundation for Educational Research (NFER) covering all current and future educational research projects together with details of their main objectives, methodologies, findings and publications. Again this is a DfEE initiative but projects throughout the UK are to be included.

- The National Educational Research Forum for England

Overseeing and facilitating all of these innovations, in the future, will be the National Educational Research Forum for England - a key proposal from the Hillage Report. The Forum itself comprises individuals drawn from key groups with an interest in education research including research funders, academic researchers, LEAs, teachers and the media. Its overall aim, set out in its document *A Research and Development Strategy for Education, is* 'to develop a framework and a coherent strategy within which research in education can thrive' (NERF 200 1: 1). More specifically it aims to:

- o set up a Foresight Exercise specifically in the field of education; set up a 'Standing Group on Educational Research and Developmental Priorities'. Significantly this new group will not itself be responsible for setting priorities; 'rather its aim is to develop and support processes for identifying priorities that are productive, transparent, rational and democratic'; (p7)establish an independent Funders Forum to bring funders together on a regular basis;

- o promote further thinking and discussion on the concept of 'capacity building';
- o stimulate further debate about quality in research by, amongst other activities, holding an annual journal editors' conference;

- o support and promote organisations such as the EPPI-Centre and CERUK that are designed to increase the accessibility of researchbased knowledge;

- o encourage funders and researchers to place greater emphasis on issues of dissemination.

Though the Forum is still in its infancy, it is clear that, if it is successful, it will have a major impact on the future structure, funding and content of educational research in England; it could also have an important role in promoting both quality and capacity in educational research. As such it is likely to prove significant in influencing research in Wales.

Each of these initiatives in England is highly significant and is unlikely to leave the landscape for educational research in Wales unchanged. But, before we in Wales can decide how to respond to this changing landscape, we need a clearer understanding of the present position of educational research in Wales. This was the task of our review.

1.5 How ewe went about the review

Given the breadth of our brief, but the limited time scale and funding available to us, we have only be able to undertake a preliminary overview of the issues surrounding educational research in Wales. We can draw confident conclusions in certain areas but clearly there is ample scope for further exploration of all of the issues we touch upon.

Our way of working was as follows. In addition to reviewing contemporary literature and monitoring developments in England, we:

- formed a steering committee with senior representatives from a crosssection of organisations involved in the production, commissioning and use of research in Wales; we also had representation from the British Educational Research Association (BERA);
- sent questionnaires to all Schools and Departments of Education in HE institutions in Wales requesting details about research funding, publications, staffing, research student numbers etc;
- sent a similar questionnaire to all other Schools and Departments in HE institutions in Wales where we judged that there might be staff engaged in educational research (departments of psychology, social policy, Welsh etc);
- interviewed c20 senior figures from organisations across Wales involved in the production, commissioning and use of research;
- held a half day seminar in Cardiff for over 40 representatives from three different 'constituencies' within the education community - teachers, govern-mental and quasi-governmental organisations, and academics.

In the chapters which follow we present the principal findings from our review. Chapter 2 draws on a range of literature to set out the role and purposes of educational research while Chapter 3 presents the results of our survey. Chapter 4 presents a list of issues that need to be addressed in developing a strategy for the future of educational research in Wales.

2. The Role and Purposes of Educational Research

As we noted in Chapter 1, the aim of our review was to consider educational research capacity in Wales - capacity to undertake research and to use it. Inevitably therefore we were involved in making judgements. But before we could make such judgements, we had to address the prior question: 'Capacity for what?' Why is educational research important and for what purposes? What should its role be in contemporary Wales? As we have already indicated, there is within the education community a growing recognition that research has an important part to play in relation to policy and practice. But what precisely is the role of educational research in that process and is this its only purpose? In this chapter we draw on a range of literature to consider these questions more fully.

2.1 The contribution of research to evidence-based policy and practice.

> *Having good evidence on which to base new policies is vital. We are
> reviewing the type and levels of research currently undertaken in Wales and
> will issue a new research strategy to guide priorities. We are also establishing
> stronger links with the academic community in Wales so that they can play
> a* full *part in developing new 'made in Wales'policy* (National Assembly for
> Wales, 2001 b: 24)

The need for good evidence on which to base educational policy and practice is now widely
advocated. It was not always so. As Furlong (1998) has argued, the story of educational
policy and professional development under the Conservative governments of the 1980s and
1990s was one of dramatically increasing centralisation; research had little role. As David
Blunkett observed 'Too often in the past policy has not been informed by good research: a
former Permanent Secretary once ruefully described the old DES as a knowledge-free-
zone.' (Blunkett 2000)

Things are very different now though it is important to recognise that there are a number of
potentially different approaches.

2.1.1 Research to guide evidence-based policy and practice in education

Over the last five years, a **number** of influential writers, most particularly Hargreaves (1996),
have argued strongly that, as in medicine, the aim of research, should be to provide ***direct
guidance*** about effective practice in teaching and learning. It is argued that what teachers
need is access to evidence from controlled studies (ideally randomised controlled
experiments) about the procedures most likely to achieve specific desired learning outcomes
in specified types of circumstances.

Despite the scepticism of many educational researchers (Kennedy, 1997; Furlong, 1998;
Edwards, 2000), Hargreaves' aspiration to develop a secure research base for teaching
knowledge has proved persuasive in some senior circles. For example in 1997, Anthea
Millett, then head of the TTA, wrote:

> *'If there was more research about what worked we would hear teachers
> talking more frequently about how their teaching affects pupils' learning*
>
> *(Millett 199 7 para 2, emphasis added).*

and David Blunkett, told the ESRC in 2000

> *'We need to be able to rely on social science and social scientists to tell us
> what works and why and what types of policy initiatives are likely to be most
> effective'*

However, as McIntyre and McIntyre (2001) suggest, the relative scarcity of such research
must to some extent be because of the difficulty of undertaking it with a persuasive degree
of validity. This difficulty, they suggest, is due in part to the technically demanding
quantitative research involved and in part to the organisational problems of achieving the
willing collaboration of groups of participants.

> *Capacity for research of this ... kind must involve both a distinctive kind of
> academic engagement and a strong inter- institutional infrastructure. Capacity*

> *for its use depends on policy makers' and practitioners' readiness and ability
> to be distinctively guided by this type of researchbased knowledge (McIntye
> and McIntyre 2001;415)*

Perhaps unsurprisingly, we found little evidence of this type of research in Wales at present.
There were only two significant exceptions. One was a randomised controlled trial study of a
school-based smoking intervention based at Cardiff University[The 'Randomised controlled
trial of the effectiveness of a schools-based, peer-led, smoking intervention" project based at
Cardiff University runs from February 2001 to January 2005 and is funded by the MRC with
a total grant of £1,393,633.]. Significantly this very large scale project, with a budget of £1.4
million, is funded by the Medical Research Council, where randomised control studies are
more common. The other exception was the ESRC's Teaching and Learning Research
Capacity Building Initiative also based at Cardiff University, which has as one of its aims, the
development of capacity across the UK for quantitative research techniques, including
control trials.

Whether the evidence derived from these two initiatives is accepted by policy makers and
practitioners as a direct 'guide' to their actions remains a question for the future. At present,
most commentators understand the relationship between research, policy and practice in
more indirect ways.

2.1.2 Research in the policy cycle

Although there is widespread scepticism that research findings can be used directly to guide
the action of policy makers, there is now a growing commitment to the view that research
should be part of a 'policy cycle', entering into that cycle in a number of different ways.

Different forms of research can, for example, be used:

- o   as part of the policy planning

- o   putting issues on the policy agenda,
- o   helping policy makers recognise their current and future information
  requirements,
- o   reviewing what is already known;

- o   as part of policy development

- o   piloting new initiatives,
- o   developing specialised policy instruments e.g. new forms of assessment,
  specialised curriculum materials;

- o   as part of evaluation

- o   finding out what worked, what did not work,
- o   linking past experience back to further policy planning

As Selby Smith (2001) demonstrated in his study of policy making in vocational education in
Australia:

> *'The policy process is characterised by a number of stages (and) research of
> different types can potentially play a part at each stage. (Research can be
> used in) ... problem identification and agenda setting, (or) linked with the*

*subsequent policy formulation phase ... Research can also contribute at the
evaluation phase, which provides opportunitiesfor programme finetuning and
adjustment to changing circumstances'.* (Selby Smith 20013)

A key issue for us in examining policy making at different levels of the educational service in
Wales has therefore been to explore the ways in which research currently or might in the
future enter into the policy cycle.

2.2 practitioner Research

A very different way of conceptualising the role of research, particularly in relation to
practitioners, has been put forward by advocates of practitioner or action research.
Influential writers from Stenhouse (1975) to Sachs (2000) have consistently emphasised the
value of investigations aimed at understanding or Q evaluation' of specific local institutions
or cases rather than the aspiration to generalise. As McIntyre and McIrityre (2001) state,
visions of the teacher as a researcher 'combine here with more recent concerns that schools
can and should themselves be "knowledge creating" (Hargreaves 1999)' (McIntyre and
McIntyre, 2001:4).

There are two powerful rationales for the development of such an approach to research. The
first concerns a growing recognition of the complexity of the notion of 'dissemination'. Even
when research-based knowledge can demonstrate 'what works' and even when that
knowledge is presented in 'simple and crisp language', there still remains a major issue as to
how practitioners make this knowledge their own.

