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Evidence synthesis for knowledge exchange: balancing responsiveness and quality in providing evidence for policy and practice

Sarah Morton, s.morton@ed.ac.uk
Karen Seditas,
University of Edinburgh, UK

Barriers to using research in practice are well documented. This paper describes an innovative process developed by the Centre for Research on Families and Relationships to address these barriers. We supported people to define what they needed to know; how existing evidence could help; and how to use evidence in practice. An action-focused evidence review process was developed to synthesise and appraise varied relevant literatures, and communicate this in meaningful, timely, relevant and action-focused ways. Both making evidence accessible and facilitating processes for deliberating evidence were essential in supporting evidence users to understand the extent and usefulness of evidence and identify implications for policy, practice and services.

Key words evidence-based policy • literature review • knowledge mobilisation • synthesis • knowledge translation tool • knowledge translation service

Introduction

Issues in getting evidence into action are well documented (for example, Nutley et al, 2007) and highlight that traditional evidence synthesis methods are not always appropriate for responding to those issues (Oliver and Dickson, 2015). Knowledge Exchange (KE) practitioners at The Centre for Research on Families and Relationships (CRFR) (a consortium research centre which produces, supports, stimulates and shares social research, and works to make research more accessible for diverse audiences) were aware of these needs and worked in partnership with research user organisations to address them. Through several projects we worked with partners in the third and public sectors to develop evidence services culminating in the Evidence Request Bank Project: an evidence-to-action service to help identify and use evidence in policy and practice. The programme aimed to help close the evidence-to-action gap around delivering services for children and families, focusing on how to help those planning and delivering policies and services to understand what existing relevant evidence was available, and how this might help frame new approaches to service and policy delivery.
The Evidence Request Bank Project devised an evidence to action (E2A) cycle, which includes three key stages: identifying gaps in knowledge; an evidence review process to gather, synthesise and present evidence in action-focused ways to address those gaps in knowledge; and planning evidence use. It built on methods previously developed by CRFR to address well-documented issues around using evidence including accessibility, relevance, and timeliness.

This paper describes how an evidence-to-action process was developed by the Evidence Request Bank Project, offering reflections throughout, and giving an example of how the process was used in practice. It shows how this process successfully supported those working in children and family settings to identify gaps in knowledge and use evidence to address those needs. Finally, it offers concluding thoughts and outlines next steps for the Evidence Request Bank Project.

Background

Problems and issues in getting evidence into action

Barriers to research use by policymakers and practitioners are well documented (Mitton et al, 2007; Nutley et al, 2007; Oliver et al, 2014). Research evidence is just one source of knowledge for practice (Gabbay and Le May, 2004), and it needs to be translated and often animated through discussion (Walter et al, 2005). Often paywalls (where a paid subscription is required to view articles) and other cost issues prevent practitioners or policymakers accessing evidence. When research users can access research (through for example an increased emphasis on open access), they do not have the time and resources to synthesise findings, or published synthesis is frequently in language and formats that are difficult to use. Whilst a recent UK survey shows that university research is highly trusted by policymakers and practitioners, it is also less used than evidence from government, third sector and think tanks (McKormick, 2013). The same source found that evidence was often seen as interesting but not useful, with a particular gap in evidence being directly relevant to respondents’ work.

Barriers to research use extend beyond access and trust issues. Support and infrastructure for evidence use within organisations are important in both policy and practice (Cherney and Head, 2011, Elueze, 2015). Processes and approaches that combine both access to evidence and activities to help apply evidence to problems or issues are necessary (Best and Holmes, 2010; Seditas, 2014). Research use is a process rather than a one-off event, with the need for learning about what might be effective in different situations sitting alongside the need to reframe, rethink and address issues at a more conceptual level (Morton and Wright, 2015). Research users often rework evidence to apply it to the real world issues they face (Morton, 2015a), and this implies commitment and resources from settings where research is used.

Supporting research users through the processes described above has been a key element in the approach to research synthesis described in this paper.

In this paper ideas of what constitutes evidence was open to discussion with practitioners involved in each synthesis process. Research evidence and published grey literature that were: relevant to the topic under investigation, seen as appropriate and relevant by both researchers and practitioners, and that met the quality criteria, were included in the term ‘evidence’. 
Synthesising evidence for policy and practice

Our experience of working with third and public sector organisations at the time highlighted lack of relevant, focused and robust reviews of literature which responded to their needs. Limitations of current methods for synthesising research were also apparent in the literature, for example the inability of the ‘standard’ Cochrane Collaboration type systematic review to accommodate variations in study design and acknowledge different types of research (Boaz et al, 2006).

