

## **Taking Stock of Educational Research and the Impact of The UK**

### **Teaching and Learning Research Programme**

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#### **Introduction – What is the Teaching and Learning Research Programme?**

The Teaching and Learning Research Programme (TLRP) has been by far the largest ever investment in educational research in the United Kingdom and certainly among the largest in the world. Its scale eclipses any other programme of research ever before funded or managed by the UK Economic and Social Research Council (ESRC). TLRP has provided coordination and support for over 700 educational researchers in some 70 project teams and almost 20 initiatives of cross programme thematic analysis across the four countries of the UK. The first projects began empirical work in 2000 and the last project is presently expected to end in 2012. The total budget by the end of 2008 was some £43 million having drawn together contributions from a wide range of UK government bodies, principally the Higher Education Funding Council for England to which credit is due for imaginative initiation of the scheme and the largest share of the funding. Its scope and its ambitions have grown very substantially from its inception in 1999, when around £10 million was invested. It has attempted to support cutting edge research aimed at making a significant impact on the quality of teaching and learning across the life course and in a wide range of learning contexts in all parts of the UK. It has aimed to encourage the engagement of a wide range of social science perspectives in

addressing research questions arising from the field of education and at the same time enhance research capacity. A major feature of the approach advocated by TLRP has been a fundamental commitment to user engagement, the close involvement of all relevant stakeholders in all phases and aspects of the research process.

The original stimulus for the establishment of TLRP was the trenchant criticism directed at educational research in the mid-1990s (e.g. Tooley & Darby, 1998). Typically these criticisms highlighted as weaknesses the following features, as summarised by Whitty (2006):

- Lack of rigour
- Failure to produce cumulative findings
- Theoretical incoherence
- Ideological bias
- Irrelevance to schools
- Lack of involvement of teachers
- Inaccessibility and poor dissemination
- Poor cost effectiveness (p. 161).

Even though there were many who argued that these criticisms were not entirely justified, they represented a significant challenge to the educational research community. In any event, the initial prospectus for the TLRP could be seen as an attempt by the funding bodies and the ESRC to address these perceived weaknesses in a sustained way. Thus the stakes were high for TLRP from the outset. Funders were making an unprecedented level of investment. Politicians and policy makers had high expectations in terms of relevance, impact and quality. Meanwhile the critics of educational research were watching closely. Could the research community rise to

the challenge, demonstrate the value of the investment for policy and practice and at the same time avoid compromising their core values and principles as researchers?

The education research community in the UK was not alone in facing such a challenge. National education systems in all parts of the world were increasingly operating within a global political climate which emphasised performativity, standards, accountability, international competition to enhance comparative performance and the need to undergo 'reform'. In the UK and many other countries there were strident calls for educational policy and practice to be evidence-based or at least evidence-informed (e.g. Hargreaves, 1996).

### **Evidence-based policy and practice, the role of research and the aims of TLRP**

The call for evidence-based policy and practice takes many forms, probably the most forcible coming from those who advocate the randomised control trial (RCT) as the definitive means of obtaining evidence of 'what works' that can with confidence be trusted by policy makers ( e.g. Torgerson & Torgerson, 2001; Tymms, Merrell & Coe, 2008; and see Torgerson, Chapter 'X' [Ralf to complete?] of this volume). This positivist approach attempts to bring to the evaluation of educational interventions the rigorous experimental control of relevant variables. The level at which randomisation procedures are applied vary from the individual level, which is often hard to accommodate within conventional educational contexts like schools, to the more pragmatic 'cluster' RCTs, in which randomisation is applied at the class or school level. Tymms, et al. (2008) argue for the latter as having greater ecological validity, since policy decisions tend to operate at school level, and describe a study in one local authority in Scotland in which 120 schools have agreed to be randomly assigned to different forms of peer learning intervention. The appropriateness and value of RCTs

can, however, be questioned on a number of grounds (see Styles, Chapter ‘Y’ [Ralf to complete] of this volume). For instance, how can ethical standards of informed consent be met in the case of RCTs? How can large-scale RCTs authentically accommodate the complexity of educational contexts such as schools in which the learning is mediated by individual classroom teachers and where there so many other ‘uncontrolled’ variables operating? Among those who support the use of RCTs, there are some who would at least argue they should not be seen as a panacea (e.g. Newman, 2008).