The complexities surrounding the ways in which research based knowledge actually enters
into the world of practice have recently been the focus of another major Australian study
(McMeniman et al 2001). As the researchers state:

> 1 *educational researchers need to reconceptualise the ways in which formal
> educational research is accessed by practitioners The flow is not one-way,
> but constantly recursive, and legitimises the important role that the
> practitioner plays in what has been termed teacher research as well as the
> role of the practitioner in transfbrming or mediating the findings of the formal
> research of others'* (McMeniman et al 200 1;9)

There is, therefore, a growing recognition that engaging practitioners themselves in the
research process is an important strategy in 'disseminating' research based ideas and
developing a more sophisticated understanding of what educational research can and can
not contribute to the development of practice. At the very least, as McIntyre and McIntyre
(2001) say 'The capacity of teachers, learners and schools to interpret and use research
effectively must be viewed as one element of research capacity in this field' (4).

The second rationale for the teacher-researcher movement is the recognition that when
practitioners participate in the research process, rather than being merely 'consumers' of
research knowledge, they experience a potent form of personal professional development.

The fact that engaging in research works in this way is attested by the large numbers of
practitioners who elect to undertake Masters' degrees each year, often paying their own fees
and combining their studies with demanding home and professional commitments. A
weakness of the conventional masters degree however is that it is primarily individual. The
aspiration of the teacher-researcher movement is to capitalise on this individual research
experience and link it to some form of institutional development. As Sachs (2000) notes, the
real challenge here is to create the political and professional conditions where these sorts of

new research cultures can emerge. In looking at educational research in Wales we were **therefore particularly interested in examples** of attempts to create such research cultures through, for example, links between practitioners and the academic community of the sort currently being piloted by GTC Wales (see 3.6 below).

2.3 The role of research within higher education

Recent debates and policy initiatives have meant that educational research now has a much higher public profile than 10 years ago. The fact that there is a growing recognition of its potential in the development of policy and practice is to be welcomed. However, one disadvantage of that debate has been that the focus on the role of research in policy and practice has marginalized some of its other purposes, most particularly its role within higher education. For some writers such as Moore (1998), for example, one of the main purposes of research is its contribution to teaching within higher education and as such it is not, and should not be confined to the directly practical.

There are many more questions that need to be asked about society and its educational processes than the merely practical ones. As David Blunkett (2000) has acknowledged 'We need research which (amongst other things) leads to a coherent picture of how society works' (para 55).

There is of course long standing debate about whether research is a 'necessary' part of higher education. We would support the view that research is central to teaching in higher education; it is after all how new knowledge in a given discipline is produced. At the same time, not every lecturer has to be an active researcher. As Barnett (1990) persuasively argues 'Knowledge in the context of discovery and knowledge in the context of transmission are entirely different enterprises' (Barnett, 1990:124).

Nevertheless, collectively, the higher education community does have a responsibility to maintain the output of research if it is to maintain the quality of its teaching programmes. Again to quote Barnett 1990:

> *... for effective teaching in higher education to take place, someone, somewhere should have engaged in research. This does not imply that all teachers should engage in research. It does suggest that teachers corporately have a responsibility to assist in keeping alive the research tradition.*

On the other hand, in order to be a high quality teacher within higher education, every lecturer:

> *has a Professional obligation to understand the key conversations going on in the research community... and staff ... need to have the time and resources to keep up with their field of study so that they are immersed in its conversations. (Barnett, 1990:1301135)*

This would suggest that, to be effective, all lecturers in higher education need to be participants within a 'scholarly culture' even if not directly engaged in research themselves. Quality assurance procedures alone (however stringent) are not enough to ensure high quality education. However, one of the strategies most frequently used by managers within higher education to develop and maintain such a 'scholarly culture' is to support staff in their own research endeavours.

There are few models within British higher education of how to maintain the scholarly culture necessary to support good teaching that do not involve research. Therefore, although at an individual level, being a researcher may not be necessary for all lecturers, at an institutional level, it is a key strategy in the development of quality teaching and learning.

In assessing the current position of educational research in Wales we were therefore just as interested in its role in the development and maintenance of a high quality higher education system as in its more direct contribution to the development of policy and practice.

In our next chapter we now turn to the evidence from our survey of current capacity to undertake and to utilise educational research in Wales.

3. Current capacity for Undertaking and Using Educational Research in Wales

Part 1
Capacity for Undertaking Educational Research

Within Wales, there are a number of bodies and individuals where educational research can be regarded as a core part of their activity. These include: schools and departments of education within Universities and Colleges; the National Foundation for Educational Research (NFER) (Wales); research consultants and agencies, and individual students undertaking masters and doctoral research [Some might define the work of Estyn (the Office of Her Majesty's Chief Inspector of Education and Training in Wales) as research. While we recognise the important role played by Estyn in the evaluation of educational institutions in Wales, we have not included them in our review of research activity.]. In addition, there are a number of organisations which themselves undertake some educational research, though it is not their core activity. They extend the list to include: other departments and schools within higher education (psychology, Welsh etc); NAfW; LEAS; ACCAC; National Council-ELWa; the Welsh Language Board; FENTO; WJEC, professional associations; the Institute for Welsh Affairs.

Ideally therefore, a review of research capacity in Wales should cover all of these organisations equally, but, given our limited time and resources, this has not been possible. While we have documented examples of research in many of these organisations, we have focused most of our attention on current capacity within higher education and particularly within schools and departments of education. The reason for limiting our focus to higher education, is because for a variety of different reasons, higher education is at the core of the educational research network within Wales. Higher education is the source of much of the training for the system as a whole and those within it often act as consultants or undertake research on behalf of other organisations.

Our reason for focusing mainly on schools and departments of education rather than other departments within higher education is because our survey has revealed that at present, this is where educational research is actually happening. From the 40+ questionnaires we sent to other departments within HEIs in Wales, apart from our own School of Social Sciences in Cardiff, we only had responses reporting two funded projects. While we believe this evidence underestimates the actual current involvement of departments such as psychology, sociology, Welsh, etc. in educational research, it is clearly not a major feature of their current profiles.

3.1 RAE, staff, students

Perhaps the most obvious way to assess current educational research capacity in Welsh HEIs is to consider the Research Assessment Exercise (RAE) ratings and the size of the

sector - staff and research students. Formally, there are nine schools or departments of education within Welsh HEIs, but in research terms, we would add to this figure the 'education' staff currently working within a variety of departments within University of Glamorgan[In addition the Swansea University Department of Education (UDE) and the Swansea Department of Adult and Continuing Education (DACE) constituted one single RAE return in 1996. We have therefore combined them throughout this report.] All ten departments or schools have a research profile.

3. 1. 1 RAE results

Quality of research across all HEIs in the UK is assessed every five years through the RAE. As a way of 'measuring' research quality, the RAE follows a narrower definition of research than the one we have adopted in this Review['See Annex A]; it is therefore not the entire story. Nevertheless, it does provide an important insight into the quality of the more formal aspects of educational research. Moreover, as we will see below, it is profoundly significant in relation to research funding. Results of the 2001 exercise are currently awaited but in 1996, the results for Education were as follows:

Table 11996 RAE ratings in Education

Country	Grade 1	Grade 2	Grade 3b	Grade 3a	Grade 4	Grade 5	Grade 5"	Non returned 9
Wales	2	1	1	2	1	-	-	2
England	9	22	18	11	12	10	2	3
Scotland	2	1		5	2	1	-	-
N. Ireland	-	-	-	-	2	-	-	2

(Source: Joint Funding Councils of the United Kingdom 1996 Research Assessment Exercise: The Outcome)

Definitions of RAE grades are given in Annex A'

Non-returned' are HEIs currently offering initial teacher education courses in England and Wales (source GTTR). In addition, University of Glamorgan staff working in the field of Education were not returned to the Education RAE in 1996 though as we will see below, 7 were returned in 2001.

In comparison with other parts of the UK the position in Wales following the 1996 RAE was therefore not strong. 44% of Welsh departments achieved a 3b or better compared with 60% of those in England; 42% of institutions in England achieved a grade 4 or above while only one institution in Wales (11%) did so. Moreover, no institution in Wales achieved higher than a grade 4.

There are many possible reasons for this comparative weakness in terms of the RAE but one obvious explanation is that historically, in Wales, a greater proportion of teacher

education has taken place in the college sector in comparison with the university sector. Since 1992, many English polytechnics, as new universities offering teacher education, have successfully developed research profiles.

In Wales, in terms of the RAE, it is still only the relatively small pre-1992 University institutions that have any substantial research profile. As a result, less research capacity has been developed.

3.1.2 Staffing

Departments and numbers of staff in Welsh HEIs working in the field of Education are listed in *Table 2* below:

Table 2. Academic staff in schools and departments of education in Welsh HEIs 2000/01 as reported by institutions

Institution	Lecturing staff	Staff entered for RAE 2001	Contract ResearchStaff (estimates)
Aberystwyth	16.5	14	0.4
Bangor	46	10	4
Cardiff	30	24	9
Glamorgan*	15	7	1.5
NEWI	16.5	4	0
Swansea Institute	22	2	0
Swansea UDE/DACE	31	25	2
Trinity	37	0	1
UWIC	55	0	0
MCN	23	0	0
Total	292	86	17.9

* Staff teaching and researching in the field of education within University of Glamorgan are currently located within a number of different departments.

As *Table 2* demonstrates, there are a considerable number of academic staff currently employed within schools and departments of education in Welsh HEIs, though only a minority are formally designated as 'research active' in the RAE. As we will see below, this is

highly significant in relation to funding. *Table 2* also demonstrates the very small numbers of full time funded educational researchers currently working within Welsh HEIs.

