GIVING VOICE: EVIIDENCE-INFORMED POLICY AND PRACTICE AS A DEMOCRATIZING PROCESS

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Introduction

An important role of universities is to develop new ways of understanding our physical and social worlds. This may include challenging accepted views and shining light on established orders and powers. Many of the chapters in this volume provide examples of such research which explores social differences and social interests hidden by dominant discourses and revealed by academic inquiry and analysis.

One approach to developing new research perspectives on the world is to involve a greater number of voices in the interpretation, use and conduct of research. Research helps us to understand the world and if this research is only led and understood by certain sections of society its approach and findings are likely to be limited by the ideological and conceptual assumptions and priorities of those groups.

The importance of the different perspectives on knowledge creation and use can be seen in widespread debates about such contested issues as the nature of mental illness or whether doctors or service users should determine the nature of maternity services. In the area of education you would expect policy makers, practitioners, parents and school students to have different perspectives and different research questions about the nature of educational services. Each of these groups would find it easier to engage in debates about research evidence if they were determining the questions driving the evidence being created.

This chapter has similar interests in developing and challenging ways of understanding the world. Its focus is on secondary research, on how we go about finding out what we know already from existing research evidence and how this can be a powerful driver for determining future research agendas.

Clarifying what we know is traditionally the role of experts or of literature reviews but these may not be explicit about their assumptions or methods of review. It is therefore important to have formal explicit methods of review just as formal explicit methods are required to ensure that the findings of primary research are accountable. This is not an argument for one method of review but for multiple explicit accountable methods for specifying what we know from research evidence and how we know it. This includes being clear about the questions being asked, by who, and for what purpose.

Systematic research synthesis is an umbrella term for a number of formal explicit methods for reviewing research literature. Such systematic methods have many advantages over traditional informal methods of review and many implications for the creation and use of knowledge, including giving voice to different groups and individual members of society.

Systematic reviews often have a number of common stages that can but not always include:

- Specification of question and the conceptual framework and method of review (though this may not be pre-specified in iterative reviews with emergent methods)
- Definitions of studies to be considered (inclusion criteria)
- A strategy for identifying such studies (search strategy and screening)
- Describing the research field (systematic mapping)
- Quality and relevance appraisal
- Analysis and synthesis
- Communication of review findings
- Interpretation of findings for different needs
- Implementation of interpreted findings for different needs

There are many myths about systematic review one of which being that they are limited to statistical meta analysis of results from quantitative experimental studies. This can lead to the fear that systematic reviews will be used to control the research agenda of what is studied and how. The logic of the need

for transparent methods of reviewing what we know and how we know it applies to all research questions and thus all research methods and types of data (Gough and Elbourne 2002; Gough 2004). This chapter argues that systematic reviews can be a powerful means to enable access to all potential users of research to research knowledge and more importantly to drive research agendas. Such potential users and beneficiaries of research include researchers, policy makers and practitioners but also include members of the public and all minority groups.

The chapter considers three inter-related issues in relation to systematic research synthesis as a means of giving voice to all research users. First, the role of systematic research synthesis in democratising access to knowledge and in clarifying the values driving research questions, methods and findings. Second, the breadth of questions and evidence that can be considered. Reviews can be concerned with all types of research knowledge, not only those coming from a particular conceptual or methodological standpoint. Third, the potential of systematic research synthesis to allow a greater range of voices to drive research agendas, thus democratising knowledge creation.

If different groups within society had the resources and power to commission systematic research reviews, there would be a range of different perspectives of what we want to know, what we already know already and how we know it and what more do we want to know and how could we know it? In this way the different groups would drive the research agenda and be active players in knowledge creation and its use. This does not mean that everyone has to be a researcher. It means that different groups need to have the power to contribute as active players and managers and controllers of the research process undertaken by others.

Access to and Appraisal of Research Knowledge

Access

In the past the inability to read or understand specific languages was a barrier to most people accessing knowledge that was written and accumulated by the learned and elite in society. Everyone in a society is a potential beneficiary and thus user of research knowledge so that knowledge should not be held by a few privileged members and groups in society. The problem is not access alone but in making sense of the extraordinary quantity of research that is published each year in a vast array of different forms (Hillage *et al* 1998). Research synthesis that brings together all that is known within clear parameters and uses explicit methods of review can enable such research knowledge to be open to all. It enables those making decisions and those affected by decisions to have easier access to research evidence that may be relevant to the arguments made in support of or against any such decision (Smith 1996).

Trustworthiness and accountability

A basic premise of research is that it has some form of methodology that is made explicit so that the results of the research are accountable in terms of:

- the underlying theoretical and value assumptions of the research
- the methods of the research
- the manner in which these methods have been executed

Explicit reporting enables people to know whether they agree with the theories and other assumptions underlying the research, the methods used, the manner in which these were implemented in practice, the analysis of results and the conclusions drawn: all of this may include ethical objections to aspects of the research. Such explicitness of theory and method has long been a requirement in primary research. But transparency of theory and methods has not traditionally been the expectation from reviews of evidence from these primary studies. Until recently reviews have been relatively silent on their method and dependent on trusting the expertise of the reviewer.