Biesta (2007, p.1) has pointed out that calls for evidence-based practice actually entail a “double transformation”: firstly, the transformation of educational research to enable it to provide relevant evidence; and, secondly, with the benefit of this research evidence, the transformation of educational practice into an evidence-based practice. Biesta (2007) argues that key assumptions underlying the idea of evidence-based education tend to oversimplify both the processes of learning and teaching and the complex nature of professional judgement and decision-making in education. Furthermore, according to Biesta (2007) conventional views about evidence-based practice characterised by simple slogans, like “What works?” fail to recognise the importance of questioning the ends as well as the means of education. Expectations associated with the concept of evidence-based practice and the role of educational research to provide definitive answers are, therefore, unrealistic, since research is not capable of providing definitive answers to educational questions that can be adopted “with absolute confidence either in the formulation of policy or in the pursuit of particular practices” (Oancea and Pring, 2008, p. 27). That is not to deny the importance of evidence in formulating policy or as a basis for professional decision-making, but to argue that being informed by good evidence is a necessary (or

at least desirable), but not sufficient, condition for policy and practice in education (Bridges and Watts, 2008).

Pollard (2006), TLRP Director from 2002 , characterised the stance adopted by TLRP in response to these challenges as “reflexive activism” and defined this as:

a creative, but self-conscious and socially aware, form of mediation between external critique, constraint and pressure and the social practices, values and perspectives which characterize the academic field. It represents a commitment to act politically if appropriate, but also to take the initiative in the development of the research field (p. 252).

This approach affirms the goal of improving the quality of research practices and outcomes, but at the same time it associates this with a commitment to engage actively in the public realm within our democracy and, in particular, to generate independent evidence for public debate and decision-making processes of both practitioners and policy makers (see also Pollard, 2007, p. 639). This stance presents a difficult balance in order to avoid, on the one hand, the accusation from the academic community of conformity with, or even ‘selling out’ to, the politicians and the policy makers and, on the other, the continuing criticism from funders, politicians and others of resistance to change on the part of academic researchers and the lack of relevance of research findings to policy and practice.

One of the challenges for TLRP, as a uniquely large national programme, was to find a way to encompass, if not to reconcile, differing and even conflicting traditions of research within its portfolio of activities. Any move away from the strict scientific approach might have been seen as undermining the warrant for the credibility of the findings of the various projects. However, the importance of

ensuring ecological validity demanded that researchers adopt approaches that authentically reflect the nuances of individual understandings and shared meanings among those involved in educational settings – learners, teachers and other stakeholders – as well as the complexity and the situational uniqueness of the circumstances and conditions operating in any given educational context. Broadly speaking, the methodological diversity displayed by the projects that were funded by TLRP shows that the Programme has encouraged multi-method approaches with fitness for purpose as guiding principle rather than allegiance to particular research traditions. Both qualitative and quantitative approaches have been supported and published research reports from TLRP funded projects often claim methodological triangulation as warrant for conclusions reached. But what was all of this research activity trying to achieve?

The broad aims of TLRP can be stated under the following headings:

- Learning: TLRP aims to improve outcomes for learners of all ages in teaching and learning contexts across the UK.
- Outcomes: TLRP studies a broad range of learning outcomes. These include both the acquisition of skill, understanding, knowledge and qualifications and the development of attitudes, values and identities relevant to a learning society.
- Life course: TLRP supports research projects and related activities at many ages and stages in education, training and lifelong learning. The Programme is concerned with patterns of success and difference, inclusion and exclusion through the life course.
- Enrichment: TLRP commits to user engagement at all stages of research. The Programme promotes research on teaching and learning across disciplines,

methodologies and sectors, and supports various forms of national and international cooperation and comparison.

- Expertise: TLRP works to enhance capacity for all forms of research on teaching and learning, and for research-informed policy and practice. This work is the particular focus of the Programme's research capacity building strategy.
- Improvement: TLRP develops the knowledge base on teaching and learning and contributes to the improvement of policy and practice in the UK. The Programme works to maximise the impact of its research ([www.tlrp.org](http://www.tlrp.org)).

In order to achieve these aims TLRP made six strategic commitments which shaped the development of the programme over the best part of a decade. These were:

1. user engagement for relevance and quality;
2. knowledge generation by project teams;
3. knowledge synthesis through thematic activities;
4. knowledge transformation for impact;
5. capacity building for professional development; and
6. partnerships for sustainability.

The following sections will focus on user engagement, knowledge synthesis and knowledge transformation for impact and attempt to illustrate how these commitments have been fulfilled with reference to selected examples drawn from the portfolio of research supported by TLRP. But first, let us turn to the nature of knowledge and epistemological issues that are raised by TLRP's attempts to achieve its aims.

### **Epistemological issues in educational research,**

As can be seen from the list of strategic commitments listed above considerable emphasis was placed by TLRP on the idea of research being about creating new knowledge. Of course this raises a number of epistemological issues about the nature

of evidence, precisely what kind of knowledge should we expect research to create in a field as complex as education and how such knowledge can meaningfully be said to be cumulative. The questions of what constitutes evidence and new knowledge in educational research and the nature of the relationship between research and policy were addressed from a philosophical perspective by a team led by David Bridges with TLRP support in the form of a Thematic Seminar Series (Bridges, Smeyers and Smith, 2008). For example, Bridges and Watts (2008) examined epistemological considerations in relation to educational research and policy, highlighting that policy is itself a complex concept and that, while there is a role for research in providing relevant evidence for the formulation of policy, there are inescapable normative and ethical considerations in the field of education which make the relationship between research and policy profoundly problematic.

