

LSDA PROJECT

MODELS OF RESEARCH IMPACT: A CROSS SECTOR REVIEW

LITERATURE REVIEW PROTOCOL - SUMMARY

Isabel Walter and Sandra Nutley, RURU, University of St. Andrews

Background to the review

This cross-sector review of models used to enhance the impact of research evidence in policy making and practice was requested by the Learning and Skills Development Agency (LSDA) as part of the first work package within their Research and Development Programme *Research Impact*. The LSDA, and its predecessors, have long recognised and acted on the need to enhance the impact of their research and development activities. However, further efforts are required to increase the influence and use of research-based evidence among practitioners, managers and policy-makers throughout the learning and skills sector. LSDA is keen to critically assess its previous experience and compare it with that of other sectors. There is also recognition within the wider education field of the need to review the impact of research and policy (e.g. NERF, 2001; Kanefsky, 2001).

The development of "evidence-based" policy and practice within the public sector requires more than the creation of an agreed, valid and accessible evidence base. Ways have to be found to ensure that this evidence impacts on the policy process and service delivery. Examples of strategies to increase the impact of research can be found across diverse public sectors (see Davies et al., 2000), but these have rarely been reviewed in any rigorous way. The main advances in implementing research-based evidence have been made in healthcare, in terms of both developing practical interventions and in assessing the effectiveness of these. A number of overviews, using the results from systematic reviews, have drawn similar conclusions about "what works" in attempting to get research into healthcare practice (EHCB, 1999; Bero et al., 1998; Oxman et al., 1995). They suggest that while effective dissemination is an important element of successful research implementation, it is not sufficient alone. Pro-active strategies which proved consistently effective were interactive education meetings, educational outreach and reminders; passive educational approaches were generally ineffective. Multi-faceted interventions combining two or more types of intervention were the most successful. The overviews also highlight the need to analyse the context for new interventions and target strategies accordingly.

The extent to which these findings reflect the experience of other sectors, or can be transferred across them, remains unclear. Other sectors lack similarly comprehensive overviews of their research impact strategies. However, some approaches, such as the use of opinion leaders or facilitation techniques, are common to a number of sectors. While practices should not be transferred uncritically across different contexts, this suggests there may be potential for cross-sector learning. To date there have been few attempts to draw together experiences around enhancing research impact beyond sectoral boundaries (Kanefsky, 2001 provides an example).

Cross-sector learning may be supported through examining the theoretical models which underpin research impact strategies. However, Marteau et al. (2002) note that much of the research on methods of getting research into practice is atheoretical with interventions rarely guided by a theory or formal body of knowledge. Theoretical models can be used to understand different aspects of the research impact process and to guide development and implementation of interventions. They range from theories aimed at changing individual behaviour, such as learning theory, to those concerned with the wider contextual influences on research impact, such as models of organisational change. The *Effective Health Care Bulletin* (1999) has summarised a selection of conceptual models relevant to improving the use of research in healthcare practice. Work has also been done to assess the value of different conceptual frameworks to developing evidence-based policy and practice more generally. Examples include the diffusion of innovations (e.g. Nutley and Davies, 2000, Kanefsky, 2001) and organisational learning (Davies and Nutley, 2000). Drawing together this kind of conceptual learning may enable a greater understanding of the processes involved in research use and of how to develop effective utilisation strategies.

This review will provide an overview of the literature on approaches to enhancing research use from the education, healthcare, social care and criminal justice sectors. It will examine both empirical studies of the success of different research impact strategies, and theoretical evidence of the ways research impact has been conceptualised and understood in these four sectors. It will also interrogate the transferability of experiences across contexts, and specifically to the learning and skills environment.

The review will not be strictly "systematic" in format (see Boaz et al., 2002). Its scope is broad-ranging, and the size of potentially relevant literature too vast to be searched comprehensively. However, by adopting a number of features of systematic reviews, it will be possible to make the review process as transparent, rigorous and replicable as possible. The review will thus have a well-defined search strategy; clear selection criteria for papers; a rigorous approach to extracting data; and quality assessment criteria for judging empirical studies. These are outlined in more detail below.

Objectives

The objectives of the review are three-fold:

- to provide an overview of the conceptual frameworks and models which guide research impact thinking and practice
- to provide evidence on the success of different practices which aim to enhance research impact
- to examine how effectiveness of research impact is best assessed.

These objectives suggest a number of research questions which the review will seek to address:

- what frameworks or models have been used to conceptualise the issue of research impact ?
- how have these been applied in practice ?
- what are the barriers to and enablers of research utilisation ?
- what are the characteristics of effective research utilisation interventions ?
- in what ways are these characteristics context dependent ?

- what dimensions of context are important in understanding the success of particular interventions ?
- what criteria are used to judge the effectiveness of research utilisation interventions ?
- how are these best measured ?
- how far is learning from other sectors relevant and transferable to the learning and skills sectors ?