The value of qualitative evidence to inform policy and practice is increasingly recognised and methods for reviewing qualitative research in systematic ways are emerging (Thomas and Harden, 2008; Ring et al, 2011). Yet methods such as thematic synthesis (see Thomas and Harden, 2008) and realist synthesis (Pawson et al, 2005) require significant time and labour (Boaz et al, 2006; Saul et al, 2013), which are often outwith the available resources and policy or practice timeframe of third and public sector evidence users. Since this project, the literature around systematic syntheses has been further developed (for example, Oliver and Dickson, 2015).

The Evidence Request Bank Project drew on a range of evidence synthesis methods (including systematic review, rapid realist review, and qualitative synthesis), consulted experts in the fields of evidence synthesis and evidence to action, and worked closely with project partners to understand their needs, to develop an evidence review process which balances quality with pragmatism to provide relevant and timely evidence for third and public sectors. It also supported research use in policy and practice by producing evidence syntheses in actionable formats appropriate to context, and by including research users at each stage of the synthesis process to ensure relevance and accessibility.

Policy and practice context

The CRFR is a consortium research centre which produces, supports, stimulates and shares high quality social research on families and relationships. Established in 2001 with a mission to make research more accessible and relevant to non-academics, the centre is a leader in the knowledge exchange field, with extensive experience in making research more accessible for policymakers, practitioners, research participants, academics and the wider public in order to increase its impact and open up debate and discussion about research questions and research findings, exploring ways in which knowledge can lead to action. The Evidence Request Bank Project was developed in partnership between CRFR, the Scottish Government, two third sector intermediaries (Children in Scotland and Parenting Across Scotland), and West Lothian Council, a local authority in central Scotland.1 This arrangement of partners ensured cross-sector issues were represented, and built on the work of a previous project, About Families.2

The evidence-to-action process cycle

The evidence-to-action process described in this paper was developed through two projects. Initially About Families was an evidence request service for third sector organisations working on parenting issues. In that project we developed and experimented with different ways of understanding the evidence base and with processes for getting that evidence into action in the organisations we worked with.
Below we present how we refined the process in the second project, The Evidence Request Bank, which took learning from About Families and developed it with partners from the third and statutory sectors. The project was internally evaluated. The diagram below outlines the process explained in this section.

**Diagram 1: The Evidence to Action process**

The timescale for the Evidence to Action process outlined in Diagram 1 varied according to partners’ decision-making process and organisational schedules, and the size and scope of the literature. The pilot attempted to develop a more rapid evidence review process than other systematic review methods. While the stages of the review process outlined below varied, generally evidence reviews produced during the pilot were completed within three months of confirming a review question, using a part-time researcher. In development work since the pilot, larger reviews using the same process have taken up to six months using a part-time researcher.

**Supporting practitioners to identify gaps in knowledge**

How people understand and define what they need to know in social policy and practice settings is not a straightforward process. In this project our non-academic partners were interested in questions such as ‘What factors affect children’s transition...”
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to primary school?’, and ‘How have families in Scotland changed over 2001–2011’?
Addressing these kinds of gaps in knowledge required exploration of different types
of evidence (for example, programme and service evaluations, literature reviews,
qualitative research) from a range of sources (for example, government agencies,
alademic papers, public and third sector services, specialist centres), within a limited
timeframe, using limited resources. Evidence addressing complex issues is often not
clear-cut, meaning that identifying what action should be taken in response to the
evidence can be challenging.

We found that even when people wanted to use evidence to inform their work,
they found it difficult to articulate what they wanted to know and to make decisions
about what should be prioritised and why. Often initial research questions were too
broad or multi-faceted or, through exploration, emerged as not the right question
to address the specific service need in hand.

CRFR developed a facilitative tool to support our partners to consider what they
wanted to know and how this would help them develop policies and services relevant
to their roles. The tool used a series of questions to drill down from the general area
of interest to specific issues in team discussion. In particular it considered:

1. Whether the research questions being posed were appropriate to the problem
2. How existing research and other evidence could help to address those issues
3. plans for using the evidence
4. How those plans fitted with organisational direction and strategy
5. Capacity to engage in the evidence to action process (amongst the partners and
   more widely within their agencies)
6. Timescales in which an evidence review would be needed for action

This process of identifying and interrogating what our partners wanted to know was
fundamental to ensuring that the evidence review process would result in something
useful and relevant. Providing this support to consider how and why the evidence
was needed, and involving whole teams in discussions in the early stages of service
planning, worked well for the partners and was valued as a useful part of the project.