Somekh (2007) has risen to this kind of challenge by advocating the development and use of “speculative knowledge”, which she describes as “engaged, opportunistic and political” (p. 198). Speculative knowledge, in Somekh’s terms, “creates best guesses for possible social futures on the basis of research into current social practices” (p. 204). This perspective emphasises the complexity of the phenomena of interest to the educational researcher. Complexity theory, which emphasises the multiplicity and interconnectedness of variables and factors operating in any given system (Radford, 2006), can be set against more reductionist, positivist perspectives traditionally associated with a scientific approach to researching phenomena. Citing the work of Cilliers on the characteristics of systems that may be defined as complex, Radford (2006) asserts that classrooms and schools can indeed be characterised as highly complex contexts in which to carry out research, that educational processes are intrinsically problematic for researchers and practitioners



alike and that, therefore, the limitations both on the degree to which control over educational outcomes can in fact be exercised by practitioners and managers and on the capability of research to provide definitive advice to schools should be more readily acknowledged. From the perspective of complexity and chaos theories, Radford (2006) argues that education “becomes a much more open enterprise with the emphasis on a more flexible, tentative, imaginative and creative response to the multiple points at which alternative eventualities become possibilities” (p. 188).

Concepts such as complexity and speculative knowledge certainly challenge conventional assumptions about the inter-relationships between research, policy and practice. Advocates of a more tentative, nuanced approach would argue that researchers should grasp the opportunities afforded by such an approach to impact on innovation and improvement in education in more imaginative and improvised ways. Somekh (2007) challenges the research community to accept that recognising the importance of speculative knowledge involves them being more willing to take risks “by going beyond what can be said with certainty on the basis of reliable and valid warrants” (p.205). This may, of course, be deeply uncomfortable to educational researchers (including those involved in a programme as prominent as TLRP), steeped as they are in a tradition which prizes rigour and transparency. At the same time the associated lack of certainty will be potentially irritating to policy makers seeking clear and dependable advice. Nevertheless, Somekh (2007) portrays speculative knowledge as both a liberating and an empowering concept.

To expect categorical certainty as a product of social science would indeed be naïve, suggesting a lack of ontological and epistemological awareness. Therefore, no matter how challenging it may be, there is a need to promote a more realistic public perception of the status of knowledge of the sort produced by educational research,

and social science generally. At the same time, we need to establish alternative and constructive (but realistic) stances. For instance, in relation to educational research Pollard (2006) argued:

As in other fields of applied social science, cause-and-effect (or ‘what works’) is often hard to establish precisely, but educational research nevertheless has the potential to provide information, analysis and insight, and thus to significantly improve understanding and decision-making by users.

Educational problems, of practice or policy, are often complex and immediate – but are invariably grounded in more enduring issues which merit both practitioner enquiry and sustained, cumulative, multidisciplinary, social scientific research. The introduction of evidence can clarify the key factors and major dilemmas which practitioners and/or policy-makers face in decision-making (p. 254).

Such arguments do not mean, however, that education and educational researchers (and other social scientists) can avoid their responsibility to work to achieve the highest degrees of confidence in their findings and analyses as possible. This remains a major challenge to research education. Furthermore, we would argue that the status of the field is undermined when issues of research rigour, the quality of evidence and the nature of new knowledge generated are merely glossed over. It is not sufficient to argue that we should be content with speculative knowledge. TLRP in attempting to address these issues has, for example, fostered sustained debates on the nature of the ‘warrants’ which may be available for project findings. As a consequence, each

project's Research Briefing includes a statement outlining the methodological foundations of the study

### **User engagement for relevance and quality**

User engagement has been a major strategic commitment of TLRP from its inception and collaborative approaches have been advocated across all phases of project activity. Involving other stakeholders in the research process may be seen as a step towards recognising that research knowledge in the field of education needs to be more speculative, more nuanced and more open to a range of perspectives. However, research construed as collaborative enquiry, which entails engaging and sustaining the commitment of the widest possible range of partners over the long term is very demanding on resources, energy and intellectual capital.