3.1.3 Students

Students are also important in the research profile in that a large number undertake educational research projects each year. In addition, doctoral research is the major method for research training. The numbers of education students, including undergraduates, completing different sorts of research dissertations during the academic year 1999-2000 are listed in *Table 3.*

Table 3. Numbers of different types of students reported by institutions as completing research projects during the academic year 1999-2000

Institution	MA	PhD	MPhil	U-G Dissertation
Aberystwyth	2	2	1	11
Bangor	30	2	-	6
Cardiff	14	5	1	32
Glamorgan#	30	3	-	-
NEWI	6	-	-	100
Swansea Institute	9	-	-	93
Swansea UDE	23	1	-	-
Swansea DACE	5	1	-	-
Trinity	3	-	-	130
UWIC	25	-	-	150
UWCN	24	-	-	123
Total	**171**	**14**	**2**	**673**

Students researching in the field of education within University of Glamorgan are currently located within a number of different departments

.In addition, Cardiff University had 36 students registered on its EdD during 19992000, 11 of whom were currently undertaking their dissertation.

That substantial numbers of students undertake educational research projects of some kind in Wales is perhaps one indicator of research potential across the sector. However, at present, the vast majority of students are only working at undergraduate or masters level. Only one institution, Cardiff University, provides ESRC recognised post-graduate research training[Institutions are currently being required to reapply for ESRC recognition in preparation for the new 1+3 model of research training (from 2002, all ESRC sponsored students will be required to undertake a preliminary one year MSc in Research Methods before commencing their PhD dissertation). It may be that following the re-validation exercise, more HEIs in Wales will be recognised by the ESRC for research methods training.]. In 1999/2000, Cardiff had 6 full-time and 4 part-time ESRC sponsored doctoral students working in the field of education though all other full time non-ESRC students are required to undertake the same research training. Cardiff also currently offers an ESRC recognised MSc in Social Research Methods which attracts a small number of students working within education.

Overall, therefore, we would suggest that despite the substantial numbers of education students engaged in some sort of educational research in Wales, capacity, in terms of the numbers being prepared at a level appropriate for an ongoing career in educational research, is very small indeed.

As a consequence, it is perhaps unsurprising that when we spoke to senior colleagues responsible for administering research projects, they reported considerable difficulties in attracting suitably qualified post doctoral research workers for funded projects.

3.2 Funding

In Wales we already spend a considerable amount of public funds supporting educational research and since the establishment of the NAfW, much of the responsibility for that expenditure lies within Wales itself. Key questions are therefore 'How much is spent?', 'On what?' 'To what effect?' and 'How does that expenditure compare with other countries?'

As other commentators have found, calculating the budget for educational research is at best an imprecise science. We would estimate that in Wales, annual expenditure is in the region of £2.5 million. This is made up from a number of elements.

- 'QR' funding - approximately £ 1 million pa [This funding from ITEFCW to University Schools and Departments of Education is designed to support research infrastructure rather than to fund particular projects. It is awarded competitively as a result of the five yearly Research Assessment Exercise (RAE)]
- Project funding gained by higher education institutions from non HEFCW sources - approximately £1 million pa

More details on these two principal sources of funding are given below. However, to this total must be added additional sums which are much more difficult to calculate. For example

- Funding to 'non-education' departments in higher education; 14[Hillage et al (1998), for example, reported that, at the time of their study, some 20 per cent of ESRC 'educational' projects, broadly defined, were being carried out within a non-education discipline (sociology, psychology etc.).]
- 'In house' research undertaken by various agencies - e.g. ELWa, LEAS etc;
- Research undertaken by the NFER;
- Research students of various sorts studying at masters and doctoral level.

At a rough estimate these additional sources of funding might add up to a further £500,000 per annum. At around £2.5 million per annum, the educational research budget in Wales is therefore small.

But how much 'should' the research budget be? NERF (NERF 2000b) estimate that in England, the current budget for educational research is £70-75 million pa. HEFCW advise a 'rule of thumb', whereby budgets for Wales are estimated at 5% of the UK total; ACCAC put the figure at between 6-7%.[We only have estimates of English rather than the UK expenditure available, but have assumed for this purpose that funding levels in Scotland and Northern Ireland are comparable. In fact there is some suggestion that funding levels for research in Scotland are higher than in England.] This would lead to an expectation of a budget for Wales of between £3.75 and £4.9 million per year.

On these figures it would suggest that there is currently between 30 and 50% underfunding of educational research in Wales in comparison with the rest of the UK. Moreover, even the English budget is estimated to be one of the lowest percentages in the OECD (CERI 1995). As the NERF state bluntly in the opening pages of their *Research and Development Strategy.for Education* (NERF 200 1) 'It is widely recognised that education research in England is under-funded as a proportion of expenditure on education and meagre resources are thinly spread because of a diversity of funding policies and practices' (p3).

In the remainder of this section we give more details on the two principal sources of funding - QR funding and funding from projects

3.2.1 QR as a source of funding

As we have already indicated, one of the most important sources of funding, accounting for almost half the total budget for educational research in Wales, is the QR, or infrastructural funding paid by the Higher Education Funding Council (HEFCW) to HEIs. The amount of QR funding awarded to institutions varies both in relation to the number of 'research active staff and in relation to their collective performance on the RAE carried out every five years. Its purpose is to support formal academic research as defined within the RAE (see annex A).

In the 1996 RAE, only four schools or departments of education in Welsh HEIs achieved a grade 3b or above, the minimum level necessary to attract QR funding. *Table 4* shows QR funding paid to HEIs in Wales over the last four years by institution.

Table 4. HEFCW QR ALLOCATIONS FROM 1997/98 - BY INSTITUTION

UNIT OF ASSESSMENT: 68 EDUCATION

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Year /Institution	UW Aberystwyth	UW Bangor	Cardiff University	UW Swansea	Total
1997198	£112,708	£100,885	£398,840	£356,691	**£969,124**
1998/99	£108,405	£110,424	£411,372	£343,205	**£973,406**

1999/2000	£114,453	£118,089	£429,130	£380,588	**£1,042,260**
2000/01	£119,388	£130,507	£420,712	£393,638	**£1,064,245**
TOTAL	£454,954	£459,905~	£1,660,054	£1,474,122	**£4,049,035**

Source: HEFCW Circulars W97/16HE, W98/20HE, W99/24HE and WOO/29HE

Figures for Swansea include both the Department of Education and the Department of Adult and Continuing Education

How does this compare with QR funding for education elsewhere in the UK? Table 5 sets out the comparative figures for Wales, England and Scotland

UK QR ALLOCATIONS FROM 1997198 - BY COUNTRY

UNIT OF ASSESSMENT: 68 EDUCATION

Country/Year	England#	Northern Ireland	Scotland	Wales
1997/98	£25,686,177	£655,889	£2,396,000	£969,124
1998/99	£31,393,416	£787,015	£2,593,921	£973,406
1999/2000	£26,546,151	£661,890	£2,632,840	£1,042,260
2000/01	£27,038,019	£750,231	£2,693,938	£1,064,245
TOTAL	**£110,663,763**	**£2,855,025**	**£10,316,699**	**£4,049,035**

Excludes additional funds for London extra costs and funds for supervision and tuition of postgraduate research students.

Source: Consultation with HEFCE, SHEFC and HEFCW officers, April and October 2001

Some care needs to be taken in interpreting the figures in *Tables 4* and 5 in that budgets made available by funding councils to support research vary[For example, HEFCW reported to us that their overall budget devoted to research has not increased as fast as that of England over the last RAE period but that, in an attempt to support research development, the differentials (or steps) between grades within Wales have been less steep than England.]. Despite this, at about 3% of the UK total, it is apparent that actual QR funds devoted to supporting educational research in Wales are low compared with the other home countries. (HEFCW reported that pro rata, the proportion should be approximately 5% of the UK figure).

This low level of funding can in part be explained by the grades assigned to educational departments in Wales but perhaps more significantly in the number of research active staff within funded departments.

In the 1996 RAE, the total number of research active staff in Wales as a whole was 80. Comparisons with other UK universities show that for example Warwick (Grade 4) entered 86 research active staff., Exeter (Grade 4) entered 70; Leeds (Grade 5) entered 75; Reading (3a) entered 98; Strathclyde (3b) entered 114; and the London Institute of Education (5*) entered 140 staff.

> ***As a result, each one of these institutions, over the last ive years, is likely to have received more QR funding than was available in the whole of Wales.*** Again, we have to recognise the importance of historical factors here. Before 1992, the university sector in Wales was small and Wales' one polytechnic did not have a substantial profile in the field of education; as a consequence, in comparison with England, a disproportionate amount of teacher education took place within the college sector. Little has changed since 1992 to alter that broad pattern of provision.

3.2.2 Funding from projects

The second major source of funding is through projects. Our questionnaire to HEIs requested details of research projects in the field of education funded during the previous three calendar years 1998 - 2000[Since our questionnaire was circulated, some substantial grants have been won by institutions in Wales, most particularly the *£500,000 ESRC Teaching and Learning Research Capacity-BuildingProject* and the £1,400,000 *MRCRandomised controlled trial ofthe effectiveness ofa schools-based, peer-led, smoking intervention* both ofthern awarded to Cardiff University School of Social Sciences.] and in the tables below we look at what can be learned about educational research in Wales by interrogating that evidence. However, great care has to be taken in interpreting our figures. As we have indicated, our response rate from 'non-education' schools and departments was low and we may therefore be underestimating overall funding though where we know of such projects, we have included them. We must also re-emphasise that these figures are those provided by HEIs, they do not include research undertaken entirely outside higher education by for example the NFER. Finally we have to acknowledge some difficulty in attributing projects with any precision to particular years; inevitably they spread over more than one year with some commencing before 1998 and others concluding after 2000. We have therefore had to estimate annual expenditure. As a result of these uncertainties, the figures we present should not be taken as a precise account of research in Wales, rather they should be seen as indicative of broad patterns and trends.