Producing a user-focused evidence report: the Evidence Review Process

Using the above process to establish what research users wanted to know and why, a
clear, accessible, user-focused evidence review was produced using specific methods
we developed to keep the focus on future knowledge use.

The evidence review process comprised four distinct though iterative stages:

1. Refining the research question
2. Retrieving the evidence
3. Synthesising the evidence
4. Reporting on evidence

Templates and tools were developed for each stage. A team approach was led by a
dedicated member of staff, the Evidence Request Bank lead (review co-ordinator).
The production process included a number of people with defined roles to ensure
robustness and relevance. The evidence review author searched for and led appraisal
of the evidence, and wrote initial drafts. These were edited for language clarity by a knowledge exchange editor, and reviewed by an evidence user (individual or team), academic peer reviewer, and field (non-academic expert) peer reviewer.

Refining the research question

Building on the identified gaps in knowledge, the evidence review process further refined the research questions posed through developing a research strategy and scoping the research questions. An academic peer review of the research strategy and scoping report was conducted and guidance given.

The research strategy was checked with our partners to ensure relevance, for example checking that keywords include policy and practice terminology and potential grey evidence sources.

In scoping the research questions, two stages were devised for pragmatism and relevance checking:

1. An initial top-level scoping of the evidence – to test key words, the extent and manageability of evidence, and initial inclusion / exclusion criteria, refining parameters (such as geography, time period) as necessary.
2. A deeper scoping and report (peer-reviewed and discussed with the requester) – detailed the methods, initial comments on the evidence landscape, key themes arising, and posed questions and/or suggestions to the requester over parameters.
   It allowed the requester to consider the relevance of the evidence to their needs (including whether their needs have changed), make prioritising decisions over the direction and scope of the forthcoming evidence review, and agree a realistic timeframe.

Facilitating open, whole-team discussion considering the scoping report fostered shared understanding, managed expectations over what available evidence does and does not cover, and helped ensure that reports addressed the gaps in knowledge previously identified while allowing opportunity to refine evidence needs and, if necessary, research questions.

Retrieving the evidence

As outlined previously, different types of evidence (academic and non-academic) from varied sources often need to be considered to address gaps in knowledge in policy and practice settings.

The Evidence Request Bank Project developed a specific range of tools to gather, record and appraise diverse evidence and maintain a focus on potential uses. To do this we ensured that evidence retrieval:

- Linked findings directly with knowledge gaps
- Captured research quality issues
- Facilitated reporting the ‘evidence landscape’ in ways which support non-academic readers to orientate the evidence within their own practice or policy setting, such as what it does and does not say about particular population groups, which disciplines and topics dominate the published evidence.
For example, an evidence log was created. This provided systematic record-keeping and a critical appraisal record. The evidence log specifically documented characteristics of evidence and issues arising of direct relevance to the policy and practice context of the evidence requester, for example, how gender or ethnicity feature in the available evidence. This was used to create accessible summaries to open conversation about what we called the ‘evidence landscape’ and gaps in evidence within evidence reviews.

**Synthesising the evidence: quality review**

To quality review non peer-reviewed qualitative literature, the Evidence Request Bank Project drew on critical appraisal criteria appropriate for the type of research Critical Skills Appraisal Programme (CASP, 2013; Spencer et al, 2003). Qualitative evidence is often relevant and valuable in addressing policy and practice knowledge gaps. This meant using qualitative appraisal approaches that address issues such as the variation in types of literature and difficulties in weighting different aspects of study quality (which makes applying a standard measure impractical) (Thomas and Harden, 2008; Ring et al, 2011).

While literature published in peer review journals was initially included as having met a first stage quality threshold, papers were examined and excluded if, for example, they featured unaddressed limitations (for example study design), or were too conceptual or problem-focused for the needs of the review.

Quality issues were captured using data extraction and evidence log tools. While Evidence Request Bank Project resources often had a single lead author, consensus was gained in the review team where there were uncertainties in quality. This included where synthesis of different types of evidence raised questions about overall conclusions that might be drawn in the reviews. Any contradictions, debates and conflicts in the evidence synthesis were reported in the reviews (see point 3 below).

**Reporting on the evidence**

The Evidence Request Bank Project developed a new accessible and action-focused way of reporting syntheses of evidence while acknowledging that evidence rarely provides clear directions for action in policy and practice settings.