However, there is empirical evidence that the method of review affects the results of the review (Oliver 1999) which is hardly surprising when considering

all the stages and processes of a review that require theoretical or value judgement and decisions. The consequence is that a traditional review may give non-researchers access to research findings but not in an accountable trustworthy or interpretable way. Similar concerns can be made about expert opinion, which may be based on high levels of skill and experience but is difficult to evaluate without an understanding of the basis on which it is made.

In contrast to traditional informal methods of reviewing and also to expert opinion on what is known from the research literature, systematic research synthesis uses explicit and transparent methods to determine what is known from the research literature. Such systematic reviews are pieces of research, which follow standard sets of stages and so are accountable updateable and in some cases replicable. Systematic research synthesis enables us to be clear about what we know and how we know it within different ideological and theoretical positions.

Conceptual and value positions

The way we understand the world is dependent upon the implicit and explicit theories and assumptions by which we perceive and analyse information so there are many potential understandings or discourses and many types of knowledge.

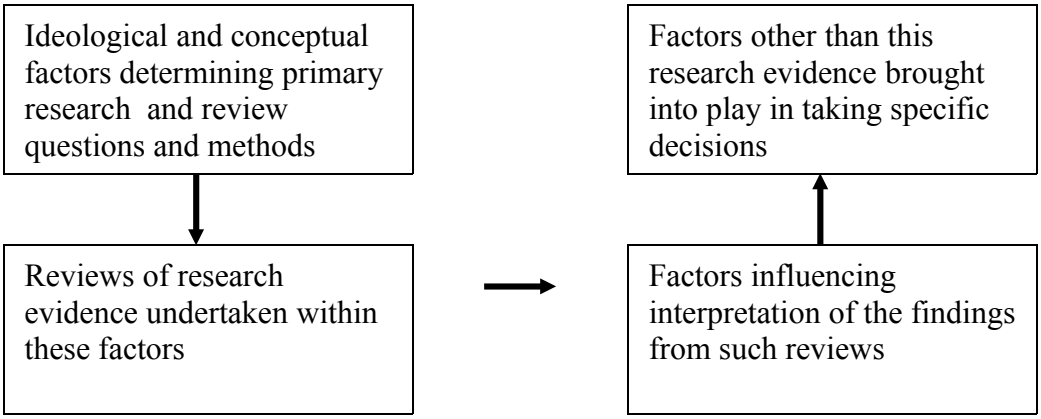
Being clear about the methods by which knowledge has been identified and synthesised enables the ideological and theoretical assumptions on which the research knowledge is based to be more transparent. The aim is to make these inevitable biases explicit rather than being hidden within the discourse of the account of knowledge. Research and evidence cannot be value-free, but it can be an overt epistemic form of knowledge creation. What systematic reviews aim to eliminate is hidden bias that may mislead the user of the research review.

Research evidence is only one factor influencing policy, practice and individual decisions. Other factors such as ideology, political judgment,

experience and resources may be equally if not more important. Being more explicit about what is known about research and the premises on which it is based allows us to be more explicit about the other factors influencing decisions. In this way, non-research factors influence both the creation of research knowledge and its use in decision making (Table 1). Thus, systematic research synthesis highlights rather than hides judgements, values and worldviews so that they can be overtly discussed and debated. It can also reveal where research is being used selectively to support decisions made for other reasons (Weiss 1979).

Table 1 Factors effecting the research process and interpretation and use of research knowledge it creates

RESEARCH	**DECISION MAKING**



All Types Of Research Knowledge

There are an infinite number of research questions that could be posed by different users of research based on different conceptual and value positions. These different questions need different research methods to answer them: this is reflected by the richness in variation of primary research methods, from ethnography to randomised controlled experiments, and of primary research data and research findings. This richness in methods, data and evidence is mirrored in research reviews so that systematic reviews may be as varied as primary research and require judgment and decision at every stage of the review.

Reviews are undertaken in order to answer questions. The nature of the review question is likely, as in primary research, to influence the method of review and the evidence considered competent to answer the review question. Often the conceptual and value positions in a research question are not fully explicit. But to undertake a systematic review, the question to be answered and its assumptions need to be made clear in order to define what studies to include and how they should be considered by the review.