Amounts and numbers of projects by institution

Table 6 presents data on project funding by institution and in constructing it we have attributed any project that involved more than one partner to the first or main institution. The 'number of projects' includes a small number that are formally constituted but unfunded.

Table 6: Educational research (funding and projects) by institution for three years 1998-2000

HEI	Numbers of Projects(i)	Gross **funding of** live**projects1998-2000**	**Estimated average annual funding 19982000(ii)**
Cardiff(iii)	*32*	*1,683747*	*471,600*

Bangor	*12*	*656,000*	*170,000*
Aberystwyth	*25*	*512,234*	*127,000*
Swansea UDE1DACE	*16*	*427,353*	*93,300*
Glamorgan	*8*	*425,500*	*142,000*
UWIC	*23*	*279,300*	*93,100*
UWCN	*7*	*101,180*	*33,600*
NEWI	*3*	*14,500*	*4,800*
Swansea IHE	*3*	*14,360*	*4,000*
TOTAL	**133**	**4,112,174**	**1,189,400**

(i) Includes funded and unfunded projects

(ii) Average annual funding calculated from the proportion of 'live' projects estimated to fall into each of the three years 1998-2000

(iii) In addition, Cardiff had projects totalling £1,000,000 for 'special initiatives' mainly from the UK government e.g. thdMEE 'Pilot Mentoring Scheme within Education Action Zones', DfEE 'Children's Parliament on the Environment'. As most of these funds were not directly attributable to research or development costs they have been excluded from our analysis.

There are some immediate conclusions which can be drawn from *Table 6.* About *40%* of Wales' annual educational research income was secured by Cardiff University, which also undertook the largest number of research projects. Bangor, Aberystwyth, Swansea and Glamorgan position themselves as additional 'key players', and UWIC has also established a significant research base, both in terms of funding and project numbers.

Sources offunding

Table 7: Research funding to Welsh HEIs by funding body.

Totals for three years 1998-2000 reported by institutions

Funding Body	Funding	Funded Projects
ACCAC(i)	1,066,396	12
Private organisations(ii)	915,610	15
ESRC	860,653	12

HEFCW	453,553	14
UK government(iii)	311,437	8
Welsh government(iv)	194,350	12
Welsh local government	198,275	13
Universities	77,900	19
International Bodies(v)	34,000	2
Total	**4,112,174**	107
Unfunded projects		26

Table 7 shows that in the three years we covered, ACCAC was the largest funder of educational research in Wales; 'Private organisations' including charities and businesses were the next largest group followed by, the ESRC and HIEFCW. Interestingly UK government agencies were also significant. Compared with these groups, the investment in research by other national and local government agencies in Wales (including NAfW) was relatively small.

(i)A substantial proportion of this funding was for 'research-based' curriculum materials development (e.g. developing a Welsh/French dictionary). ACCAC have an additional substantial budget for materials development, most of which is awarded to agencies outside the higher education sector.

(ii)Including businesses and charities

(iii)Includes, TTA, QCA, and BECTA. See also note 25.

(iv)Welsh 'government' includes here the former Welsh Office, the National Assembly for Wales, theWelsh Language Board (WLB), the Welsh Development Agency (WDA) and the Wales Youth Agency.

(v)European Union; OECD.

3.2.3 NAfW funding

In our review, we were not in a position to make a systematic study of the research budgets of bodies that regularly commission research. Instead, we chose to record funding by asking for details from those within higher education. However, because of its significance as a research funder (and particularly because of the strategic role played by the DfES) we did attempt systematically to document research funded by the NAfW.

Prior to the establishment of the NAfW, there was regular funding of educational research in Wales by the Government. This was of two sorts. The first, and the predominant, was research that was designed and led from England but with a Welsh dimension to it. Many studies were designed to cover Wales as well as England and it was common for the then

DES to commission a Welsh (often junior) 'partner' in its major projects. In addition however, until the establishment of the NAfW, the Welsh Office had its own educational research budget which it was able to utilise for researching issues that were seen as specific to Wales.

Both of these types of research funding are, for example, revealed in an annual report published exactly 10 years ago by the Welsh Office (Welsh Office 1991). The report lists 'live' educational research projects totalling £2,805,000 with an annual spend during 1989/90 of just under £750,000. Of this budget, approximately half (£365,000) was spent on curriculum and assessment materials development. Much of this work is nowadays undertaken by ACCAC, though interestingly in contrast to today, a majority of that curriculum development work was commissioned from Welsh HEIs. Of the remaining £380,000, half was spent on the assessment of performance, mainly in colla~oration with major projects based in English universities. The other half, (C£166,000) included projects based in England (for example the evaluation of the Records of Achievement initiative) and others led by Welsh researchers (for example an investigation of the impact of the introduction of GCSE on Welsh secondary schools, or an observational study of the teaching of writing).

Despite strong support for our Review from senior colleagues within the NAfW, we have found considerable difficulty in identifying either the Assembly's current research budget or its research priorities. We also found no evidence of a clear strategy for linking with funding initiatives in England. From information made available to us by the Assembly, for the academic year 2000/01, we could only identify five 'live' educational research projects. These projects appeared to have a total budget of around £325,000 though in the majority of cases spending was spread over more than one year. The current annual budget is therefore more likely to be £150,000 at most. Given that since the establishment of the NAfW, the DfES no longer has a formal research remit within Wales, this constitutes a substantial reduction in research funding by the Assembly.

3.3 Areas of Expertise

A different way of examining capacity is to look at current areas of research expertise. Following the 1996 RAE, the NFER was commissioned to map educational research in England and in so doing, reviewed over 10,000 publications that were submitted for that year's RAE (Kerr et al 1997). A similar exercise was undertaken on behalf of BERA by Bassey and Constable (1997). According to Kerr et al, the most frequently occurring topics at the time were: educational policy, subject-based enquiry, teaching, education management, education (non-specific or general), key skills (particularly literacy), assessment, institutional effectiveness and improvement, and social factors affecting education.

Bassey and Constable (1997) produced a list that was broadly similar though they note the relatively large number of studies in the field of initial teacher education compared with the low number of studies on nursery or secondary education and the virtual absence of papers tackling methodological issues. Certainly many commentators have raised questions about the current range of methodological expertise amongst educational researchers. For example, one of the key aims of the ESRC's current Teaching and Learning Research Programme based at Cardiff University is to extend the range of methodologies, especially quantitative methodologies, used in educational research. We were not ourselves able directly to measure methodological expertise though again we have no reason to suppose that it is significantly different from that available in the rest of the UK.

In mapping current expertise, we used two strategies. Firstly, from our questionnaire, we looked at topics addressed within funded projects and secondly, from details supplied to us

by all HEIs in Wales, we examined all recent publications in the field of education during the three calendar years 1998-2000. (Once again we would emphasise that our figures should be interpreted only to be indicative of broad trends rather than precise measures.)

Classifying projects and publications is not straightforward. Defining topics is difficult and many projects and publications fall under more than one simple heading. Rather than invent our own system of classification we have therefore used the Eppi-Centre's (2001) *Core Keywording Strategy* for this purpose. Although their instrument is intended for classifying publications, we have adapted it for classifying projects. Following their procedure, we have classified research projects in three different ways - by 'focus topic', by 'educational setting' and by 'population focus'. Although this may appear to 'over count' projects, it does give us a useful insight into different dimensions of current expertise in Wales. For publications, we have only classified them by focus topic.

3.3.2 Expertise by focus topic'

To analyse this aspect of expertise we have looked at evidence both from projects and publications. *Table 8* shows our evidence from research projects.

Table 8: **Educational research projects in Wales** *1998-2000 by 'focus* **topic'**

Focus Topic	Funding	Projects (i)
Organisation(ii)	2,010,543	49
Curriculum	1,228,080	33
Policy	344,190	22
Disciplines(iii)	302611	7
Other	95,000	1
Teaching and Learning	88,750	17
Teachers' Careers	43,000	4
Total	*4,112,174*	*133*

(i)Includes funded and unfunded projects

(ii) Research focusing on the organisation of educational institutions (e.g. planning and development, school ethos, leadership and management, pupil grouping, equal opportunities, special educational needs, pupil mobility, transfer, transition). Educational participation and outcomes have also been included in this category.

(iii) Disciplines of educational research (e.g. history of education, philosophy of education, sociology of education, psychology of education, economics of education).

Research projects concerned with the 'organisation' of education made up the largest group attracting over £2 million. However, this category is defined very broadly within the Eppi-Centre classification system. As well as the more obvious areas such as 'management' and 'planning',, it also includes 'special educational needs', 'transfer', 'pupil mobility' and 'equal opportunities'. The research projects in the sample focusing on 'participation' and 'outcomes' also appeared to be most appropriately absorbed into this category. In some ways, then, this category is not particularly useful in terms of assessing the focus of educational research, simply because it encompasses such a wide range of topics. However, its high rank in *Table 8 is* highly significant in that it demonstrates that a large proportion of educational research is not currently focused on issues relating to the curriculum, or on teaching and learning. Considering the current concern that educational research should relate to 'the effects and effectiveness of what teachers do in classrooms' (Hargreaves, 1996, p. 4) the strong focus on g organisation' as opposed to 'teaching and learning' is significant.

