

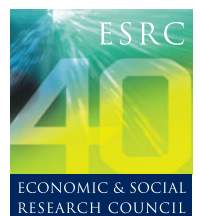
esrc research briefing

Assessing quality in applied and practice-based educational research

Summary

There is a growing interest in the potential contribution of research to the development of a wide range of policies and practices in education. This has led some to question the appropriateness of existing ways of judging research quality, including those used in the Research Assessment Exercise. Researchers from the Oxford University Department of Educational Studies have sought to clarify what we mean by applied or practice-based research and to develop an appropriate framework within which to assess their effectiveness. These are their key conclusions and policy implications.

- Traditional barriers between pure theoretical research and applied research in education are being broken down. Furthermore, there is a growing demand from government and other agencies that research should help to stimulate and help to spread new approaches to educational policy and practice
- Existing definitions of practical research are too descriptive and existing models that seek to mesh the theoretical with the practical may be too simplistic. The researchers suggest that ‘applied and practice-based research’ can best be defined as ‘an area situated between academia-led theoretical pursuits – such as historical research - and research-informed practice.’ They see this as consisting of many models of research ‘explicitly conducted in, with, and/or for practice’.
- Existing quality assessment mechanisms – despite changes to the Research Assessment Exercise – may not be appropriate measures of the effectiveness of applied and practice-based research.
- A multidimensional understanding of quality should be developed which combines methodological and theoretical robustness with the potential value of research in classrooms and other practical (and policy-making) settings; its ability to engage and stimulate practitioners in their own practice; and its value for money. This is the starting point of a new framework for the assessment of applied and practice-based research in education.
- The researchers identify several potential subsidiary aspects to each of the four dimensions in their new framework, but they caution that not every research project will have the same aims or audience. Those seeking to develop performance indicators or thresholds from the framework will therefore need to adapt it to different circumstances.





Background

In recent years, the government and other bodies have been keen to see research supporting improved educational standards. As a result there has been a growing interest in applied and practice-based educational research.

However, there is no current agreed definition of applied or practice-based research and how they differ from other more theoretical forms of educational research. There are also no agreed ways to judge quality in these more applied forms of research.

Researchers from the Oxford University Department of Educational Studies were commissioned by the ESRC to undertake a project clarifying the terminology and concepts involved, so that appropriate criteria might be developed to assess the effectiveness of this type of research.

Their project set out to:

- Clarify the concepts used in relation to applied and practice-based research
- Map the various models currently in use
- Explore the philosophy behind the different models
- Review recent UK initiatives and what drives them

Quality Criteria: Why now?

For nearly 10 years, there has been a public debate in the UK about the quality of educational research. This debate has prompted new efforts by many different agencies to try to define the nature of good quality educational research.

■ **The RAE:** The Research Assessment Exercise (RAE) remains vitally important in defining good quality in research and the 2001 RAE was supposed to give equal value to basic, strategic and applied research and the consideration of practical and practice-oriented research as a matter of principle. However, the 2003 Roberts and Lambert Reports implied that this had not happened. The RAE 2008 is expected to give greater weight to practical research, an important reason for addressing the quality question now.

■ **A New Social Contract?** The traditional assumption that there is a clear distinction between a 'research community' and a 'policy and practice community' has broken down over the last twenty years. It is increasingly recognised that policymakers have a legitimate expectation that research should help them find solutions to education problems.

Nevertheless, mutual reservations remain: many policymakers and teachers feel that researchers lack accountability, while some researchers fear that the research process is being driven too much by a pragmatic agenda, which undermines the value of theoretical knowledge. These tensions lead to changes in the role of research that further explains the need to define quality.

Defining applied and practice-based research

The OECD's definition of applied research may describe the basic aim of applied research, but it doesn't extend to an internationally accepted account of practice-based research - or of how to measure quality. And there are many competing views.

- **User-inspired basic research:** Stokes' notion of Pasteur's Quadrant¹ tries to cross the idea of 'use' with 'fundamental understanding'. This creates 'user-inspired basic research' which should both address policy problems and improve knowledge. Such an approach is supported by documents from the OECD and the English National Educational Research Forum. But this model may be too simplistic because it overrates the importance of the basic aim of a piece of research to create a clear distinction between pure and applied research.
- **Strategic research:** Other dimensions of applied and practice-based research may be better captured in the OECD notion of 'strategic research' which combines scientific understanding with practical advancement, but also recognises the political goal of achieving change. This approach, based on a partnership between scientists and policy-makers, aims to achieve highly focused results.
- **Integrated approaches:** Action research and reflective practice challenge the notion that applied research cannot contribute to theoretical understanding. Other accounts suggest that research and practice can be integrated activities that borrow from, inform and support each other. Gibbons et al² talk of 'context-based knowledge production' where the process of identifying practical solutions to real problems also generates new knowledge.

These different models show that the meanings and boundaries of applied and practice-based research are shifting. They also show how difficult it is to reach agreement on how to define such research, and how to assess it. So, any quality standards must recognise the many forms and aims that they can serve.

