

The use and usability of research outputs: making a difference

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Introduction

This paper examines the prevailing preoccupation with the 'impact' of our research. As the preamble to the conference theme suggests this is a seductive and beguiling focus and also an aim. It is perverse and nonsensical to say that we don't care about impact. I think it is axiomatic that in a domain like higher education research we care about making a difference. It is just that the present policy hegemony frames our connection with potential users in a particular way. It suffers from a simplistic construction of causality between an item of research output and the way it might be used by others. It seems to me that there are several problems with the present 'construction' embodied in the way in which research impact is understood in the current UK national research evaluation exercise: the Research Excellence Framework (REF).

- The time scales are often unrealistic
- There is no theory of engagement (given our research is usually embodied in a text)
- There is no theory of impact or what counts as the creation of effects and on what
- There is no theory of change

It is also a paradox that the preoccupation with the social value of research (research outputs as public goods, essentially an instrumental view) is in stark contrast with current policy on University teaching and funding in the UK in which a University education has been reconstructed as overwhelmingly a private good with the public goods produced by a University experience being all but expunged (See Saunders 2012).

This brief paper will not deal with each of these charges in turn but will pick up some themes which are connected to them. I won't dwell on what we might term 'making a difference' in terms of our academic impact, but I do acknowledge though that these boundaries are messy and uncertain. Making a difference academically can, as we know, be measured in terms of citation indexes of various kinds. The critiques of such an approach are legion. Citation indexes do show something, but what, is very unclear as the literature on the sociology of citation suggests see for example, Luukkonen 97, Moed 2006, and Stack 2013). One of the most interesting distinctions in this respect can be 'ritualistic citation' in which a small group of authors are cited at the top end of a paper as a matter of course with little further reference or likelihood that the work has even been read. References to Merton for example, are the most 'cited' in this regard within sociological research (Lindgren 2011). Beyond this 'use' which I will call here *ritualism*, we may see genuine impact through the development of *paradigmatic* influence or the adaptation of a paradigm. For me, Bernstein alongside MFD Young's work on the sociology of knowledge might fall into this category or Giddens' work on practice. On a grand scale, Marx's use of the Hegelian dialectic can be said to fall into this category as might Foucault, Bourdieu or Habermas. We can all identify these kinds of profound influences on our own work. I guess making a difference in this respect, means the provision, through your work, of a 'new way of seeing' or framework for understanding. The third form is the *research findings* approach in which 'what we know already' is identified in terms of empirical descriptions of

social phenomena. Links between class and University entrance might be examples (e.g. Hoare and Johnston 2011). Making a difference means providing a platform of knowledge resources for further research or even policy.

I am sure there are other forms of academic use but these will do for now.

What this paper *will* do is talk a little about what 'impact' might mean. It will identify the two concepts of 'use' and 'usability' as potentially interesting ways of understanding how our work might make a difference. In this respect, research outputs might be understood as the knowledge resources we might use for changing practice. It will finish by referring to the modes of engagement we use for getting our research out there and its potential for making a difference. For this, and given my own experience I will draw on the evaluative research tradition.

Impact

The stance taken here on making a difference is not a paradigmatically aggressive one. It is based on a kind of methodological pragmatism, particularly in complex policy environments. We need to guard against the 'chimera' of certainty and acknowledge the difficulty of establishing, unequivocally clear, lines of determination of use and effects of our research. The problems of establishing these clear lines, in most cases, are well known and the proponents of RCTs, in research, are at pains to guard against over-optimism and specify the restricted set of circumstances in which such approaches might work (see Barca 2009, p181). So, basing change (making a difference) on the apparent certainties of particular research approaches would be a mistake. The main difficulties are:

- 1. Methodological:** centering on the requirement, in a robust design, that the experimental environment is controlled enough (timing, multi layered intervention, evaluation focus, matched sets, contamination and treatment) to allow the determination of clearly distinguishable and comparative effects of one treatment over another.
- 2. Ethical:** the difficulties in justifying a 'positive' treatment to one group and comparing it with a 'non-treatment' group for whom resources or developments have been withheld. This is particularly sensitive when undertaken across as well as within national boundaries.

However, we still have a problem of attribution. We need to know more about it as we search for narratives about the positive effects of our work. So, what might we do in this imperfect world and is an alternative paradigm viable? In uncertainty, we need research to provide 'provisional stability' (see Saunders et al, 2005) by working with new metaphors.