The next largest area is 'curriculum' with funding of £1.2 million spread over 33 projects. Virtually all projects focused on the school curriculum (rather than FE, HE or beyond) with the overwhelming majority of funding (£900,000) devoted to Welsh language curriculum development. Research in other curriculum areas was much more thinly spread with only 5 funded projects over the last three years in mathematics/numeracy totalling £33,000; five in the area of English/literacy, totalling £24,000 and one small project each in the areas of history and music. Most other curriculum areas appeared to have no research funding at all over the last three years.

Research into educational policy made up a smaller but significant proportion of the total research activity. It accounted for £0.3 million in funds, spread over 22 projects. Along with 'curriculum' and 'organisation', research into educational policy therefore represents an area where there is a relatively high level of activity in Wales.

By contrast, research in the 'disciplines' of education appeared small. There appeared to be virtually no current, basic (as opposed to applied) work focussing on teaching and learning, though there may be research of which we were unaware in departments of psychology.

Even more significant was our finding that only 3 projects appear to have been funded over the last three years in the field of bilingualism and linguistics education (total budget £ 110,000). While there is substantial funding for Welsh language curriculum and materials development, basic research i ' n this area is notable by its absence. Given the importance of bilingual education within Wales and the potential of Wales to contribute to an issue of global educational significance, this low level of funding is highly significant.

Our classification of publications from those working in Welsh HEIs over the last three years reveals a broadly similar picture in terms of 'topic focus' though there would appear to be a greater number of publications on different aspects of the curriculum than might be predicted by research project funding. However, given that the majority of lecturers working in the field of education do have a curriculum specialism, this is not particularly surprising.

Table 9: Educational publications in Wales 1998-2000 by 'focus topic'

Topic Focus	Journal article	book	bookchapter.	report	resource	total
Organisation	92	2	36	23	3	156

Curriculum	63	1	45	4	10	123
Teaching and Learning	25	4	22	5	1	57
Policy	22	1	17	7	1	48
Disciplines	14	2	9	2	0	27
Methodology	6	0	6	1	0	
Teacher Careers		6	1	2	0	0
Other	3	1	0	0	0	

3.3.3 Expertise ` -Educational setting

A different way of examining research expertise is in terms of the educational setting within which it is carried out. A reclassification of research projects reveals the following picture.

Table 10: Educational research projects in Wales 1998-2000 by Educational Setting

Educational Setting	Funding	Projects(i)
Secondary Education	*1,235,053*	*50*
Primary Education	*1,381,093*	*48*
Community Based (ii))	*700,000*	*8*
Other Educational Setting	*678,500*	*12*
Adult Education	*577,000*	*4*
Initial Teacher Training	*403,660*	*19*
Distance Learning	*396,500*	*9*
Workplace	*294,000*	
Nursery Education	*247,747*	*4*
Higher Education	*238,000*	*8*
Informal Education	*224,611*	*4*

Government Department	*201,500*	*9*
Home (iv)	*135,000*	*3*
Post-Compulsory Education	*130,500*	*4*
Further Education	*124,000*	*3*
Unknown	*23,190*	*8*

Figures for funding and project numbers should be treated with caution, in that research was coded according to as rnany ,educational settings' appropriate as were deemed relevant (as specified by *theKeywording Strategy)*. This meant that there was a degree of 'double-counting' where projects involved more than one setting.

(i)Includes funded and unfunded projects.

(ii)Studies carried out in an organised community setting (e.g. youth club, community centre).

(iv) Formal education which takes place at home.

It is clear from *Table 10* that the majority of projects involved some kind of investigation relating to either primary or secondary education, with postcompulsory and further education noticeably neglected. Therefore, although *Table* 8 shows that there is a good base of research experience in certain substantive areas, it appears that these topics are primarily being investigated in the context of only a few sectors.

3.3.4 Expertise DY Population focus'

Our final way of looking at research projects was in terms of their 'population focus'

Table I I: **Educational research projects in Wales** 1998-2000 by 'Population Focus,[a]

Population Focus	Funding	Projects [b]
Teaching Staff	*1,158,116*	*56*
Primary children	*1,019,791*	*29*
Post-compulsory learners [c]	*737,500*	*13*
Secondary children	*631,841*	*28*
Adult learners [d]	*548,020*	*18*
All of the above	*472,500*	*7*

Preschool children	*405,358*	*11*
Headteachers	*371,742*	*9*
Senior management	*172,500*	*6*
Governors	*170,910*	*5*
Government	*152,000*	*8*
Parents	*52,500*	*5*
Other educational practitioners	*50,000*	*1*
LEA Officers	*17,500*	*2*
Unknown	*65,090*	*13*

[a]The figures in Table 11 were calculated in the same way as those in Table 10, and are thus subject to the same qualifications. The category 'All of the above' was added to the original framework to cater for historical projects and those examining the 'lifelong learning' of diverse populations, which would involve all or most of the groups in the framework.

[b] Includes funded and unfunded projects

[c] Ages 17 to 20

[d] Aged 21+

Given our findings on 'educational settings' then it is unsurprising that secondary children, primary children and teaching staff are amongst the most popular foci of educational research. The relative lack of work on adult learners is again significant given the Assembly's current life long learning policy agenda.

3.4 Assessing Current capacity to undertake research in Wales

What can be said about current capacity to undertake educational research in Wales? Perhaps the most important finding to emerge from the Review is the small scale and fragility of the system.

Although there are considerable numbers of academic staff engaged in teaching in the field of education at degree level and above in Wales, only a minority of these are currently engaged in research in a substantial way. This is an historical legacy that means that, in comparison with other parts of the UK, schools and departments of education are badly placed in terms of QR funding. This makes developing capacity extremely difficult and makes for a strongly divided HE system in Wales with only a minority of HEIs having a strong educational research profile.

Given the size of the system, research funding from grants in Wales seems relatively healthy, though it is disproportionately based in Cardiff. However, a significant proportion of

projects included in our review were funded by the UK Government with funding decisions probably made before the establishment of the NAfW; whether such funding will continue in the future is an open question. There are also major issues to be confronted about current funding levels from local and national government in Wales.

Our review of expertise revealed some important strengths as well as some current weaknesses though these are presumably as much a product of funding decisions as decisions by individual researchers or HEIs. Work in the field of primary and secondary education is widespread as is work on a narrow range of curriculum issues, particularly in relation to Welsh language curriculum development. However, currently, there would appear to be less experience of research with the very young and with learners beyond school age including work place learning and higher education (despite some important ESRC funded work in Cardiff). The current narrow, school based focus of much current expertise is an issue which needs to be tackled if the aspirations of the National Assembly to establish Wales as 'The Learning Country' (NAfW 2001 a) are to be achieved.

However, perhaps the most important feature to emerge in relation to areas of expertise is the immense fragility of the system. Even in areas of comparative strength, the numbers of active researchers working in any one field is small. In many areas, Wales' research capacity on key topics is limited to one or two people and the system as a whole is highly vulnerable to the vagaries of particular employment decisions. [As an example of this fragility, the recent departure of a professor at Cardiff University to a post in London means that there is now only one person in Wales with recent substantial experience of researching early years provision.]

Part II

Capacity for Using Educational Research

As we argued in Chapter 2, research may have a variety of different roles in supporting educational policy and practice. Research may enter what we described as the 'policy cycle' at a number of different points (in policy planning, in policy development and in policy evaluation); it may have a role in professional development through forms of practitioner research; and it may have a role in the development of higher education itself. What evidence is there that educational institutions in Wales currently use research in these ways?

3.5 Research in Policy Cycle

3.5.1 Policyplanning

One of the clearest examples we came across of utilising research for policy planning was the Future Skills Wales project (1998/1999), now the responsibility of the National Council - ELWa

National Co un cil - EL Wa ~ Future Skills Wales

> The Future Skills Wales project was sponsored by a partnership from all parts of public and business life in Wales (Welsh Office, Welsh TECs, Welsh Development Agency, Development Board for Rural Wales, Local Authorities, CBI Wales, the education sector, the Employment Service and the Careers Services). The aim of the project was to establish current and future skill needs in Wales by posing questions such as: what are the growth prospects for different industries over the next decade?; what types of jobs are likely to

be created and what particular skills are needed?; do employers and individuals feel they will have the skills to meet these needs? The project involved nearly 6000 interviews with representatives from employing bodies across Wales and 6000 interviews with residents.

Other 'policy planning' projects we were aware of included two high profile reviews commissioned by the NAfW. One, undertaken by Margaret Hanney of UWIC on behalf of the Pre 16 Subject Committee, was a review of current research in relation to early years provision. The other, commissioned directly by the Minister for Education and Life Long Learning, was a review of student hardship led by Professor Teresa Rees of Cardiff University. Both reports have been highly influential in emerging NAfW educational policy (NAtW 2001a). A lpolicy planning' project of a rather different sort was that undertaken by Gorard, Salisbury and Rees at Cardiff University on behalf of ACCAC in 1999.

ACCAC - The under-achievement of boys

The object of this project was to use research in order to help clarify the Authority's thinking on a key contemporary policy issue - the apparent educational underachievement of boys. The researchers reviewed existing literature on the issue and undertook secondary data analysis of public examination results in Wales over a 6 year period. They raised questions about the nature and reality of this phenomenon, suggesting that the pattern of differential attainment (such as it was) was primarily caused by curriculum and assessment procedures rather than by pedagogy or societal factors.

