

*IASK Teaching and Learning Conference:
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**Quality Criteria in Educational Research:
Is beauty more important than popularity?**

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GREGORY

“I need someone well versed in the art of torture—do you know PowerPoint?”

Quality in educational research

- ❖ *HISTORICAL CONTEXT: The poor quality of educational research*
- ❖ *THE DISCUSSION FRAMEWORK: Assessing Quality in Educational Research*
- ❖ *CRITIQUES: Is assessing the quality of educational research possible or necessary?*
- ❖ *RESEARCH: into education - are medical and economic models appropriate?*
- ❖ *EDUCATION: Is it an art or a science (or what)?*

Historical Context

“We need to be able to rely on ... social scientists to tell us what works and why and what types of policy initiatives are likely to be most effective. And we need better ways of ensuring that those who want this information can get it easily and quickly. I commend this vision to you and invite all of you to work with us to achieve it.”

David Blunkett, Secretary of State for Education and Employment , ‘Influence or irrelevance: can social science improve government?’ (Speech at a meeting at the Economic and Social Research Council, 2nd February 2000).

Historical Context

In the U.K. and the U.S.A. the last decade has seen criticisms being voiced in academia and government about the overall quality of research into education (in terms of both its scientific rigour and its utility to practitioners), how such research is to be assessed and whether/how it can be used to inform practice .

“Education in this country on the whole has a problem with the quality of the research, not with the amount of it. ... It is not as good as it might be and I speak as a former Chairman of the Economic and Social Research Council.”

Sir Howard Newby, Evidence to the House of Commons Education and Skills Committee, 5th March, 2003

Historical Context

“From the beginning the field has been plagued by skepticism concerning the value and validity of developing a ‘science of education’ ... Indeed, a set of attitudes toward education research that one might call ‘anti-educationism’ has been a constant to the present day” (p.13f). “the widespread perception that research in education has not produced the kind of cumulative knowledge garnered from other scientific endeavours. The prevailing view is that findings in education research studies are of low quality and are endlessly contested” (p.28).

Shavelson, R. J., Towne, L., (Eds.), (2002) *Scientific Research in Education*, Washington, DC: National Academy Press.

Historical Context

“I am less certain that much of the research reported in the literature does extend theory, or illuminate policy, or improve practice in significant ways. I have a strong impression of individualism, of researchers working in isolation from each other, dabbling in an amateurish way at issues which are too big to be tackled by lone researchers. I consider that much educational research is in a dilettante tradition that looks like a game of trivial pursuits.”

Michael Bassey, member of the Educational Panel during the national 1992 Research Assessment Exercise, commenting on the overall standard of the submissions

Historical Context

“The actions and decisions of policy-makers and practitioners are insufficiently informed by research. Where the research does address policy-relevant and practical issues it tends to:

- be small scale and incapable of generating findings that are reliable and generalisable
- be insufficiently based on existing knowledge and therefore capable of advancing understanding
- be presented in a form or medium which is largely inaccessible to a non-academic audience, and
- lack interpretation for a policy-making or practitioner audience.”

Hillage Report (1998) *Excellence in Research on Schools*, DfEE

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The Discussion Framework

In 2004, the Educational Studies Department at Oxford University was commissioned by the ESRC to study criterial judgements in education on behalf of academic, practitioners and policy makers. The aims were to:

- clarify the concepts employed in relation to applied and practice-based research;
- map the various models currently in use and then explore the philosophical underpinnings of the models;
- review the recent UK initiatives concerning applied research and practice based research,
- develop an understanding of quality to assist the development of quality criteria appropriate for different types of applied and practice-based research.

The Discussion Framework

In 2005, Furlong and Oancia reported their findings in *Assessing Quality in Applied and Practice-based Educational Research: A Framework for Discussion*.

They distinguished four dimensions of quality:

- *EPISTEMIC DIMENSION;*
- *TECHNOLOGICAL DIMENSION;*
- *CAPACITY BUILDING DIMENSION,*
- *ECONOMIC DIMENSION.*

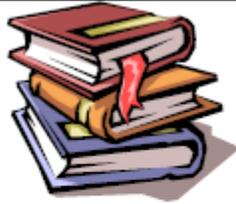
For each dimension they identified five sub-dimensions, as shown in the following table.