Why should such energy, resources and intellectual capacity be invested in user engagement in research? Perhaps there are more benefits than simply facilitating better lines of communication for the dissemination of research findings, or improving the perceived warrant for such findings. The TLRP proposition has been that a commitment to more fundamental forms of user engagement actually carries the potential to enhance the quality of the research itself. The involvement of users in genuinely collaborative research activity may permit a more comprehensive and sound conceptual grasp of issues under investigation by the incorporation of a wider range of perspectives and understandings. Methodologically, it may also represent a more ecologically valid way of investigating education as an area of 'real world' concern. Edwards, Sebba and Rickinson (2007), drawing on a TLRP-funded seminar series on forms of user engagement, encouragingly found evidence of "reciprocity of the co-construction of research-based knowledge across organisational boundaries emerging in different ways across the TLRP projects" and that this mirrors more

general arguments for the “reciprocity of professionalism” (p. 659). The co-construction of knowledge is arguably the purpose of collaborative research and enquiry and is a process which has been identified by Cassidy *et al.* (2008) as the aim of communities of enquiry, which they propose as a model for educational research.

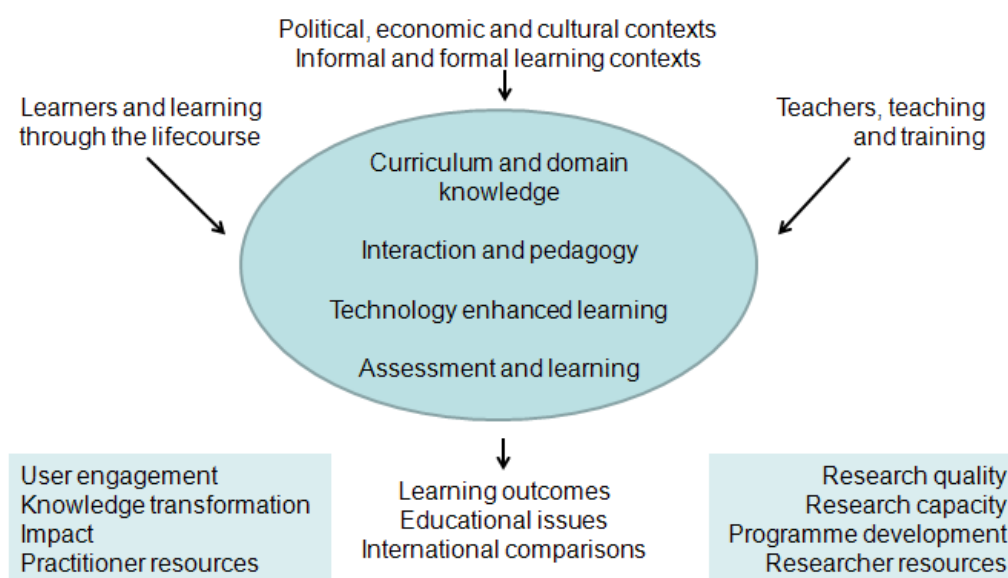
TLRP projects have adopted a wide range of innovative strategies for user engagement, going beyond the involvement of stakeholders in project advisory groups and dissemination opportunities. Where the research involved some kind of educational intervention this was, more often than not, mediated in an authentic and ecologically valid way by the appropriate professional practitioners, rather than by researchers. For example, the “Supporting Group Work in Scottish Schools” (ScotSPRinG) project involved 29 teachers who implemented enhanced group work in their classrooms over a one-year period (Christie, et al., 2009). In other school-based projects, teachers and practitioners have themselves been involved both as researchers and as full members of project teams. A second illustrative case is provided by the “Early Professional Learning” project, led by Jim McNally, in which a cadre of six practitioners were recruited as researchers. These practitioners not only acted as participant observers, conducting interviews and administering other research instruments, but were also fully involved in the work of project team across all stages of the research including the development and refinement of research tools, data analysis and ongoing planning (McNally and Blake, 2008).

In addition to project teams working closely with practitioners and others in their research sites, TLRP fostered links with key national organisations with potentially ‘high leverage’, in relation to dissemination and impact activity both at the individual project level and at the wider Programme level. The TLRP Directors’ Team maintained links with high-leverage user organisations in each educational

sector and in each part of the UK. TLRP has also worked directly with UK governments to maximise the use of its research and has been represented on almost all significant national bodies for the coordination of education research over the period.

### **Knowledge synthesis through thematic activities**

TLRP has adopted a comprehensive conceptual framework for its thematic initiatives and development. Figure 1 shows this conceptual framework in schematic form. An additional function of this model is that it provides a tagged map of linked thematic resources available on the TLRP website.



**Figure 1.** *TLRP's conceptual framework for thematic development*

In the present chapter, space only allows for a few of these themes to be briefly addressed.