3.5.2 Research in policy development

Research may also be part of policy development with the piloting of new initiatives or the development of specialised policy instruments such as new forms of assessment and specialised curriculum materials. ACCAC provided a number of examples of policy development of this latter type.

ACCAC - Commissioning classroom materials

One of the formal responsibilities of ACCAC is the commissioning of classroom materials to support the teaching of Welsh, other subjects through the medium of Welsh and Wales-specific aspects of the curriculum. In the year ending March 2000 it spent about £1.4 million on this aspect of its remit. A small proportion of this work involves university-based researchers drawing on their research based skills and knowledge in constructing particular specialist materials. Examples of such work in recent years include the development of Welsh/German and Welsh/French Dictionaries at UW. Aberystwyth & Trinity College Carmarthen.

3.5.3 Evaluation research

The final role of research in the policy cycle we discussed was as part of evaluation - finding out what has worked, what has not worked and linking past experience back to further policy planning. Here we came across a number of examples.

ACCAC - Using research expertise to evaluate the National Curriculum

Unlike its counterpart in England, ACCAC commissioned external researchers to undertake a review of the National Curriculum in Wales in

order to provide it with an evidence base for recommendations on changes to be implemented in September 2000. The team which carried out the review was based partly at UW. Aberystwyth, and partly at the Scottish Council for Research in Education. In this way ACCAC made use both of the indigenous research expertise in a Welsh HEI and of the research skills of a specialist education research organization based elsewhere in the UK.

As we indicated earlier, we did not formally include Estyn in our review of research. Nevertheless it is clear that Estyn plays a major role in providing evaluation evidence on current practice in Education within Wales.

Estyn

Estyri's formal brief is to 'improve quality and standards of education and training within Wales'. As such it has a remit to inspect virtually all sectors of the education service, including the independent sector from nursery schools for further education. Within higher education it also inspects teacher education and training. Perhaps less well known are Estyn's responsibilities for evaluating government funded training, careers education and youth provision including aspects of the New Deal. For example, during the last two years Estyn has evaluated more than 50 training organisations, many of them in the private sector.

The evaluative information provided by Estyn is clearly of major importance to the NMW and for policy makers, practitioners and 'consumers' at a variety of different levels within the system.

3.5.4 Assessing current capacity for using research in the '*policy cycle'*

Within Wales there are therefore recent and current examples of research being used within all stages of the policy cycle. However, although there are many other examples we could have given, overall we found very little evidence that the engagement with research by policy making organisations is consistently undertaken.

ACCAC, as a key educational organisation, does have a formal research brief and regularly uses research (either by commissioning or by undertaking it itself) in almost all stages of the policy cycle - though even they would admit that this is not consistently the case. We were aware of no other major educational body within Wales, either local or national, that currently has this experience of using research across the full range of the policy cycle. Within ELWa, HEFCW has only a small research budget, though in some aspects of its work it is able to draw on the work of Estyn. And within the National Council, although their use of research for 'foresight planning' (as in the case of Future Skills Wales) is exemplary, at present there seems less use of research in policy development and evaluation.

Our limited resources meant that our contacts with LEAs were much less consistent than with national bodies but such evidence as we could collect did not indicate that research currently plays a key role in their policy making processes. In this respect they contrast markedly with many LEAS in England, some of which have a well developed tradition of commissioning and undertaking their own research.40

But perhaps the most significant omission was within the National Assembly. We have already indicated that despite the importance of the Hanney and Rees Reports, we found that at present only minimal use is being made of educational research. As a result ma or

policies are being developed and implemented without the benefit of reviewing what is already known from past research evidence and without systematic evaluation.

Fortunately, there is now evidence that this lack of engagement with research is being addressed. A team of staff has been appointed to co-ordinate the role of research across all departments within the Assembly including education and in July 2001 a seminar was held at University of Glamorgan to develop links with the academic community and explore the future research agenda. This welcome development has been endorsed within the Assembly's recent paving document on education 'The Learning Country' (2001a) and reflects the growing recognition across the Assembly as a whole of the need to increase its engagement with research.[There is for example within the British Educational Research Association (BERA) a 'Special Interest Group' for LEAs. At the BERA Conference in September 200 1, there was a series of symposia organised by LEAs reporting and discussing their research, though only one Welsh LEA representative presented a paper.]

Finally we should address the issue of networks or 'linkages' between researchers and policy makers. As Selby Smith 2001 notes

> *To stress the concept of linkages is to be concerned with facilitating the establishment of multiple areas of collaboration between researchers, policy makers and practitioners, given the multiple pathways through which research can influence policy and practice ... . Although linkages are established because one party, usually decision-makers, wants to gain access to information, this presupposes that decision-makers know what they want; that researchers understand which decision-makers want what research, and when; and that researchers wish to respond and are able to do so. These conditions are frequently not satisfied. In practice, there are often difficulties in creating and maintaining an ~ffective web oj'linkages.*

Our experience in conducting this Review has been one of a growing recognition of the lack of linkage between the producers and users of research. While we were always welcomed by the policy makers, we were personally aware of how, in order to conduct our review, we were having to develop new contacts - working across barriers that in principle should not exist. We also came to recognise the power of existing divisions amongst researchers themselves, most powerfully between competing institutions. Developing more effective networks and breaking down such divisions is going to be essential if research it to play its proper role in the further development of educational policy in Wales.

Practitioner research in Wales

As we have seen, within England in recent years the teacher-researcher movement has received official backing from the TTA and now from the MES. Within Wales a growing number of LEAs have experimented with the promotion of practitioner research as part of their in-service education strategy. One particularly well developed scheme is based in Swansea.

Swansea School Enquiry and Research Network (SER)

> This initiative is led by a group of primary and secondary school heads, deputies and classroom teachers together with representatives from the University of Swansea, Swansea Institute and Swansea LEA. Since its launch some four years ago, the vast majority of primary and secondary schools in Swansea LEA have become involved. The aim of SER is to promote understanding and engagement with research amongst practising teachers;

as a result it is very much 'teacher led'. Through its links with higher education it promotes the idea of teachers as researchers and provides networks of support. It holds an annual conference (attended by over 100 local teachers); has regular evening seminars and workshops; and has a newsletter. The group has also participated in a major national project on headteacher development funded, in collaboration with other HEIs and LEAs, by the Esmee Fairbairn Foundation.

As far as we are aware, the Swansea scheme is currently the most developed of its kind in Wales. There have, however, recently been two policy developments that indicate a growing recognition on the part of the NMW of the value of engaging teachers more systematically in the research process. The first is the proposed induction and early professional development framework for new teachers. In its consultation document 'Supporting New Teachers' (NAfW 2001c) the Assembly proposes that in their third year of teaching, all new teachers in Wales should be given information on good research practice 'so that teachers who wish to go on to do practitioner research will have a solid foundation' (p6). In addition, this autumn, GTC Wales have also announced a national pilot scheme to support teacher researchers. In the first year, 50 Teacher Research Scholarships of up to £3000 will be available and, as in England, teachers are expected to work collaboratively with HEIs and LEAs in the design and evaluation of their projects. In addition, teachers can apply for funding of up to £500 to support exchanges, visits and training; some of this funding too is likely to be used in the support of teachers' research based activities. Such developments are to be welcomed.

However, it remains the case that the vast majority of continuing professional development (CPD) for teachers, (including the National Professional Qualification for Head teachers (NPQ1-1)), does not systematically engage with research. As we have argued elsewhere (Furlong 2000), much more needs to be done in the development of the CP1) framework in Wales if teaching is truly to become a research based profession.

3.7 Research and Higher Education in Wales

As we argued in Chapter 2, educational research is not only about informing policy and practice, it also has a central role in the development and maintenance of the higher education system itself. How robust is educational research in Wales in these terms?

We have already noted in *Table 1* that, when measured by the last RAE results, the research culture within schools and departments of education within higher education in Wales is not strong. Three of the 10 institutions offering teacher education achieved only a grade 1 or 2 and a further 3 were not returned at all. This does not compare well with the rest of the UK. Within England, only three out of the 80+ institutions offering initial teacher education were not returned and in Scotland all providers were returned.

In comparison with the rest of the UK therefore, a greater proportion of teachers in Wales is educated (up to Masters level and beyond) in institutions that do not have a strong research culture, certainly as measured by the RAE. Moreover, this position contrasts poorly with a growing number of countries around the world. In many developing countries (for example Hong Kong, Malaysia), let alone those that are fully developed (Australia, USA) there is an explicit expectation that those involved in teacher education should themselves be educated to doctoral level and that their institutions should be actively involved in research.

However, without the QR funding that follows the RAE, HEIs in Wales have limited resources to support the development of a research culture in their own institution. The tension here is that some might argue that the best way to support the development of high quality research is to concentrate future funding in existing centres of excellence. However,

it remains the case that the most tried and tested way for ensuring high
quality **teaching** within higher education is through the development of an active research
culture. If this is true, then a strategy of concentration will do little to achieve the goals for
Higher Education set by the Assembly in Betterwales.Com[The Assembly want higher
standards for teaching within Welsh HEIs than in the rest of the UK by 2010 (NA1W 1998:
20)]. Although we would not wish to preempt the Assembly's current review of higher
education in Wales, our conclusion is that if the Assembly wants to achieve its broader aims
of enhancing quality within Higher Education, addressing the substantial imbalance in terms
of research cultures across the HE sector is a high priority.