The Discussion Framework

DOMAINS OF QUALITY

<i>Episteme Theoretike</i>	<i>Techne (&) Economic</i>		<i>Phronesis</i>
Trustworthiness	Fitness to Purpose	Auditability	Plausibility
Advancement of Knowledge	Concern for enabling impact	Cost-effectiveness	Reflexivity, deliberation and criticism
Transparency/Explicitness	Specificity and accessibility	Marketability and competitiveness	Engagement
Propriety	Salience/timeliness	Feasibility	Receptiveness
Paradigm-dependent criteria	Flexibility and operationalisability	Added Value/ 'brand'	Transformation and personal growth
Scientific Robustness	Social and Economic Robustness		

The Discussion Framework



Academic-led theoretical pursuits (e.g. Historical research)

-----Applied and practice-based research

-----Research-informed practice

' Multiple models of research conducted in, with and/or for practice'

Applied and practice-based research - an inclusive definition

Quality in educational research

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Critiques of the Framework

The Framework document *Assessing Quality in Applied and Practice-based Educational Research* generated both interest and criticism in equal measure, among both educational researchers (academics) and practitioners (teaching professionals). This debate, which often generated more heat than light, raised fundamental and inter-related questions about the purpose and quality of educational research, which still have not been successfully resolved.

Critiques of the Framework

PURPOSE: “the task of practical research is to contribute knowledge that could inform practice, and it must be judged not in terms of whether this knowledge proves productive in practical terms, only according to whether it is relevant and valid. ... In the case of academic research, the immediate audience is not practitioners but fellow researchers. The aim is to contribute to a body of knowledge, albeit one that relates to some issue of human concern. Thus, the likely validity of the findings is to be judged primarily by the research community” Hammersley, M., (2008), ‘Troubling criteria: a critical commentary on Furlong and Oancea’s framework for assessing educational research.’ *British Educational Research Journal*, 34(6): 747-762

Critiques of the Framework

QUALITY: “Despite its overriding concern with quality, systematic review actually closes down on important questions concerning quality and accountability in educational research. ... Contrary to the assertions of many proponents of evidence-based practice and systematic review, educational researchers often have their own concerns about quality, and are interested in pursuing questions of how to improve it, without sacrificing the diversity of approach, interests, values and purposes on which a democratic research community should be based”

MacLure, M., (2005) ‘Clarity bordering on stupidity: where's the quality in systematic review?’, *Journal of Education Policy*, 20 (4): 393-416

Critiques of the Framework

QUALITY: “there are almost as many different lists of suggested criteria for judging research as there are writers about the issue. These lists overlap, often substantially, but one person’s obviously valid list item is judged inappropriate or excluded by someone else. Many researchers, for example, those of a postmodernist persuasion or within a broadly hermeneutical, interpretivist tradition would deny the value of using predetermined criteria as the prime means of judging research quality at all”

Hodkinson, P., (2004), ‘Research as a form of work: expertise, community and methodological objectivity’, *British Educational Research Journal*, 30(1): 9-26

Beauty or Popularity?

If research is to be judged by more than one criteria, then it is necessary to clarify the relationships (equal, superordinate, subordinate) between the criteria which requires agreement between the assessors, which is likely to be problematic. As Hammersley points out there are likely to be differences between assessments by the subject discourse communities of practitioner users and researchers. For example, in respect to the former “in relation to plausibility, ... what they take to be established knowledge will be different from that which is well established within the relevant research community. This is because they will have practical knowledge deriving from individual and collective experience”

Beauty or Popularity?

However, without necessarily determining a hierarchy between internal and external criteria, or making assumptions about agreements by the assessors, it is possible to examine the possible outcomes when a piece of research either meets or fails to meet both internal/intrinsic and external/extrinsic criteria. Where both the internal and external criteria relating to a piece of research are met, then an assessment of the positive worth of the research would presumably not be questioned, and it could be deemed to be both 'beautiful' and 'popular'. Similarly, when a piece of research fails to meet either internal or external criteria then, it could justifiably be disregarded.

Beauty or Popularity?

External Criteria Met?
(Is the research popular?)

Yes

No

	Yes		No
No		No	
	Yes		No
Yes		Yes	

Internal Criteria Met?
(Is the research beautiful?)

Yes

No

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Education/Educational Research?