### ***Learning outcomes***

One of the first thematic activities supported by TLRP was an attempt to map and define what was meant by the term 'learning outcomes'. From the inception of the

Programme this was seen as a highly problematic issue deeply associated with fundamental questions about what is valued in education. Since teaching and learning, as defined by TLRP, aims to equip learners with the resources to participate in society as active citizens, to contribute to economic development and to flourish as individuals, a broad range of outcomes is appropriate, including indicators of ‘soft’ skills. Each of TLRP’s projects has worked in different ways on defining, developing and investigating learning outcomes and hence a wide range of measures have been required to obtain evidence of change in the different domains of learning under consideration – social, emotional, and cognitive. The ScotSPRinG project, for example, reported significant learning gains attributable to the quality of collaborative dialogue during enhanced group work both in terms of science attainment and in terms of classroom social relationships (Howe, *et al.*, 2007; Tolmie, *et al.*, 2009).

### ***Research capacity***

Another theme cutting across the whole of the TLRP portfolio of activity is research capacity building. Among the criteria against which all project proposals were evaluated was whether the proposed research could significantly contribute to capacity building. A formal and informal, needs-based, research training programme was initially funded by TLRP and coordinated by the team based at the University of Cardiff. This was subsequently followed by the adoption of the social practices model of research capacity building as developed by the Applied Educational Research Scheme (AERS) in Scotland in which inexperienced researchers are provided with opportunities to join or be associated with funded project teams and hence gain real experience of all aspects of the research process. The capacity building strategy was also complemented by the development of a suite of web-based resources for research training to be made available as “public goods” in collaboration

with AERS, NCRM and the British Educational Research Association, the UK national individual membership organisation for researchers in education.

***Evidence informed principles of pedagogy***

One of the main strands of synoptic work carried out by TLRP which drew from findings across all of the projects in the Programme was the synthesis of ten key principles of pedagogy (See [www.tlrp.org/themes/themes/tenprinciples.html#One](http://www.tlrp.org/themes/themes/tenprinciples.html#One)).

To illustrate, three of the ten principles are as follows:

Principle 1 Effective pedagogy equips learners for life in its broadest sense:

*Learning should aim to help individuals and groups to develop the intellectual, personal and social resources that will enable them to participate as active citizens, contribute to economic development and flourish as individuals in a diverse and changing society. This means adopting a broad conception of worthwhile learning outcomes and taking seriously issues of equity and social justice for all.*

Principle 4 Effective pedagogy requires learning to be scaffolded:

*Teachers, trainers and all those, including peers, who support the learning of others, should provide activities, cultures and structures of intellectual, social and emotional support to help learners to move forward in their learning. When these supports are removed the learning needs to be secure*

Principle 7 Effective pedagogy fosters both individual and social processes and outcomes:

*Learners should be encouraged and helped to build relationships and communication with others for learning purposes, in order to assist the mutual construction of knowledge and enhance the achievements of individuals and groups. Consulting learners about their learning and giving them a voice is both an expectation and a right.*

Each of the ten principles is warranted by evidence from several specific projects and the website and associated documentation allows interested parties to unpack and interrogate both the evidence base and the implications for policy and practice of each principle. In an attempt to ensure such syntheses of research evidence are as accessible and influential as possible a very wide range of impact and dissemination strategies have been adopted. These are addressed in the following section.

### **Knowledge transformation for impact**

TLRP has attempted to challenge traditional conceptions of research impact. Rather than impact being construed as a simple linear flow starting with research followed by transformation and dissemination of findings, then adoption into practice and policy, it has been seen much more as a collaborative process from the outset in which the research itself is reflexive, interactive, iterative, constructive, distributed and transformative. As an integrated programme with clear intentions to add value to research activity TLRP has engaged in a much broader range of activities than just undertaking and disseminating research. For TLRP impact, therefore, includes increasing awareness of new ideas and fostering openness to change as well as direct influence on practice and policy. Working for impact is embedded in everything TLRP has attempted to do from formulating research questions through to evaluating research influence on individual practice, not just disseminating findings of research projects. It has also been recognised that impact comes not just from "successful" research, since lessons from unexpected outcomes of activities may be just as valuable.

However, effective communication in support of influence and impact has for a number of reasons been very challenging for the Programme, as for other major



research initiatives in applied fields like education. The world of teaching and learning is very complex. Producing high quality research is a *sine qua non* for maximising impact, but this is not necessarily the main consideration among policy makers and practitioners, who may be more concerned about relevance to, and congruence with, current priorities, than what might be seen as more esoteric indicators of research quality. Generalising from the immediate research setting across varied teaching settings is difficult for researchers, change agents and policy makers alike. Practitioners and their managers also have to consider whether the ideas and findings in question could be applied in their particular circumstances. Furthermore, policy makers, managers, teachers and other practitioners tend to look for well-packaged solutions for defined problems, while research realities are invariably more messy. They work in very different contexts and to different timescales from the research community. They are also likely to be more receptive to research if it supports a desired policy direction and offers succinct, clear-cut advice. Thus transforming research so it has wider value and can be applied by stakeholders to their own circumstances is notoriously difficult and not without dangers. On the one hand researchers must avoid making overstated claims for what might be achieved in practice. On the other hand, researchers must not oversimplify their accounts of research findings in ways that might obscure the essential complexity and problematic nature of educational practice. (See <http://www.tlrp.org/manage/admin/caip.html> )