Different types of question are not only more likely to be related to specific research methodologies but also to particular paradigms of research. Studies

asking questions of process or conceptual understanding may be more likely to use descriptive analytic techniques and to create new theories about the world. The question about how mixed ability teaching affects different individuals and in what ways can be explored through small sample qualitative designs. On the other hand, studies asking questions about the efficacy of interventions or of measuring the extent of some phenomena are attempting to ascertain some empirical facts (within the parameters of the conceptual assumptions of the study) and so may use large scale empirical designs. For example, the question about whether mixed ability teaching leads to improved or worse outcomes for certain groups of individuals can be tested with experimental or large group naturalistic research. In this way the variation found in primary research studies is also likely to be reflected in secondary research including systematic reviews. Some of the most important differences between reviews are described in the next section (Gough 2007).

Type of review question

The range of questions considered by systematic reviews is to date relatively limited, many reviews being concerned with the efficacy of interventions, though an increasing number ask questions of prevalence, need, process and of conceptual understanding and explanation (Dixon-Woods *et al.* 2006; Greenhalgh *et al.* 2005; Pawson 2006). All questions asked of primary research can be asked of reviews. There is not a full account of all these potential questions, so work is underway to examine the range of questions found in journals across the social science disciplines (at the Methods for Research Synthesis Node of the ESRC National Centre for Research Methods, see www.ncrm.ac.uk). This means that reviews can be charted against possible questions and that the actual and potential range of review methods used to address these questions can be explored.

A priori or iterative methodology

For some primary research it is considered important for the research method to be specified well in advance of the research, whilst for other primary

research it is important that the method, and to some extent the research question, is flexible and develops iteratively as the research progresses. Research reviews mirror this distinction. For example, reviews on the efficacy of educational interventions by the Campbell Collaboration (www.campbell.org) are more likely to use *a priori* methods using meta analysis of experimental studies to ask questions of empirical efficacy. In contrast, reviews concerned with examining theory are more likely to use iterative approaches (Dixon-Woods *et al* 2006; Greenhalgh *et al* 2005; Pawson 2006).

Research designs, numerical or narrative data, empirical or conceptual data, and relatively homogeneous or heterogeneous data

Primary research varies in the research design and specific methods used to answer different questions and the type of data produced by such methods. Reviews can also vary in their design and method and in the types and range of primary research considered. Even within one type of research design data can vary on dimensions such as topic, concepts and approach, sample, context and measures. If several types of research design are considered there can be considerable heterogeneity in the studies included in a review.

Numerical or narrative analysis of data in synthesis and integrative (meta empirical) or interpretative (meta conceptual) synthesis of data

When a primary study or review includes only numerical data it is possible that the data analysis will be also be numerical but this may not always be the case as when the full data are not available or are too heterogeneous for meaningful numerical analysis. In all cases where numerical analysis is not possible the material for analysis will be words and so will be narrative. This narrative analysis may aim to make empirical statements about the world within a particular conceptual framework thus integrating empirical evidence from individual studies to make an overall meta empirical statement. Alternatively, the analysis may be integrating theoretical understandings to make a new conceptual understanding or meta conceptual synthesis.

Many more distinctions can be made between different methods of systematic review (Gough 2007) including the appraisal of the quality and relevance of research contributing to the review findings (Gough in press). The purpose here is only to introduce some of the major distinctions to show that reviews cover the whole spectrum of methods of primary research. Reviews are not confined to a particular approach to research; they do not predefine how research is to be undertaken or require a particular world view. Reviews are not atheoretical processes without judgement. They span both what are often termed qualitative and quantitative research. Systematic research synthesis just like primary research aims to avoid implicit assumptions and to encourage question-driven, transparent, and methods of research which are fit for purpose.

User-Led Research Agendas

The crucial issue for all research is the question being asked. Different questions have different implicit and explicit assumptions and so lead to different answers. It is therefore important to know who is asking the questions and for what purpose. If the questions are in the control of only some parts of society this can alter the research agenda being undertaken. Some sections of society may be directly affected by decisions informed by research but may have had little say in the research agenda that informed the creation of that research knowledge. This is why there have been attempts to involve different groups of citizens in research agenda setting (Oliver *et al* 2004). Systematic reviews are a powerful means of achieving this objective because they consider all research within certain specified boundaries. They provide greater leverage in considering what we want to know and how we can know it than involvement in single primary studies. The role of users can vary from being powerful mangers of the whole process to providing input for some of the stages of a review such as those listed in Table 1 and discussed below (Gough 2005).