¹Stokes, D.E (1997) Pasteur's Quadrant: Basic science and technological innovation. Washington DC: The Brookings Institution.

Applied research is 'original investigation undertaken in order to acquire new knowledge...directed towards a specific practical aim or objective'

Organisation of Economic Co-operation and Development Frascati Manual.

"An area situated between academia-led theoretical pursuits – such as historical research – and research-informed practice, and consisting of a multitude of models of research explicitly conducted in, with, and/or for practice."

The researchers' inclusive definition of applied and practice-based research.

²Gibbons, M., Limoges, C., Nowotny H., et al (1994) The New Production of Knowledge: The dynamics of science and research in contemporary societies. Sage.

Assessing applied and practice-based research

A new four-dimension framework to assessing research quality

The concept of quality in current research evaluation procedures needs to be rethought and adapted for at least three reasons:

- To reflect the changing relationship between research and society
- To exploit the potential of applied and practice-based research for innovation
- To cater for different interest groups and interpretations of quality

To reflect these various interests, the researchers propose a four-dimensional approach. The four dimensions can each be broken down into several sub-dimensions, which may be used to develop criteria for assessing the quality of research:

- **Epistemic:** The assessment process should reflect traditional dimensions of quality such as methodological and scientific robustness – these are the epistemic dimensions. Five possible issues were identified. Is the research trustworthy and authoritative? Does it contribute to knowledge, building on what is known and contributing to it? Is it well designed and clearly reported? Does it meet legal requirements and ethical principles? And is it consistent with shared traditions and practices of particular research communities?

- **Technological:** As most research doesn't have an immediate impact on knowledge or practice, the researchers suggest the need to focus on its potential practical use rather than just its actual impact. This is the technological dimension. To do this might involve considering how timely the research is – if research is not to be ephemeral, it needs to balance short-term and long-term benefits. Other questions arise: is it fit for purpose? Is it accessible and relevant to the needs of users? Has it been designed to ensure that it makes an impact, perhaps through closer links with teachers and other practitioners? And does it offer enough pointers to facilitate ease of use?

■ **Capacity building and value for people:** Research can also contribute to the collective and personal development of practitioners and policy-makers, making them more receptive to new ideas, encouraging new partnerships or improving their ability to reflect critically on their work. The researchers call this dimension capacity building and value for people. To judge whether research improves such practical wisdom, they identify five issues: how plausible the research is to practitioners; whether there is partnership, collaboration and engagement between researchers and practitioners or policy-makers; whether it enables practitioners critically to reflect on their own practice; whether it enhances the mutual receptiveness to new ideas between researchers, practitioners and policy-makers; and whether it stimulates personal growth.

■ **Economic:** Those who commission and fund research will want to see their money well spent, so the assessment must look at what added value the research brings to existing practice – this is defined as the economic dimension.

The issues that might be considered here are: how marketable the research is; its cost-effectiveness; whether it can be audited; its feasibility; its originality; and its value-efficiency (an indicator combining bibliometric and economic measures).

Dimensions of quality				
	Epistemic: methodological and theoretical robustness	Technological	Capacity development and value for people	Economic
Quality sub-dimensions	Trustworthiness	Purposivity	Plausibility	Marketability & competitiveness
	Builds on what is known + contribution to knowledge	Saliency/timeliness	Partnership, collaboration & engagement	Cost-effectiveness
	Explicitness	Specificity & accessibility	Reflexivity, deliberation & criticism	Auditability
	Propriety	Concern for enabling impact	Receptiveness	Feasibility
	Paradigm-dependent criteria	Flexibility & operationalisability	Transformation & personal growth	Originality
	Scientific robustness	Social & economic robustness		

Conclusions: Using the Framework

From the start, this was not intended to be a prescriptive framework; rather it was an attempt to pull together and highlight the multiple dimensions along which research quality can be assessed. The researchers have suggested illustrations of what the four dimensions to applied or practice-based research might encompass. And if these are to be used by various evaluation agencies in the process of developing performance indicators or thresholds, the framework may be a starting point, but other elements may need to be considered too.

However, not every research project is alike. So, some projects will favour some aspects of the framework over others. A project designed to improve public knowledge may have different quality assurance requirements than one intended to improve classroom practice. Any agency adopting this framework should recognise these differences in adapting it to a particular project.

Nor is this the final word on the subject. The framework is intended to stimulate further discussion and debate. The researchers would welcome comments and contributions towards the further development of their framework.

About the study

This research was carried out by Professor John Furlong and Mrs Alis Oancea of the Oxford University Department of Educational Studies. The research is based on a literature review of standards and criteria in use; interviews with key individuals in the policy and research communities; and consultation on early drafts.

Further information

The report “Assessing Quality in Applied and Practice-based Educational Research” is available on the ESRC website at www.esrc.ac.uk and the British Educational Research Association website at www.bera.ac.uk/news/news.php

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