In attempting to navigate these hazardous waters, TLRP has drawn on its key strengths as a well resourced, but independent Programme, which strives to maintain its integrity and profile in terms of research quality and which at the same time enjoys a high reputation and level of credibility with key decision making bodies, policy

makers and professional practitioners. Because of its level of funding TLRP has been able to offer a wider range of other assets beyond the research projects – research reviews, conceptual and methodological developments, policy inputs, emerging findings, capacity building activities and resources and opportunities for interaction with a wide range of social science views. TLRP has also invested effort in establishing and maintaining networks of communication and influence in organisations, which share the broad aims of the Programme and want to engage with the process of putting research evidence at the forefront of the day to day operational context of teachers, trainers and other practitioners.

The Impact Strategy adopted by TLRP involved the following seven components:

- working with networks of practitioners, learners and others to deliver, transform and communicate research evidence and other assets (reviews, methodologies, perspectives, etc.) to the widest possible number of their peers, and to convince practitioners to apply its recommendations to their practice;
- engaging with a wide range of user organisations and other stakeholders to embed the aims, approaches and findings of the Programme in the cultural context of both research and practitioner communities;
- contributing to (and where appropriate organising and leading) strategic debates about teaching and learning, to influence policy and practice;
- working with key organisations in the field to raise the profile of evidence-informed teaching and learning as a significant and effective route to lasting improvements in attainment of learners;

- communicating conceptual, methodological and practical approaches at both Programme and project level to research, practitioner and relevant policy communities;
- supporting training and other capacity-building activity which improves the ability of the teaching and learning community to undertake relevant research and transform it appropriately for a range of audiences; and
- facilitating the learning and co-operation opportunities generated by discussion between projects within the Programme, to develop both conceptual and practical advances in transforming research into impact (<http://www.tlrp.org/manage/admin/caip.html>).

TLRP has adopted a range of different modes of dissemination, both conventional and unconventional, including a coherent package of corporately badged outputs in the form of briefing papers from each project, conventional reports, practitioner guides and applications, a series of academic books and also very influential themed, synoptic commentaries drawing upon and warranted by evidence from a large number of projects. The Programme website ([www.tlrp.org](http://www.tlrp.org)) is itself a comprehensive resource representing its enormous portfolio of activities - and it also serves as a powerful portal to other sources of information. Individual project teams have been encouraged to be innovative in terms of dissemination strategy. For example, the ‘Home-school knowledge exchange’ project led by Martin Hughes and colleagues at University of Bristol commissioned the production of a powerful drama performance based on the authentic narrative voices of children and young people reflected in the

accounts they had provided to the research team of their experiences of primary to secondary school transition.

The value added by the programme-wide perspective and the collective potential of such an extensive portfolio of research projects is demonstrated by the impact of the synoptic TLRP Commentaries, of which at the time of writing there have been eleven. These are attempts to respond from a research perspective to issues considered to be of high relevance to public policy and professional practice. Judging by the frequency of downloading from the TLRP website (over 600,000 times), these commentaries have been very widely taken up. For example, the commentary on Neuroscience and Education (Howard-Jones, 2007) exceeded 50,000 downloads in its first month. Another very widely welcomed and highly influential commentary relating specifically to school learning, edited by a journalist, Diane Hofkins(2007) is: “What is and what might be? Principles into practice: a teachers’ guide to research evidence on teaching and learning”. This includes an accessible distillation of the ten principles for pedagogy outlined above and provides illustrative detail of relevant research projects accompanied by resources, including a poster and digital video recording of a series of authentic case studies of relevant classroom practices. There are those who might argue that such distillations of research evidence must inevitably oversimplify and even trivialise what are essentially complex questions about learning and teaching. However, as with the other Commentaries, the warrant for the principles presented is clearly founded upon research evidence and any reader has the opportunity to follow up for themselves particular lines of enquiry through links to other forms of project output. It is also arguably an important task for the research community to engage in the process of distillation of key principles. Setting oneself such a task serves the researcher as a stimulus to stand back from the detail of any

given piece of work and look for patterns and insights in emerging themes which can not only be related to established theory but also serve to build new theoretical understandings.

**Conclusion: four metaphors for research in education.**

In concluding this chapter, we have chosen to refer to the four metaphors for educational research offered by Marilyn Cochran-Smith (2007), namely: (a) research as weapon; (b) research as warranty; (c) research as foundation; and (d) research as stance.