Hence, there is a divide in the education(al) research community between those trying to emulate the pure sciences, by pursuing a scientific positivist approach, and those who believe such a pursuit is ill-judged and even counter-productive. This is mirrored by a “dichotomy between quantitative and qualitative research designs - the former receiving the approbation of Government looking for the evidence for particular policies, the other generally embraced by practitioners but disdained by those who want general answers to generally conceived problems”, Oancea, A., Pring, R., (2008), ‘The Importance of Being Thorough: On Systematic Accumulations of “What Works” in Education Research’, *Journal of Philosophy of Education*, 42(1):15-39

Education/Educational Research?

So, on one side “There is the research which extends the methods of the social sciences to educational practice. It assumes that educational practices, being ‘social facts’, are amenable to empirical investigation, generalisation, causal explanation and verification (and) can be explained in much the same way as physical events and facts can. The methods of the social sciences, are brought to bear upon an understanding of education, and from the understandings gained those in charge of education, either at the policy or at the professional level, will know what interventions will make things work: the grouping within the class, the most effective size of the class, the style of teaching and so on”

Education/Educational Research?

But on the other side “This position is what a very different tradition of educational research has argued strongly against, pointing to the uniqueness of educational situations, the ‘subjective meanings’ of the participants which ‘define’ the educational practice uniquely, and thus the redefinition (or - even abandonment) of such terms as ‘truth’, ‘objectivity’, ‘reality’, ‘knowledge’. Quantitative research is irrelevant. It is to be replaced by the qualitative research which celebrates this uniqueness.”

Pring, R., (2000) ‘The “False Dualism” of Educational Research’, *Journal of Philosophy of Education*, 34(2): 247-60.

Education/Educational Research?

However this apparent divide may be an illusion “To understand an educational practice requires the careful analysis of the social situation-the underlying social rules, the interpretation of the participants, the values and aims embedded within the practice. Such ‘qualitative research’ is quite clearly necessary, and the absence of it leads to the gross generalisations and misleading science. On the other hand, such qualitative work, given what we know about human beings and about the social structures which constrain their activities, simply sets limits and gives greater refinement to the more general verifiable and (where possible) quantifiable claims which research should constantly be seeking.” Pring *ibid.*

Medical Research as a model?

Using medicine as an example Hargreaves argues that research should be educational:

“both education and medicine are profoundly people-centred professions. Neither believes that helping people is a matter of simple technical application but rather a highly skilled process in which a sophisticated judgement matches a professional decision to the unique needs of each client.”

Hargreaves, D., (1996) ‘Teaching as a research based profession: possibilities and prospects’, *TTA Annual Lecture*, 1996

Medical Research as a model?

Replying, Hammersley argued “that there are some fundamental problems at the core of Hargreaves’ analysis. ... his reliance on the medical analogy is potentially misleading. (as) Much medical research does not involve the distinctive problems associated with studying social phenomena”.

Hammersley, M., (1997) ‘Educational Research And Teaching: A Response To David Hargreaves’ TTA Lecture’, *British Educational Research Journal*, 23(2): 141-61

Medical Research as a model?

In response, Hargreaves argued: “Hammersley’s error is to treat the research underlying medical practice as essentially homogeneous and as positivistic, working on physical phenomena in the interests of discovering universal laws and patterns of physical causation. Doubtless this applies to the root natural sciences ... But with research into practice, the kind of research at the heart of evidence-based medicine, we are in the world of human beings making complex decisions. His depiction of the knowledge-base of medical practice is, in short, crude oversimplification.” Hargreaves, D., (1997) ‘In Defence of Research for Evidence-based Teaching: a rejoinder to Martyn Hammersley’, *British Educational Research Journal*, 23(4): 405-419

Medical Research as a model?

Similarly, Evans and Benfield argued against steering “educational research in the direction of a ‘medical model.’... (as) ... Such an approach will tend to reduce research questions to the pragmatics of technical efficiency and effectiveness”.

Evans, J., Benfield, P., (2001) ‘Systematic Reviews of Educational Research: does the medical model fit?’ *British Educational Research Journal*, 27(5): 527-541.

Economics as a model?

As a social science, economics has many of the problems that currently beset educational research. However, economists have succeeded in building micro and macro level theoretical models, covering an array of economic activities (e.g. theories of the firm, labour markets, international trade, price fluctuations, etc.) often with a high level of statistical sophistication and predictive ability. Unlike theories in the pure sciences, economic models are conditional rather than causal statements, but this has not prevented the discipline from accumulating a body of relevant knowledge which informs policy makers and practitioners (businesses, trade unions, etc.) and which, it is argued, educational research has failed to do.