Search strategy

A range of sources will be searched in order to maximise coverage and minimise bias. RURU has found that unpublished reports offer an important source of accounts of research impact and so particular efforts will be made to search the "grey" literature. Searches will be cross-sectoral but with an emphasis on the education-related literature to maximise transferability of findings to the learning and skills field. Searches will be conducted on:

- a range of core bibliographic databases to include
 - sector-specific databases
 - general databases
 - more specialist databases such as SIGLE and to include RURU's own existing database on research utilisation¹.

Initial terms for searching these databases have been developed from preliminary scoping searches. They comprise:

- general terms concerned with research impact e.g. research/evidence and impact or implementation or dissemination
- terms to identify relevant sector areas e.g. community learning, nurse/nursing, social care, probation
- terms to identify particular interventions e.g. continuing professional development, guideline(s), opinion leader
- terms to identify specific theoretical or conceptual approaches e.g. diffusion of innovations, change management, organisational learning.
- reference lists of key papers and citation indices
- research registers
- conference papers and proceedings
- web sites of key organisations or programmes involved in research impact, such as Research in Practice, Barnardo's, NFER, SCRE, CEBSS
- local and national government web sites
- personal contacts.

Searches will be restricted to dates from 1990 onwards. This reflects both the scope of the project and previous work by RURU which suggests that returns on searches prior to this date will be limited. Searches will also be confined to English language papers. The focus of searches will be UK papers but with an international perspective. Searches will aim for a high level of sensitivity. Given the difficulties of locating studies on research impact, it will be preferable to exclude irrelevant studies once retrieved rather than fail to identify potentially relevant studies.

¹ Sources searched to date to compile the RURU database are listed at Appendix I.

Details of all searches conducted will be fully documented and their results saved in Endnote libraries.

Given the vast scale of potentially relevant studies, a slightly different approach will be taken when searching the healthcare literature². Initial searches for empirical studies will be confined to relevant reviews and overviews of interventions to enhance research impact, and to studies which involve large-scale or multi-site research impact initiatives such as FACTS (Framework for Appropriate Care Throughout Sheffield) or PACE (Promoting Action on Clinical Effectiveness). Results of these searches will then be assessed. Any particular types of study which are found to have been excluded by this strategy, such as those which do not meet selection criteria for systematic reviews, will be searched for separately.

Selection criteria

Selection of papers for inclusion in the review will be a two-stage process. Initial broad selection criteria will be used with the titles and abstracts of papers retrieved from searches. Criteria for including papers at this stage will be:

- located within the education, healthcare, criminal justice or social care sectors
- refers to research utilisation or to implementing evidence-based policy and/or practice.

Where there is any doubt as to whether a paper should be included at this stage, the full text will be retrieved and these initial criteria applied to the whole paper.

The full texts of papers selected at the title and abstract stage will be retrieved and refined selection criteria applied. The review will be divided into three parts according to the main objectives: a conceptual review; an empirical review; and a methodological review. Different selection criteria will apply to each of the three as outlined below, but it is likely that some papers will be relevant to more than one area.

Objective 1 - conceptual review:

to provide an overview of the conceptual frameworks and models which guide research impact thinking and practice.

Papers to be included will be those which discuss how research utilisation and EBP implementation have been conceptualised within the four sectors of concern - education, healthcare, social care and criminal justice. Papers which meet the following criteria will be selected:

- discussion of the concepts or models used to guide the development of a practical strategy to enhance research impact
- a substantive contribution to thinking or theory about enhancing research impact on policy or practice
- a theoretical or conceptual review of ideas about research utilisation or implementing evidence-based policy and practice.

² For example, the EPOC (Effective Practice and Organisation of Care) database, which lists studies of interventions designed to promote effective practice of which many are concerned with improving research use, contains over 1000 entries. The latter reflect rigorous selection procedures and in practice the number of studies potentially relevant to this review within the healthcare field is likely to be several times this figure.

Objective 2: - empirical review:

to provide evidence on the success of different practices which aim to enhance research impact.

Papers to be included will be empirical studies of

- interventions designed to enhance the impact of research-based evidence on policy and/or practice
- what inhibits and what enables the use of research-based evidence in policy and practice
- reviews of either of the above.

Objective 3 - methodological review:

to examine how effectiveness of research impact is best assessed

Papers included in the Objective 2 review will also be included in the methodological review for Objective 3. In addition, the following papers will be included:

- empirical studies of the use of research-based evidence in policy and/or practice, or reviews of these
- conceptual papers which discuss issues around how we measure and assess the impact of research.

All empirical papers included must meet specific selection criteria. The selection criteria for each part of the review will be piloted on a sample of studies and refined as required. The study selection procedure will primarily be undertaken by a single member of the team. In general it is preferable to have all or a proportion of study selection decisions checked by a second independent assessor, but the limited scale of the current project means this will not be possible. However, clarity of selection criteria will help support the replicability of the review process.

Data extraction strategy

A "mapping exercise" will be carried out for all studies meeting the inclusion criteria for the different parts of the review. This will map out the kinds of papers retrieved, the types of research studies conducted, the nature of interventions used to enhance research impact and the conceptual models underpinning this field. Relevant data will be extracted and coded using a data extraction sheet, which will be piloted and refined as necessary.