***Research as weapon***

This metaphor recognises that research evidence can be used to mount robust challenges to current policy and practice and that research activity itself can have an adversarial, competitive dimension as part of the culture of performativity that governs academic life. As described in the early part of this paper, TLRP has had to be ready to defend itself from possible attack from politicians, funding bodies, the policy community and the professions as well as the rest of the research community. It was greatly helped in this by the rise of the concept of ‘evidence-based policy making’ which, despite its susceptibility to rhetoric, provided a strong legitimisation for the investment. The Programme was also assiduous in engaging with senior civil servants in all UK government education departments and key agencies and with the Education Front Bench Teams of the three major political parties at Westminster. This was part of an explicit strategy of ‘constructive engagement’ which, in combination with Commentaries, Research Briefings, public presentations and other impact work, were designed to contribute evidence to inform both democratic debate and decision-making. Research evidence produced by TLRP has also certainly been used by politicians or policy makers in support of particular policy priorities –

perhaps meriting the ‘weapon’ metaphor - but the Programme has tried to ensure that its analysis has been available to all. TLRP’s own analytic conclusions, and its moral commitment to the improvement of teaching and learning, were promoted over many years and through a coherent set of initiatives. Indeed, it is not by chance that TLRP’s Teachers’ Guide to school findings is subtitled ‘What is and what might be?’ (Hofkins, 2007). Thus, whilst TLRP has not exactly welded its research findings into a ‘weapon’, they have been knowingly accumulated in a form which has the potential to gradually undermine naive policy commitments to performativity in favour of policies and practices founded on an understanding of the nature of learning.

### ***Research as warranty***

This metaphor depicts research as providing the warrant or justification for educational proposals and decisions. It highlights the responsibility that rests upon researchers to ensure that the conclusions they reach in reporting the findings of their research are warranted by the evidence they have gathered and the logical coherence of their reasoning. Instructions from TLRP to research teams on writing about warrants say that warrants are ‘Key reasons why readers should have confidence in your conclusions’. Such reasons might include: the elegance of project design; empirical robustness; conceptual and theoretical coherence; the degree of user engagement and validation; careful/systematic review of other evidence; and peer review. TLRP Research Briefings contain a statement indicating what the warrants are for project conclusions and the content of all other TLRP publications, including its Research Commentaries on issues of relevance to policy and practice, are substantiated by careful reference to relevant research evidence.

### ***Research as Foundation***

As has been argued above, research should engage with policy and practice. However, research is much more than a matter of gathering evidence in response to the educational policy agenda or in order to evaluate some aspect of current professional practice. Research should also provide the foundation on which we build our understanding of the world. In short, it should be concerned with generating new knowledge. Whitty (2006) drew a distinction between two terms used to describe research in education by referring to “*educational* research” as research concerned in one way or another with improving policy and practice while the term “education research” should be used more broadly to characterise the whole field. This helps us to recognise that research in education should address fundamental questions which transcend the exigencies of the current political and policy priorities. OECD (2002) in its examiners’ report on educational research and development in England called for more research in Pasteur’s Quadrant, namely, research that *both* enhances our fundamental understanding of (educational) phenomena and at the same time informs practice. TLRP has very definitely attempted to foster this kind of approach, but it is perhaps too early to judge whether the eclectic portfolio of research projects it has supported has indeed informed fundamental understandings in the field of education. Work on the ‘ten principles of effective teaching and learning’ (in versions for both schooling and post-compulsory education) and the production of international handbooks (for SAGE) are contributions to this goal, but only the passage of time will enable an evaluation of the impact of these suggestions to be made.

### ***Research as Stance***

In an applied field like education, perhaps above all, we should see research as a stance that could usefully be adopted by all stakeholders. Ideally researchers, policy

makers and practitioners should have a ‘researcherly’ disposition and be research-minded. In other words all stakeholders in education should adopt a questioning, enquiring approach to whatever role they are attempting to fulfil. Cochran-Smith (2003) in describing the role of research, or “inquiry”, in the teaching profession uses the metaphor of stance to suggest:

both orientational and positional ideas, to carry allusions to the physical placing of the body as well as to intellectual activities and perspectives over time. In this sense, the metaphor is intended to capture the ways we stand, the ways we see, and the lenses we see through. Teaching is a complex activity that occurs within webs of social, historical, cultural and political significance. Across the life span an inquiry stance provides a kind of grounding within the changing cultures of school reform and competing political agendas (p. 8).

In this respect, we should seek to create a culture of evidence that can enhance professional practice in education, but such a culture should also be characterised by a critical activism (Sachs, 2003). This is indeed the approach which has been strongly advocated by TLRP and is reflected in many ways across its portfolio of activities. It appears that the body of work that has been produced by TLRP over the past decade is already proving influential in a wide range of professional and policy contexts – for instance, it can be explicitly tracked in the publications of all four GTCs, in LSIS, the HEA and even the work of ESRC. Programmes of professional education in the UK increasingly aspire to foster research as a stance among the next generation of educational practitioners and have through the legacy of TLRP not only a source of research evidence but also a source of inspiration for what they might achieve in their



own professional practice. More generally, it can be said that the overall trend of government policy in the countries of the UK is highly consistent with the implications of TLRP findings, as communicated to appropriate government bodies. There is no simple connection of course, but as ideas move iteratively in the ebb and flow of biography and history, TLRP can claim to have at least made a substantial contribution to thinking about education policy and practice in the first decade of the 21<sup>st</sup> century.