A format and approach was designed to link evidence to action which:

1. Provided enough background for the reader to understand the issue/s under consideration
2. Provided information about what actions might help to address those issues, for whom and in what circumstances
3. Supported the reader to understand uncertainties in the evidence, what it can and cannot tell us, what the gaps in evidence are
4. Included ‘Talking Points’ to stimulate the reader to reflect on the evidence, consider its implications for public service development and use it to plan those developments, and open up discussion where evidence isn’t clear
5. Signposted the reader to further sources of information and examples of practice
6. Used clear language and structure
Training and tools were provided for review authors, who were mentored by the project lead throughout the review process. Project evaluation reported that training and supporting review authors helped them appreciate the complexity of the evidence user’s environment.

As well as being peer-reviewed, draft reviews were field reviewed by an expert in the sector to check clarity, accessibility and relevance. Tools were provided to support the peer and field review process. These outlined the purpose, context and process of Evidence Request Bank Project work, specified what was required of reviewers, and provided templates for providing comments. The draft review was then discussed with the requester to further check accessibility. Involving external peer reviewers increased their understanding of how to present information for third and public sectors in action-focused ways.

Whilst the whole review process is distinct from other systematic reviews in its focus on evidence for knowledge exchange and action, we believe that the approaches detailed in points 3 and 4 above are particularly innovative and were particularly useful to our partners.

**Planning research use**

Once finalised and published, review findings were presented to, and discussed with, those who requested them, including any wider teams intending to use the evidence.

The Evidence Request Bank Project process included a facilitated discussion to support evidence users to reflect on findings and gaps in evidence, consider implications for practice, plan how to use and share the evidence and with whom, and consider what they want to do differently as a result of having the evidence. The Evidence Request Bank Project approach was informed by CRFR’s understanding of barriers and enablers to evidence use and utilised knowledge exchange features devised for inclusion within the evidence review (for example, talking points). From this discussion, the Evidence Request Bank Project produced an evidence use plan with partners to take forward and monitor action. All evidence reviews were logged into a project website, along with examples of how the evidence was used, allowing further access and learning.

Acknowledging the evidence use environment and providing knowledge brokerage were both essential in enabling those who requested evidence to take it forward into action in a meaningful and focused way. Discussing how to use evidence fostered shared understanding and managed expectations over what the evidence did or did not say, and helped to link evidence with specific gaps in knowledge while managing uncertainty. Involving evidence-using teams helped to integrate team thinking and direct resources effectively.

**How the evidence to action process has been used**

West Lothian Council social policy team, a pilot project partner, wanted an evidence base for their improvement work within the area of transitions to primary school. They wanted to know more about the factors that affect children’s transition, what can help in managing transitions, and what the barriers might be for services and families.
The Evidence Request Bank Project worked with the team to explore and refine this knowledge gap, and subsequently produced the evidence review: ‘What factors affect children’s transition to primary school?’

The evidence was used in four key ways:

- Staff at West Lothian Council created a driver diagram demonstrating successful transition to primary school based on the evidence review.
- Talking points contained within the evidence review were used to facilitate team discussion about any uncertainties in the evidence, the findings and planning action. This element of the Evidence Request Bank Project process has been reported as particularly useful.
- The driver diagram was used with nursery and primary school staff to identify ways they could improve transitions.
- This has been shared with the council to reinforce the value of evidence-based practice and has also informed others via the Scottish Government Early Years Collaborative (an outcomes-focused, multi-agency quality improvement programme).

Limitations and reflections

The Evidence Request Bank pilot project was funded for one year with one full-time staff member and was subject to the limitations of a short project: with the resources and timeframe available, it was difficult to develop and test a range of processes, tools and report formats, complete full evidence to action cycles in a staggered process to enable learning from each cycle to inform the next, and demonstrate outcomes relating to evidence use. Engagement, developments and activities needed to align with partners’ existing strategic priorities, workplans and timeframes, limiting the progress that can be realistically made within a short project. It takes time for organisations to consider and embrace new ways of working. However it did build on the previous About Families three-year project which had developed and refined methods, allowing us to build and improve approaches.

There was some diversity amongst the project partners that affected their ability to engage with the project. These included differences in approaches to using evidence often depending on the context and purpose of why evidence was needed, and on the previous experience of staff in using evidence in their work, for example, as a springboard for debate or to direct resources for practice change. Supporting organisations to engage with this kind of project will vary based on experience and attitudes to evidence-informed planning. People vary in their capability to interpret and use evidence, and a consideration of training may be important.