4. Recommendations: Towards a national strategy for educational research in Wales.

As we demonstrated in the last chapter, the profile of educational research within Wales at
present is not strong. Despite some important achievements and some positive signs of a
growing recognition of its significance, there are still many issues that need addressing if
research is to play its full part in the development of the education service within Wales. We
therefore conclude that what is needed is a national strategy for the development of
educational research in Wales. That strategy needs to be led and coordinated by the NMW
though a large number of players need to contribute. We believe that what is needed first
and foremost from the Assembly is a vision for the future role of research in all sectors of the
educational system perhaps set out in a consultation document.

In this chapter, we outline what we consider to be the principal elements that should be
included in such a strategy. However, our recommendations do not in themselves constitute
a strategy. While some of our recommendations can and should be acted on immediately,
others will demand new forms of collaboration across higher education; therefore, until the
outcome of the Assembly's current review of higher education in Wales is complete,
specifying an educational research strategy in detail would be premature. Instead what we
aim to do in this final chapter is to set out a list of issues that need to be considered by the
Assembly and others once the outcome of the review is known.

4.1 Increasing capacity in Wales to undertake research

4. 1. 1. Making the most of current capacity

Capacity for undertaking educational research in Wales is small. As we have seen, the
number of active educational researchers in the whole of Wales as defined by the RAE is
not more than in many medium sized universities in Britain. We therefore need to make sure
that we make the most of the capacity we already have. In order to do this:

- HEI based educational researchers across Wales need to develop far better links
  between themselves in order to coordinate their efforts, capitalise on existing
  strengths, and address existing deficiencies in capacity;
- educational researchers in other institutions (ELWa, NFER LEAs, Consultants) need
  to establish more effective links with each other and with those based in HEIs;
- all educational researchers need to develop better links with policy makers and
  practitioners at all levels of the system;
- all educational researchers need to recognise the importance of writing for multiple
  audiences so that when high quality research is produced in Wales, it has greater
  impact.

4.1.2 Increasedparticipation

In addition, capacity needs to be enhanced by developing strategies for increasing participation. The potential pool of educational researchers in Wales is far larger than those currently active in the field. This will mean devising strategies to build capacity in:

- Institutions with little current research profile.

As a first step, all HEIs working in the field of education need staff development policies focused on bringing all staff up to doctoral level; such a strategy would be valuable both to support teaching and to increase research capacity across Wales. This objective could be achieved by developing a 'hub and spoke' strategy with systematic links between those HEIs that have well developed doctoral training programmes and others across Wales. Such links could also facilitate the development of new cross-institutional teams for specific projects.

- Non-education departments

Departments of psychology, sociology and subject departments within higher education are currently a largely untapped resource in relation to educational research. They have much to offer. They therefore need drawing into funding networks and ways need to be found to provide incentives to encourage them to engage in educational research.

4.1.3 Improved infrastructure

We need a proper infrastructure to recruit, support and train educational researchers in Wales:

- attracting high quality, particularly post doctoral research staff to Wales is often difficult and those who are attracted here need incentives to stay. All HEIs and other employers of educational researchers have a key role to play in ensuring that career structures are as good as possible. All institutions regularly employing educational researchers should consider implementing the BERA guidelines on the employment of research staff (BERA 2000);

- all regular funders of educational research need to be encouraged to think more carefully about the infrastructure of research, recognising their potential role in developing capacity; they also need to recognise the importance of paying full overheads if the research capacity is to expand;

- developing and extending research expertise should be a key objective for all schools and departments of education; as such institutions should consider making it an explicit part of their departmental plans. Success in the RAE is not a substitute for this sort of research capacity building and, in order to achieve this objective, all HEIs should consider including the development of research expertise in their staff development plans.

4.1.4 Dealing with gaps in expertise - methodological and substantive

Our review of research expertise has pointed up many important gaps in current research capacity. We also know from other reviewers (Mclntyre and McIntyre 2001) that there are likely to be methodological limitations amongst current researchers. In addition to staff development within HEIs:

- funders need to be encouraged to address these gaps strategically. Rather than simply 'buying' expertise from England, carefully structured teams (e.g. bringing together experienced researchers with specialist practitioners who have less research experience) may help grow research capacity in Wales. Where gaps in expertise necessitate commissioning researchers outside Wales, funders should be encouraged to consider how local capacity might be developed by, for example, insisting on a local, junior partner or placing Welsh researchers on steering committees and liaison groups.

- HEFCW should be given a more explicit role in developing research capacity in Wales by supporting training and research networks across Wales (comparable to the ESRC seminar series). For example, very modestly targeted funding could ensure that new and established researchers in Wales had the opportunity to benefit from the ESRC research capacity building work based at Cardiff University; or from expertise in substantive research areas such as bilingual education at the Universities of Bangor and Aberystwyth or mathematics education at Swansea.

4.1.5. Better networks

As we argued above, good networks between researchers and policy makers at all levels are essential if research is to have any impact. The *NMW* have recently made a commitment to increase contact with the academic community and this is to be welcomed. But better networks are also needed between researchers and all potential users of educational research - national bodies, LEAs as well as individual schools and colleges. The research community itself, perhaps through BERA, could take a lead here in setting up regular meetings with a range of different interested parties on a national and regional basis.

4.1.6 Increased investment

However, although each of the above strategies is important, on their own they will not be sufficient. For historical reasons, the system inherited at the time of the establishment of the *NMW* was simply too small to serve the needs of a modem, independent education service. Before researchers in Wales can be more successful in attracting external funds from the ESRC, from other UK funding bodies and from the European Union, new investment is needed at least to bring core funding up to levels comparable with our competitors in the rest of the UK. There are two areas of current under- investment - from the *NMW* and from QR funding.

- *NAf W* The Assembly needs to consider increasing its educational research budget, at least bringing it up to levels equivalent to the DfES. A pro rata figure would be between £500,000 and £700,000. Regular investment of this sort would have a major impact on building research capacity across Wales and thereby increase the ability of researchers in Wales to compete for external research funding. Some of that increased budget should be used for 'buying into' developments in England and elsewhere. However, for every project that is commissioned outside Wales, we lose the opportunity to further develop our own capacity for future research. The majority of any increased budget should therefore be spent in Wales with a properly developed funding strategy. Such a strategy should focus both on particular issues to be researched and think clearly about systematically developing capacity across Wales, recognising regional needs, and the need to develop capacity in particular methodologies and substantive topic areas.

- *HEFCW- ELWa.* As we have indicated, one of the biggest areas of current under-investment in comparison with the rest of the UK is from QR funding. Because this

funding is dependent on the size of the system as much as the quality ratings, however well institutions fare in the current RAE round, QR investment in Education will remain low compared with the rest of the UK. We therefore cannot avoid the conclusion that such a structural weakness will not be addressed without substantial additional investment from HEFCW with a new funding stream specifically targeted at strategic research capacity building in education.[In June this year, FIEFCW announced the establishment of Research Capacity Development Fund (HETCW 2001) with a budget of £8m over three years. While such an initiative is to be welcomed, the chances of it being utilised to support capacity of the type being advocated here are low. The budget for the whole of Wales is modest and only one bid per institution is to be supported. Funds are therefore likely to be utilised to support 'high status' research areas, rather than education, and to build on existing strengths rather than address historical weaknesses] Again, such investment needs to be carefully managed, building on existing strengths and recognising particular regional and national needs.

4.1.7 Better Links with England

As we have seen, there are many new initiatives taking place in England which should not be ignored. DfES strategy will inevitably influence the position of researchers within Wales. Moreover there are potentially many advantages for Wales from developments that have been set up.

The Assembly therefore needs to take responsibility for:

- developing clear and effective links with the full range of developments taking place in England e.g the NERF, the EPPI-centre, NFER/CERUK;
- ensuring that the research community in Wales is effectively represented and kept up to date with funding developments in England the UK and elsewhere (e.g. the ESRC's Teaching and Learning Research Programme, the DfES, the proposed Funders Forum, UK Charities, European Union);
- coordinating joint work on substantive research topics with those in England (e.g DfES) the UK (e.g. FENTO) and internationally.

For some of these developments, financial investment may be necessary and care will need to be taken to ensure that, where this is the case, Wales has a voice in policy development and in establishing research priorities. If this can be achieved, there are potentially considerable benefits to be derived from such a partnership.

4.1.8 Establishing research priorities

Finally the research community as a whole (funders as well as researchers) needs to consider whether it would be advantageous to follow the NERF for England and establish a 'Standing Group on Educational Research and Development Priorities'. This is NERVs most sensitive and controversial proposal even though they are at pains to point out that they have no intention of controlling the research funding agenda, merely facilitating a strategic discussion about it. Such a proposal would be controversial in Wales too, but it is clear from our review, that at present in Wales, research remains haphazard with many major areas (e.g. early years, post 16, teaching and learning and perhaps most significantly of all, bilingual education) currently neglected. Responsibility here lies with researchers, with their employers (HEIs and others) and with funders. Despite the obvious dangers, it is difficult to see how, without some sort of framework for discussion between these interested parties, a more balanced research agenda can be achieved.