- **Courtrooms not laboratories** (although forensic science is used, it is not normally in the form of a controlled comparison) in which we aggregate available knowledge of a circumstance and induce what might have caused it. The claim to 'truth' will be based on *what it is reasonable to conclude* when the array of evidence is weighed. In these cases our research might make a difference not based on absolute truths but on knowledge resources for onward action i.e. making a difference.
- **Indicative and evocative** rather than definitive and one dimensional causality in which we can only hope to have 'provisionally stable' knowledge of a circumstance

in order to come to conclusions but we bring to bear the best possible research designs to establish what is happening.

Use practices and making a difference

This notion of use refers to the interaction between the organisational environment into which a research output might be intervening and the design of the research output itself. Both these features interact to determine the extent to which an output or a research process can create effects i.e. change practices (Weiss 79). Contandriopoulos and Brouselle (2012), in their extensive review of collective level knowledge exchange, conceptualise two dimensions of use context. On the one hand they point to how the nature, degree and power of the ideological dimension prompts differential polarisation, which, in turn determines the extent to which potential users share similar outlooks and preferences. The second dimension they identify is associated with the extent to which potential users' estimate the costs and benefits of changing practices based on the resources offered by new knowledge. Both these features, suggest the centrality of 'practice' in considering the way knowledge resources produced by research might be used.

The way research is used depends on the capacity of the potential users to respond to the messages research might contain. In social practice terms, it is the degree to which the research can provide knowledge resources for new practices. The extent to which knowledge resources are recognised as 'useful' by potential users has ideological, temporal and organisational dimensions. The following characteristics of this 'use environment' are drawn from case studies of research use and demonstrate the factors that seem particularly pertinent in terms of maximising use.

- The timing and nature of the 'release' of the research output is embedded in decision making cycles (this requires clear knowledge on when decisions take place and who makes them).
- The researchers have a clear understanding of the organisational or sectoral memory and are able to locate the outputs within an accumulation of knowledge.
- The research has reflexive knowledge of the capacity of an organisation or group to respond. This requires the following dimensions:
 - The output connects effectively with systemic processes. This means the messages are able to feed into structures that are able to identify and act on implications.
 - Organisations that are lightly bureaucratised, sometimes called adaptive systems are better placed to respond to 'tricky' or awkward evaluations because their practices are more fluid, less mechanistic and have a 'history' of responding to new knowledge.
 - Research which is strongly connected to power structures is more likely to have effects because they have champions who have a stake in using evaluations to change practices (I am not sure about this, what about participatory research which involves small teams of activists or practitioners/)

- Outputs that identify or imply possible changes that are congruent or build on what is already in place have a greater chance of maximising use.

Usability practice and making a difference

Prosaically, most research into 'research usability' refers to the form the research outputs take and the extent to which they 'speak' to the intended user in an appropriate way (enable their use as knowledge resources for new practices). The contextual dimensions of this can be called the 'use' domain. The other key dimension refers to the design of the vehicle of the message to maximise engagement (a single, cold unresponsive text, a presentation, working in a workshop, working alongside a user to draw out practice based implications etc.) but also the way in which the design of the research lends itself to communicability and is formed in such a way that its potential as a knowledge resource is made more apparent.

In social practice discourse, this is sometimes referred to as a 'boundary object' or a 'bridging tool'. In an important sense, usability is a reference to a learning process in which a 'research artefact' (could be a report, web based material or a social artefact like an event) is used as a knowledge resource for new practice. The term 'bridging tool' is guided by a specific learning theory. The idea that people might engage in a change on the basis of the use of an research (moving from one activity system to another) has resonance with the notion identified by Engestrom and others (see Tuomi-Grohn and Engestrom, 2003) concerning the metaphor of 'boundary crossing'. Conventionally associated with the experience of moving between different 'activity systems' and the learning processes, opportunities and, indeed, requirements, such crossing implies, activity theory has provided a fertile resource for depicting this process. Building on the work of Vygotsky (1978), Engestrom and his collaborators (e.g.2004) have drawn our attention to ways of thinking that emphasise how learning takes place in a social setting involving practices shaped by tools and resources (in this case knowledge resources provided through research), communities, divisions of labour and rules such that individuals and groups experience tension, creative problem solving and resolution that utilises these elements toward an 'object' or 'project'. Often, in research environments, this may be improvement or development (Chelimsky, 1997).