## References

- Bridges, D., Smeyers, P. & Smith, R. (2008). Educational research and the practical judgement of policy makers. *Journal of the Philosophy of Education*, 42 (Supplement 1), 5-14.
- Bridges, D. & Watts, M. (2008) Educational research and policy: epistemological considerations. *Journal of the Philosophy of Education*, 42 (Supplement 1), 41-62.
- Cassidy, C., Christie, D., Coutts, N., Dunn, J., Sinclair, C., Skinner, D. & Wilson, A. (2008). Building communities of educational enquiry. *Oxford Review of Education*, 34 (2), 217-235.
- Christie, D., Thurston, A., Tolmie, A., Howe, C. and Topping, K. (2008). Supporting group work in Scottish primary classrooms: improving the quality of collaborative dialogue. *Cambridge Journal of Education (In Press)*.
- Cochran-Smith, M. (2007). *Research and evidence in teacher education*. Keynote Lecture presented at the Teacher Education and Teachers' Work Conference, University of Strathclyde, Glasgow, 15 June 2007.
- Cochran-Smith, M. (2003). Learning and unlearning: the education of teacher educators. *Teaching and Teacher Education*, 19, 5–28.
- Edwards, A., Sebba, J. & Rickinson, M. (2007). Working with users: some implications for educational research. *British Educational Research Journal*, 33 (5), 647 – 661.
- Hargreaves, D. (1996). *Teaching as a Research-Based Profession: Possibilities and Prospects*. London: Teacher Training Agency.

Hofkins, D. (2007) "What is and what might be? Principles into practice: a teachers' guide to research evidence on teaching and learning" London: ESRC Teaching and Learning Research Programme (available online at [www.tlrp.org/pub/commentaries.html](http://www.tlrp.org/pub/commentaries.html)).

Howard-Jones, P. (Undated) Neuroscience and Education: Issues and Opportunities. London: ESRC Teaching and Learning Research Programme. (available at [www.tlrp.org/pub/commentaries.html](http://www.tlrp.org/pub/commentaries.html)).

Howe, C., Tolmie, A., Thurston, A., Topping, K., Christie, D., Livingston, K., Jessiman, E. & Donaldson, C. (2007) Group work in elementary science: organisational principles for classroom teaching. *Learning and Instruction*, 17, 549-563.

McNally, J. & Blake, A. (2009) From Relationships to *interact*: moving from narrative to number (and back again) in exploring the interactions of new teachers. *British Educational Research Journal* (Under review).

OECD (2002). Educational research and development in England: examiners' report. Paris: OECD.

Oancea, A. & Pring, R. (2008). The importance of being thorough: on systematic accumulations of 'What Works' in education research. *Journal of the Philosophy of Education*, 42 (Supplement 1), 15-40.

Pollard, A. (2006). Challenges facing educational research: Educational Review Guest Lecture 2005', *Educational Review*, 58 (3), 251-267.

Pollard, A. (2007). The UK's Teaching and Learning Research Programme: findings and significance. *British Educational Research Journal*, 33 (5) 639-646.

Radford, M. (2006). Researching classrooms: complexity and chaos. *British Educational Research Journal*, 32 (2), 177-190.

- Sachs, J. (2003). *The activist teaching profession*. Buckingham: Open University Press.
- Somekh, B. (2007). Last words: speculative knowledge. In B. Somekh & T.A. Schwandt (Eds) *Knowledge production: research work in interesting times*. Abingdon: Routledge.
- Tolmie, A., Topping, K., Christie, D., Donaldson, C., Howe, C., Jessiman, E., Livingston, K. and Thurston, A (2009). Social Effects of Collaborative Learning in Primary Schools. *Learning and Instruction (In Press)*.
- Tooley, J. & Darby, D. (1998) *Educational research: a critique*. London: Office for Standards in Education.
- Torgerson, C.J & Torgerson, D.J. (2001). The need for randomised control trials in educational research. *British Journal of Educational Studies*, 49, 316-319.
- Tymms, P., Merrell, C. & Coe, R. (2008). Educational policies and randomised controlled trials. *Psychology of Education Review*, 32 (2), 3-9.
- Whitty, G. (2006). Education(al) research and education policy making: is conflict inevitable? *British Educational Research Journal*, 32 (2), 159-176.