4.2. 1 Research in the policy cycle

At present, the capacity of educational policy makers at all levels of the system to engage with research effectively is inconsistent. Despite some excellent examples of good practice, too much of the education service remains a 'research free zone'. In order to increase capacity in Wales to use research effectively, the NMW should consider taking the lead, demonstrating a clear commitment to the increased role of research in all phases of policy development and evaluation. The Assembly should consider:

- establishing more effective links with the educational research community so as to keep up to date with research developments in Wales and internationally;
- routinely engaging in 'foresight' exercises in each of its major areas of responsibility;
- at the start of each 'policy cycle' routinely commissioning reviews of what is known about the policy issue;
- where appropriate, commissioning new research to clarify policy needs in
- where appropriate employing the research community in the detailed development of policies;
- routinely engaging in systematic evaluation of all educational policies.

In addition, the NMW should consider setting out a clear expectation and targets for ensuring that all local and national educational agencies receiving public funds increasingly do the same.

4.2.2 Practitioner research

If the Assembly's aspirations to create Wales as 'The Learning Country' are to be realised then increasing the capacity of schools and individual teachers to understand, utilise and participate in research is vital. If pupils and students are to learn, then so too must the professionals that serve them. Some moves have already been made in this direction but more needs to be done.

- The NMW in collaboration with GTC Wales need to find ways of ensuring that an appropriate understanding and engagement with research is included in all phases of professional education and training. The forthcoming revision of Circular 13/98 on initial teacher education and the development of induction plans for new teachers represent important opportunities here as does any future review of **NPQH.**
- The GTC Wales, in collaboration with LEAs should consider establishing strategies to increase the capacity of every school and college to understand, utilise and participate in research in the development of policy and practice. Such strategies, which should perhaps complement but go beyond the recently announced Teacher Research Scholarship scheme, should perhaps include the development of networks between HEIs, individual researchers and other practitioners.

4.2 Conclusion

Through our Review, we have become aware of the many challenges facing higher education in Wales if it is to meet the aspirations of the National Assembly to become a world class system. As in England, educational research has not, historically been well funded, and as we have seen, in many respects, the position inherited in Wales at the time of the establishment of the NMW was significantly weaker than that of England. Funding levels have been lower and, despite some centres of excellence, the size and experience of the research community is more limited than in much of the rest of the UK. At the same time as these structural weaknesses, we became aware of the growing expectations from professionals across all sectors of education in Wales of what research can and should

contribute to the further development of our education service. Capacity to use research effectively in policy and practice may still be limited, but expectations are rising fast.

As well as these challenges though there are at least two very positive features to be noted about the current position in Wales. The first are the welcome sings of support and willingness to take the contribution of research seriously on the part of the Assembly. As we have noted in our Review, much more needs to be done by the Assembly to develop the system and to provide the leadership necessary if we are to establish education as a truly research led field. Nevertheless, the positive commitment of the Assembly is to be welcomed. The other positive feature to be noted is that at present there is a very large and untapped pool of staff within higher education who could, if appropriately supported, contribute significantly to research capacity in Wales. 'Education' is a major sector within the Welsh higher education system, but as we have seen, at present no more than one third of the staff are formally designated as 'research active'. Finding ways of supporting and developing those staff so that they can make a proper contribution to research capacity will be challenging; it may well involve investment and it will certainly involve breaking down much of the competitive culture that besets our institutions at present. Nevertheless, experience internationally and elsewhere in the UK since 1992 has shown that, with well targeted resources and the right leadership, it can be done. Wales potentially therefore has all the educational research capacity that it needs to develop education as a research led field over the coming years; the only question that remains is whether it has the commitment and determination to turn that potential into a reality.

Annex A - RAE Definitions of Research and Ratings

RAE Definition of Research (Source: HEFC (1996) Annex A)

'Research' for the purpose of the RAE is to be understood as original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sectors; scholarship*; the invention and generation of ideas, images, performances and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and analysis of materials, components and processes, e.g. for the maintenance of national standards, as distinct from the development of new analytical techniques.

* Scholarship embraces a spectrum of activities including the development of teaching material; the latter is excluded from the RA

The Rating Scale (Source: HEFC (1996) Annex C)

5*	Research quality that equates to attainable levels of international excellence in a majority of sub-areas of activity and attainable levels of national excellence in all others
5	Research quality that equates to attainable levels of international excellence in some sub-areas of activity and to attainable levels of national excellence in virtually all others.

4	Research quality that equates to attainable levels of national excellence in virtuall all sub-areas of activity, possibly showing some evidence of international excellence, or to international level in some and at least national level in a majority.
3a	Research quality that equates to attainable levels of national excellence in a substantial majority of the sub-areas of activity, or to international level in some and to national level in others together comprising a majority.
3b	Research quality that equates to-attainable levels of national excellence in the majority of sub-areas of activity.
2	Research quality that equates to attainable levels of national excellence in up to half the sub-areas of activity.
1	Research quality that equates to attainable levels of national excellence in none, or virtually none, of the sub-areas of activity.

References

Barnett, R. (1990) *The Idea* of *Higher Education.* Buckingham: Open University Press.

Bassey M, and Constable H (1997) 'Higher education research in education 1992 to 1996: fields of enquiry reported in the HEFC's RAE', *Research Intelligence* 61, London: BERA.

BERA (2000) *The BERA Charterfor Good Practice in the Employment* of *Contract Researchers* Southwell: BERA

Blunkett, D. (2000) Influence or Irrelevance: can social science improve Government?, *Research Intelligence,* 71, pp. 12-21.

CERI (1995), *Education Research and Development.' trends, issues and challenge.~* Paris: OECD

DIES (200 1) *Best Practice Research Scholarships, guidancefor applicants.* London: DIES

Desforges, C. (2000) *Putting Educational Research to Use Through Knowledge Transformation,* Keynote lecture to the Further Education Research Network Conference, Coventry 12 Dec 2000

Edwards, T. (2000) All the Evidence Shows ... : reasonable expectations of educational research, *Oxford Review* of *Education,* 36 (3 & 4):299-311.

Furlong J. (1998), *Educational Research: meeting the challenge,* inaugural lecture, University of Bristol, Graduate School of Education, April.

Furlong, J. (2000) *Higher Education and the New Professionalism for Teachers; realising the potential* of *partnership.* London: CVCP.

Hammersley M. (1997), 'Educational Research and Teaching: a response to David Hargreaves' TTA lecture', *British Journal* of *Educational Research* Vol. 23(2): 141-161

Hargreaves D. H. (1996), *Teaching as a Research-based Profession: possibilities andprospects,* Teacher Training Agency Annual Lecture.

Hargreaves D. H. (1999) The Knowledge Creating School, *British Journal* of *Educational Studies,* 47 (2): 122-44

HEFC (1996) *RAE 96 1196 - 1996 Research Assessment Exercise.. **The Outcome*** (http://www.niss.ac.uk/education/beLc/rae961)

HEFCW (200 1) *Circular WO 1148HE,* Cardiff.. HEFCW

Hillage, J., Pearson, R., Anderson, A. and Tarnkin, P. (1998) Excellence in Research on Schools, *Institutefor Employment Studies Research Report* No. 74. London: HMSO.

Kennedy, M. (1997)The Connection Between Research and Practice *Educational Researcher,* Oct 1997 pp 4-12

Mchityre, D. and McIntyre, A.(2001) *Review* of *Capacityfor Research into Teaching and Learning* (the Mchityre Report). ESRC (unpublished report).

McMeniman, M., Cumming L, Wilson, J, Stephenson, J. and Sim, C (2000) Teacher Knowledge in Action, in Department of Education, Training and Youth Agency (eds) *The Impact* of*Educational Research* Canberra:
DETYA http://www.detya.gov.au/highered/respubs/impac overview.htrn

Mil lett, A. (1997) *Speech to 7-TA Research Conference,* 5.12.97. London: TTA.

Moore, R. (1998) BERA Internet Conference *The Uses* of *Educational Research March* 199 8 http://www.scre.ac.uk/bera/

NAfW (National Assembly for Wales) (2001 a) *7he Learning Country; a paving document* Cardiff.. NAIW

NAIW (National Assembly for Wales (2001b) *Strategic Statement on the Preparation* of *'Plan for Wales 2001',* Cardiff. N~.

NA1W (National Assembly for Wales) (2001 c)

Supporting New Teachers: a consultation document. Cardiff. NAFW

NA1W (National Assembly for Wales) (1998)

Better Wales. Com http://www.wales.gov.uk/themesbetterwales/aboutc. him

NERF (National Educational Research Forum) (2000a) *Building Research Capacity; sub-group report.* London: NERF

NERF (National Educational Research Forum) (2000b) *Research Funding: sub-group report.* London: NERF.

National Educational Research Forum (2000)

*Research and Developmentfor Education. a national strategy consultation
paper.* Nottingham: NERF.

Sachs (2000) The Activist Professional, *Journal of Educational Change 1:* 77-95.

Sebba, J (2000) *Educational Research: an outline ofpolicy developments in
England.* Unpublished Paper.

Selby-Smith, C (2000) The Relationship Between Research and Decision-Making in
Education: an empirical investigation, in Department of Education, Training and Youth
Agency (eds) *The Impact* of *Educational Research* Canberra:
DETYa http://www.detya.gov.au/highere~/~SUb~/~`~ overview.htin

Stenhouse, L. (1975) *Introduction to Curriculum Research and Development* London:
Heineman

Kerr, D, Lines A, MacDonald A, Andrews L

(199 7), Mapping Educational Research in England, Slough: NFER.

Education.

Tooley, J. and Darby D. *(1998), Education*

Research: an Ofsted critique, London: OFSTED

Welsh Office *(1991)* Research, Wales: Seventeenth Report *1989-90.* Cardiff, Welsh Office.

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