Contandriopoulos and Brouselle (2012) focus on an approach which positions *research products* or artefacts in the context of knowledge use and exchange. This conceptual reconfiguration is welcome, and is captured in this short extract

We thus suggest a definition of collective-level knowledge use as the process by which users incorporate specific information into action proposals to influence others' thought, practices and collective action rules" (Contandriopoulos and Brouselle, 2012:63)

However, as suggested above, what strengthens this formulation is a robust conceptualisation of what constitutes a 'practice'. *Action rules* form the knowledge base on which potential users draw in new practices prompted by knowledge resources derived from a research. In a recent case study of research use in the context of Arts within higher education, (Shreeve, 2011) a high usability approach to research based on an interactive and user responsive design is outlined. Interestingly, the learning points she identifies have

considerable resonance with the design issues prompted by adopting the practice based approach. Although at the 'high risk' end of a strategy to maximise usability, her observations are telling.

We had to devolve power and control and let the respondents determine what they wanted to tell us and how they wanted to tell us. Taking a risk in this way resulted in new formats and unexpected outcomes of research.....research does not always have to follow text based and verbal processes and dissemination or the 'usability' of research is an important part of the outcome and this is dependent on the format the research takes. We found acts of translation are required between different kinds of medium (words and objects) and also between different people with different previous experiences. Research is also a context dependent and cultural activity (adapted from Shreeve, 2011: 185)

While users of research are not monolithic, they can be collapsed for the purposes of this paper. It is self-evident that once research enters the public domain, if it does, then anybody can be a potential user of the research if they have access to it. This is one of research's great potentialities and suggests the urgency of establishing the levels of public access to research very early on. Using the categories for research design associated with RUFDATA (Saunders, 2000), it is possible to chart practices which are likely to enhance the usability of the research and its outputs. The following framework is intended to rehearse the practices associated with research at each stage of the framing and 'pitch' of a piece of research. The framework has been used in the context of the PALETTE project which was a European project associated with professional learning in a variety of contexts (McCluskey et al, 2008).

Usability practices in research design

1. Reasons and Purposes for the research: planning, managing, learning, developing, accountability, production of new knowledge]

Key practice: *discussing and involving potential users in issues associated with why an research is taking place. This requires a frank discussion about the 'real' potential purposes even if they are to do with compliance or rhetoric*

2. The potential Uses of the research: providing and learning from examples of good practice, staff development, strategic planning, PR, provision of data for management control, planning and milestones

Key practice: *rehearsing use environments in real time with real people by identifying a list of specific practices, for example:*

- Tabling the report at a meeting to assess its implication
- Deciding on what those implications might be and acting on them
- Doing so in an agreed timeline
- Undertaking staff development activities on the basis of the findings
- Publicising and disseminating more widely etc
- Building a knowledge base

3. The Foci of the research: activities, aspects, emphasis to be evaluated, should connect to the priority areas for research

Key practices: *co-construction practices with key stakeholders and potential users by careful selection of relevant and salient foci*

4. The nature of data and evidence [numerical, qualitative, observational, case accounts]

Key practices: *Rendering evidence and data sets in ways that the non technical stakeholder or potential user can 'read' them, creating narratives with both qualitative and quantitative evidence*

5. Audience for the research output [who are the readers of research outputs: community of practice, funders, yourselves]

Key practices: *Practices which discriminate between different audiences by style, form and content of output. Aspects of the core output (report) can be redesigned for different audiences reflecting different interests and situated use.*

6. Timing of the release of the research output [Coincidence with decision making cycles, life cycle of projects]

Key practices: *making sure the research output and deliverable deadlines coincide with other decision making cycles both formatively and summatively*

7. Agency for undertaking the research [Yourselves, academic researchers, combination]

Key practices: *co-construction with key stakeholders and potential users by careful selection of relevant and salient foci, potential data sources and a design for use*

The frames of reference of researchers and those of research funders are likely to be different from each other, and both differ from those emanating from practices on the ground as 'users' attempt to 'enact' policy or a practice cluster. In particular, these differences mean that 'engagement strategies' with research processes and outputs are best embedded in research designs to a much greater extent than conventionally undertaken. These participative dimensions of research design should be central, with the use of outputs at all stages 'design savvy'.

It is likely that engagement with research output can be understood (see Bamber et al 2011) in the form of a continuum (from relatively low engagement and use to relatively high engagement and use). At the low engagement end of the continuum, we have dissemination or distributive practices (reliance on written texts alone in the form of articles, reports, summaries); in the middle of the continuum are what we could call presentational practices (seminars, presentations, conferences); and at the engaged end of the continuum we have interactional practices (working alongside users to identify situated implications).

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