Table 2 Review stage and potential for indirect and direct user input

Stage of knowledge review and production	**Indirect user input: via new primary research or reviews of user views**	**Direct user input: Inform Versus participate Versus control**
1. Review question	Eg priority setting	Eg user managed reviews
2. Process of the review	Eg mixed methods reviews including user views	Eg advisory committees
3. Communication	Eg studies of communication and impact	Eg user written summaries
4. Interpretation	Eg practice surveys	Eg user input about context and practice knowledge
5. Application	Eg reviews of implementation research	Eg concensus development methods for developing intervention guidelines
6. Driving new primary research	Eg priority setting	Eg user led research agenda setting

Informing the specific focus of the review question

In determining the questions for research review, users of research are determining what we want to know. Even if there is broad agreement about what needs to be studied, the particular focus may be determined by those with particular perspectives such as academic, policy maker or practitioner perspectives. For example, a review on social issues for children driven by a class of school students in London reflected these students' topic interests (Garcia *et al* 2006)

A review needs to have a specific question, so not all views can be included, but a process of considering many different views clarifies the focus of the review and whose interests it will serve. There is no problem with a plurality of

reviews on a topic area but there is a problem if reviews only represent certain sectional interests particularly if this is not explicit. There needs to be open debate about the democracy of review question decision making.

There are several ways in which different perspectives can input into a review. One way is to study the range of views about an issue through new primary research or through systematic reviews of studies of the range of different perspectives about the issue. For example, a systematic map of the effects of travel on children undertook a telephone survey and a focus group with children to identify the range of travel experiences and outcomes that the systematic map should cover (Gough *et al* 2001). Another way is to represent views on an advisory group to the review with varying degrees of specification of roles, responsibilities and decision making powers including formal consensus formation processes (Oliver *et al* 2004). The role of users of the review can vary between being consulted and advising on the review to directing the decisions being taken.

Informing the process of undertaking the review

In addition to determining the initial review question there is also much opportunity to impact upon its process. This is particularly so in iterative reviews where the method is being developed during the process of the review but also true of reviews which are predominantly *a priori* with some iterative components. Reviews can have a mapping stage where a broad range of literature is systematically identified and described and then decisions are made as to the most useful and coherent way to undertake a synthesis of the evidence on all or part of this research. If only part of the research map is considered in the synthesis this is a narrowing and of the research question. Even when there is little iteration the review question, its conceptual framework and the protocol for review require many decisions to arrive at *a priori* decisions on inclusion criteria, the search strategy, screening of studies, quality appraisal and synthesis.

Communication, interpretation and application of the findings of the review

In order to fulfil the requirements of being explicit and transparent about the methods of the review a full technical explanation of methods is required but shorter summary versions for different audiences can assist communication. These formats may include some aspect of interpretation which provides another potential input for user voice. The interpretation may be undertaken by the authors of the review by guessing different user needs; it may be produced by user groups themselves or there may be an explicit formal deliberative process for considering particular views and other types of knowledge to move from review findings to interpretation for different users and contexts (Gough 2005). Similar processes may or may not occur in moving from interpretation to action through implementation of review findings in influencing decisions. One example is the use of further research such as implementation surveys to examine the contexts and uses to which the new research evidence might be put (CHSRF 2006)

Informing new evidence production and synthesis

A systematic review aims to answer a research question but the research evidence may not be adequate for this or the findings and interpretation of the review may lead to new questions. In this way those determining the review question and the process of the review are also able to help determine the new primary research agenda. The different beneficiaries and users of research and research of reviews are thus able to have much greater influence on the nature of research and research findings than they would by being involved in one specific piece of community-based research. They also have a good oversight of the process of research and so develop a capacity to understand the nature and purpose of research.

Conclusions

Systematic reviews are considered by some to be a mechanical and potentially dangerous technique for controlling research agendas. This chapter has shown that their potential is the opposite. They are concerned with all types of research and can vary in terms of question and method as much as in primary research. They can provide access to research findings for all and so allow more democratic involvement in societal debates where research evidence has a role. They can enable the open use of research evidence in debate with all the other factors that are used to make decisions. They can reveal where research evidence is being used opportunistically to support decisions already made for other reasons.

Furthermore, systematic reviews enable different users of research, including members of the public, to be involved in setting the questions asked by reviews and the further primary research that such reviews may lead to. This provides users of research with much greater leverage than could be achieved by involvement with single pieces of research. It also provides those using and influencing research reviews with a good understanding of the purpose and methods of research and the skills to commission and manage it. Not everyone needs the specialist skills of academic researchers: drivers of research agendas just need skills in the management oversight of research done in their name with public resources.

Academic researchers are specialists with much knowledge and skill. They are a major group of users of research and have key roles in developing research agendas as well as having the technical skills to undertake the research. However they should not be the only arbiters of what research is undertaken. We should celebrate and use the dimensions of difference in perspective. We should engage in the debates of the dimensions of difference of knowledge that will be created. Systematic reviews provide a means for this to be achieved that has more leverage and power than debates which are undertaken at the level of individual studies of primary research.

The argument is that systematic reviews can bring about a change in access and power. The trouble is that resources are needed to make this a reality. Some users of research such as funders of research, academics in

universities and commercial companies are more likely to have the resources to be able to determine the focus of review questions. We need to share resources more broadly within society to achieve greater plurality in the production and use of research knowledge. Research and research evidence is a democratic issue.

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