Economics as a model?

John Maynard Keynes, the father of modern macro-economics, although a theorist (he wrote *The General Theory of Employment, Interest and Money*) nevertheless believed that: “The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind which helps its possessor to draw correct conclusions” (1934, 6).

This approach has direct resonance with Bassegy's belief that the concept of 'fuzzy generalisations' “offers a viable solution to the problem of generalisation in educational research and across the other social sciences” (2001, 20).

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Education: Art or Science?

This debate about the scientific status of social sciences is not new: writing over 100 years ago Dewey observed:

“There is another group of sciences which ...are more remote from a scientific status. ...the social and psychological disciplines. ... compared with mathematics and physics we can employ the term "science" only in a tentative and somewhat prophetic sense — the aspirations, the tendencies, the movement are scientific. But to the public at large the facts and relations with which these topics deal are still almost wholly in the region of opinion, prejudice, and accepted tradition.”

Dewey, J., (1902) ‘Academic Freedom’, *Educational Review*, 21(813): 1-14

Education: Art or Science?

Reviewing progress since then Phillips states that:

“A charitable judgment is that ‘philosophy of educational research’ is roughly at the stage that much philosophy of science was at six decades or more ago when real examples of research, discussed with historical richness, were relatively rare,” suggesting that the current debate about the focus of educational research, and how it is to be assessed, has some way to run before a satisfactory conclusion may (or may not) emerge.

Phillips, D.C., (2005) ‘The Contested Nature of Empirical Educational Research (and Why Philosophy of Education Offers Little Help)’, *Journal of Philosophy of Education*, 39(4): 577-597

Education: Art or Science?

“we are able to contrast various kinds of inquiry ... in respect to their economy and efficiency in reaching warranted conclusions. ...some methods of inquiry are better than others ... (but) It does not follow in any of these cases that the "better" methods are ideally perfect, or that they are regulative or "normative" because of conformity to some absolute form. They are the methods which experience up to the present time shows to be the best methods available for achieving certain results, while abstraction of these methods does supply a (relative) norm or standard for further undertakings”

Dewey, J., (1938) *Logic: The Theory Of Inquiry*, New York: Henry Holt, p.104

Education: Art or Science?

“Objectivity is of the essence of science, just as subjectivity is of the essence of art. Natural scientists are natural objectivists. ... But it is harder to be scientific, hence objective, about human affairs than about nature. ... This is why social science is so much more backward than natural science. ... Further, this is why it is so important, for the advancement of social studies, to identify and expose the subjectivist philosophies that compound the natural obstacles to the objectivist or realist approach to social facts”.

Bunge, M., (1996) *Finding Philosophy in Social Science*, New Haven: Yale University Press, p.45

Education: Art or Science?

“The history of educational research is not a simple tale of progress, and its story provides important insights for its future. Educational research has a long history of struggling to become - or to ward off - science.”

Feuer, M., Towne, L., Shavelson, R., (2002) ‘Scientific Culture and Educational Research’, *Educational Researcher*, 31(8): 4-14

Some Final Thoughts

“Economists and policy makers must deal with ambiguity. The current state of macroeconomics offers many insights, but it also leaves open many questions. The challenge for economists is to find answers to those questions and to expand our knowledge. The challenge for policy makers is to use the knowledge we now have to improve economic performance. Both challenges are formidable, but neither is insuperable.”

Mankiw, G., Taylor, M., (2000), *Macroeconomics*, New York: Worth Publishers, p.609

Some Final Thoughts

“I find it very difficult to do educational research well. It requires rigorous thinking, perceptiveness, imagination, self-awareness, social skills and self-discipline in such demanding combinations that I am usually disappointed with the quality of my own work. To judge from the many papers that I have to referee for research journals, other researchers also find it difficult to do well, and many seem to lack an understanding of the diverse basic disciplines required.”

Donald MacIntyre, 1996 Presidential Address to the British Educational Research Association

Some Final Thoughts

If we, as researchers and teaching practitioners, do not aspire to the highest level of scientific rigour and professionalism in our teaching and research, how can we expect those whom we teach and supervise to adopt such an approach to their own studies, and in their chosen professions?

“Creating education through research is not just the title of a lecture or the theme of a conference; it is an imperative for the future of a democratic society”, Michael Bassey.

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Thank you for listening!

**Please email me at tkarran@lincoln.ac.uk
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