This mapping exercise will help assess the volume of literature for in-depth data extraction and synthesis. Additional data extraction will be conducted for the in-depth review stage. Again, a list of questions will be piloted on a sample of studies.

Quality assessment criteria

The methodological quality of empirical studies to be included in the in-depth review will be assessed. Three lists of quality assessment criteria have been developed for use with quantitative and qualitative study designs and with reviews. In essence these aim to determine whether there are any alternative possible explanations for observed findings which have not been taken into account or made explicit. Rather than selecting studies for inclusion or exclusion, the criteria will provide a framework within which to judge

whether studies are methodologically sound. This will in turn help assess whether the results and conclusions of empirical studies can be viewed as reliable.

Approach to synthesis

The approach to synthesising findings from both the literature review and the practice assessments is to be developed within the consortium and in consultation with the LSDA as results from both aspects of the project emerge. (??)

Timetable

- Searches for published and unpublished literature
May-June 2002
- Pilot testing of inclusion criteria and data extraction for mapping exercise
May 2002
- Pilot testing of data extraction for in-depth review and of quality assessment criteria
June 2002
- Selection of studies for inclusion and "mapping the literature" exercise
June 2002
 - progress report on the literature review to be produced by end June 2002. This will also help inform development of the practice assessments
- In-depth extraction of data from and quality assessment of empirical studies, and analysis of initial findings from conceptual papers
July 2002
- Synthesis work
July-August 2002

References.

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Boaz, A., Ashby, D. and Young, K. (2002) 'Systematic reviews: what have they got to offer evidence based policy and practice?' ESRC UK Centre for Evidence Based Policy and Practice Working Paper 2: Queen Mary, University of London

Centre for Reviews and Dissemination (CRD) (2001) *Undertaking Systematic Reviews of Research on Effectiveness. CRD's guidance for those carrying out or commissioning reviews* CRD Report Number 4 (2nd Edition) York: NHS Centre for Reviews and Dissemination, University of York

Davies, H. T. O. and Nutley, S. M. (2000) 'Developing learning organisations in the new NHS' *British Medical Journal* 320 998-1001

Davies, H. T. O., Nutley, S. M. & Smith, P. C. (eds) (2000) *What Works? Evidence-Based Policy and Practice in Public Services* Bristol: The Policy Press

Effective Health Care Bulletin (EHCB) (1999) 'Getting evidence into practice' Vol 5 (1) London: The Royal Society of Medicine Press

Harden, A., Weston, R. and Oakley, A. (1999) *A Review of the Effectiveness and Appropriateness of Peer-Delivered Health Promotion Interventions for Young People* EPPI Research Report London: Evidence for Policy and Practice Information and Co-ordinating Centre, Institute of Education, University of London

Kanefsky, J. (2001) 'Research Impact and the ESRC Teaching and Learning Research Programme' Paper to the British Educational Research Association Annual Conference, University of Leeds, September 2001
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Marteau, TM, Sowden, AJ and Armstrong, D (2002) Implementing research findings into practice: beyond the information deficit model, in Haines, Andrew and Donald, Anna (eds.) (2002) *Getting Research Findings Into Practice* 68-76 London: BMJ Books

National Education Research Forum (NERF) (2001) 'The impact of educational research on policy and practice' NERF Sub-Group Report

Nutley, S. M. and Davies, H. T. O. (2000) 'Making a reality of evidence-based practice: some lessons from the diffusion of innovations' *Public Money and Management* 20 (4) 35-42

Oxman, A. D., Thomson, M. A., Davis, D. A. and Haynes, R. B. (1995) 'No magic bullets: a systematic review of 102 trials of interventions to improve professional practice' *Canadian Medical Association Journal* 153 (10) 1423-1431

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APPENDIX I.

Sources searched to compile RURU database of studies relevant to implementing evidence-based policy and practice, as of April 2002.

Electronic databases.

- **ERIC** (via FirstSearch)
- **Education-Line** (via British Education Index www.bei.ac.uk)
- **Web of Science** (incl. Arts and Humanities Citation Index, Science Citation Index and Social Science Citation Index)
- **Caredata**
- **Criminal Justice Abstracts** (via SilverPlatter)
- **SIGLE** (via SilverPlatter)
- **PAIS** (via SilverPlatter)
- **CINAHL** (via SilverPlatter)
- **HMIC** - King's Fund, Dept. of Health, HELMIS (via SilverPlatter)
- **BIDS** Ingenta
- **Medline** (via FirstSearch)
- **Expanded Academic ASAP International**
- **Science Direct** (Arts & Humanities/Medicine/Social Sciences/Psychology)
- **ZetocAlert**
- **Social Care Group**

Handsearches of the following:

- *Criminal Justice* (2001)
- *Administration and Society* January 1999 - November 2001
- *Evaluation* January 1998 - July 2001
- *Educational Administration Quarterly* February 1999 - October 2001
- *Clinical Child Psychology and Psychiatry* January 1999 - October 2000
- *Clinical Nursing Research* February 1999 - November 2001
- *Journal of Social Work* April 2001 and December 2001