The process of evidence use was engaged with in different ways by different partners, with varying understanding and commitment to the idea that evidence use is not a one-off event. Engaging with research users throughout the cycle of defining the question, scoping, synthesis, writing, reporting and action planning helped to develop a process focus, and through different iterations of the programme we developed tools to help with this (for example, a tool to help define ‘knowledge gaps’, and an action-planning template). It was not always easy for research users to stick with the process and see it all the way through. The most sophisticated evidence-use organisations also
then linked the process to their own improvement, planning and strategy processes. Others engaged in a more basic way, with a focus on one-off events or single actions.

Producing quality reviews takes time, yet balancing timescales to meet user needs while ensuring sufficient discussion and high quality reports can be difficult. While the evidence review process described here is less resource intensive than other review methods, it still requires sufficient time and resources. Using researchers on an ‘as needs’ basis can help with capacity but requires repeated training in the processes methods.

**Concluding comments**

The Evidence Request Bank Project process described above helps to address the well-documented barriers to using research in developing social policies and services. The project developed new ways to help research users overcome difficulties in accessing evidence in affordable and timely ways and in formats which are appropriate to them and the contexts they work within. Linking evidence to real-world issues and seeing using research as a process rather than an event were important parts of the process.

Developing this process was informed by knowledge exchange literature and by working with non-academic partners which offered insight into the needs of the evidence-use environment. We were able to develop a process in direct response to sector needs, yet grounded in robust approaches to synthesis.

Pilot partners valued support to identify what they wanted to know in the early stages and to develop the processes and tools needed to implement change in response to the evidence base.

The project involved partners who were interested in using evidence. A range of contextual factors can get in the way of engaging with and using evidence such as changes in strategic priorities, the political environment, and internal staff changes. In this project organisations with clear leadership and vision for using evidence to help drive organisational change were the most effective partners.

The Evidence Request Bank Project produced accessible reviews which offered clear, concise, and readable syntheses of diverse literature relevant to policy and practice contexts. These enabled evidence users to plan and implement tangible action from evidence, direct resources more effectively, and demonstrate the importance of considering evidence at all stages of planning and implementation to peers.

Facilitating whole team and open discussion in practice contexts fostered shared understanding of evidence including what it does and does not cover. Including research users at each stage of the process ensured relevance, accessibility, and facilitated consideration of evidence needs and plans to use the evidence. An additional benefit of the project was that the knowledge exchange process helped academic review authors and peer reviews to better understand how to present evidence in language and formats for use in policy and practice.

**Further development**

Further work is needed to build upon the pilot work and develop tools, and consider how such a knowledge service could be sustained to support evidence-informed policy and practice. CRFR is leading the further development of the Evidence Request Bank Project in the context of public service delivery as part of What Works Scotland, an
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initiative to improve the way local areas in Scotland use evidence to make decisions about public service development and reform.4

Notes
1 For more information see project website www.crfr.ac.uk/projects/current-projects/evidencebank

2 For more information see project pages www.crfr.ac.uk/projects/current-projects/about-families

3 The Evidence Request Bank Project project was internally evaluated with all participants through online surveys and ongoing reflection and discussion with project partners. Learning was shared through a CRFR briefing (Seditas, 2014) and reflection reports from partners which were shared online (www.crfr.ac.uk/assets/ERB-pilot-Evidence-into-Action-case-studies.pdf). Further learning on processes and tools has fed into further development of the evidence to action and evidence review processes.

4 www.whatworksscotland.ac.uk

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References
CASP, 2013, ©Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13 http://media.wix.com/ugd/dded87_951541699e9edc71ce66c9bac4734c69.pdf
Elueze, IN, 2015, Evaluating the effectiveness of knowledge brokering in health research: A systematised review with some bibliometric information, Health Information & Libraries Journal 32, 3, 168–81


McCormick, J, 2013, Evidence exchange: Learning from social policy across the UK, Dunfermline: Carnegie UK Trust

Mitton, C, Adair, CE, McKenzie, E, Patten, SB, Waye Perry, B, 2007, Knowledge transfer and exchange: Review and synthesis of the literature, Milbank Quarterly 85, 4, 729–68

Morton, S, 2015a, Creating research impact: The roles of research users in interactive research mobilisation, Evidence & Policy 11, 1, 35–55


Oliver, S, Dickson, K, 2015, Policy-relevant systematic reviews to strengthen health systems: Models and mechanisms to support their production, Evidence & Policy 12, 2, 235–59


Saul, J, Willis, CD, Bitz, J, Best, A, 2013, A time-responsive tool for informing policy making: Rapid realist review, Implementation Science 8, 103


Thomas, J, Harden, A, 2008, Methods for the thematic synthesis of qualitative research in systematic reviews, BMC Medical Research Methodology 8